Pliny the Elder

Complete Works

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The Complete Works of

PLINY THE ELDER

(AD 23-AD 79)

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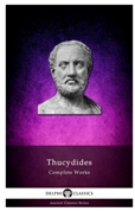

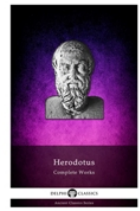

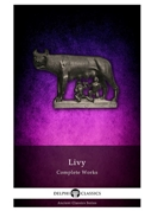

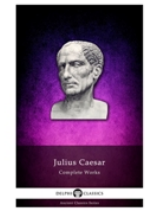

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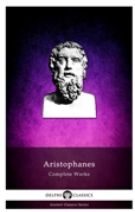

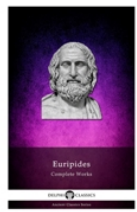

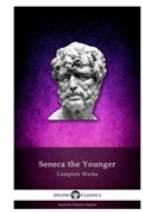

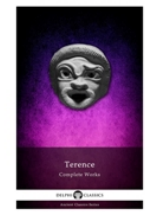

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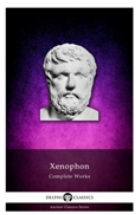

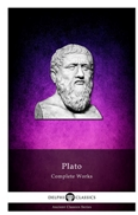

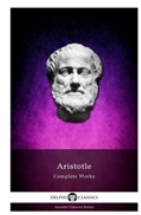

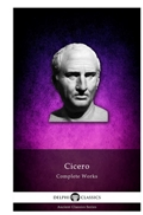

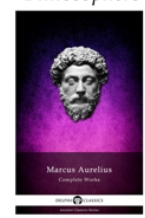

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The Complete Works of

GAIUS PLINIUS SECUNDUS

By Delphi Classics, 2015

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Complete Works of Pliny the Elder

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The Translations

Como, Lombardy, Italy — Pliny the Elder's birthplace

NATURAL HISTORY

Translated by John Bostock and Henry Thomas Riley, 1855

One of the largest single works to have survived antiquity, Pliny's *Natural History* is an early encyclopaedia, not only limited to what is today understood by the term natural history, but covering many different subjects, which the author himself defined as "the natural world or life". Divided into 37 books, these subjects include astronomy, mathematics, geography, ethnography, anthropology, human physiology, zoology, botany, agriculture, horticulture, pharmacology, mining, mineralogy, sculpture, painting and precious stones. The *Natural History* became a model for later encyclopaedias and scholarly works as a result of its sheer breadth of subject matter, its referencing of original authors and its index method. Pliny dedicated the book to the emperor Titus, the son of his close friend, the emperor Vespasian, in the first year of Titus's reign. It is the only work by Pliny to have survived and the last that he published. He began the *Natural History* in AD 77, and had not made a final revision at the time of his death during the 79 eruption of Vesuvius.

Pliny combined his scholarly activities with a busy career as an imperial administrator for Vespasian and a majority of his writing was completed at night, as daytime hours were spent working for the emperor, which he explains in the dedicatory preface. As for the nocturnal hours spent writing, these were not regarded as loss of sleep, but as an addition to life: for, as he states, *Vita vigilia est*, "to be alive is to be watchful", in a military metaphor of a sentry keeping watch in the night.

Nature for Pliny was divine, a pantheistic concept inspired by the Stoic philosophy underlying much of his thought. But the deity in question was a goddess whose main purpose was to serve the human race: "nature, that is life" is human life in a natural landscape. After

an initial survey of cosmology and geography, Pliny commences his treatment of animals with the human race, "for whose sake great Nature appears to have created all other things". This teleological view of nature was common in antiquity and is crucial to the understanding of Pliny's work. The components of nature are not only described in and for themselves, but also with a view to their role in human life. Pliny devotes a number of the books to plants, with a focus on their medicinal value; the books on minerals include descriptions of their uses in architecture, sculpture, painting and jewellery.

Pliny's work frequently reflects Rome's imperial expansion, which brought new and exciting things to the capital: exotic eastern spices, strange animals to be put on display or herded into the arena, even the alleged phoenix sent to the emperor Claudius in AD 47 – although, as Pliny admits, this was generally acknowledged to be a sham. Pliny repeated Aristotle's maxim that Africa was always producing something new. Nature's variety and versatility were claimed to be infinite: "When I have observed nature she has always induced me to deem no statement about her incredible." This led Pliny to recount rumours of strange peoples on the edges of the world. These monstrous races — the Cynocephali or Dog-Heads, the Sciapodae, whose single foot could act as a sunshade, the mouthless Astomi, who lived on scents – were not strictly new. They had been mentioned by the Greek historian Herodotus in the 5th century BC, but Pliny made them better known.

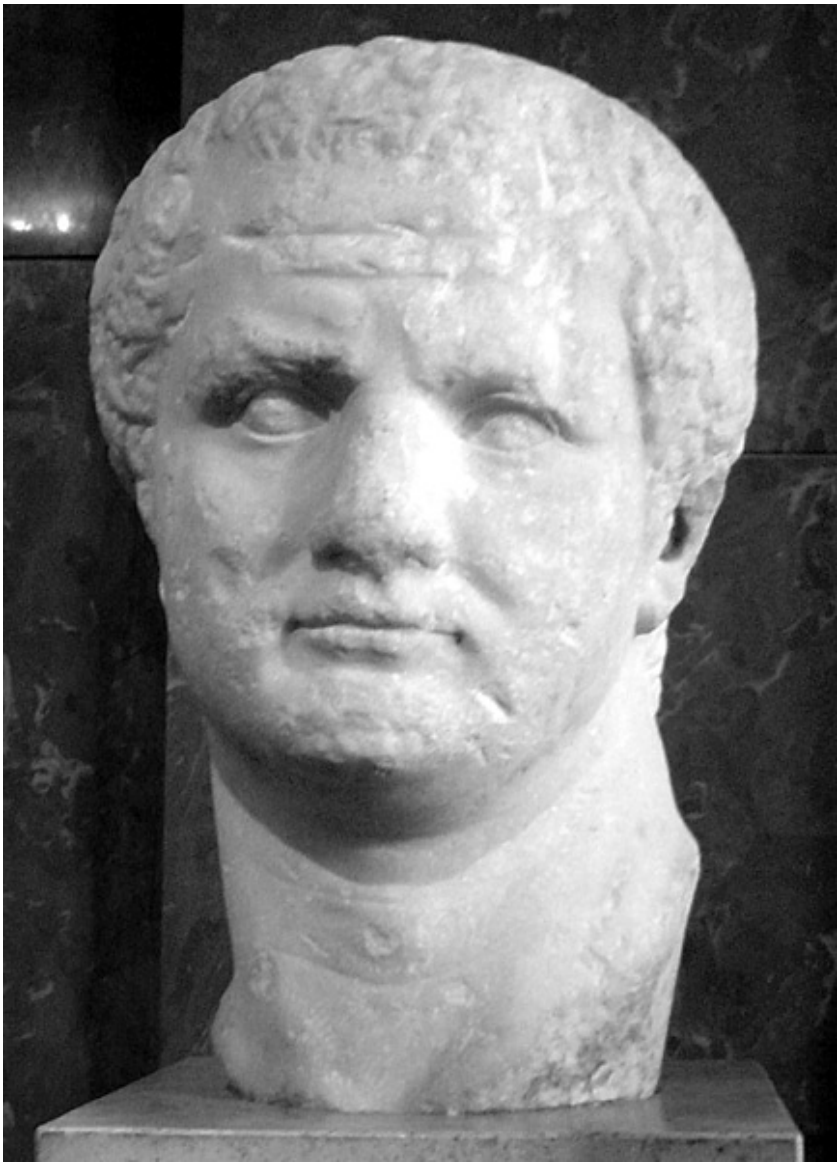
Pliny studied the original authorities on each subject, taking great care to make excerpts from their pages. His *indices auctorum* sometimes list the authorities he actually consulted, though not exhaustively; in other cases, they cover the principal writers on the subject, whose names are borrowed second-hand for his immediate authorities. He acknowledges his obligations to his predecessors: "To own up to those who were the means of one's own achievements." In his preface, he claims to have stated 20,000 facts gathered from some 2,000 books and from 100 select authors. The extant lists of his authorities cover more than 400, including 146 Roman and 327 Greek and other sources of information. The lists generally follow the order of the subject matter of each book.

Pliny's writing style emulates Seneca, aiming less at clarity and vividness than at epigrammatic point. His writing contains many antitheses, questions, exclamations, tropes, metaphors and other mannerisms typical of the Latin Silver Age. His sentence structure is often loose and straggling, adopting the heavy use of the ablative absolute, while ablative phrases are often appended in a kind of vague "apposition" to express the author's own opinion of an immediately previous statement.

Pliny wrote the first ten books of his magnum opus in AD 77 and was engaged on revising the rest during the two remaining years of his life. The work was probably published with some revision by the author's nephew Pliny the Younger, who, when telling the story of a tame dolphin and describing the floating islands of the Vadimonian Lake thirty years later, had apparently forgotten that both are to be found in his uncle's work.

The absence of the author's final revision explains many errors, including why the text bears a disjointed order and corrupt state. There are approximately 200 extant manuscripts, but the best of the more ancient manuscripts, held at Bamberg State Library, contains only books XXXII–XXXVII. *Natural History* was one of the first classical manuscripts to be printed, at Venice in 1469 by Johann and Wendelin of Speyer.

Vespasian (AD 9-79) was Roman Emperor from AD 69 to 79. He founded the Flavian dynasty that ruled the Empire for twenty-seven years. The emperor originally came from an equestrian family that rose into the senatorial rank under the Julio–Claudian emperors.



The Emperor Titus (AD 39–81) was the son of Vespasian, Pliny's good friend, and Domitilla the Elder. Pliny's 'Natural History' was dedicated to Titus.

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C. PLINII SECUNDI

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TOMUS PRIMUS.

Cum Commentariis & adnotationibus HERMOLAI BARBARI, PINTIANI, RHENANI, GELENII, DALECHAMPII, SCALIGERI, SALMASII, Is. VOSSII, & Variorum.

Accedunt preterea variæ Lectiones ex MSS. complurimis ad oram Paginarum accurate indicatæ.

Item JOH. FR. GRONOVII Notarum Liber Singularis ad Illustrem Virum *Johannem Capelanum.*

LUGD. BATAV. ROTERODAMI. } Apud HACKIOS, A°. 1669.

The title page of the 1669 edition

Laocoon and his Sons — a sculpture greatly admired by Pliny

BOOK I.

DEDICATION.

C. PLINIUS SECUNDUS TO HIS FRIEND TITUS VESPASIAN.

THIS treatise on Natural History, a novel work in Roman literature, which I have just completed, I have taken the liberty to dedicate to you, most gracious Emperor, an appellation peculiarly suitable to you, while, on account of his age, that of *great* is more appropriate to your Father; —

"For still thou ne'er wouldst quite despise
The trifles that I write;"

if I may be allowed to shelter myself under the example of Catullus, my fellow-countryman, a military term, which you well understand. For he, as you know, when his napkins had been changed, expressed himself a little harshly, from his anxiety to show his friendship for his dear little *Veranius* and *Fabius*. At the same time this my importunity may effect, what you complained of my not having done in another too forward epistle of mine; it will put upon record, and let all the world know, with what kindness you exercise the imperial dignity. You, who have had the honour of a triumph, and of the censorship, have been six times consul, and have shared in the tribunate; and, what is still more honourable, whilst you held them in conjunction with your Father, you have presided over the Equestrian order, and been the Prefect of the Prætorians: all this you have done for the service of the Republic, and, at the same time, have regarded me as a fellow-soldier and a messmate. Nor has the extent of your prosperity produced any change in you, except that it has given you the power of doing good to the utmost of your wishes. And whilst all these circumstances increase the veneration which other persons feel for you, with respect to myself, they have made me so bold, as to wish to become more familiar. You must, therefore, place this to your own account, and blame yourself for any fault of this kind that I may commit.

But, although I have laid aside my blushes, I have not gained my object; for you still awe me, and keep me at a distance, by the majesty of your understanding. In no one does the force of eloquence and of tribunitian oratory blaze out more powerfully! With what glowing language do you thunder forth the praises of your Father! How dearly do you love your Brother! How admirable is your talent for poetry! What a fertility of genius do you possess, so as to enable you to imitate your Brother! But who is there that is bold enough to form an estimate on these points, if he is to be judged by you, and, more especially, if you are challenged to do so? For the case of those who merely publish their works is very different from that of those who expressly dedicate them to you. In the former case I might say, Emperor! why do you read these things? They are written only for the common people, for farmers or mechanics, or for those who have nothing else to do; why do you trouble yourself with them? Indeed, when I undertook this work, I did not expect that you would sit in judgement upon me; I considered your situation much too elevated for you to descend to such an office. Besides, we possess the right of openly rejecting the opinion of men of learning. M. Tullius himself, whose genius is beyond all competition, uses this privilege; and, remarkable as it may appear, employs an advocate in his own defence:— "I do not write for very learned people; I do not wish my works to be read by Manius Persius, but by Junius Congus." And if Lucilius, who first introduced the satirical style, applied such a remark to himself, and if Cicero thought proper to borrow it, and that more especially in his treatise "De Republica," how much reason have I to do so, who have such a judge to defend myself against! And by this dedication I have deprived myself of the benefit of challenge; for it is a very different thing whether a person has a judge given him by lot, or whether he voluntarily selects one; and we always make more preparation for an invited guest, than for one that comes in unexpectedly.

When the candidates for office, during the heat of the canvass, deposited the fine in the hands of Cato, that determined opposer of bribery, rejoicing as he did in his being rejected from what he considered to be foolish honours, they professed to do this out of respect to his integrity; the greatest glory which a man could attain. It

was on this occasion that Cicero uttered the noble ejaculation, “How happy are you, Marcus Porcius, of whom no one dares to ask what is dishonourable!” When L. Scipio Asiaticus appealed to the tribunes, among whom was Gracchus, he expressed full confidence that he should obtain an acquittal, even from a judge who was his enemy. Hence it follows, that he who appoints his own judge must absolutely submit to the decision; this choice is therefore termed an appeal.

I am well aware, that, placed as you are in the highest station, and gifted with the most splendid eloquence and the most accomplished mind, even those who come to pay their respects to you, do it with a kind of veneration: on this account I ought to be careful that what is dedicated to you should be worthy of you. But the country people, and, indeed, some whole nations offer milk to the Gods, and those who cannot procure frankincense substitute in its place salted cakes; for the Gods are not dissatisfied when they are worshiped by every one to the best of his ability. But my temerity will appear the greater by the consideration, that these volumes, which I dedicate to you, are of such inferior importance. For they do not admit of the display of genius, nor, indeed, is mine one of the highest order; they admit of no excursions, nor orations, nor discussions, nor of any wonderful adventures, nor any variety of transactions, nor, from the barrenness of the matter, of anything particularly pleasant in the narration, or agreeable to the reader. The na- ture of things, and life as it actually exists, are described in them; and often the lowest department of it; so that, in very many cases, I am obliged to use rude and foreign, or even barbarous terms, and these often require to be introduced by a kind of preface. And, besides this, my road is not a beaten track, nor one which the mind is much disposed to travel over. There is no one among us who has ever attempted it, nor is there any one individual among the Greeks who has treated of all the topics. Most of us seek for nothing but amusement in our studies, while others are fond of subjects that are of excessive subtilty, and completely involved in obscurity. My object is to treat of all those things which the Greeks include in the Encyclopædia, which, however, are either not generally known or are rendered dubious from our ingenious conceits. And there are other matters which many writers have given so much in detail that we quite loathe them. It is, indeed, no easy task

to give novelty to what is old, and authority to what is new; brightness to what is become tarnished, and light to what is obscure; to render what is slighted acceptable, and what is doubtful worthy of our confidence; to give to all a natural manner, and to each its peculiar nature. It is sufficiently honourable and glorious to have been willing even to make the attempt, although it should prove unsuccessful. And, indeed, I am of opinion, that the studies of those are more especially worthy of our regard, who, after having overcome all difficulties, prefer the useful office of assisting others to the mere gratification of giving pleasure; and this is what I have already done in some of my former works. I confess it surprises me, that T. Livius, so celebrated an author as he is, in one of the books of his history of the city from its origin, should begin with this remark, "I have now obtained a sufficient reputation, so that I might put an end to my work, did not my restless mind require to be supported by employment." Certainly he ought to have composed this work, not for his own glory, but for that of the Roman name, and of the people who were the conquerors of all other nations. It would have been more meritorious to have persevered in his labours from his love of the work, than from the gratification which it afforded himself, and to have accomplished it, not for his own sake, but for that of the Roman people.

I have included in thirty-six books 20,000 topics, all worthy of attention, (for, as Domitius Piso says, we ought to make not merely books, but valuable collections,) gained by the perusal of about 2000 volumes, of which a few only are in the hands of the studious, on account of the obscurity of the subjects, procured by the careful perusal of 100 select authors; and to these I have made considerable additions of things, which were either not known to my predecessors, or which have been lately discovered. Nor can I doubt but that there still remain many things which I have omitted; for I am a mere mortal, and one that has many occupations. I have, therefore, been obliged to compose this work at interrupted intervals, indeed during the night, so that you will find that I have not been idle even during this period. The day I devote to you, exactly portioning out my sleep to the necessity of my health, and contenting myself with this reward, that while we are musing on these subjects (according to the

remark of Varro), we are adding to the length of our lives; for life properly consists in being awake.

In consideration of these circumstances and these difficulties, I dare promise nothing; but you have done me the most essential service in permitting me to dedicate my work to you. Nor does this merely give a sanction to it, but it determines its value; for things are often conceived to be of great value, solely because they are consecrated in temples.

I have given a full account of all your family — your Father, yourself, and your Brother, in a history of our own times, beginning where Aufidius Bassus concludes. You will ask, Where is it? It has been long completed and its accuracy confirmed; but I have determined to commit the charge of it to my heirs, lest I should have been suspected, during my lifetime, of having been unduly influenced by ambition. By this means I confer an obligation on those who occupy the same ground with myself; and also on posterity, who, I am aware, will contend with me, as I have done with my predecessors.

You may judge of my taste from my having inserted, in the beginning of my book, the names of the authors that I have consulted. For I consider it to be courteous and to indicate an ingenuous modesty, to acknowledge the sources whence we have derived assistance, and not to act as most of those have done whom I have examined. For I must inform you, that in comparing various authors with each other, I have discovered, that some of the most grave and of the latest writers have transcribed, word for word, from former works, without making any acknowledgement; not avowedly rivalling them, in the manner of Virgil, or with the candour of Cicero, who, in his treatise “De Republica,” professes to coincide in opinion with Plato, and in his Essay on Consolation for his Daughter, says that he follows Crantor, and, in his Offices, Panæcius; volumes, which, as you well know, ought not merely to be always in our hands, but to be learned by heart. For it is indeed the mark of a perverted mind and a bad disposition, to prefer being caught in a theft to returning what we have borrowed, especially when we have acquired capital, by usurious interest.

The Greeks were wonderfully happy in their titles. One work they

called κηρίον, which means that it was as sweet as a honeycomb; another κέρας ʾαμαλθείας, or Cornu copiæ, so that you might expect to get even a draught of pigeon's milk from it. Then they have their Flowers, their Muses, Magazines, Manuals, Gardens, Pictures, and Sketches, all of them titles for which a man might be tempted even to forfeit his bail. But when you enter upon the works, O ye Gods and Goddesses! how full of emptiness! Our duller countrymen have merely their Antiquities, or their Examples, or their Arts. I think one of the most humorous of them has his Nocturnal Studies, a term employed by Bibaculus; a name which he richly deserved. Varro, indeed, is not much behind him, when he calls one of his satires A Trick and a Half, and another Turning the Tables. Diodorus was the first among the Greeks who laid aside this trifling manner and named his history The Library. Apion, the grammarian, indeed — he whom Tiberius Cæsar called the Trumpeter of the World, but would rather seem to be the Bell of the Town-crier, — supposed that every one to whom he inscribed any work would thence acquire immortality. I do not regret not having given my work a more fanciful title.

That I may not, however, appear to inveigh so completely against the Greeks, I should wish to be considered under the same point of view with those inventors of the arts of painting and sculpture, of whom you will find an account in these volumes, whose works, although they are so perfect that we are never satisfied with admiring them, are inscribed with a temporary title, such as "Apelles, or Polycletus, was doing this;" implying that the work was only commenced and still imperfect, and that the artist might benefit by the criticisms that were made on it and alter any part that required it, if he had not been prevented by death. It is also a great mark of their modesty, that they inscribed their works as if they were the last which they had executed, and as still in hand at the time of their death. I think there are but three works of art which are inscribed positively with the words "such a one executed this;" of these I shall give an account in the proper place. In these cases it appears, that the artist felt the most perfect satisfaction with his work, and hence these pieces have excited the envy of every one.

I, indeed, freely admit, that much may be added to my works; not only to this, but to all which I have published. By this admission I

hope to escape from the carping critics, and I have the more reason to say this, because I hear that there are certain Stoics and Logicians, and also Epicureans (from the Grammarians I expected as much), who are big with something against the little work I published on Grammar; and that they have been carrying these abortions for ten years together — a longer pregnancy this than the elephant's. But I well know, that even a woman once wrote against Theophrastus, a man so eminent for his eloquence that he obtained his name, which signifies the Divine speaker, and that from this circumstance originated the proverb of choosing a tree to hang oneself.

I cannot refrain from quoting the words of Cato the censor, which are so pertinent to this point. It appears from them, that even Cato, who wrote commentaries on military discipline, and who had learned the military art under Africanus, or rather under Hannibal (for he could not endure Africanus, who, when he was his general, had borne away the triumph from him), that Cato, I say, was open to the attacks of such as caught at reputation for themselves by detracting from the merits of others. And what does he say in his book? "I know, that when I shall publish what I have written, there will be many who will do all they can to depreciate it, and, especially, such as are themselves void of all merit; but I let their harangues glide by me." Nor was the remark of Plancus a bad one, when Asinius Pollio was said to be preparing an oration against him, which was to be published either by himself or his children, after the death of Plancus, in order that he might not be able to answer it: "It is only ghosts that fight with the dead." This gave such a blow to the oration, that in the opinion of the learned generally, nothing was ever thought more scandalous. Feeling myself, therefore, secure against these vile slanderers, a name elegantly composed by Cato, to express their slanderous and vile disposition (for what other object have they, but to wrangle and breed quarrels?), I will proceed with my projected work.

And because the public good requires that you should be spared as much as possible from all trouble, I have subjoined to this epistle the contents of each of the following books, and have used my best endeavours to prevent your being obliged to read them all through. And this, which was done for your benefit, will also serve the same

purpose for others, so that any one may search for what he wishes, and may know where to find it. This has been already done among us by Valerius Soranus, in his work which he entitled “On Mysteries.”

The 1st book is the Preface of the Work, dedicated to Titus Vespasian Cæsar.

The 2nd is on the World, the Elements, and the Heavenly Bodies.

The 3rd, 4th, 5th and 6th books are on Geography, in which is contained an account of the situation of the different countries, the inhabitants, the seas, towns, harbours, mountains, rivers, and dimensions, and the various tribes, some of which still exist and others have disappeared.

The 7th is on Man, and the Inventions of Man.

The 8th on the various kinds of Land Animals.

The 9th on Aquatic Animals.

The 10th on the various kinds of Birds.

The 11th on Insects.

The 12th on Odoriferous Plants.

The 13th on Exotic Trees.

The 14th on Vines.

The 15th on Fruit Trees.

The 16th on Forest Trees.

The 17th on Plants raised in nurseries or gardens.

The 18th on the nature of Fruits and the Cerealia, and the pursuits of the Husbandman.

The 19th on Flax, Broom, and Gardening.

The 20th on the Cultivated Plants that are proper for food and for medicine.

The 21st on Flowers and Plants that are used for making Garlands.

The 22nd on Garlands, and Medicines made from Plants.

The 23rd on Medicines made from Wine and from cultivated Trees.

The 24th on Medicines made from Forest Trees.

The 25th on Medicines made from Wild Plants.

The 26th on New Diseases, and Medicines made, for certain Diseases, from Plants.

The 27th on some other Plants and Medicines.

The 28th on Medicines procured from Man and from large Animals.

The 29th on Medical Authors, and on Medicines from other Animals.

The 30th on Magic, and Medicines for certain parts of the Body.

The 31st on Medicines from Aquatic Animals.

The 32nd on the other properties of Aquatic Animals.

The 33rd on Gold and Silver.

The 34th on Copper and Lead, and the workers of Copper.

The 35th on Painting, Colours, and Painters.

The 36th on Marbles and Stones.

The 37th on Gems.

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BOOK II. AN ACCOUNT OF THE WORLD AND THE ELEMENTS.

[I have adopted the division of the chapters from Hardouin, as given in the editions of Valpy, Lemaire, Ajasson, and Sillig.; the Roman figures, enclosed between brackets, are the numbers of the chapters in Dalechamps, De Laët, Gronovius, Holland, and Poinsinet. The titles of the chapters are nearly the same with those in Valpy, Lemaire, and Ajasson.]

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CHAP. 1. (1.)

WHETHER THE WORLD BE FINITE, AND WHETHER THERE BE MORE THAN ONE WORLD.

The world, and whatever that be which we otherwise call the heavens, by the vault of which all things are enclosed, we must conceive to be a Deity, to be eternal, without bounds, neither created, nor subject, at any time, to destruction. To inquire what is beyond it is no concern of man, nor can the human mind form any conjecture respecting it. It is sacred, eternal, and without bounds, all in all; indeed including everything in itself; finite, yet like what is infinite; the most certain of all things, yet like what is uncertain, externally and internally embracing all things in itself; it is the work of nature, and itself constitutes nature.

It is madness to harass the mind, as some have done, with attempts to measure the world, and to publish these attempts; or, like others, to argue from what they have made out, that there are innumerable other worlds, and that we must believe there to be so many other natures, or that, if only one nature produced the whole, there will be so many suns and so many moons, and that each of them will have immense trains of other heavenly bodies. As if the same question would not recur at every step of our inquiry, anxious as we must be to arrive at some termination; or, as if this infinity, which we ascribe to nature, the former of all things, cannot be more easily comprehended by one single formation, especially when that is so extensive. It is madness, perfect madness, to go out of this world and to search for what is beyond it, as if one who is ignorant of his own dimensions could ascertain the measure of any thing else, or as if the human mind could see what the world itself cannot contain.

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CHAP. 2. (2.)

OF THE FORM OF THE WORLD.

That it has the form of a perfect globe we learn from the name which has been uniformly given to it, as well as from numerous natural arguments. For not only does a figure of this kind return everywhere into itself and sustain itself, also including itself, requiring no adjustments, not sensible of either end or beginning in any of its parts, and is best fitted for that motion, with which, as will appear hereafter, it is continually turning round; but still more, because we perceive it, by the evidence of the sight, to be, in every part, convex and central, which could not be the case were it of any other figure.

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CHAP. 3. (3.)

OF ITS NATURE; WHENCE THE NAME IS DERIVED.

The rising and the setting of the sun clearly prove, that this globe is carried round in the space of twenty-four hours, in an eternal and never-ceasing circuit, and with in- credible swiftness. I am not able to say, whether the sound caused by the whirling about of so great a mass be excessive, and, therefore, far beyond what our ears can perceive, nor, indeed, whether the resounding of so many stars, all carried along at the same time and revolving in their orbits, may not produce a kind of delightful harmony of incredible sweetness. To us, who are in the interior, the world appears to glide silently along, both by day and by night.

Various circumstances in nature prove to us, that there are impressed on the heavens innumerable figures of animals and of all kinds of objects, and that its surface is not perfectly polished like the eggs of birds, as some celebrated authors assert. For we find that the seeds of all bodies fall down from it, principally into the ocean, and, being mixed together, that a variety of monstrous forms are in this way frequently produced. And, indeed, this is evident to the eye; for, in one part, we have the figure of a wain, in another of a bear, of a bull, and of a letter; while, in the middle of them, over our heads, there is a white circle.

(4.) With respect to the name, I am influenced by the unanimous opinions of all nations. For what the Greeks, from its being ornamented, have termed κόσμος, we, from its perfect and complete elegance, have termed *mundus.* The name *cœlum,* no doubt, refers to its being engraven, as it were, with the stars, as Varro suggests. In confirmation of this idea we may adduce the Zodiac, in which are twelve figures of animals; through them it is that the sun has continued its course for so many ages.

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CHAP. 4. (5.)

OF THE ELEMENTS AND THE PLANETS.

I do not find that any one has doubted that there are four elements. The highest of these is supposed to be fire, and hence proceed the eyes of so many glittering stars. The next is that spirit, which both the Greeks and ourselves call by the same name, air. It is by the force of this vital principle, pervading all things and mingling with all, that the earth, together with the fourth element, water, is balanced in the middle of space. These are mutually bound together, the lighter being restrained by the heavier, so that they cannot fly off; while, on the contrary, from the lighter tending upwards, the heavier are so suspended, that they cannot fall down. Thus, by an equal tendency in an opposite direction, each of them remains in its appropriate place, bound together by the never-ceasing revolution of the world, which always turning on itself, the earth falls to the lowest part and is in the middle of the whole, while it remains suspended in the centre, and, as it were, balancing this centre, in which it is suspended. So that it alone remains immoveable, whilst all things revolve round it, being connected with every other part, whilst they all rest upon it.

(6.) Between this body and the heavens there are suspended, in this aërial spirit, seven stars, separated by determinate spaces, which, on account of their motion, we call wander- ing, although, in reality, none are less so. The sun is carried along in the midst of these, a body of great size and power, the ruler, not only of the seasons and of the different climates, but also of the stars themselves and of the heavens. When we consider his operations, we must regard him as the life, or rather the mind of the universe, the chief regulator and the God of nature; he also lends his light to the other stars. He is most illustrious and excellent, beholding all things and hearing all things, which, I perceive, is ascribed to him exclusively by the prince of poets, Homer.

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CHAP. 5. (7.)

OF GOD.

I consider it, therefore, an indication of human weakness to inquire into the figure and form of God. For whatever God be, if there be any other God, and wherever he exists, he is all sense, all sight, all hearing, all life, all mind, and all within himself. To believe that there are a number of Gods, derived from the virtues and vices of man, as Chastity, Concord, Understanding, Hope, Honour, Clemency, and Fidelity; or, according to the opinion of Democritus, that there are only two, Punishment and Reward, indicates still greater folly. Human nature, weak and frail as it is, mindful of its own infirmity, has made these divisions, so that every one might have recourse to that which he supposed himself to stand more particularly in need of. Hence we find different names employed by different nations; the inferior deities are arranged in classes, and diseases and plagues are deified, in consequence of our anxious wish to propitiate them. It was from this cause that a temple was dedicated to Fever, at the public expense, on the Palatine Hill, and to Orbona, near the Temple of the Lares, and that an altar was elected to Good Fortune on the Esquiline. Hence we may understand how it comes to pass that there is a greater population of the Celestials than of human beings, since each individual makes a separate God for himself, adopting his own Juno and his own Genius. And there are nations who make Gods of certain animals, and even certain obscene things, which are not to be spoken of, swearing by stinking meats and such like. To suppose that marriages are contracted between the Gods, and that, during so long a period, there should have been no issue from them, that some of them should be old and always grey- headed and others young and like children, some of a dark complexion, winged, lame, produced from eggs, living and dying on alternate days, is sufficiently puerile and foolish. But it is the height of impudence to imagine, that adultery takes place between them, that they have contests and quarrels, and that there are Gods of theft and of various crimes. To assist man is to be a God; this is the path to eternal glory.

This is the path which the Roman nobles formerly pursued, and this is the path which is now pursued by the greatest ruler of our age, Vespasian Augustus, he who has come to the relief of an exhausted empire, as well as by his sons. This was the ancient mode of remunerating those who deserved it, to regard them as Gods. For the names of all the Gods, as well as of the stars that I have mentioned above, have been derived from their services to mankind. And with respect to Jupiter and Mercury, and the rest of the celestial nomenclature, who does not admit that they have reference to certain natural phænomena? But it is ridiculous to suppose, that the great head of all things, whatever it be, pays any regard to human affairs. Can we believe, or rather can there be any doubt, that it is not polluted by such a disagreeable and complicated office? It is not easy to determine which opinion would be most for the advantage of mankind, since we observe some who have no respect for the Gods, and others who carry it to a scandalous excess. They are slaves to foreign ceremonies; they carry on their fingers the Gods and the monsters whom they worship; they condemn and they lay great stress on certain kinds of food; they impose on themselves dreadful ordinances, not even sleeping quietly. They do not marry or adopt children, or indeed do anything else, without the sanction of their sacred rites. There are others, on the contrary, who will cheat in the very Capitol, and will forswear themselves even by Jupiter Tonans, and while these thrive in their crimes, the others torment themselves with their superstitions to no purpose.

Among these discordant opinions mankind have discovered for themselves a kind of intermediate deity, by which our scepticism concerning God is still increased. For all over the world, in all places, and at all times, Fortune is the only god whom every one invokes; she alone is spoken of, she alone is accused and is supposed to be guilty; she alone is in our thoughts, is praised and blamed, and is loaded with reproaches; wavering as she is, conceived by the generality of mankind to be blind, wandering, inconstant, uncertain, variable, and often favouring the unworthy. To her are referred all our losses and all our gains, and in casting up the accounts of mortals she alone balances the two pages of our sheet. We are so much in the power of chance, that change itself is considered as a God, and the

existence of God becomes doubtful.

But there are others who reject this principle and assign events to the influence of the stars, and to the laws of our nativity; they suppose that God, once for all, issues his decrees and never afterwards interferes. This opinion begins to gain ground, and both the learned and the unlearned vulgar are falling into it. Hence we have the admonitions of thunder, the warnings of oracles, the predictions of soothsayers, and things too trifling to be mentioned, as sneezing and stumbling with the feet reckoned among omens. The late Emperor Augustus relates, that he put the left shoe on the wrong foot, the day when he was near being assaulted by his soldiers. And such things as these so embarrass improvident mortals, that among all of them this alone is certain, that there is nothing certain, and that there is nothing more proud or more wretched than man. For other animals have no care but to provide for their subsistence, for which the spontaneous kindness of nature is all-sufficient; and this one circumstance renders their lot more especially preferable, that they never think about glory, or money, or ambition, and, above all, that they never reflect on death.

The belief, however, that on these points the Gods superintend human affairs is useful to us, as well as that the punishment of crimes, although sometimes tardy, from the Deity being occupied with such a mass of business, is never entirely remitted, and that the human race was not made the next in rank to himself, in order that they might be degraded like brutes. And indeed this constitutes the great comfort in this imperfect state of man, that even the Deity cannot do everything. For he cannot procure death for himself, even if he wished it, which, so numerous are the evils of life, has been granted to man as our chief good. Nor can he make mortals immortal, or recall to life those who are dead; nor can he effect, that he who has once lived shall not have lived, or that he who has enjoyed honours shall not have enjoyed them; nor has he any influence over past events but to cause them to be forgotten. And, if we illustrate the nature of our connexion with God by a less serious argument, he cannot make twice ten not to be twenty, and many other things of this kind. By these considerations the power of Nature is clearly proved, and is shown to be what we call God. It is not

foreign to the subject to have digressed into these matters, familiar as they are to every one, from the continual discussions that take place respecting God.

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CHAP. 6. (8.)

OF THE NATURE OF THE STARS; OF THE MOTION OF THE PLANETS.

Let us return from this digression to the other parts of nature. The stars which are described as fixed in the heavens, are not, as the vulgar suppose, attached each of them to different individuals, the brighter to the rich, those that are less so to the poor, and the dim to the aged, shining according to the lot of the individual, and separately assigned to mortals; for they have neither come into existence, nor do they perish in connexion with particular persons, nor does a falling star indicate that any one is dead. We are not so closely connected with the heavens as that the shining of the stars is affected by our death. When they are supposed to shoot or fall, they throw out, by the force of their fire, as if from an excess of nutriment, the superabundance of the humour which they have absorbed, as we observe to take place from the oil in our lamps, when they are burning. The nature of the celestial bodies is eternal, being interwoven, as it were, with the world, and, by this union, rendering it solid; but they exert their most powerful influence on the earth. This, notwithstanding its subtilty, may be known by the clearness and the magnitude of the effect, as we shall point out in the proper place. The account of the circles of the heavens will be better understood when we come to speak of the earth, since they have all a reference to it; except what has been discovered respecting the Zodiac, which I shall now detail.

Anaximander the Milesian, in the 58th olympiad, is said to have been the first who understood its obliquity, and thus opened the road to a correct knowledge of the subject. Afterwards Cleostratus made the signs in it, first marking those of Aries and Sagittarius; Atlas had formed the sphere long before this time. But now, leaving the further consideration of this subject, we must treat of the bodies that are situated between the earth and the heavens.

It is certain that the star called Saturn is the highest, and therefore appears the smallest, that he passes through the largest circuit, and that he is at least thirty years in completing it. The course of all the

planets, and among others of the Sun, and the Moon, is in the contrary direction to that of the heavens, that is towards the left, while the hea- vens are rapidly carried about to the right. And although, by the stars constantly revolving with immense velocity, they are raised up, and hurried on to the part where they set, yet they are all forced, by a motion of their own, in an opposite direction; and this is so ordered, lest the air, being always moved in the same direction, by the constant whirling of the heavens, should accumulate into one mass, whereas now it is divided and separated and beaten into small pieces, by the opposite motion of the different stars. Saturn is a star of a cold and rigid nature, while the orbit of Jupiter is much lower, and is carried round in twelve years. The next star, Mars, which some persons call Hercules, is of a fiery and burning nature, and from its nearness to the sun is carried round in little less than two years. In consequence of the excessive heat of this star and the rigidity of Saturn, Jupiter, which is interposed between the two, is tempered by both of them, and is thus rendered salutary. The path of the Sun consists of 360 degrees; but, in order that the shadow may return to the same point of the dial, we are obliged to add, in each year, five days and the fourth part of a day. On this account an intercalary day is given to every fifth year, that the period of the seasons may agree with that of the Sun.

Below the Sun revolves the great star called Venus, wandering with an alternate motion, and, even in its surnames, rivalling the Sun and the Moon. For when it precedes the day and rises in the morning, it receives the name of Lucifer, as if it were another sun, hastening on the day. On the contrary, when it shines in the west, it is named Vesper, as prolonging the light, and performing the office of the moon. Pythagoras, the Samian, was the first who discovered its nature, about the 62nd olympiad, in the 222nd year of the City. It excels all the other stars in size, and its brilliancy is so considerable, that it is the only star which produces a shadow by its rays. There has, consequently, been great interest made for its name; some have called it the star of Juno, others of Isis, and others of the Mother of the Gods. By its influence everything in the earth is generated. For, as it rises in either direction, it sprinkles everything with its genial dew, and not only matures the productions of the earth, but

stimulates all living things. It completes the circuit of the zodiac in 348 days, never receding from the sun more than 46 degrees, according to Timæus.

Similarly circumstanced, but by no means equal in size and in power, next to it, is the star Mercury, by some called Apollo; it is carried in a lower orbit, and moves in a course which is quicker by nine days, shining sometimes before the rising of the sun, and at other times after its setting, but never going farther from it than 23 degrees, as we learn from Timæus and Sosigenes. The nature of these two stars is peculiar, and is not the same with those mentioned above, for those are seen to recede from the sun through one-third or one-fourth part of the heavens, and are often seen opposite to it. They have also other larger circuits, in which they make their complete revolutions, as will be described in the account of the great year.

(9.) But the Moon, which is the last of the stars, and the one the most connected with the earth, the remedy provided by nature for darkness, excels all the others in its admirable qualities. By the variety of appearances which it assumes, it puzzles the observers, mortified that they should be the most ignorant concerning that star which is the nearest to them. She is always either waxing or waning; sometimes her disc is curved into horns, sometimes it is divided into two equal portions, and at other times it is swelled out into a full orb; sometimes she appears spotted and suddenly becomes very bright; she appears very large with her full orb and suddenly becomes invisible; now continuing during all the night, now rising late, and now aiding the light of the sun during a part of the day; becoming eclipsed and yet being visible while she is eclipsed; concealing herself at the end of the month and yet not supposed to be eclipsed. Sometimes she is low down, sometimes she is high up, and that not according to one uniform course, being at one time raised up to the heavens, at other times almost contiguous to the mountains; now elevated in the north, now depressed in the south; all which circumstances having been noticed by Endymion, a report was spread about, that he was in love with the moon. We are not indeed sufficiently grateful to those, who, with so much labour and care, have enlightened us with this light; while, so diseased is the human mind, that we take pleasure in writing the annals of blood and

slaughter, in order that the crimes of men may be made known to those who are ignorant of the constitution of the world itself.

Being nearest to the axis, and therefore having the smallest orbit, the Moon passes in twenty-seven days and the one-third part of a day, through the same space for which Saturn, the highest of the planets, as was stated above, requires thirty years. After remaining for two days in conjunction with the sun, on the thirtieth day she again very slowly emerges to pursue her accustomed course. I know not whether she ought not to be considered as our instructress in everything that can be known respecting the heavens; as that the year is divided into the twelve divisions of the months, since she follows the sun for the same number of times, until he returns to the commencement of his course; and that her brightness, as well as that of the other stars, is regulated by that of the sun, if indeed they all of them shine by light borrowed from him, such as we see floating about, when it is reflected from the surface of water. On this account it is that she dissolves so much moisture, by a gentle and less perfect force, and adds to the quantity of that which the rays of the sun consume. On this account she appears with an unequal light, because being full only when she is in opposition, on all the remaining days she shows only so much of herself to the earth as she receives light from the sun. She is not seen in conjunction, because, at that time, she sends back the whole stream of light to the source whence she has derived it. That the stars generally are nourished by the terrestrial moisture is evident, because, when the moon is only half visible she is sometimes seen spotted, her power of absorbing moisture not having been powerful enough; for the spots are nothing else than the dregs of the earth drawn up along with the moisture. (10.) But her eclipses and those of the sun, the most wonderful of all the phænomena of nature, and which are like prodigies, serve to indicate the magnitude of these bodies and the shadow which they cast.

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CHAP. 7.

OF THE ECLIPSES OF THE MOON AND THE SUN.

For it is evident that the sun is hid by the intervention of the moon, and the moon by the opposition of the earth, and that these changes are mutual, the moon, by her interposition, taking the rays of the sun from the earth, and the earth from the moon. As she advances darkness is suddenly produced, and again the sun is obscured by her shade; for night is nothing more than the shade of the earth. The figure of this shade is like that of a pyramid or an inverted top; and the moon enters it only near its point, and it does not exceed the height of the moon, for there is no other star which is obscured in the same manner, while a figure of this kind always terminates in a point. The flight of birds, when very lofty, shows that shadows do not extend beyond a certain distance; their limit appears to be the termination of the air and the commencement of the æther. Above the moon everything is pure and full of an eternal light. The stars are visible to us in the night, in the same way that other luminous bodies are seen in the dark. It is from these causes that the moon is eclipsed during the night. The two kinds of eclipses are not, however, at the stated monthly periods, on account of the obliquity of the zodiac, and the irregularly wandering course of the moon, as stated above; besides that the motions of these stars do not always occur exactly at the same points.

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CHAP. 8. (11.)

OF THE MAGNITUDE OF THE STARS.

This kind of reasoning carries the human mind to the heavens, and by contemplating the world as it were from thence, it discloses to us the magnitude of the three greatest bodies in nature. For the sun could not be entirely concealed from the earth, by the intervention of the moon, if the earth were greater than the moon. And the vast size of the third body, the sun, is manifest from that of the other two, so that it is not necessary to scrutinize its size, by arguing from its visible appearance, or from any conjectures of the mind; it must be immense, because the shadows of rows of trees, extending for any number of miles, are disposed in right lines, as if the sun were in the middle of space. Also, because, at the equinox, he is vertical to all the inhabitants of the southern districts at the same time; also, because the shadows of all the people who live on this side of the tropic fall, at noon, towards the north, and, at sunrise, point to the west. But this could not be the case unless the sun were much greater than the earth; nor, unless it much exceeded Mount Ida in breadth, could he be seen when he rises, passing considerably beyond it to the right and to the left, especially, considering that it is separated by so great an interval.

The eclipse of the moon affords an undoubted argument of the sun's magnitude, as it also does of the small size of the earth. For there are shadows of three figures, and it is evident, that if the body which produces the shadow be equal to the light, then it will be thrown off in the form of a pillar, and have no termination. If the body be greater than the light, the shadow will be in the form of an inverted cone, the bottom being the narrowest part, and being, at the same time, of an infinite length. If the body be less than the light, then we shall have the figure of a pyramid, terminating in a point. Now of this last kind is the shadow which produces the eclipse of the moon, and this is so manifest that there can be no doubt remaining, that the earth is exceeded in magnitude by the sun, a circumstance which is indeed indicated by the silent declaration of nature herself.

For why does he recede from us at the winter half of the year? That by the darkness of the nights the earth may be refreshed, which otherwise would be burned up, as indeed it is in certain parts; so great is his size.

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CHAP. 9. (12.)

AN ACCOUNT OF THE OBSERVATIONS THAT HAVE BEEN MADE ON THE HEAVENS BY DIFFERENT INDIVIDUALS.

The first among the Romans, who explained to the people at large the cause of the two kinds of eclipses, was Sulpicius Gallus, who was consul along with Marcellus; and when he was only a military tribune he relieved the army from great anxiety the day before king Perseus was conquered by Paulus; for he was brought by the general into a public assembly, in order to predict the eclipse, of which he afterwards gave an account in a separate treatise. Among the Greeks, Thales the Milesian first investigated the subject, in the fourth year of the forty-eighth olympiad, predicting the eclipse of the sun which took place in the reign of Alyattes, in the 170th year of the City. After them Hipparchus calculated the course of both these stars for the term of 600 years, including the months, days, and hours, the situation of the different places and the aspects adapted to each of them; all this has been confirmed by experience, and could only be acquired by partaking, as it were, in the councils of nature. These were indeed great men, superior to ordinary mortals, who having discovered the laws of these divine bodies, relieved the miserable mind of man from the fear which he had of eclipses, as foretelling some dreadful events or the destruction of the stars. This alarm is freely acknowledged in the sublime strains of Stesichorus and Pindar, as being produced by an eclipse of the sun. And with respect to the eclipse of the moon, mortals impute it to witchcraft, and therefore endeavour to aid her by producing discordant sounds. In consequence of this kind of terror it was that Nicias, the general of the Athenians, being ignorant of the cause, was afraid to lead out the fleet, and brought great distress on his troops. Hail to your genius, ye interpreters of heaven! ye who comprehend the nature of things, and who have discovered a mode of reasoning by which ye have conquered both gods and men! For who is there, in observing these things and seeing the labours which the stars are compelled to undergo (since we have chosen to apply this term to them), that

would not cheerfully submit to his fate, as one born to die? I shall now, in a brief and summary manner, touch on those points in which we are agreed, giving the reasons where it is necessary to do so; for this is not a work of profound argument, nor is it less wonderful to be able to suggest a probable cause for everything, than to give a complete account of a few of them only.

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CHAP. 10. (13.)

ON THE RECURRENCE OF THE ECLIPSES OF THE SUN AND THE MOON.

It is ascertained that the eclipses complete their whole revolution in the space of 223 months, that the eclipse of the sun takes place only at the conclusion or the commencement of a lunation, which is termed conjunction, while an eclipse of the moon takes place only when she is at the full, and is always a little farther advanced than the preceding eclipse. Now there are eclipses of both these stars in every year, which take place below the earth, at stated days and hours; and when they are above it they are not always visible, sometimes on account of the clouds, but more frequently, from the globe of the earth being opposed to the vault of the heavens. It was discovered two hundred years ago, by the sagacity of Hipparchus, that the moon is sometimes eclipsed after an interval of five months, and the sun after an interval of seven; also, that he becomes invisible, while above the horizon, twice in every thirty days, but that this is seen in different places at different times. But the most wonderful circumstance is, that while it is admitted that the moon is darkened by the shadow of the earth, this occurs at one time on its western, and at another time on its eastern side. And farther, that although, after the rising of the sun, that darkening shadow ought to be below the earth, yet it has once happened, that the moon has been eclipsed in the west, while both the luminaries have been above the horizon. And as to their both being invisible in the space of fifteen days, this very thing happened while the Vespasians were emperors, the father being consul for the third time, and the son for the second.

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CHAP. 11. (14.)

OF THE MOTION OF THE MOON.

It is certain that the moon, having her horns always turned from the sun, when she is waxing, looks towards the east; when she is waning, towards the west. Also, that, from the second day after the change, she adds 47 1/2 minutes each day, until she is full, and again decreases at the same rate, and that she always becomes invisible when she is within 14 degrees of the sun. This is an argument of the greater size of the planets than of the moon, since these emerge when they are at the distance of 7 degrees only. But their altitude causes them to appear much smaller, as we observe that, during the day, the brightness of the sun prevents those bodies from being seen which are fixed in the firmament, although they shine then as well as in the night: that this is the case is proved by eclipses, and by descending into very deep wells.

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CHAP. 12. (15.)

OF THE MOTIONS OF THE PLANETS AND THE GENERAL LAWS OF THEIR ASPECTS.

The three planets, which, as we have said, are situated above the sun, are visible when they come into conjunction with him. They rise visibly in the morning, when they are not more than 11 degrees from the sun; they are afterwards directed by the contact of his rays, and when they attain the trine aspect, at the distance of 120 degrees, they take their morning stationary positions, which are termed pri- mary; afterwards, when they are in opposition to the sun, they rise at the distance of 180 degrees from him. And again advancing on the other side to the 120th degree, they attain their evening stations, which are termed secondary, until the sun having arrived within 12 degrees of them, what is called their evening setting becomes no longer visible. Mars, as being nearer to the sun, feels the influence of his rays in the quadrature, at the distance of 90 degrees, whence that motion receives its name, being termed, from the two risings, respectively the first and the second nonagenarian. This planet passes from one station to another in six months, or is two months in each sign; the two other planets do not spend more than four months in passing from station to station.

The two inferior planets are, in like manner, concealed in their evening conjunction, and, when they have left the sun, they rise in the morning the same number of degrees distant from him. After having arrived at their point of greatest elongation, they then follow the sun, and having overtaken him at their morning setting, they become invisible and pass beyond him. They then rise in the evening, at the distances which were mentioned above. After this they return back to the sun and are concealed in their evening setting. The star Venus becomes stationary when at its two points of greatest elongation, that of the morning and of the evening, according to their respective risings. The stationary points of Mercury are so very brief, that they cannot be correctly observed.

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CHAP. 13.

WHY THE SAME STARS APPEAR AT SOME TIMES MORE LOFTY AND AT OTHER TIMES MORE NEAR.

The above is an account of the aspects and the occultations of the planets, a subject which is rendered very complicated by their motions, and is involved in much that is wonderful; especially, when we observe that they change their size and colour, and that the same stars at one time approach the north, and then go to the south, and are now seen near the earth, and then suddenly approach the heavens. If on this subject I deliver opinions different from my predecessors, I acknowledge that I am indebted for them to those individuals who first pointed out to us the proper mode of inquiry; let no one then ever despair of benefiting future ages.

But these things depend upon many different causes. The first cause is the nature of the circles described by the stars, which the Greeks term *apsides*, for we are obliged to use Greek terms. Now each of the planets has its own circle, and this a different one from that of the world; because the earth is placed in the centre of the heavens, with respect to the two extremities, which are called the poles, and also in that of the zodiac, which is situated obliquely between them. And all these things are made evident by the infallible results which we obtain by the use of the compasses. Hence the apsides of the planets have each of them different centres, and consequently they have different orbits and motions, since it necessarily follows, that the interior apsides are the shortest.

(16.) The apsides which are the highest from the centre of the earth are, for Saturn, when he is in Scorpio, for Jupiter in Virgo, for Mars in Leo, for the Sun in Gemini, for Venus in Sagittarius, and for Mercury in Capricorn, each of them in the middle of these signs; while in the opposite signs, they are the lowest and nearest to the centre of the earth. Hence it is that they appear to move more slowly when they are carried along the highest circuit; not that their actual motions are accelerated or retarded, these being fixed and determinate for each of them; but because it necessarily follows, that

lines drawn from the highest apsis must approach nearer to each other at the centre, like the spokes of a wheel; and that the same motion seems to be at one time greater, and at another time less, according to the distance from the centre.

Another cause of the altitudes of the planets is, that their highest apsides, with relation to their own centres, are in different signs from those mentioned above. Saturn is in the 20th degree of Libra, Jupiter in the 15th of Cancer, Mars in the 28th of Capricorn, the Sun in the 19th of Aries, Venus in the 27th of Pisces, Mercury in the 15th of Virgo, and the Moon in the 3rd of Taurus.

The third cause of the altitude depends on the form of the heavens, not on that of the orbits; the stars appearing to the eye to mount up and to descend through the depth of the air. With this cause is connected that which depends on the latitude of the planets and the obliquity of the zodiac. It is through this belt that the stars which I have spoken of are carried, nor is there any part of the world habitable, except what lies under it; the remainder, which is at the poles, being in a wild desert state. The planet Venus alone exceeds it by 2 degrees, which we may suppose to be the cause why some animals are produced even in these desert regions of the earth. The moon also wanders the whole breadth of the zodiac, but never exceeds it. Next to these the planet Mercury moves through the greatest space; yet out of the 12 degrees (for there are so many degrees of latitude in the zodiac), it does not pass through more than 8, nor does it go equally through these, 2 of them being in the middle of the zodiac, 4 in the upper part, and 2 in the lower part. Next to these the Sun is carried through the middle of the zodiac, winding unequally through the two parts of his tortuous circuit. The star Mars occupies the four middle degrees; Jupiter the middle degree and the two above it; Saturn, like the sun, occupies two. The above is an account of the latitudes as they descend to the south or ascend to the north. Hence it is plain that the generality of persons are mistaken in supposing the third cause of the apparent altitude to depend on the stars rising from the earth and climbing up the heavens. But to refute this opinion it is necessary to consider the subject with very great minuteness, and to embrace all the causes.

It is generally admitted, that the stars, at the time of their evening

setting, are nearest to the earth, both with respect to latitude and altitude, that they are at the commencement of both at their morning risings, and that they become stationary at the middle points of their latitudes, what are called the ecliptics. It is, moreover, acknowledged, that their motion is increased when they are in the vicinity of the earth, and diminished when they are removed to a greater altitude; a point which is most clearly proved by the different altitudes of the moon. There is no doubt that it is also increased at the morning risings, and that the three superior planets are retarded, as they advance from the first station to the second. And since this is the case, it is evident, that the latitudes are increased from the time of their morning risings, since the motions afterwards appear to receive less addition; but they gain their altitude in the first station, since the rate of their motion then begins to diminish, and the stars to recede.

And the reason of this must be particularly set forth. When the planets are struck by the rays of the sun, in the, situation which I have described, *i. e.* in their quadrature, they are prevented from holding on their straight forward course, and are raised on high by the force of the fire. This cannot be immediately perceived by the eye, and therefore they seem to be stationary, and hence the term station is derived. Afterwards the violence of the rays increases, and the vapour being beaten back forces them to recede.

This exists in a greater degree in their evening risings, the sun being then turned entirely from them, when they are drawn into the highest apsides; and they are then the least visible, since they are at their greatest altitude and are carried along with the least motion, as much less indeed as this takes place in the highest signs of the apsides. At the time of the evening rising the latitude decreases and becomes less as the motion is diminished, and it does not increase again until they arrive at the second station, when the altitude is also diminished; the sun's rays then coming from the other side, the same force now therefore propels them towards the earth which before raised them into the heavens, from their former triangular aspect. So different is the effect whether the rays strike the planets from below or come to them from above. And all these circumstances produce much more effect when they occur in the evening setting. This is the doctrine of the superior planets; that of the others is more difficult,

and has never been laid down by any one before me.

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CHAP. 14. (17.)

WHY THE SAME STARS HAVE DIFFERENT MOTIONS.

I must first state the cause, why the star Venus never recedes from the sun more than 46 degrees, nor Mercury more than 23, while they frequently return to the sun within this distance. As they are situated below the sun, they have both of them their apsides turned in the contrary direction; their orbits are as much below the earth as those of the stars above mentioned are above it, and therefore they cannot recede any farther, since the curve of their apsides has no greater longitude. The extreme parts of their apsides therefore assign the limits to each of them in the same manner, and compensate, as it were, for the small extent of their longitudes, by the great divergence of their latitudes. It may be asked, why do they not always proceed as far as the 46th and the 23rd degrees respectively? They in reality do so, but the theory fails us here. For it would appear that the apsides are themselves moved, as they never pass over the sun. When therefore they have arrived at the extremities of their orbits on either side, the stars are then supposed to have proceeded to their greatest distance; when they have been a certain number of degrees within their orbits, they are then supposed to return more rapidly, since the extreme point in each is the same. And on this account it is that the direction of their motion appears to be changed. For the superior planets are carried along the most quickly in their evening setting, while these move the most slowly; the former are at their greatest distance from the earth when they move the most slowly, the latter when they move the most quickly. The former are accelerated when nearest to the earth, the latter when at the extremity of the circle; in the former the rapidity of the motion begins to diminish at their morning risings, in the latter it begins to increase; the former are retrograde from their morning to their evening station, while Venus is retrograde from the evening to the morning station. She begins to increase her latitude from her morning rising, her altitude follows the sun from her morning station, her motion being the quickest and her altitude the greatest in her morning setting. Her latitude decreases

and her altitude diminishes from her evening rising, she becomes retrograde, and at the same time decreases in her altitude from her evening station.

Again, the star Mercury, in the same way, mounts up in both directions from his morning rising, and having followed the sun through a space of 15 degrees, he becomes almost stationary for four days. Presently he diminishes his altitude, and recedes from his evening setting to his morning rising. Mercury and the Moon are the only planets which descend for the same number of days that they ascend. Venus ascends for fifteen days and somewhat more; Saturn and Jupiter descend in twice that number of days, and Mars in four times. So great is the variety of nature! The reason of it is, however, evident; for those planets which are forced up by the vapour of the sun likewise descend with difficulty.

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CHAP. 15.

GENERAL LAWS OF THE PLANETS.

There are many other secrets of nature in these points, as well as the laws to which they are subject, which might be mentioned. For example, the planet Mars, whose course is the most difficult to observe, never becomes stationary when Jupiter is in the trine aspect, very rarely when he is 60 degrees from the sun, which number is one-sixth of the circuit of the heavens; nor does he ever rise in the same sign with Jupiter, except in Cancer and Leo. The star Mercury seldom has his evening risings in Pisces, but very frequently in Virgo, and his morning risings in Libra; he has also his morning rising in Aquarius, very rarely in Leo. He never becomes retrograde either in Taurus or in Gemini, nor until the 25th degree of Cancer. The Moon makes her double conjunction with the sun in no other sign except Gemini, while Sagittarius is the only sign in which she has sometimes no conjunction at all. The old and the new moon are visible on the same day or night in no other sign except Aries, and indeed it has happened very seldom to any one to have witnessed it. From this circumstance it was that the tale of Lynceus's quick-sightedness originated. Saturn and Mars are invisible at most for 170 days; Jupiter for 36, or, at the least, for 10 days less than this; Venus for 69, or, at the least, for 52; Mercury for 13, or, at the most, for 18.

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CHAP. 16. (18.)

THE REASON WHY THE STARS ARE OF DIFFERENT COLOURS.

The difference of their colour depends on the difference in their altitudes; for they acquire a resemblance to those planets into the vapour of which they are carried, the orbit of each tinging those that approach it in each direction. A colder planet renders one that approaches it paler, one more hot renders it redder, a windy planet gives it a lowering aspect, while the sun, at the union of their apsides, or the extremity of their orbits, completely obscures them. Each of the planets has its peculiar colour; Saturn is white, Jupiter brilliant, Mars fiery, Lucifer is glowing, Vesper refulgent, Mercury sparkling, the Moon mild; the Sun, when he rises, is blazing, afterwards he becomes radiating. The appearance of the stars, which are fixed in the firmament, is also affected by these causes. At one time we see a dense cluster of stars around the moon, when she is only half-enlightened, and when they are viewed in a serene evening; while, at another time, when the moon is full, there are so few to be seen, that we wonder whither they are fled; and this is also the case when the rays of the sun, or of any of the above-mentioned bodies, have dazzled our sight. And, indeed, the moon herself is, without doubt, differently affected at different times by the rays of the sun; when she is entering them, the convexity of the heavens rendering them more feeble than when they fall upon her more directly. Hence, when she is at a right angle to the sun, she is half-enlightened; when in the trine aspect, she presents an imperfect orb, while, in opposition, she is full. Again, when she is waning, she goes through the same gradations, and in the same order, as the three stars that are superior to the sun.

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CHAP. 17. (19.)

OF THE MOTION OF THE SUN AND THE CAUSE OF THE IRREGULARITY OF THE DAYS.

The Sun himself is in four different states; twice the night is equal to the day, in the Spring and in the Autumn, when he is opposed to the centre of the earth, in the 8th degree of Aries and Libra. The length of the day and the night is then twice changed, when the day increases in length, from the winter solstice in the 8th degree of Capricorn, and afterwards, when the night increases in length from the summer solstice in the 8th degree of Cancer. The cause of this inequality is the obliquity of the zodiac, since there is, at every moment of time, an equal portion of the firmament above and below the horizon. But the signs which mount directly upwards, when they rise, retain the light for a longer space, while those that are more oblique pass along more quickly.

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CHAP. 18. (20.)

WHY THUNDER IS ASCRIBED TO JUPITER.

It is not generally known, what has been discovered by men who are the most eminent for their learning, in consequence of their assiduous observations of the heavens, that the fires which fall upon the earth, and receive the name of thunder-bolts, proceed from the three superior stars, but principally from the one which is situated in the middle. It may perhaps depend on the superabundance of moisture from the superior orbit communicating with the heat from the inferior, which are expelled in this manner; and hence it is commonly said, the thunder-bolts are darted by Jupiter. And as, in burning wood, the burnt part is cast off with a crackling noise, so does the star throw off this celestial fire, bearing the omens of future events, even the part which is thrown off not losing its divine operation. And this takes place more particularly when the air is in an unsettled state, either because the moisture which is then collected excites the greatest quantity of fire, or because the air is disturbed, as if by the parturition of the pregnant star.

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CHAP. 19. (21.)

OF THE DISTANCES OR THE STARS.

Many persons have attempted to discover the distance of the stars from the earth, and they have published as the result, that the sun is nineteen times as far from the moon, as the moon herself is from the earth. Pythagoras, who was a man of a very sagacious mind, computed the distance from the earth to the moon to be 126,000 furlongs, that from her to the sun is double this distance, and that it is three times this distance to the twelve signs; and this was also the opinion of our countryman, Gallus Sulpicius.

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CHAP. 20. (22.)

OF THE HARMONY OF THE STARS.

Pythagoras, employing the terms that are used in music, sometimes names the distance between the Earth and the Moon a tone; from her to Mercury he supposes to be half this space, and about the same from him to Venus. From her to the Sun is a tone and a half; from the Sun to Mars is a tone, the same as from the Earth to the Moon; from him there is half a tone to Jupiter, from Jupiter to Saturn also half a tone, and thence a tone and a half to the zodiac. Hence there are seven tones, which he terms the diapason harmony, meaning the whole compass of the notes. In this, Saturn is said to move in the Doric time, Jupiter in the Phrygian, and so forth of the rest; but this is a refinement rather amusing than useful.

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CHAP. 21. (23.)

OF THE DIMENSIONS OF THE WORLD.

The stadium is equal to 125 of our Roman paces, or 625 feet. Posidonius supposes that there is a space of not less than 40 stadia around the earth, whence mists, winds and clouds proceed; beyond this he supposes that the air is pure and liquid, consisting of uninterrupted light; from the clouded region to the moon there is a space of 2,000,000 of stadia, and thence to the sun of 500,000,000. It is in consequence of this space that the sun, notwithstanding his immense magnitude, does not burn the earth. Many persons have imagined that the clouds rise to the height of 900 stadia. These points are not completely made out, and are difficult to explain; but we have given the best account of them that has been published, and if we may be allowed, in any degree, to pursue these investigations, there is one infallible geometrical principle, which we cannot reject. Not that we can ascertain the exact dimensions (for to profess to do this would be almost the act of a madman), but that the mind may have some estimate to direct its conjectures. Now it is evident that the orbit through which the sun passes consists of nearly 366 degrees, and that the diameter is always the third part and a little less than the seventh of the circumference. Then taking the half of this (for the earth is placed in the centre) it will follow, that nearly one-sixth part of the immense space, which the mind conceives as constituting the orbit of the sun round the earth, will compose his altitude. That of the moon will be one-twelfth part, since her course is so much shorter than that of the sun; she is therefore carried along midway between the sun and the earth. It is astonishing to what an extent the weakness of the mind will proceed, urged on by a little success, as in the abovementioned instance, to give full scope to its impudence! Thus, having ventured to guess at the space between the sun and the earth, we do the same with respect to the heavens, because he is situated midway between them; so that we may come to know the measure of the whole world in inches. For if the diameter consist of seven parts, there will be twenty-two of the same parts in the circumference; as if

we could measure the heavens by a plumb-line!

The Egyptian calculation, which was made out by Petosi- ris and Necepsos, supposes that each degree of the lunar orbit (which, as I have said, is the least) consists of little more than 33 stadia; in the very large orbit of Saturn the number is double; in that of the sun, which, as we have said, is in the middle, we have the half of the sum of these numbers. And this is indeed a very modest calculation, since if we add to the orbit of Saturn the distance from him to the zodiac, we shall have an infinite number of degrees.

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CHAP. 22. (24.)

OR THE STARS WHICH APPEAR SUDDENLY, OR OF COMETS.

A few things still remain to be said concerning the world; for stars are suddenly formed in the heavens themselves; of these there are various kinds.

(25.) The Greeks name these stars *comets*; we name them Crinitæ, as if shaggy with bloody locks, and surrounded with bristles like hair. Those stars, which have a mane hanging down from their lower part, like a long beard, are named Pogoniæ. Those that are named Acontiæ vibrate like a dart with a very quick motion. It was one of this kind which the Emperor Titus described in his very excellent poem, as having been seen in his fifth consulship; and this was the last of these bodies which has been observed. When they are short and pointed they are named Xiphiæ; these are the pale kind; they shine like a sword and are without any rays; while we name those Discei, which, being of an amber colour, in conformity with their name, emit a few rays from their margin only. A kind named Pitheus exhibits the figure of a cask, appearing convex and emitting a smoky light. The kind named Cerastias has the appearance of a horn; it is like the one which was visible when the Greeks fought at Salamis. Lampadias is like a burning torch; Hippias is like a horse's mane; it has a very rapid motion, like a circle revolving on itself. There is also a white comet, with silver hair, so brilliant that it can scarcely be looked at, exhibiting, as it were, the aspect of the Deity in a human form. There are some also that are shaggy, having the appearance of a fleece, surrounded by a kind of crown. There was one, where the appearance of a mane was changed into that of a spear; it happened in the 109th olympiad, in the 398th year of the City. The shortest time during which any one of them has been observed to be visible is 7 days, the longest 180 days.

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CHAP. 23.

THEIR NATURE, SITUATION, AND SPECIES.

Some of them move about in the manner of planets, others remain stationary. They are almost all of them seen towards the north, not indeed in any particular portion of it, but generally in that white part of it which has obtained the name of the Milky Way. Aristotle informs us that several of them are to be seen at the same time, but this, as far as I know, has not been observed by any one else; also that they prognosticate high winds and great heat. They are also visible in the winter months, and about the south pole, but they have no rays proceeding from them. There was a dreadful one observed by the Æthiopians and the Egyptians, to which Typhon, a king of that period, gave his own name; it had a fiery appearance, and was twisted like a spiral; its aspect was hideous, nor was it like a star, but rather like a knot of fire. Sometimes there are hairs attached to the planets and the other stars. Comets are never seen in the western part of the heavens. It is generally regarded as a terrific star, and one not easily expiated; as was the case with the civil commotions in the consulship of Octavius, and also in the war of Pompey and Cæsar. And in our own age, about the time when Claudius Cæsar was poisoned and left the Empire to Domitius Nero, and afterwards, while the latter was Emperor, there was one which was almost constantly seen and was very frightful. It is thought important to notice towards what part it darts its beams, or from what star it receives its influence, what it resembles, and in what places it shines. If it resembles a flute, it portends some- thing unfavourable respecting music; if it appears in the parts of the signs referred to the secret members, something respecting lewdness of manners; something respecting wit and learning, if they form a triangular or quadrangular figure with the position of some of the fixed stars; and that some one will be poisoned, if they appear in the head of either the northern or the southern serpent.

Rome is the only place in the whole world where there is a temple dedicated to a comet; it was thought by the late Emperor Augustus to

be auspicious to him, from its appearing during the games which he was celebrating in honour of Venus Genetrix, not long after the death of his father Cæsar, in the College which was founded by him. He expressed his joy in these terms: “During the very time of these games of mine, a hairy star was seen during seven days, in the part of the heavens which is under the Great Bear. It rose about the eleventh hour of the day, was very bright, and was conspicuous in all parts of the earth. The common people supposed the star to indicate, that the soul of Cæsar was admitted among the immortal Gods; under which designation it was that the star was placed on the bust which was lately consecrated in the forum.” This is what he proclaimed in public, but, in secret, he rejoiced at this auspicious omen, interpreting it as produced for himself; and, to confess the truth, it really proved a salutary omen for the world at large.

Some persons suppose that these stars are permanent, and that they move through their proper orbits, but that they are only visible when they recede from the sun. Others suppose that they are produced by an accidental vapour together with the force of fire, and that, from this circumstance, they are liable to be dissipated.

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CHAP. 24. (26.)

THE DOCTRINE OF HIPPARCHUS ABOUT THE STARS.

This same Hipparchus, who can never be sufficiently commended, as one who more especially proved the relation of the stars to man, and that our souls are a portion of heaven, discovered a new star that was produced in his own age, and, by observing its motions on the day in which it shone, he was led to doubt whether it does not often happen, that those stars have motion which we suppose to be fixed. And the same individual attempted, what might seem presumptuous even in a deity, viz. to number the stars for posterity and to express their relations by appropriate names; having previously devised instruments, by which he might mark the places and the magnitudes of each individual star. In this way it might be easily discovered, not only whether they were destroyed or produced, but whether they changed their relative positions, and likewise, whether they were increased or diminished; the heavens being thus left as an inheritance to any one, who might be found competent to complete his plan.

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CHAP. 25.

EXAMPLES FROM HISTORY OF CELESTIAL PRODIGIES; *FACES, LAMPADES,* AND *BOLIDES.*

The *faces* shine brilliantly, but they are never seen excepting when they are falling one of these darted across the heavens, in the sight of all the people, at noon-day, when Germanicus Cæsar was exhibiting a show of gladiators. There are two kinds of them; those which are called *lampades* and those which are called *bolides,* one of which latter was seen during the troubles at Mutina. They differ from each other in this respect, that the *faces* produce a long train of light, the fore-part only being on fire; while the *bolides,* being entirely in a state of combustion, leave a still longer track behind them.

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CHAP. 26.

TRABES CELESTES; CHASMA CŒLI.

The *trabes* also, which are named δοκοὶ, shine in the same manner; one of these was seen at the time when the Lacedæmonians, by being conquered at sea, lost their influence in Greece. An opening sometimes takes place in the firmament, which is named *chasma*.

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CHAP. 27. (27.)

OF THE COLOURS OF THE SKY AND OF CELESTIAL FLAME.

There is a flame of a bloody appearance (and nothing is more dreaded by mortals) which falls down upon the earth, such as was seen in the third year of the 103rd olympiad, when King Philip was disturbing Greece. But my opinion is, that these, like everything else, occur at stated, natural periods, and are not produced, as some persons imagine, from a variety of causes, such as their fine genius may suggest. They have indeed been the precursors of great evils, but I conceive that the evils occurred, not because the prodigies took place, but that these took place because the evils were appointed to occur at that period. Their cause is obscure in consequence of their rarity, and therefore we are not as well acquainted with them as we are with the rising of the stars, which I have mentioned, and with eclipses and many other things.

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CHAP. 28. (28.)

OF CELESTIAL CORONÆ.

Stars are occasionally seen along with the sun, for whole days together, and generally round its orb, like wreaths made of the ears of corn, or circles of various colours; such as occurred when Augustus, while a very young man, was entering the city, after the death of his father, in order to take upon himself the great name which he assumed. (29.) The same *coronæ* occur about the moon and also about the principal stars, which are stationary in the heavens.

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CHAP. 29.

OF SUDDEN CIRCLES.

A bow appeared round the sun in the consulship of L. Opimius and L. Fabius, and a circle in that of C. Porcius and M. Acilius. (30.) There was a little circle of a red colour in the consulship of L. Julius and P. Rutilius.

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CHAP. 30.

OF UNUSUALLY LONG ECLIPSES OF THE SUN.

Eclipses of the sun also take place which are portentous and unusually long, such as occurred when Cæsar the Dictator was slain, and in the war against Antony, the sun remained dim for almost a whole year.

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CHAP. 31. (31.)

MANY SUNS.

And again, many suns have been seen at the same time; not above or below the real sun, but in an oblique direction, never near nor opposite to the earth, nor in the night, but either in the east or in the west. They are said to have been seen once at noon in the Bosphorus, and to have continued from morning until sunset. Our ancestors have frequently seen three suns at the same time, as was the case in the consulship of Sp. Postumius and L. Mucius, of L. Marcius and M. Portius, that of M. Antony and Dolabella, and that of M. Lepidus and L. Plancus. And we have ourselves seen one during the reign of the late Emperor Claudius, when he was consul along with Corn. Orfitus. We have no account transmitted to us of more than three having been seen at the same time.

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CHAP. 32, (32.)

MANY MOONS.

Three moons have also been seen, as was the case in the consulship of Cn. Domitius and C. Fannius; they have generally been named nocturnal suns.

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CHAP. 33. (33.)

DAYLIGHT IN THE NIGHT.

A bright light has been seen proceeding from the heavens in the night time, as was the case in the consulship of C. Cæcilius and Cn. Papirius, and at many other times, so that there has been a kind of daylight in the night.

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CHAP. 34. (34.)

BURNING SHIELDS.

A burning shield darted across at sunset, from west to east, throwing out sparks, in the consulship of L. Valerius and C. Marius.

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CHAP. 35. (35.)

AN OMINOUS APPEARANCE IN THE HEAVENS, THAT WAS SEEN ONCE ONLY.

We have an account of a spark falling from a star, and increasing as it approached the earth, until it became of the size of the moon, shining as through a cloud; it afterwards returned into the heavens and was converted into a *lampas;* this occurred in the consulship of Cn. Octavius and C. Scri- bonius. It was seen by Silanus, the proconsul, and his attendants.

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CHAP. 36. (36.)

OF STARS WHICH MOVE ABOUT IN VARIOUS DIRECTIONS.

Stars are seen to move about in various directions, but never without some cause, nor without violent winds proceeding from the same quarter.

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CHAP. 37. (37.)

OR THE STARS WHICH ARE NAMED CASTOR AND POLLUX.

These stars occur both at sea and at land. I have seen, during the night-watches of the soldiers, a luminous appearance, like a star, attached to the javelins on the ramparts. They also settle on the yard-arms and other parts of ships while sailing, producing a kind of vocal sound, like that of birds flitting about. When they occur singly they are mischievous, so as even to sink the vessels, and if they strike on the lower part of the keel, setting them on fire. When there are two of them they are considered auspicious, and are thought to predict a prosperous voyage, as it is said that they drive away that dreadful and terrific meteor named Helena. On this account their efficacy is ascribed to Castor and Pollux, and they are invoked as gods. They also occasionally shine round the heads of men in the evening, which is considered as predicting something very important. But there is great uncertainty respecting the cause of all these things, and they are concealed in the majesty of nature.

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CHAP. 38. (38.)

OR THE AIR AND ON THE CAUSE OF THE SHOWERS OF STONES.

So far I have spoken of the world itself and of the stars. I must now give an account of the other remarkable phænomena of the heavens. For our ancestors have given the name of heavens, or, sometimes, another name, air, to all the seemingly void space, which diffuses around us this vital spirit. It is situated beneath the moon, indeed much lower, as is admitted by every one who has made observations on it, and is composed of a great quantity of air from the upper regions, mixed with a great quantity of terrestrial vapour, the two forming a compound. Hence proceed clouds, thunder and lightning of all kinds; hence also hail, frost, showers, storms and whirlwinds; hence proceed many of the evils incident to mortals, and the mutual contests of the various parts of nature. The force of the stars keeps down all terrestrial things which tend towards the heavens, and the same force attracts to itself those things which do not go there spontaneously. The showers fall, mists rise up, rivers are dried up, hail-storms rush down, the rays of the sun parch the earth, and impel it from all quarters towards the centre. The same rays, still unbroken, dart back again, and carry with them whatever they can take up. Vapour falls from on high and returns again to the same place. Winds arise which contain nothing, but which return loaded with spoils. The breathing of so many animals draws down the spirit from the higher regions; but this tends to go in a contrary direction, and the earth pours out its spirit into the void space of the heavens. Thus nature moving to and fro, as if impelled by some machine, discord is kindled by the rapid motion of the world. Nor is the contest allowed to cease, for she is continually whirled round and lays open the causes of all things, forming an immense globe about the earth, while she again, from time to time, covers this other firma- ment with clouds. This is the region of the winds. Here their nature principally originates, as well as the causes of almost all other things; since most persons ascribe the darting of thunder and lightning to their violence. And to the same cause are assigned the showers of stones, these

having been previously taken up by the wind, as well as many other bodies in the same way. On this account we must enter more at large on this subject.

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CHAP. 39. (39.)

OR THE STATED SEASONS.

It is obvious that there are causes of the seasons and of other things which have been stated, while there are some things which are casual, or of which the reason has not yet been discovered. For who can doubt that summer and winter, and the annual revolution of the seasons are caused by the motion of the stars? As therefore the nature of the sun is understood to influence the temperature of the year, so each of the other stars has its specific power, which produces its appropriate effects. Some abound in a fluid retaining its liquid state, others, in the same fluid concreted into hoar frost, compressed into snow, or frozen into hail; some are prolific in winds, some in heat, some in vapours, some in dew, some in cold. But these bodies must not be supposed to be actually of the size which they appear, since the consideration of their immense height clearly proves, that none of them are less than the moon. Each of them exercises its influence over us by its own motions; this is particularly observable with respect to Saturn, which produces a great quantity of rain in its transits. Nor is this power confined to the stars which change their situations, but is found to exist in many of the fixed stars, whenever they are impelled by the force of any of the planets, or excited by the impulse of their rays; as we find to be the case with respect to the Suculæ, which the Greeks, in reference to their rainy nature, have termed the Hyades. There are also certain events which occur spontaneously, and at stated periods, as the rising of the Kids. The star Arcturus scarcely ever rises without storms of hail occurring.

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CHAP. 40. (40.)

OF THE RISING OF THE DOG-STAR.

Who is there that does not know that the vapour of the sun is kindled by the rising of the Dog-star? The most powerful effects are felt on the earth from this star. When it rises, the seas are troubled, the wines in our cellars ferment, and stagnant waters are set in motion. There is a wild beast, named by the Egyptians Oryx, which, when the star rises, is said to stand opposite to it, to look steadfastly at it, and then to sneeze, as if it were worshiping it. There is no doubt that dogs, during the whole of this period, are peculiarly disposed to become rabid.

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CHAP. 41. (41.)

OF THE REGULAR INFLUENCE OF THE DIFFERENT SEASONS.

There is moreover a peculiar influence in the different degrees of certain signs, as in the autumnal equinox, and also in the winter solstice, when we find that a particular star is connected with the state of the weather. It is not so much the recurrence of showers and storms, as of various circumstances, which act both upon animals and vegetables. Some are planet-struck, and others, at stated times, are affected in the bowels, the sinews, the head, or the intellect. The olive, the white poplar, and the willow turn their leaves round at the summer solstice. The herb pulegium, when dried and hanging up in a house, blossoms on the very day of the winter solstice, and bladders burst in consequence of their being distended with air. One might wonder at this, did we not observe every day, that the plant named heliotrope always looks towards the setting sun, and is, at all hours, turned towards him, even when he is obscured by clouds. It is certain that the bodies of oysters and of whelks, and of shell-fish generally, are increased in size and again diminished by the influence of the moon. Certain accurate observers have found out, that the entrails of the field-mouse correspond in number to the moon's age, and that the very small animal, the ant, feels the power of this luminary, always resting from her labours at the change of the moon. And so much the more disgraceful is our ignorance, as every one acknowledges that the diseases in the eyes of certain beasts of burden increase and diminish according to the age of the moon. But the immensity of the heavens, divided as they are into seventy-two constellations, may serve as an excuse. These are the resemblances of certain things, animate and inanimate, into which the learned have divided the heavens. In these they have announced 1600 stars, as being remarkable either for their effects or their appearance; for example, in the tail of the Bull there are seven stars, which are named Vergiliæ; in his forehead are the Suculæ; there is also Bootes, which follows the seven northern stars.

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CHAP. 42. (42.)

OR UNCERTAIN STATES OF THE WEATHER.

But I would not deny, that there may exist showers and winds, independent of these causes, since it is certain that an exhalation proceeds from the earth, which is sometimes moist, and at other times, in consequence of the vapours, like dense smoke; and also, that clouds are formed, either from the fluid rising up on high, or from the air being compressed into a fluid. Their density and their substance is very clearly proved from their intercepting the sun's rays, which are visible by divers, even in the deepest waters.

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CHAP. 43. (43.)

OR THUNDER AND LIGHTNING.

It cannot therefore be denied, that fire proceeding from the stars which are above the clouds, may fall on them, as we frequently observe on serene evenings, and that the air is agitated by the impulse, as darts when they are hurled whiz through the air. And when it arrives at the cloud, a discordant kind of vapour is produced, as when hot iron is plunged into water, and a wreath of smoke is evolved. Hence arise squalls. And if wind or vapour be struggling in the cloud, thunder is discharged; if it bursts out with a flame, there is a thunderbolt; if it be long in forcing out its way, it is simply a flash of lightning. By the latter the cloud is simply rent, by the former it is shattered. Thunder is pro- duced by the stroke given to the condensed air, and hence it is that the fire darts from the chinks of the clouds. It is possible also that the vapour, which has risen from the earth, being repelled by the stars, may produce thunder, when it is pent up in a cloud; nature restraining the sound whilst the vapour is struggling to escape, but when it does escape, the sound bursting forth, as is the case with bladders that are distended with air. It is possible also that the spirit, whatever it be, may be kindled by friction, when it is so violently projected. It is possible that, by the dashing of the two clouds, the lightning may flash out, as is the case when two stones are struck against each other. But all these things appear to be casual. Hence there are thunderbolts which produce no effect, and proceed from no immediate actual cause; by these mountains and seas are struck, and no injury is done. Those which prognosticate future events proceed from on high and from stated causes, and they come from their peculiar stars.

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CHAP. 44.

THE ORIGIN OF WINDS.

In like manner I would not deny that winds, or rather sudden gusts, are produced by the arid and dry vapours of the earth; that air may also be exhaled from water, which can neither be condensed into a mist, nor compressed into a cloud; that it may be also driven forward by the impulse of the sun, since by the term ‘wind’ we mean nothing more than a current of air, by whatever means it may be produced. For we observe winds to proceed from rivers and bays, and from the sea, even when it is tranquil; while others, which are named *Altani,* rise up from the earth; when they come back from the sea they are named *Tropæi,* but if they go straight on, *Apogæi*.

(44.) The windings and the numerous peaks of mountains, their ridges, bent into angles or broken into defiles, with the hollow valleys, by their irregular forms, cleaving the air which rebounds from them (which is also the cause why voices are, in many cases, repeated several times in succession), give rise to winds.

(45.) There are certain caves, such as that on the coast of Dalmatia, with a vast perpendicular chasm, into which, if a light weight only be let down, and although the day be calm, a squall issues from it like a whirlwind. The name of the place is Senta. And also, in the province of Cyrenaica, there is a certain rock, said to be sacred to the south wind, which it is profane for a human hand to touch, as the south wind immediately rolls forwards clouds of sand. There are also, in many houses, artificial cavities, formed in the walls, which produce currents of air; none of these are without their appropriate cause.

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CHAP. 45.

VARIOUS OBSERVATIONS RESPECTING WINDS.

But there is a great difference between a gale and a wind. The former are uniform and appear to rush forth; they are felt, not in certain spots only, but over whole countries, not forming breezes or squalls, but violent storms. Whether they be produced by the constant revolution of the world and the opposite motion of the stars, or whether they both of them depend on the generative spirit of the nature of things, wandering, as it were, up and down in her womb, or whether the air be scourged by the irregular strokes of the wandering stars, or the various projections of their rays, or whether they, each of them, proceed from their own stars, among which are those that are nearest to us, or whether they descend from those that are fixed in the heavens, it is manifest that they are all governed by a law of nature, which is not altogether unknown, although it be not completely ascertained.

(46.) More than twenty old Greek writers have published their observations upon this subject. And this is the more remarkable, seeing that there is so much discord in the world, and that it is divided into different kingdoms, that is into separate members, that there should have been so many who have paid attention to these subjects, which are so difficult to investigate. Especially when we consider the wars and the treachery which everywhere prevail; while pirates, the enemies of the human race, have possession of all the modes of communication, so that, at this time, a person may acquire more correct information about a country from the writings of those who have never been there, than from the inhabitants themselves. Whereas, at this day, in the blessed peace which we enjoy, under a prince who so greatly encourages the advancement of the arts, no new inquiries are set on foot, nor do we even make ourselves thoroughly masters of the discoveries of the ancients. Not that there were greater rewards held out, from the advantages being distributed to a greater number of persons, but that there were more individuals who diligently scrutinized these matters, with no other prospect but

that of benefiting posterity. It is that the manners of men are degenerated, not that the advantages are diminished. All the seas, as many as there are, being laid open, and a hospitable reception being given us at every shore, an immense number of people undertake voyages; but it is for the sake of gain, not of science. Nor does their understanding, which is blinded and bent only on avarice, perceive that this very thing might be more safely done by means of science. Seeing, therefore, that there are so many thousands of persons on the seas, I will treat of the winds with more minuteness than perhaps might otherwise appear suitable to my undertaking.

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CHAP. 46. (47.)

THE DIFFERENT KINDS OF WINDS.

The ancients reckoned only four winds (nor indeed does Homer mention more) corresponding to the four parts of the world; a very poor reason, as we now consider it. The next generation added eight others, but this was too refined and minute a division; the moderns have taken a middle course, and, out of this great number, have added four to the original set. There are, therefore, two in each of the four quarters of the heavens. From the equinoctial rising of the sun proceeds Subsolanus, and, from his brumal rising, Vulturnus; the former is named by the Greeks Apeliotes, the latter Eurus. From the south we have Auster, and from the brumal setting of the sun, Africus; these were named Notos and Libs. From the equinoctial setting proceeds Favonius, and from the solstitial setting, Corus; these were named Zephyrus and Argestes. From the seven stars comes Septemtrio, between which and the solstitial rising we have Aquilo, named Aparctias and Boreas. By a more minute subdivision we interpose four others, Thrascias, between Septemtrio and the solstitial setting; Cæcias, between Aquilo and the equinoctial rising; and Phœnices, between the brumal rising and the south. And also, at an equal distance from the south and the winter setting, between Libs and Notos, and compounded of the two, is Libonotos. Nor is this all. For some persons have added a wind, which they have named Meses, between Boreas and Cæcias, and one between Eurus and Notos, named Euronotus.

There are also certain winds peculiar to certain countries, which do not extend beyond certain districts, as Sciron in Attica, deviating a little from Argestes, and not known in the other parts of Greece. In other places it is a little higher on the card and is named Olympias; but all these have gone by the name of Argestes. In some places Cæcias is named Hellespontia, and the same is done in other cases. In the province of Narbonne the most noted wind is Circius; it is not inferior to any of the winds in violence, frequently driving the waves before it, to Ostia, straight across the Ligurian sea. Yet this same

wind is unknown in other parts, not even reaching Vienne, a city in the same province; for meeting with a high ridge of hills, just before it arrives at that district, it is checked, although it be the most violent of all the winds. Fabius also asserts, that the south winds never penetrate into Egypt. Hence this law of nature is obvious, that winds have their stated seasons and limits.

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CHAP. 47.

THE PERIODS OF THE WINDS.

The spring opens the seas for the navigators. In the beginning of this season the west winds soften, as it were, the winter sky, the sun having now gained the 25th degree of Aquarius; this is on the sixth day before the Ides of February. This agrees, for the most part, with all the remarks that I shall subsequently make, only anticipating the period by one day in the intercalary year, and again, preserving the same order in the succeeding lustrum. After the eighth day before the Calends of March, Favonius is called by some Chelidonias, from the swallows making their appearance. The wind, which blows for the space of nine days, from the seventy-first day after the winter solstice, is sometimes called Ornithias, from the arrival of the birds. In the contrary direction to Favonius is the wind which we name Subsolanus, and this is connected with the rising of the Vergiliæ, in the 25th degree of Taurus, six days before the Ides of May, which is the time when south winds prevail: these are opposite to Septemtrio. The dog-star rises in the hottest time of the summer, when the sun is entering the first degree of Leo; this is fifteen days before the Calends of August. The north winds, which are called Prodromi, precede its rising by about eight days. But in two days after its rising, the same north winds, which are named Etesiæ, blow more constantly during this period; the vapour from the sun, being increased twofold by the heat of this star, is supposed to render these winds more mild; nor are there any which are more regular. After these the south winds become more frequent, until the appearance of Arcturus, which rises eleven days before the autumnal equinox. At this time Corus sets in; Corus is an autumnal wind, and is in the opposite direction to Vulturnus. After this, and generally for forty-four days after the equinox, at the setting of the Vergiliæ, the winter commences, which usually happens on the third of the Ides of November. This is the period of the winter north wind, which is very unlike the summer north wind, and which is in the opposite direction to Africus. For seven days before the winter solstice, and for the

same length of time after it, the sea becomes calm, in order that the king-fishers may rear their young; from this circumstance they have obtained the name of the halcyon days; the rest of the season is winterly. Yet the severity of the storms does not entirely close up the sea. In former times, pirates were compelled, by the fear of death, to rush into death, and to brave the winter ocean; now we are driven to it by avarice.

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CHAP. 48.

NATURE OF THE WINDS.

Those are the coldest winds which are said to blow from the seven stars, and Corus, which is contiguous to them; these also restrain the others and dispel the clouds. The moist winds are Africus, and, still more, the Auster of Italy. It is said that, in Pontus, Cæcias attracts the clouds. The dry winds are Corus and Vulturnus, especially when they are about to cease blowing. The winds that bring snow are Aquilo and Septemtrio; Septemtrio brings hail, and so does Corus; Auster is sultry, Vulturnus and Zephyrus are warm. These winds are more dry than Subsolanus, and generally those which blow from the north and west are more dry than those which blow from the south and east. Aquilo is the most healthy of them all; Auster is unhealthy, and more so when dry; it is colder, perhaps because it is moist. Animals are supposed to have less appetite for food when this wind is blowing. The Etesiæ generally cease during the night, and spring up at the third hour of the day. In Spain and in Asia these winds have an easterly direction, in Pontus a northerly, and in other places a southerly direction. They blow also after the winter solstice, when they are called Ornithiæ, but they are more gentle and continue only for a few days. There are two winds which change their nature with their situation; in Africa Auster is attended with a clear sky, while Aquilo collects the clouds. Almost all winds blow in their turn, so that when one ceases its opposite springs up. When winds which are contiguous succeed each other, they go from left to right, in the direction of the sun. The fourth day of the moon generally determines their direction for the whole of the monthly period. We are able to sail in opposite directions by means of the same wind, if we have the sails properly set; hence it frequently happens that, in the night, vessels going in different directions run against each other. Auster produces higher winds than Aquilo, because the former blows, as it were, from the bottom of the sea, while the latter blows on the surface; it is therefore after south winds that the most mischievous earthquakes have occurred. Auster is more violent

during the night, Aquilo during the day; winds from the east continue longer than from the west. The north winds generally cease blowing on the odd days, and we observe the prevalence of the odd numbers in many other parts of nature; the male winds are therefore regulated by the odd numbers. The sun sometimes increases and sometimes restrains winds; when rising and setting it increases them; while, when on the meridian, it restrains them during the summer. They are, therefore, generally lulled during the middle of the day and of the night, because they are abated either by excessive cold or heat; winds are also lulled by showers. We generally expect them to come from that quarter where the clouds open and allow the clear sky to be seen. Eudoxus supposes that the same succession of changes occurs in them after a period of four years, if we observe their minute revolutions; and this applies not only to winds, but to whatever concerns the state of the weather. He begins his lustrum at the rising of the dog-star, in the intercalary year. So far concerning winds in general.

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CHAP. 49. (48.)

ECNEPHIAS AND TYPHON.

And now respecting the sudden gusts, which arising from the exhalations of the earth, as has been said above, and falling down again, being in the mean time covered by a thin film of clouds, exist in a variety of forms. By their wandering about, and rushing down like torrents, in the opinion of some persons, they produce thunder and lightning. But if they be urged on with greater force and violence, so as to cause the rupture of a dry cloud, they produce a squall, which is named by the Greeks Ecnephias. But, if these are compressed, and rolled up more closely together, and then break without any discharge of fire, i. e. without thunder, they produce a squall, which is named Typhon, or an Ecnephias in a state of agitation. It carries along a portion of the cloud which it has broken off, rolling it and turning it round, aggravating its own destruction by the weight of it, and whirling it from place to place. This is very much dreaded by sailors, as it not only breaks their sail-yards, but the vessels themselves, bending them about in various ways. This may be in a slight degree counteracted by sprinkling it with vinegar, when it comes near us, this substance being of a very cold nature. This wind, when it rebounds after the stroke, absorbs and carries up whatever it may have seized on.

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CHAP. 50.

TORNADOES; BLASTING WINDS; WHIRLWINDS, AND OTHER WONDERFUL KINDS OF TEMPESTS.

But if it burst from the cavity of a cloud which is more depressed, but less capacious than what produces a squall, and is accompanied by noise, it is called a whirlwind, and throws down everything which is near it. The same, when it is more burning and rages with greater heat, is called a blasting wind, scorching and, at the same time, throwing down everything with which it comes in contact. (49.) Typhon never comes from the north, nor have we Ecnephias when it snows, or when there is snow on the ground. If it breaks the clouds, and, at the same time, catches fire or burns, but not until it has left the cloud, it forms a thunderbolt. It differs from Prester as flame does from fire; the former is diffused in a gust, the latter is condensed with a violent impulse. The whirlwind, when it rebounds, differs from the tornado in the same manner as a loud noise does from a dash.

The squall differs from both of them in its extent, the clouds being more properly rent asunder than broken into pieces. A black cloud is formed, resembling a great animal, an appearance much dreaded by sailors. It is also called a pillar, when the moisture is so condensed and rigid as to be able to support itself. It is a cloud of the same kind, which, when drawn into a tube, sucks up the water.

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CHAP. 51. (50.)

OF THUNDER; IN WHAT COUNTRIES IT DOES NOT FALL, AND FOR WHAT REASON.

Thunder is rare both in winter and in summer, but from different causes; the air, which is condensed in the winter, is made still more dense by a thicker covering of clouds, while the exhalations from the earth, being all of them rigid and frozen, extinguish whatever fiery vapour it may receive. It is this cause which exempts Scythia and the cold districts round it from thunder. On the other hand, the excessive heat exempts Egypt; the warm and dry vapours of the earth being very seldom condensed, and that only into light clouds. But, in the spring and autumn, thunder is more frequent, the causes which produce summer and winter being, in each season, less efficient. From this cause thunder is more frequent in Italy, the air being more easily set in motion, in consequence of a milder winter and a showery summer, so that it may be said to be always spring or autumn. Also in those parts of Italy which recede from the north and lie towards the south, as in the district round our city, and in Campania, it lightens equally both in winter and in summer, which is not the case in other situations.

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CHAP. 52. (51.)

OF THE DIFFERENT KINDS OF LIGHTNING AND THEIR WONDERFUL EFFECTS.

We have accounts of many different kinds of thunder-storms. Those which are dry do not burn objects, but dissipate them; while those which are moist do not burn, but blacken them. There is a third kind, which is called bright lightning, of a very wonderful nature, by which casks are emptied, without the vessels themselves being injured, or there being any other trace left of their operation. Gold, copper, and silver are melted, while the bags which contain them are not in the least burned, nor even the wax seal much defaced. Marcia, a lady of high rank at Rome, was struck while pregnant; the fœtus was destroyed, while she herself survived without suffering any injury. Among the prognostics which took place at the time of Catiline's conspiracy, M. Herennius, a magistrate of the borough of Pompeii, was struck by lightning when the sky was without clouds.

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CHAP. 53. (52.)

THE ETRURIAN AND THE ROMAN OBSERVATIONS ON THESE POINTS.

The Tuscan books inform us, that there are nine Gods who discharge thunder-storms, that there are eleven different kinds of them, and that three of them are darted out by Jupiter. Of these the Romans retained only two, ascribing the diurnal kind to Jupiter, and the nocturnal to Summanus; this latter kind being more rare, in consequence of the heavens being colder, as was mentioned above. The Etrurians also suppose, that those which are named Infernal burst out of the ground; they are produced in the winter and are particularly fierce and direful, as all things are which proceed from the earth, and are not generated by or proceeding from the stars, but from a cause which is near at hand, and of a more disorderly nature. As a proof of this it is said, that all those which proceed from the higher regions strike obliquely, while those which are termed terrestrial strike in a direct line. And because these fall from matter which is nearer to us, they are supposed to proceed from the earth, since they leave no traces of a rebound; this being the effect of a stroke coming not from below, but from an opposite quarter. Those who have searched into the subject more minutely suppose, that these come from the planet Saturn, as those that are of a burning nature do from Mars. In this way it was that Volsinium, the most opulent town of the Tuscans, was entirely consumed by lightning. The first of these strokes that a man receives, after he has come into possession of any property, is termed *Familiar*, and is supposed to prognosticate the events of the whole of his life. But it is not generally supposed that they predict events of a private nature for a longer space than ten years, unless they happen at the time of a first marriage or a birth-day; nor that public predictions extend beyond thirty years, unless with respect to the founding of colonies.

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CHAP. 54. (53.)

OF CONJURING UP THUNDER.

It is related in our Annals, that by certain sacred rites and imprecations, thunder-storms may be compelled or invoked. There is an old report in Etruria, that thunder was invoked when the city of Volsinium had its territory laid waste by a monster named Volta. Thunder was also in- voked by King Porsenna. And L. Piso, a very respectable author, states in the first book of his Annals, that this had been frequently done before his time by Numa, and that Tullus Hostilius, imitating him, but not having properly performed the ceremonies, was struck with the lightning. We have also groves, and altars, and sacred places, and, among the titles of Jupiter, as Stator, Tonans, and Feretrius, we have a Jupiter Elicius. The opinions entertained on this point are very various, and depend much on the dispositions of different individuals. To believe that we can command nature is the mark of a bold mind, nor is it less the mark of a feeble one to reject her kindness. Our knowledge has been so far useful to us in the interpretation of thunder, that it enables us to predict what is to happen on a certain day, and we learn either that our fortune is to be entirely changed, or it discloses events which are concealed from us; as is proved by an infinite number of examples, public and private. Wherefore let these things remain, according to the order of nature, to some persons certain, to others doubtful, by some approved, by others condemned. I must not, however, omit the other circumstances connected with them which deserve to be related.

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CHAP. 55. (54.)

GENERAL LAWS OF LIGHTNING.

It is certain that the lightning is seen before the thunder is heard, although they both take place at the same time. Nor is this wonderful, since light has a greater velocity than sound. Nature so regulates it, that the stroke and the sound coincide; the sound is, however, produced by the discharge of the thunder, not by its stroke. But the air is impelled quicker than the lightning, on which account it is that everything is shaken and blown up before it is struck, and that a person is never injured when he has seen the lightning and heard the thunder. Thunder on the left hand is supposed to be lucky, because the east is on the left side of the heavens. We do not regard so much the mode in which it comes to us, as that in which it leaves us, whether the fire rebounds after the stroke, or whether the current of air returns when the operation is concluded and the fire is consumed. In relation to this object the Etrurians have divided the heavens into sixteen parts. The first great division is from north to east; the second to the south; the third to the west, and the fourth occupies what remains from west to north. Each of these has been subdivided into four parts, of which the eight on the east have been called the left, and those on the west the right divisions. Those which extend from the west to the north have been considered the most unpropitious. It becomes therefore very important to ascertain from what quarter the thunder proceeds, and in what direction it falls. It is considered a very favourable omen when it returns into the eastern divisions. But it prognosticates the greatest felicity when the thunder proceeds from the first-mentioned part of the heavens and falls back into it; it was an omen of this kind which, as we have heard, was given to Sylla, the Dictator. The remaining quarters of the heavens are less propitious, and also less to be dreaded. There are some kinds of thunder which it is not thought right to speak of, or even to listen to, unless when they have been disclosed to the master of a family or to a parent. But the futility of this observation was detected when the temple of Juno was struck at Rome, during the consulship of

Scaurus, he who was afterwards the Prince of the Senate.

It lightens without thunder more frequently in the night than in the day. Man is the only animal that is not always killed by it, all other animals being killed instantly, nature having granted to him this mark of distinction, while so many other animals excel him in strength. All animals fall down on the opposite side to that which has been struck; man, unless he be thrown down on the parts that are struck, does not expire. Those who are struck directly from above sink down immediately. When a man is struck while he is awake, he is found with his eyes closed; when asleep, with them open. It is not considered proper that a man killed in this way should be burnt on the funeral pile; our religion enjoins us to bury the body in the earth. No animal is consumed by lightning unless after having been previously killed. The parts of the animal that have been wounded by lightning are colder than the rest of the body.

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CHAP. 56. (55.)

OBJECTS. WHICH ARE NEVER STRUCK.

Among the productions of the earth, thunder never strikes the laurel, nor does it descend more than five feet into the earth. Those, therefore, who are timid consider the deepest caves as the most safe; or tents made of the skins of the animal called the sea-calf, since this is the only marine animal which is never struck; as is the case, among birds, with the eagle; on this account it is represented as the bearer of this weapon. In Italy, between Terracina and the temple of Feronia, the people have left off building towers in time of war, every one of them having been destroyed by thunderbolts.

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CHAP. 57. (56.)

SHOWERS OF MILK, BLOOD, FLESH, IRON, WOOL, AND BAKED TILES.

Besides these, we learn from certain monuments, that from the lower part of the atmosphere it rained milk and blood, in the consulship of M'Acilius and C. Porcius, and frequently at other times. This was the case with respect to flesh, in the consulship of P. Volumnius and Servius Sulpicius, and it is said, that what was not devoured by the birds did not become putrid. It also rained iron among the Lucanians, the year before Crassus was slain by the Parthians, as well as all the Lucanian soldiers, of whom there was a great number in this army. The substance which fell had very much the appearance of sponge; the augurs warned the people against wounds that might come from above. In the consulship of L. Paulus and C. Marcellus it rained wool, round the castle of Carissanum, near which place, a year after, T. Annius Milo was killed. It is recorded, among the transactions of that year, that when he was pleading his own cause, there was a shower of baked tiles.

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CHAP. 58. (57.)

RATTLING OF ARMS AND THE SOUND OF TRUMPETS HEARD IN THE SKY.

We have heard, that during the war with the Cimbri, the rattling of arms and the sound of trumpets were heard through the sky, and that the same thing has frequently happened before and since. Also, that in the third consulship of Marius, armies were seen in the heavens by the Amerini and the Tudertes, encountering each other, as if from the east and west, and that those from the east were repelled. It is not at all wonderful for the heavens themselves to be in flames, and it has been more frequently observed when the clouds have taken up a great deal of fire.

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CHAP. 59. (58.)

OR STONES THAT HAVE FALLEN FROM THE CLOUDS. THE OPINION OF ANAXAGORAS RESPECTING THEM.

The Greeks boast that Anaxagoras, the Clazomenian, in the second year of the 78th Olympiad, from his knowledge of what relates to the heavens, had predicted, that at a certain time, a stone would fall from the sun. And the thing accordingly happened, in the daytime, in a part of Thrace, at the river Ægos. The stone is now to be seen, a waggonload in size and of a burnt appearance; there was also a comet shining in the night at that time. But to believe that this had been predicted would be to admit that the divining powers of Anaxagoras were still more wonderful, and that our knowledge of the nature of things, and indeed every thing else, would be thrown into confusion, were we to suppose either that the sun is itself composed of stone, or that there was even a stone in it; yet there can be no doubt that stones have frequently fallen from the atmosphere. There is a stone, a small one indeed, at this time, in the Gymnasium of Abydos, which on this account is held in veneration, and which the same Anaxagoras predicted would fall in the middle of the earth. There is another at Cassandria, formerly called Potidæa, which from this circumstance was built in that place. I have myself seen one in the country of the Vocontii, which had been brought from the fields only a short time before.

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CHAP. 60. (59.)

THE RAINBOW.

What we name Rainbows frequently occur, and are not considered either wonderful or ominous; for they do not predict, with certainty, either rain or fair weather. It is obvious, that the rays of the sun, being projected upon a hollow cloud, the light is thrown back to the sun and is re- fracted, and that the variety of colours is produced by a mixture of clouds, air, and fire. The rainbow is certainly never produced except in the part opposite to the sun, nor even in any other form except that of a semicircle. Nor are they ever formed at night, although Aristotle asserts that they are sometimes seen at that time; he acknowledges, however, that it can only be on the 14th day of the moon. They are seen in the winter the most frequently, when the days are shortening, after the autumnal equinox. They are not seen when the days increase again, after the vernal equinox, nor on the longest days, about the summer solstice, but frequently at the winter solstice, when the days are the shortest. When the sun is low they are high, and when the sun is high they are low; they are smaller when in the east or west, but are spread out wider; in the south they are small, but of a greater span. In the summer they are not seen at noon, but after the autumnal equinox at any hour: there are never more than two seen at once,

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CHAP. 61.

THE NATURE OF HAIL, SNOW, HOAR, MIST, DEW; THE FORMS OF CLOUDS.

I do not find that there is any doubt entertained respecting the following points. (60.) Hail is produced by frozen rain, and snow by the same fluid less firmly concreted, and hoar by frozen dew. During the winter snow falls, but not hail; hail itself falls more frequently during the day than the night, and is more quickly melted than snow. There are no mists either in the summer or during the greatest cold of winter. There is neither dew nor hoar formed during great heat or winds, nor unless the night be serene. Fluids are diminished in bulk by being frozen, and, when the ice is melted, we do not obtain the same quantity of fluid as at first.

(61.) The clouds are varied in their colour and figure according as the fire which they contain is in excess or is absorbed by them.

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CHAP. 62. (62.)

THE PECULIARITIES OF THE WEATHER IN DIFFERENT PLACES.

There are, moreover, certain peculiarities in certain places. In Africa dew falls during the night in summer. In Italy, at Locri, and at the Lake Velinum, there is never a day in which a rainbow is not seen. At Rhodes and at Syracuse the sky is never so covered with clouds, but that the sun is visible at one time or another; these things, however, will be better detailed in their proper place. So far respecting the air.

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CHAP. 63. (63.)

NATURE OF THE EARTH.

Next comes the earth, on which alone of all parts of nature we have bestowed the name that implies maternal veneration. It is appropriated to man as the heavens are to God. She receives us at our birth, nourishes us when born, and ever afterwards supports us; lastly, embracing us in her bosom when we are rejected by the rest of nature, she then covers us with especial tenderness; rendered sacred to us, inasmuch as she renders us sacred, bearing our monuments and titles, continuing our names, and extending our memory, in opposition to the shortness of life. In our anger we imprecate her on those who are now no more, as if we were ignorant that she is the only being who can never be angry with man. The water passes into showers, is concreted into hail, swells into rivers, is precipitated in torrents; the air is condensed into clouds, rages in squalls; but the earth, kind, mild, and indulgent as she is, and always ministering to the wants of mortals, how many things do we compel her to produce spontaneously! What odours and flowers, nutritive juices, forms and colours! With what good faith does she render back all that has been entrusted to her! It is the vital spirit which must bear the blame of producing noxious animals; for the earth is constrained to receive the seeds of them, and to support them when they are produced. The fault lies in the evil nature which generates them. The earth will no longer harbour a serpent after it has attacked any one, and thus she even demands punishment in the name of those who are indifferent about it themselves. She pours forth a profusion of medicinal plants, and is always producing something for the use of man. We may even suppose, that it is out of compassion to us that she has ordained certain substances to be poisonous, in order that when we are weary of life, hunger, a mode of death the most foreign to the kind disposition of the earth, might not consume us by a slow decay, that precipices might not lacerate our mangled bodies, that the unseemly punishment of the halter may not torture us, by stopping the breath of one who seeks his own destruction, or that we may not seek our

death in the ocean, and become food for our graves, or that our bodies may not be gashed by steel. On this account it is that nature has produced a substance which is very easily taken, and by which life is extinguished, the body remaining undefiled and retaining all its blood, and only causing a degree of thirst. And when it is destroyed by this means, neither bird nor beast will touch the body, but he who has perished by his own hands is reserved for the earth.

But it must be acknowledged, that everything which the earth has produced, as a remedy for our evils, we have converted into the poison of our lives. For do we not use iron, which we cannot do without, for this purpose? But although this cause of mischief has been produced, we ought not to complain; we ought not to be ungrateful to this one part of nature. How many luxuries and how many insults does she not bear for us! She is cast into the sea, and, in order that we may introduce seas into her bosom, she is washed away by the waves. She is continually tortured for her iron, her timber, stone, fire, corn, and is even much more subservient to our luxuries than to our mere support. What indeed she endures on her surface might be tolerated, but we penetrate also into her bowels, digging out the veins of gold and silver, and the ores of copper and lead; we also search for gems and certain small pebbles, driving our trenches to a great depth. We tear out her entrails in order to extract the gems with which we may load our fingers. How many hands are worn down that one little joint may be ornamented! If the infernal regions really existed, certainly these burrows of avarice and luxury would have penetrated into them. And truly we wonder that this same earth should have produced anything noxious! But, I suppose, the savage beasts protect her and keep off our sacrilegious hands. For do we not dig among serpents and handle poisonous plants along with those veins of gold? But the Goddess shows herself more propitious to us, inasmuch as all this wealth ends in crimes, slaughter, and war, and that, while we drench her with our blood, we cover her with unburied bones; and being covered with these and her anger being thus appeased, she conceals the crimes of mortals. I consider the ignorance of her nature as one of the evil effects of an ungrateful mind.

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CHAP. 64. (64.)

OF THE FORM OF THE EARTH.

Every one agrees that it has the most perfect figure. We always speak of the ball of the earth, and we admit it to be a globe bounded by the poles. It has not indeed the form of an absolute sphere, from the number of lofty mountains and flat plains; but if the termination of the lines be bounded by a curve, this would compose a perfect sphere. And this we learn from arguments drawn from the nature of things, although not from the same considerations which we made use of with respect to the heavens. For in these the hollow convexity everywhere bends on itself, and leans upon the earth as its centre. Whereas the earth rises up solid and dense, like something that swells up and is protruded outwards. The heavens bend towards the centre, while the earth goes from the centre, the continual rolling of the heavens about it forcing its immense globe into the form of a sphere.

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CHAP. 65. (65.)

WHETHER THERE BE ANTIPODES?

On this point there is a great contest between the learned and the vulgar. We maintain, that there are men dispersed over every part of the earth, that they stand with their feet turned towards each other, that the vault of the heavens appears alike to all of them, and that they, all of them, appear to tread equally on the middle of the earth. If any one should ask, why those situated opposite to us do not fall, we directly ask in return, whether those on the opposite side do not wonder that we do not fall. But I may make a remark, that will appear plausible even to the most unlearned, that if the earth were of the figure of an unequal globe, like the seed of a pine, still it may be inhabited in every part.

But of how little moment is this, when we have another miracle rising up to our notice! The earth itself is pendent and does not fall with us; it is doubtful whether this be from the force of the spirit which is contained in the universe, or whether it would fall, did not nature resist, by allowing of no place where it might fall. For as the seat of fire is nowhere but in fire, nor of water except in water, nor of air except in air, so there is no situation for the earth except in itself, everything else repelling it. It is indeed wonderful that it should form a globe, when there is so much flat surface of the sea and of the plains. And this was the opinion of Dicæarchus, a peculiarly learned man, who measured the heights of mountains, under the direction of the kings, and estimated Pelion, which was the highest, at 1250 paces perpendicular, and considered this as not affecting the round figure of the globe. But this appears to me to be doubtful, as I well know that the summits of some of the Alps rise up by a long space of not less than 50,000 paces. But what the vulgar most strenuously contend against is, to be compelled to believe that the water is forced into a rounded figure; yet there is nothing more obvious to the sight among the phænomena of nature. For we see everywhere, that drops, when they hang down, assume the form of small globes, and when they are covered with dust, or have the down of leaves spread over them, they

are observed to be completely round; and when a cup is filled, the liquid swells up in the middle. But on account of the subtile nature of the fluid and its inherent softness, the fact is more easily ascertained by our reason than by our sight. And it is even more wonderful, that if a very little fluid only be added to a cup when it is full, the superfluous quantity runs over, whereas the contrary happens if we add a solid body, even as much as would weigh 20 denarii. The reason of this is, that what is dropt in raises up the fluid at the top, while what is poured on it slides off from the projecting surface. It is from the same cause that the land is not visible from the body of a ship when it may be seen from the mast; and that when a vessel is receding, if any bright object be fixed to the mast, it seems gradually to descend and finally to become invisible. And the ocean, which we admit to be without limits, if it had any other figure, could it cohere and exist without falling, there being no external margin to contain it? And the same wonder still recurs, how is it that the extreme parts of the sea, although it be in the form of a globe, do not fall down? In opposition to which doctrine, the Greeks, to their great joy and glory, were the first to teach us, by their subtile geometry, that this could not happen, even if the seas were flat, and of the figure which they appear to be. For since water always runs from a higher to a lower level, and this is admitted to be essential to it, no one ever doubted that the water would accumulate on any shore, as much as its slope would allow it. It is also certain, that the lower anything is, so much the nearer is it to the centre, and that all the lines which are drawn from this point to the water which is the nearest to it, are shorter than those which reach from the beginning of the sea to its extreme parts. Hence it follows, that all the water, from every part, tends towards the centre, and, because it has this tendency, does not fall.

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CHAP. 66.

How THE WATER IS CONNECTED WITH THE EARTH. OF THE NAVIGATION OF THE SEA AND THE RIVERS.

We must believe, that the great artist, Nature, has so arranged it, that as the arid and dry earth cannot subsist by itself and without moisture, nor, on the other hand, can the water subsist unless it be supported by the earth, they are connected by a mutual union. The earth opens her harbours, while the water pervades the whole earth, within, without, and above; its veins running in all directions, like connecting links, and bursting out on even the highest ridges; where, forced up by the air, and pressed out by the weight of the earth, it shoots forth as from a pipe, and is so far from being in danger of falling, that it bounds up to the highest and most lofty places. Hence the reason is obvious, why the seas are not increased by the daily accession of so many rivers.

(66.) The earth has, therefore, the whole of its globe girt, on every side, by the sea flowing round it. And this is not a point to be investigated by arguments, but what has been ascertained by experience.

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CHAP. 67. (67.)

WHETHER THE OCEAN SURROUNDS THE EARTH.

The whole of the western ocean is now navigated, from Gades and the Pillars of Hercules, round Spain and Gaul. The greater part of the northern ocean has also been navigated, under the auspices of the Emperor Augustus, his fleet having been carried round Germany to the promontory of the Cimbri; from which spot they descried an immense sea, or became acquainted with it by report, which extends to the country of the Scythians, and the districts that are chilled by excessive moisture. On this account it is not at all probable, that the ocean should be deficient in a region where moisture so much abounds. In like manner, towards the east, from the Indian sea, all that part which lies in the same latitude, and which bends round towards the Caspian, has been explored by the Macedonian arms, in the reigns of Seleucus and Antiochus, who wished it to be named after themselves, the Seleucian or Antiochian Sea. About the Caspian, too, many parts of the shores of the ocean have been explored, so that nearly the whole of the north has been sailed over in one direction or another. Nor can our argument be much affected by the point that has been so much discussed, respecting the Palus Mæotis, whether it be a bay of the same ocean, as is, I understand, the opinion of some persons, or whether it be the overflowing of a narrow channel connected with a different ocean. On the other side of Gades, proceeding from the same western point, a great part of the southern ocean, along Mauritania, has now been navigated. Indeed the greater part of this region, as well as of the east, as far as the Arabian Gulf, was surveyed in consequence of Alexander's victories. When Caius Cæsar, the son of Augustus, had the conduct of affairs in that country, it is said that they found the remains of Spanish vessels which had been wrecked there. While the power of Carthage was at its height, Hanno published an account of a voyage which he made from Gades to the extremity of Arabia; Himilco was also sent, about the same time, to explore the remote parts of Europe. Besides, we learn from Corn. Nepos, that one Eudoxus, a contemporary of his,

when he was flying from king Lathyrus, set out from the Arabian Gulf, and was carried as far as Gades. And long before him, Cælius Antipater informs us, that he had seen a person who had sailed from Spain to Æthiopia for the purposes of trade. The same Cornelius Nepos, when speaking of the northern circumnavigation, tells us that Q. Metellus Celer, the colleague of L. Afranius in the consulship, but then a proconsul in Gaul, had a present made to him by the king of the Suevi, of certain Indians, who sailing from India for the purpose of commerce, had been driven by tempests into Germany. Thus it appears, that the seas which flow com- pletely round the globe, and divide it, as it were, into two parts, exclude us from one part of it, as there is no way open to it on either side. And as the contemplation of these things is adapted to detect the vanity of mortals, it seems incumbent on me to display, and lay open to our eyes, the whole of it, whatever it be, in which there is nothing which can satisfy the desires of certain individuals.

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CHAP. 68. (68.)

WHAT PART OF THE EARTH IS INHABITED.

In the first place, then, it appears, that this should be estimated at half the globe, as if no portion of this half was encroached upon by the ocean. But surrounding as it does the whole of the land, pouring out and receiving all the other waters, furnishing whatever goes to the clouds, and feeding the stars themselves, so numerous and of such great size as they are, what a great space must we not suppose it to occupy! This vast mass must fill up and occupy an infinite extent. To this we must add that portion of the remainder which the heavens take from us. For the globe is divided into five parts, termed zones, and all that portion is subject to severe cold and perpetual frost which is under the two extremities, about each of the poles, the nearer of which is called the north, and the opposite the south, pole. In all these regions there is perpetual darkness, and, in consequence of the aspect of the milder stars being turned from them, the light is malignant, and only like the whiteness which is produced by hoar frost. The middle of the earth, over which is the orbit of the sun, is parched and burned by the flame, and is consumed by being so near the heat. There are only two of the zones which are temperate, those which lie between the torrid and the frigid zones, and these are separated from each other, in consequence of the scorching heat of the heavenly bodies. It appears, therefore, that the heavens take from us three parts of the earth; how much the ocean steals is uncertain.

And with respect to the part which is left us, I do not know whether that is not even in greater danger. This same ocean, insinuating itself, as I have described it, into a number of bays, approaches with its roaring so near to the inland seas, that the Arabian Gulf is no more than 115 miles from the Egyptian Sea, and the Caspian only 375 miles from the Euxine. It also insinuates itself into the numerous seas by which it separates Africa, Europe, and Asia; hence how much space must it occupy? We must also take into account the extent of all the rivers and the marshes, and we must add the lakes and the pools. There are also the mountains, raised up to the

heavens, with their precipitous fronts; we must also subtract the forests and the craggy valleys, the wildernesses, and the places, which, from various causes, are desert. The vast quantity which remains of the earth, or rather, as many persons have considered it, this speck of a world (for the earth is no more in regard to the universe), this is the object, the seat of our glory — here we bear our honours, here we exercise our power, here we covet wealth, here we mortals create our disturbances, here we continually carry on our wars, aye, civil wars, even, and unpeople the earth by mutual slaughter. And not to dwell on public feuds, entered into by nations against each other, here it is that we drive away our neighbours, and enclose the land thus seized upon within our own fence; and yet the man who has most extended his boundary, and has expelled the inhabitants for ever so great a distance, after all, what mighty portion of the earth is he master of? And even when his avarice has been the most completely satisfied, what part of it can he take with him into the grave?

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CHAP. 69. (69.)

THAT THE EARTH IS IN THE MIDDLE OF THE WORLD.

It is evident from undoubted arguments, that the earth is in the middle of the universe, but it is the most clearly proved by the equality of the days and the nights at the equinox. It is demonstrated by the quadrant, which affords the most decisive confirmation of the fact, that unless the earth was in the middle, the days and nights could not be equal; for, at the time of the equinox, the rising and setting of the sun are seen on the same line, and the rising of the sun, at the summer solstice, is on the same line with its setting at the winter solstice; but this could not happen if the earth was not situated in the centre

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CHAP. 70. (70.)

OF THE OBLIQUITY OF THE ZONES.

The three circles, which are connected with the abovementioned zones, distinguish the inequalities of the seasons; those are, the solstitial circle, which proceeds from the part of the Zodiac the highest to us and approaching the nearest to the district of the north; on the other side, the brumal, which is towards the south pole; and the equinoctial, which traverses the middle of the Zodiac.

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CHAP. 71.

OF THE INEQUALITY OF CLIMATES.

The cause of the other things which are worthy of our admiration depends on the figure of the earth itself, which, together with all its waters, is proved, by the same arguments, to be a globe. This certainly is the cause why the stars of the northern portion of the heavens never set to us, and why, on the other hand, those in the south never rise, and again, why the latter can never be seen by the former, the globe of the earth rising up and concealing them. The Northern Wain is never seen in Troglodytice, nor in Egypt, which borders on it; nor can we, in Italy, see the star Canopus, or Berenice's Hair; nor what, under the Emperor Augustus, was named Cæsar's Throne, although they are, there, very brilliant stars. The curved form of the earth is so obvious, rising up like a ridge, that Canopus appears to a spectator at Alexandria to rise above the horizon almost the quarter of a sign; the same star at Rhodes appears, as it were, to graze along the earth, while in Pontus it is not seen at all; where the Northern Wain appears considerably elevated. This same constellation cannot be seen at Rhodes, and still less at Alexandria. In Arabia, in the month of November, it is concealed during the first watch of the night, but may be seen during the second; in Meroë it is seen, for a short time, in the evening, at the solstice, and it is visible at day-break, for a few days before the rising of Arcturus. These facts have been principally ascertained by the expeditions of navigators; the sea appearing more elevated or depressed in certain parts; the stars suddenly coming into view, and, as it were, emerging from the water, after having been concealed by the bulging out of the globe. But the heavens do not, as some suppose, rise higher at one pole, otherwise its stars would be seen from all parts of the world; they indeed are supposed to be higher by those who are nearest to them, but the stars are sunk below the horizon to those who are more remote. As this pole appears to be elevated to those who are beneath it; so, when we have passed along the convexity of the earth, those stars rise up, which appear elevated

to the inhabitants of those other districts; all this, however, could not happen unless the earth had the shape of a globe.

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CHAP. 72.

IN WHAT PLACES ECLIPSES ARE INVISIBLE, AND WHY THIS IS THE CASE.

Hence it is that the inhabitants of the east do not see those eclipses of the sun or of the moon which occur in the evening, nor the inhabitants of the west those in the morning, while such as take place at noon are more frequently visible. We are told, that at the time of the famous victory of Alexander the Great, at Arbela, the moon was eclipsed at the second hour of the night, while, in Sicily, the moon was rising at the same hour. The eclipse of the sun which occurred the day before the calends of May, in the consulship of Vipstanus and Fonteius, not many years ago, was seen in Campania between the seventh and eighth hour of the day; the general Corbulo informs us, that it was seen in Armenia, between the eleventh and twelfth hour; thus the curve of the globe both reveals and conceals different objects from the inhabitants of its different parts. If the earth had been flat, everything would have been seen at the same time, from every part of it, and the nights would not have been unequal; while the equal intervals of twelve hours, which are now observed only in the middle of the earth, would in that case have been the same everywhere.

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CHAP. 73. (71.)

WHAT REGULATES THE DAYLIGHT ON THE EARTH.

Hence it is that there is not any one night and day the same, in all parts of the earth, at the same time; the intervention of the globe producing night, and its turning round producing day. This is known by various observations. In Africa and in Spain it is made evident by the Towers of Hannibal, and in Asia by the beacons, which, in consequence of their dread of pirates, the people erected for their protection; for it has been frequently observed, that the signals, which were lighted at the sixth hour of the day, were seen at the third hour of the night by those who were the most remote. Philonides, a courier of the above-mentioned Alexander, went from Sicyon to Elis, a distance of 1200 stadia, in nine hours, while he seldom returned until the third hour of the night, although the road was down-hill. The reason is, that, in going, he followed the course of the sun, while on his return, in the opposite direction, he met the sun and left it behind him. For the same reason it is, that those who sail to the west, even on the shortest day, compensate for the difficulty of sailing in the night and go farther, because they sail in the same direction with the sun.

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CHAP. 74. (72.)

REMARKS ON DIALS, AS CONNECTED WITH THIS SUBJECT.

The same dial-plates cannot be used in all places, the shadow of the sun being sensibly different at distances of 300, or at most of 500 stadia. Hence the shadow of the dial-pin, which is termed the gnomon, at noon and at the summer solstice, in Egypt, is a little more than half the length of the gnomon itself At the city of Rome it is only 1/9 less than the gnomon, at Ancona not more than 1/35 less, while in the part of Italy which is called Venetia, at the same hour, the shadow is equal to the length of the gnomon.

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CHAP. 75. (73.)

WHEN AND WHERE THERE ARE NO SHADOWS.

It is likewise said, that in the town of Syene, which is 5000 stadia south of Alexandria, there is no shadow at noon, on the day of the solstice; and that a well, which was sunk for the purpose of the experiment, is illuminated by the sun in every part. Hence it appears that the sun, in this place, is vertical, and Onesicritus informs us that this is the case, about the same time, in India, at the river Hypasis. It is well known, that at Berenice, a city of the Troglodytæ, and 4820 stadia beyond that city, in the same country, at the town of Ptolemais, which was built on the Red Sea, when the elephant was first hunted, this same thing takes place for forty-five days before the solstice and for an equal length of time after it, and that during these ninety days the shadows are turned towards the south. Again, at Meroë, an island in the Nile and the metropolis of the Æthiopians, which is 5000 stadia from Syene, there are no shadows at two periods of the year, viz. when the sun is in the 18th degree of Taurus and in the 14th of Leo. The Oretes, a people of India, have a mountain named Maleus, near which the shadows in sum- mer fall towards the south and in winter towards the north. The seven stars of the Great Bear are visible there for fifteen nights only. In India also, in the celebrated sea-port Patale, the sun rises to the right hand and the shadows fall towards the south. While Alexander was staving there it was observed, that the seven northern stars were seen only during the early part of the night. Onesicritus, one of his generals, informs us in his work, that in those places in India where there are no shadows, the seven stars are not visible; these places, he says, are called “Ascia,” and the people there do not reckon the time by hours.

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CHAP. 76. (74.)

WHERE THIS TAKES PLACE TWICE IN THE YEAR AND WHERE THE SHADOWS FALL IN OPPOSITE DIRECTIONS.

Eratosthenes informs us, that in the whole of Troglodytice, for twice forty-five days in the year, the shadows fall in the contrary direction.

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CHAP. 77. (75.)

WHERE THE DAYS ARE THE LONGEST AND WHERE THE SHORTEST.

Hence it follows, that in consequence of the daylight increasing in various degrees, in Meroë the longest day consists of twelve æquinoctial hours and eight parts of an hour, at Alexandria of fourteen hours, in Italy of fifteen, in Britain of seventeen; where the degree of light, which exists in the night, very clearly proves, what the reason of the thing also obliges us to believe, that, during the solstitial period, as the sun approaches to the pole of the world, and his orbit is contracted, the parts of the earth that lie below him have a day of six months long, and a night of equal length when he is removed to the south pole. Pytheas, of Marseilles, informs us, that this is the case in the island of Thule, which is six days' sail from the north of Britain. Some persons also affirm that this is the case in Mona, which is about 200 miles from Camelodunum, a town of Britain.

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CHAP. 78. (76.)

OF THE FIRST DIAL.

Anaximenes the Milesian, the disciple of Anaximander, of whom I have spoken above, discovered the theory of shadows and what is called the art of dialling, and he was the first who exhibited at Lacedæmon the dial which they call sciothericon.

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CHAP. 79. (77.)

OF THE MODE IN WHICH THE DAYS ARE COMPUTED.

The days have been computed by different people in different ways. The Babylonians reckoned from one sunrise to the next; the Athenians from one sunset to the next; the Umbrians from noon to noon; the multitude, universally, from light to darkness; the Roman priests and those who presided over the civil day, also the Egyptians and Hipparchus, from midnight to midnight. It appears that the interval from one sunrise to the next is less near the solstices than near the equinoxes, because the position of the zodiac is more oblique about its middle part, and more straight near the solstice.

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CHAP. 80. (78.)

OF THE DIFFERENCE OF NATIONS AS DEPENDING ON THE NATURE OF THE WORLD.

To these circumstances we must add those that are connected with certain celestial causes. There can be no doubt, that the Æthiopians are scorched by their vicinity to the sun's heat, and they are born, like persons who have been burned, with the beard and hair frizzled; while, in the opposite and frozen parts of the earth, there are nations with white skins and long light hair. The latter are savage from the inclemency of the climate, while the former are dull from its variableness. We learn, from the form of the legs, that in the one, the fluids, like vapour, are forced into the upper parts of the body, while in the other, being a gross humour, it is drawn downwards into the lower parts. In the cold regions savage beasts are produced, and in the others, various forms of animals, and many kinds of birds. In both situations the body grows tall, in the one case by the force of fire, and in the other by the nutritive moisture.

In the middle of the earth there is a salutary mixture of the two, a tract fruitful in all things, the habits of the body holding a mean between the two, with a proper tempering of colours; the manners of the people are gentle, the intellect clear, the genius fertile and capable of comprehending every part of nature. They have formed empires, which has never been done by the remote nations; yet these latter have never been subjected by the former, being severed from them and remaining solitary, from the effect produced on them by their savage nature.

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CHAP. 81. (79.)

OF EARTHQUAKES.

According to the doctrine of the Babylonians, earthquakes and clefts of the earth, and occurrences of this kind, are supposed to be produced by the influence of the stars, especially of the three to which they ascribe thunder; and to be caused by the stars moving with the sun, or being in conjunction with it, and, more particularly, when they are in the quartile aspect. If we are to credit the report, a most admirable and immortal spirit, as it were of a divine nature, should be ascribed to Anaximander the Milesian, who, they say, warned the Lacedæmonians to beware of their city and their houses. For he predicted that an earthquake was at hand, when both the whole of their city was destroyed and a large portion of Mount Taygetus, which projected in the form of a ship, was broken off, and added farther ruin to the previous destruction. Another prediction is ascribed to Pherecydes, the master of Pythagoras, and this was divine; by a draught of water from a well, he foresaw and predicted that there would be an earthquake in that place. And if these things be true, how nearly do these individuals approach to the Deity, even during their lifetime! But I leave every one to judge of these matters as he pleases. I certainly conceive the winds to be the cause of earthquakes; for the earth never trembles except when the sea is quite calm, and when the heavens are so tranquil that the birds cannot maintain their flight, all the air which should support them being withdrawn; nor does it ever happen until after great winds, the gust being pent up, as it were, in the fissures and concealed hollows. For the trembling of the earth resembles thunder in the clouds; nor does the yawning of the earth differ from the bursting of the lightning; the enclosed air struggling and striving to escape.

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CHAP. 82. (80.)

OF CLEFTS OF THE EARTH.

The earth is shaken in various ways, and wonderful effects are produced; in one place the walls of cities being thrown down, and in others swallowed up by a deep cleft; some- times great masses of earth are heaped up, and rivers forced out, sometimes even flame and hot springs, and at others the course of rivers is turned. A terrible noise precedes and accompanies the shock; sometimes a murmuring, like the lowing of cattle, or like human voices, or the clashing of arms. This depends on the substance which receives the sound, and the shape of the caverns or crevices through which it issues; it being more shrill from a narrow opening, more hoarse from one that is curved, producing a loud reverberation from hard bodies, a sound like a boiling fluid from moist substances, fluctuating in stagnant water, and roaring when forced against solid bodies. There is, therefore, often the sound without any motion. Nor is it a simple motion, but one that is tremulous and vibratory. The cleft sometimes remains, displaying what it has swallowed up; some- times concealing it, the mouth being closed and the soil being brought over it, so that no vestige is left; the city being, as it were, devoured, and the tract of country engulfed. Maritime districts are more especially subject to shocks. Nor are mountainous tracts exempt from them; I have found, by my inquiries, that the Alps and the Apennines are frequently shaken. The shocks happen more frequently in the autumn and in the spring, as is the case also with thunder. There are seldom shocks in Gaul and in Egypt; in the latter it depends on the prevalence of summer, in the former, of winter. They also happen more frequently in the night than in the day. The greatest shocks are in the morning and the evening; but they often take place at daybreak, and some- times at noon. They also take place during eclipses of the sun and of the moon, because at that time storms are lulled. They are most frequent when great heat succeeds to showers, or showers succeed to great heat.

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CHAP. 83. (81.)

SIGNS OF AN APPROACHING EARTHQUAKE.

There is no doubt that earthquakes are felt by persons on shipboard, as they are struck by a sudden motion of the waves, without these being raised by any gust of wind. And things that are in the vessels shake as they do in houses, and give notice by their creaking; also the birds, when they settle upon the vessels, are not without their alarms. There is also a sign in the heavens; for, when a shock is near at hand, either in the daytime or a little after sunset, a cloud is stretched out in the clear sky, like a long thin line. The water in wells is also more turbid than usual, and it emits a disagreeable odour.

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CHAP. 84. (82.)

PRESERVATIVES AGAINST FUTURE EARTHQUAKES.

These same places, however, afford protection, and this is also the case where there is a number of caverns, for they give vent to the confined vapour; a circumstance which has been remarked in certain towns, which have been less shaken where they have been excavated by many sewers. And, in the same town, those parts that are excavated are safer than the other parts, as is understood to be the case at Naples in Italy, the part of it which is solid being more liable to injury. Arched buildings are also the most safe, also the angles of walls, the shocks counteracting each other; walls made of brick also suffer less from the shocks. There is also a great difference in the nature of the motions, where various motions are experienced. It is the safest when it vibrates and causes a creaking in the building, and where it swells and rises upwards, and settles with an alternate motion. It is also harmless when the buildings coming together butt against each other in opposite directions, for the motions counteract each other. A movement like the rolling of waves is dangerous, or when the motion is impelled in one direction. The tremors cease when the vapour bursts out; but if they do not soon cease, they continue for forty days; generally, indeed, for a longer time: some have lasted even for one or two years.

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CHAP. 85. (83.)

PRODIGIES OF THE EARTH WHICH HAVE OCCURRED ONCE ONLY.

A great prodigy of the earth, which never happened more than once, I have found mentioned in the books of the Etruscan ceremonies, as having taken place in the district of Mutina, during the consulship of Lucius Martius and Sextus Julius. Two mountains rushed together, falling upon each other with a very loud crash, and then receding; while in the daytime flame and smoke issued from them; a great crowd of Roman knights, and families of people, and travellers on the Æmilian way, being spectators of it. All the farm-houses were thrown down by the shock, and a great number of animals that were in them were killed; it was in the year before the Social war; and I am in doubt whether this event or the civil commotions were more fatal to the territory of Italy. The prodigy which happened in our own age was no less wonderful; in the last year of the emperor Nero, as I have related in my history of his times, when certain fields and olive grounds in the district of Marrucinum, belonging to Vectius Marcellus, a Roman knight, the steward of Nero, changed places with each other, although the public highway was interposed.

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CHAP. 86. (81.)

WONDERFUL CIRCUMSTANCES ATTENDING EARTHQUAKES.

Inundations of the sea take place at the same time with earthquakes; the water being impregnated with the same spirit, and received into the bosom of the earth which subsides. The greatest earthquake which has occurred in our memory was in the reign of Tiberius, by which twelve cities of Asia were laid prostrate in one night. They occurred the most frequently during the Punic war, when we had accounts brought to Rome of fifty-seven earthquakes in the space of a single year. It was during this year that the Carthaginians and the Romans, who were fighting at the lake Thrasimenus, were neither of them sensible of a very great shock during the battle. Nor is it an evil merely consisting in the danger which is produced by the motion; it is all equal or a greater evil when it is considered as a prodigy. The city of Rome never experienced a shock, which was not the forerunner of some great calamity.

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CHAP. 87. (85.)

IN WHAT PLACES THE SEA HAS RECEDED.

The same cause produces an increase of the land; the vapour, when it cannot burst out forcibly lifting up the surface. For the land is not merely produced by what is brought down the rivers, as the islands called Echinades are formed by the river Achelous, and the greater part of Egypt by the Nile, where, according to Homer, it was a day and a night's journey from the main land to the island of Pharos; but, in some cases, by the receding of the sea, as, according to the same author, was the case with the Circæan isles. The same thing also happened in the harbour of Ambracia, for a space of 10,000 paces, and was also said to have taken place for 5000 at the Piræus of Athens, and likewise at Ephesus, where formerly the sea washed the walls of the temple of Diana. Indeed, if we may believe Herodotus, the sea came beyond Memphis, as far as the mountains of Ethiopia, and also from the plains of Arabia. The sea also surrounded Ilium and the whole of Teuthrania, and covered the plain through which the Mæander flows.

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CHAP. 88. (86.)

THE MODE IN WHICH ISLANDS RISE UP.

Land is sometimes formed in a different manner, rising suddenly out of the sea, as if nature was compensating the earth for its losses, restoring in one place what she had swallowed up in another.

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CHAP. 89. (87.)

WHAT ISLANDS HAVE BEEN FORMED, AND AT WHAT PERIODS.

Delos and Rhodes, islands which have now been long famous, are recorded to have risen up in this way. More lately there have been some smaller islands formed; Anapha, which is beyond Melos; Nea, between Lemnos and the Hellespont; Halone, between Lebedos and Teos; Thera and Therasia, among the Cyclades, in the fourth year of the 135th Olympiad. And among the same islands, 130 years afterwards, Hiera, also called Automate, made its appearance; also Thia, at the distance of two stadia from the former, 110 years afterwards, in our own times, when M. Junius Silanus and L. Balbus were consuls, on the 8th of the ides of July.

(88.) Opposite to us, and near to Italy, among the Æolian isles, an island emerged from the sea; and likewise one near Crete, 2500 paces in extent, and with warm springs in it; another made its appearance in the third year of the 163rd Olympiad, in the Tuscan gulf, burning with a violent explosion. There is a tradition too that a great number of fishes were floating about the spot, and that those who employed them for food immediately expired. It is said that the Pithecusan isles rose up, in the same way, in the bay of Campania, and that, shortly afterwards, the mountain Epopos, from which flame had suddenly burst forth, was reduced to the level of the neighbouring plain. In the same island, it is said, that a town was sunk in the sea; that in consequence of another shock, a lake burst out, and that, by a third, Prochytas was formed into an island, the neighbouring mountains being rolled away from it.

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CHAP. 90.

LANDS WHICH HAVE BEEN SEPARATED BY THE SEA.

In the ordinary course of things islands are also formed by this means. The sea has torn Sicily from Italy, Cyprus from Syria, Eubœa from Bœotia, Atalante and Macris from Eubœa, Besbycus from Bithynia, and Leucosia from the promontory of the Sirens.

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CHAP. 91. (89.)

ISLANDS WHICH HAVE BEEN UNITED TO THE MAIN LAND.

Again, islands are taken from the sea and added to the main land; Antissa to Lesbos, Zephyrium to Halicarnassus, Æthusa to Myndus, Dromiscus and Perne to Miletus, Narthecusa to the promontory of Parthenium. Hybanda, which was formerly an island of Ionia, is now 200 stadia distant from the sea. Syries is now become a part of Ephesus, and, in the same neighbourhood, Derasidas and Sophonia form part of Magnesia; while Epidaurus and Oricum are no longer islands.

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CHAP. 92. (90.)

LANDS WHICH HAVE BEEN TOTALLY CHANGED INTO SEAS.

The sea has totally carried off certain lands, and first of all, if we are to believe Plato, for an immense space where the Atlantic ocean is now extended. More lately we see what has been produced by our inland sea; Acarnania has been overwhelmed by the Ambracian gulf, Achaia by the Corinthian, Europe and Asia by the Propontis and Pontus. And besides these, the sea has rent asunder Leucas, Antirrhium, the Hellespont, and the two Bosphori.

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CHAP. 93. (91.)

LANDS WHICH HAVE BEEN SWALLOWED UP.

And not to speak of bays and gulfs, the earth feeds on itself; it has devoured the very high mountain of Cybotus, with the town of Curites; also Sipylus in Magnesia, and formerly, in the same place, a very celebrated city, which was called Tantalis; also the land belonging to the cities Galanis and Gamales in Phœnicia, together with the cities themselves; also Phegium, the most lofty ridge in Æthiopia. Nor are the shores of the sea more to be depended upon.

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CHAP. 94. (92.)

CITIES WHICH HAVE BEEN ABSORBED BY THE SEA.

The sea near the Palus Mæotis has carried away Pyrrha and Antissa, also Elice and Bura in the gulf of Corinth, traces of which places are visible in the ocean. From the island Cea it has seized on 30,000 paces, which were suddenly torn off, with many persons on them. In Sicily also the half of the city of Tyndaris, and all the part of Italy which is wanting; in like manner it carried off Eleusina in Bœotia.

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CHAP. 95. (93.)

OF VENTS IN THE EARTH.

But let us say no more of earthquakes and of whatever may be regarded as the sepulchres of cities; let us rather speak of the wonders of the earth than of the crimes of nature. But, by Hercules! the history of the heavens themselves would not be more difficult to relate: — the abundance of metals, so various, so rich, so prolific, rising up during so many ages; when, throughout all the world, so much is, every day, destroyed by fire, by waste, by shipwreck, by wars, and by frauds; and while so much is consumed by luxury and by such a number of people: — the figures on gems, so multiplied in their forms; the variously-coloured spots on certain stones, and the whiteness of others, excluding everything except light:-the virtues of medicinal springs, and the perpetual fires bursting out in so many places, for so many ages:-the exhalation of deadly vapours, either emitted from caverns, or from certain unhealthy districts; some of them fatal to birds alone, as at Soracte, a district near the city; others to all animals, except to man, while others are so to man also, as in the country of Sinuessa and Puteoli. They are generally called vents, and, by some persons, Charon's sewers, from their exhaling a deadly vapour. Also at Amsanctum, in the country of the Hirpini, at the temple of Mephitis, there is a place which kills all those who enter it. And the same takes place at Hierapolis in Asia, where no one can enter with safety, except the priest of the great Mother of the Gods. In other places there are prophetic caves, where those who are intoxicated with the vapour which rises from them predict future events, as at the most noble of all oracles, Delphi. In which cases, what mortal is there who can assign any other cause, than the divine power of nature, which is everywhere diffused, and thus bursts forth in various places?

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CHAP. 96. (94.)

OF CERTAIN LANDS WHICH ARE ALWAYS SHAKING, AND OF FLOATING ISLANDS.

There are certain lands which shake when any one passes over them; as in the territory of the Gabii, not far from the city of Rome, there are about 200 acres which shake when cavalry passes over it: the same thing takes place at Reate.

(95.) There are certain islands which are always floating, as in the territory of the Cæcubum, and of the above-mentioned Reate, of Mutina, and of Statonia. In the lake of Vadimonis and the waters of Cutiliæ there is a dark wood, which is never seen in the same place for a day and a night together. In Lydia, the islands named Calaminæ are not only driven about by the wind, but may be even pushed at pleasure from place to place, by poles: many citizens saved themselves by this means in the Mithridatic war. There are some small islands in the Nymphæus, called the Dancers, because, when choruses are sung, they are moved by the motions of those who beat time. In the great Italian lake of Tarquinii, there are two islands with groves on them, which are driven about by the wind, so as at one time to exhibit the figure of a triangle and at another of a circle; but they never form a square.

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CHAP. 97. (96.)

PLACES IN WHICH IT NEVER RAINS.

There is at Paphos a celebrated temple of Venus, in a certain court of which it never rains; also at Nea, a town of Troas, in the spot which surrounds the statue of Minerva: in this place also the remains of animals that are sacrificed never putrefy.

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CHAP. 98.

THE WONDERS OF VARIOUS COUNTRIES COLLECTED TOGETHER.

Near Harpasa, a town of Asia, there stands a terrific rock, which may be moved by a single finger; but if it be pushed by the force of the whole body, it resists. In the Tauric peninsula, in the state of the Parasini, there is a kind of earth which cures all wounds. About Assos, in Troas, a stone is found, by which all bodies are consumed; it is called Sarcophagus. There are two mountains near the river Indus; the nature of one is to attract iron, of the other to repel it: hence, if there be nails in the shoes, the feet cannot be drawn off the one, or set down on the other. It has been noticed, that at Locris and Crotona, there has never been a pestilence, nor have they ever suffered from an earthquake; in Lycia there are always forty calm days before an earthquake. In the territory of Argyripa the corn which is sown never springs up. At the altars of Mucius, in the country of the Veii, and about Tusculum, and in the Cimmerian Forest, there are places in which things that are pushed into the ground cannot be pulled out again. The hay which is grown in Crustuminium is noxious on the spot, but elsewhere it is wholesome.

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CHAP. 99. (97)

CONCERNING THE CAUSE OF THE FLOWING AND EBBING OF THE SEA.

Much has been said about the nature of waters; but the most wonderful circumstance is the alternate flowing and ebbing of the tides, which exists, indeed, under various forms, but is caused by the sun and the moon. The tide flows twice and ebbs twice between each two risings of the moon, always in the space of twenty-four hours. First, the moon rising with the stars swells out the tide, and after some time, having gained the summit of the heavens, she declines from the meridian and sets, and the tide subsides. Again, after she has set, and moves in the heavens under the earth, as she approaches the meridian on the opposite side, the tide flows in; after which it recedes until she again rises to us. But the tide of the next day is never at the same time with that of the preceding; as if the planet was in attendance, greedily drinking up the sea, and continually rising in a different place from what she did the day before. The intervals are, however, equal, being always of six hours; not indeed in respect of any particular day or night or place, but equinoctial hours, and therefore they are unequal as estimated by the length of common hours, since a greater number of them fall on some certain days or nights, and they are never equal everywhere except at the equinox. This is a great, most clear, and even divine proof of the dullness of those, who deny that the stars go below the earth and rise up again, and that nature presents the same face in the same states of their rising and setting; for the course of the stars is equally obvious in the one case as in the other, producing the same effect as when it is manifest to the sight.

There is a difference in the tides, depending on the moon, of a complicated nature, and, first, as to the period of seven days. For the tides are of moderate height from the new moon to the first quarter; from this time they increase, and are the highest at the full: they then decrease. On the seventh day they are equal to what they were at the first quarter, and they again increase from the time that she is at first quarter on the other side. At her conjunction with the sun they are

equally high as at the full. When the moon is in the northern hemisphere, and recedes further from the earth, the tides are lower than when, going towards the south, she exercises her influence at a less distance. After an interval of eight years, and the hundredth revolution of the moon, the periods and the heights of the tides return into the same order as at first, this planet always acting upon them; and all these effects are likewise increased by the annual changes of the sun, the tides rising up higher at the equinoxes, and more so at the autumnal than at the vernal; while they are lower about the winter solstice, and still more so at the summer solstice; not indeed precisely at the points of time which I have mentioned, but a few days after; for example, not exactly at the full nor at the new moon, but after them; and not immediately when the moon becomes visible or invisible, or has advanced to the middle of her course, but generally about two hours later than the equinoctial hours; the effect of what is going on in the heavens being felt after a short interval; as we observe with respect to lightning, thunder, and thunderbolts.

But the tides of the ocean cover greater spaces and produce greater inundations than the tides of the other seas; whether it be that the whole of the universe taken together is more full of life than its individual parts, or that the large open space feels more sensibly the power of the planet, as it moves freely about, than when restrained within narrow bounds. On which account neither lakes nor rivers are moved in the same manner. Pytheas of Massilia informs us, that in Britain the tide rises 80 cubits. Inland seas are enclosed as in a harbour, but, in some parts of them, there is a more free space which obeys the influence. Among many other examples, the force of the tide will carry us in three days from Italy to Utica, when the sea is tranquil and there is no impulse from the sails. But these motions are more felt about the shores than in the deep parts of the seas, as in the body the extremities of the veins feel the pulse, which is the vital spirit, more than the other parts. And in most estuaries, on account of the unequal rising of the stars in each tract, the tides differ from each other, but this respects the period, not the nature of them; as is the case in the Syrtes.

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CHAP. 100.

WHERE THE TIDES RISE AND FALL IN AN UNUSUAL MANNER.

There are, however, some tides which are of a peculiar nature, as in the Tauromenian Euripus, where the ebb and flow is more frequent than in other places, and in Eubœa, where it takes place seven times during the day and the night. The tides intermit three times during each month, being the 7th, 8th and 9th day of the moon. At Gades, which is very near the temple of Hercules, there is a spring enclosed like a well, which sometimes rises and falls with the ocean, and, at other times, in both respects contrary to it. In the same place there is another well, which always agrees with the ocean. On the shores of the Bætis, there is a town where the wells become lower when the tide rises, and fill again when it ebbs; while at other times they remain stationary. The same thing occurs in one well in the town of Hispalis, while there is nothing peculiar in the other wells. The Euxine always flows into the Propontis, the water never flowing back into the Euxine.

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CHAP. 101. (9S.)

WONDERS OF THE SEA.

All seas are purified at the full moon; some also at stated periods. At Messina and Mylæ refuse matter, like dung, is cast up on the shore, whence originated the story of the oxen of the Sun having had their stable at that place. To what has been said above (not to omit anything with which I am acquainted) Aristotle adds, that no animal dies except when the tide is ebbing. The observation has been often made on the ocean of Gaul; but it has only been found true with respect to man.

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CHAP. 102. (99.)

THE POWER OF THE MOON OVER THE LAND AND THE SEA.

Hence we may certainly conjecture, that the moon is not unjustly regarded as the star of our life. This it is that replenishes the earth; when she approaches it, she fills all bodies, while, when she recedes, she empties them. From this cause it is that shell-fish grow with her increase, and that those animals which are without blood more particularly experience her influence; also, that the blood of man is increased or diminished in proportion to the quantity of her light; also that the leaves and vegetables generally, as I shall describe in the proper place, feel her influence, her power penetrating all things.

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CHAP. 103. (100.)

THE POWER OF THE SUN.

Fluids are dried up by the heat of the sun; we have therefore regarded it as a masculine star, burning up and absorbing everything.

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CHAP. 104.

WHY THE SEA IS SALT.

Hence it is that the widely-diffused sea is impregnated with the flavour of salt, in consequence of what is sweet and mild being evaporated from it, which the force of fire easily accomplishes; while all the more acrid and thick matter is left behind; on which account the water of the sea is less salt at some depth than at the surface. And this is a more true cause of the acrid flavour, than that the sea is the continued perspiration of the land, or that the greater part of the dry vapour is mixed with it, or that the nature of the earth is such that it impregnates the waters, and, as it were, medicates them. Among the prodigies which have occurred, there is one which happened when Dionysius, the tyrant of Sicily, was expelled from his kingdom; that, for the space of one day, the water in the harbour became sweet.

(101.) The moon, on the contrary, is said to be a feminine and delicate planet, and also nocturnal; also that it resolves humours and draws them out, but does not carry them off. It is manifest that the carcases of wild beasts are rendered putrid by its beams, that, during sleep, it draws up the accumulated torpor into the head, that it melts ice, and relaxes all things by its moistening spirit. Thus the changes of nature compensate each other, and are always adequate to their destined purpose; some of them congealing the elements of the stars and others dissolving them. The moon is said to be fed by fresh, and the sun by salt water.

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CHAP. 105. (102.)

WHERE THE SEA IS THE DEEPEST.

Fabianus informs us that the greatest depth of the sea is 15 stadia. We learn from others, that in the Euxine, opposite to the nation of the Coraxi, at what is called the Depths of the Euxine. about 300 stadia from the main land, the sea is immensely deep, no bottom having been found.

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CHAP. 106. (103.)

THE WONDERS OF FOUNTAINS AND RIVERS.

It is very remarkable that fresh water should burst out close to the sea, as from pipes. But there is no end to the wonders that are connected with the nature of waters. Fresh water floats on sea water, no doubt from its being lighter; and therefore sea water, which is of a heavier nature, supports better what floats upon it. And, in some places, different kinds of fresh water float upon each other; as that of the river which falls into the Fucinus; that of the Addua into the Larius; of the Ticinus into the Verbanus; of the Mincius into the Benacus; of the Ollius into the Sevinus; and of the Rhone into the Leman lake (this last being beyond the Alps, the others in Italy): all which rivers passing through the lakes for many miles, generally carry off no more water than they bring with them. The same thing is said to occur in the Orontes, a river of Syria, and in many others

Some rivers, from a real hatred of the sea, pass under it, as does Arethusa, a fountain of Syracuse, in which the substances are found that are thrown into the Alpheus; which, after flowing by Olympia, is discharged into the sea, on the shore of the Peloponnesus. The Lycus in Asia, the Era- sinus in Argolis, and the Tigris in Mesopotamia, sink into the earth and burst out again. Substances which are thrown into the fountain of Æsculapius at Athens are cast up at the fountain of Phalerum. The river which sinks into the ground in the plain of Atinum comes up again at the distance of twenty miles, and the Timavus does the same in Aquileia.

In the lake Asphaltites, in Judæa, which produces bitumen, no substance will sink, nor in the lake Arethusa, in the Greater Armenia: in this lake, although it contains nitre, fish are found. In the country of the Salentini, near the town of Manduria, there is a lake full to the brim, the waters of which are never diminished by what is taken out of it, nor increased by what is added. Wood, which is thrown into the river of the Cicones, or into the lake Velinus in Picenum, becomes coated with a stony crust, while in the Surius, a river of Colchis, the whole substance becomes as hard as stone. In the same manner, in

the Silarus, beyond Surrentum, not only twigs which are immersed in it, but likewise leaves are petrified; the water at the same time being proper for drinking. In the stream which runs from the marsh of Reate there is a rock, which continues to increase in size, and in the Red Sea olive-trees and green shrubs are produced.

There are many springs which are remarkable for their warmth. This is the case even among the ridges of the Alps, and in the sea itself, between Italy and Ænaria, as in the bay of Baiæ, and in the Liris and many other rivers. There are many places in which fresh water may be procured from the sea, as at the Chelidonian Isles, and at Arados, and in the ocean at Gades. Green plants are produced in the warm springs of Padua, frogs in those of Pisa, and fish in those of Vetulonia in Etruria, which is not far from the sea. In Casinas there is a cold river called Scatebra, which in summer is more full of water. In this, as in the river Stymphalis, in Arcadia, small water-mice are produced. The fountain of Jupiter in Dodona, although it is as cold as ice, and extinguishes torches that are plunged into it, yet, if they be brought near it, it kindles them again. This spring always becomes dry at noon, from which circumstance it is called αναπαυόμενον it then increases and becomes full at midnight, after which it again visibly decreases. In Illyricum there is a cold spring, over which if garments are spread they take fire. The pool of Jupiter Ammon, which is cold during the day, is warm during the night. In the country of the Troglodytæ, what they call the Fountain of the Sun, about noon is fresh and very cold; it then gradually grows warm, and, at midnight, becomes hot and saline.

In the middle of the day, during summer, the source of the Po, as if reposing itself, is always dry. In the island of Tenedos there is a spring, which, after the summer solstice, is full of water, from the third hour of the night to the sixth. The fountain Inopus, in the island of Delos, decreases and increases in the same manner as the Nile, and also at the same periods. There is a small island in the sea, opposite to the river Timavus, containing warm springs, which increase and decrease at the same time with the tides of the sea. In the territory of Pitinum, on the other side of the Apennines, the river Novanus, which during the solstice is quite a torrent, is dry in the winter.

In Faliscum, all the water which the oxen drink turns them white; in Bœotia, the river Melas turns the sheep black; the Cephissus, which flows out of a lake of the same name, turns them white; again, the Peneus turns them black, and the Xanthus, near Ilium, makes them red, whence the river derives its name. In Pontus, the river Astaces waters certain plains, where the mares give black milk, which the people use in diet. In Reate there is a spring called Neminia, which rises up sometimes in one place and sometimes in another, and in this way indicates a change in the produce of the earth. There is a spring in the harbour of Brundisium that yields water which never becomes putrid at sea. The water of the Lyncestis, which is said to be acidulous, intoxicates like wine; this is the case also in Paphlagonia and in the territory of Calenum. In the island of Andros, at the temple of Father Bacchus, we are assured by Mucianus, who was thrice consul, that there is a spring, which, on the nones of January, always has the flavour of wine; it is called διὸς θεοδοσία. Near Nonacris, in Arcadia, the Styx, which is not unlike it either in odour or in colour, instantly destroys those who drink it. Also in Librosus, a hill in the country of the Tauri, there are three springs which inevitably produce death, but without pain. In the territory of the Carrinenses in Spain, two springs burst out close together, the one of which absorbs everything, the other throws them out. In the same country there is another spring, which gives to all the fish the appearance of gold, although, when out of the water, they do not differ in any respect from other fish. In the territory of Como, near the Larian lake, there is a copious spring, which always swells up and subsides again every hour. In the island of Cydonea, before Lesbos, there is a warm fountain, which flows only during the spring season. The lake Sinnaus, in Asia, is impregnated with wormwood, which grows about it. At Colophon, in the cave of the Clarian Apollo, there is a pool, by the drinking of which a power is acquired of uttering wonderful oracles; but the lives of those who drink of it are shortened. In our own times, during the last years of Nero's life, we have seen rivers flowing backwards, as I have stated in my history of his times.

And indeed who can be mistaken as to the fact, that all springs are colder in summer than in winter, as well as these other wonderful

operations of nature; that copper and lead sink when in a mass, but float when spread out; and of things that are equally heavy, some will sink to the bottom, while others will remain on the surface; that heavy bodies are more easily moved in water; that a stone from Scyros, although very large, will float, while the same, when broken into small pieces, sinks; that the body of an animal, newly deprived of life, sinks, but that, when it is swelled out, it floats; that empty vessels are drawn out of the water with no more ease than those that are full; that rain-water is more useful for salt-pits than other kinds of water; that salt cannot be made, unless it is mixed with fresh water; that salt water freezes with more difficulty, and is more readily heated; that the sea is warmer in winter and more salt in the autumn; that everything is soothed by oil, and that this is the reason why divers send out small quantities of it from their mouths, because it smoothes any part which is rough and transmits the light to them; that snow never falls in the deep part of the sea; that although water generally has a tendency downwards, fountains rise up, and that this is the case even at the foot of Ætna, burning as it does, so as to force out the sand like a ball of flame to the distance of 150 miles?

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CHAP. 107.

THE WONDERS OF FIRE AND WATER UNITED.

And now I must give an account of some of the wonders of fire, which is the fourth element of nature; but first those produced by means of water.

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CHAP. 108. (104.)

OF MALTHA.

In Samosata, a city of Commagene, there is a pool which discharges an inflammable mud, called Maltha. It adheres to every solid body which it touches, and moreover, when touched, it follows you, if you attempt to escape from it. By means of it the people defended their walls against Lucullus, and the soldiers were burned in their armour. It is even set on fire in water. We learn by experience that it can be extinguished only by earth.

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CHAP. 109. (105.)

OF NAPHTHA.

Naphtha is a substance of a similar nature (it is so called about Babylon, and in the territory of the Astaceni, in Parthia), flowing like liquid bitumen. It has a great affinity to fire, which instantly darts on it wherever it is seen. It is said, that in this way it was that Medea burned Jason's mistress; her crown having taken fire, when she approached the altar for the purpose of sacrificing.

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CHAP. 110. (106.)

PLACES WHICH ARE ALWAYS BURNING.

Among the wonders of mountains there is Ætna, which always burns in the night, and for so long a period has always had materials for combustion, being in the winter buried in snow, and having the ashes which it has ejected covered with frost. Nor is it in this mountain alone that nature rages, threatening to consume the earth; in Phaselis, the mountain Chimæra burns, and indeed with a continual flame, day and night. Ctesias of Cnidos informs us, that this fire is kindled by water, while it is extinguished by earth and by hay. In the same country of Lycia, the mountains of Hephæstius, when touched with a flaming torch, burn so violently, that even the stones in the river and the sand burn, while actually in the water: this fire is also increased by rain. If a person makes furrows in the ground with a stick which has been kindled at this fire, it is said that a stream of flame will follow it. The summit of Cophantus, in Bactria, burns during the night; and this is the case in Media and at Sittacene, on the borders of Persia; likewise in Susa, at the White Tower, from fifteen apertures, the greatest of which also burns in the daytime. The plain of Babylon throws up flame from a place like a fishpond, an acre in extent. Near Hesperium, a mountain of the Æthiopians, the fields shine in the night-time like stars; the same thing takes place in the territory of the Megalopo- litani. This fire, however, is internal, mild, and not burning the foliage of a dense wood which is over it. There is also the crater of Nymphæum, which is always burning, in the neighbourhood of a cold fountain, and which, according to Theopompus, presages direful calamities to the inhabitants of Apollonia. It is increased by rain, and it throws out bitumen, which, becoming mixed with the fountain, renders it unfit to be tasted; it is, at other times, the weakest of all the bitumens. But what are these compared to other wonders? Hiera, one of the Æolian isles, in the middle of the sea, near Italy, together with the sea itself, during the Social war, burned for several days, until expiation was made, by a deputation from the senate. There is a hill in Æthiopia called θεῶν

ὄχημα, which burns with the greatest violence, throwing out flame that consumes everything, like the sun. In so many places, and with so many fires, does nature burn the earth!

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CHAP. 111. (107.)

WONDERS OF FIRE ALONE.

But since this one element is of so prolific a nature as to produce itself, and to increase from the smallest spark, what must we suppose will be the effect of all those funeral piles of the earth ? What must be the nature of that thing, which, in all parts of the world, supplies this most greedy voracity without destroying itself? To these fires must be added those innumerable stars and the great sun itself. There are also the fires made by men, those which are innate in certain kinds of stones, those produced by the friction of wood, and those in the clouds, which give rise to lightning. It really exceeds all other wonders, that one single day should pass in which everything is not consumed, especially when we reflect, that concave mirrors placed opposite to the sun's rays produce flame more readily than any other kind of fire; and that numerous small but natural fires abound everywhere. In Nymphæum there issues from a rock a fire which is kindled by rain; it also issues from the waters of the Scantia. This indeed is a feeble flame, since it passes off, remaining only a short time on any body to which it is applied: an ash tree, which overshadows this fiery spring, remains always green. In the territory of Mutina fire issues from the ground on the days that are consecrated to Vulcan. It is stated by some authors, that if a burning body falls on the fields below Aricia, the ground is set on fire; and that the stones in the territory of the Sabines and of the Sidicini, if they be oiled, burn with flame. In Egnatia, a town of Salentinum, there is a sacred stone, upon which, when wood is placed, flame immediately bursts forth. In the altar of Juno Lacinia, which is in the open air, the ashes remain unmoved, although the winds may be blowing from all quarters.

It appears also that there are sudden fires both in waters and even in the human body; that the whole of Lake Thrasymenus was on fire; that when Servius Tullius, while a child, was sleeping, flame darted out from his head; and Valerius Antias informs us, that the same flame appeared about L. Marcius, when he was pronouncing the

funeral oration over the Scipios, who were killed in Spain; and exhorting the soldiers to avenge their death. I shall presently mention more facts of this nature, and in a more distinct manner; in this place these wonders are mixed up with other subjects. But my mind, having carried me beyond the mere interpretation of nature, is anxious to lead, as it were by the hand, the thoughts of my readers over the whole globe.

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CHAP. 112. (108.)

THE DIMENSIONS OF THE EARTH.

Our part of the earth, of which I propose to give an account, floating as it were in the ocean which surrounds it (as I have mentioned above), stretches out to the greatest extent from east to west, viz. from India to the Pillars consecrated to Hercules at Gades, being a distance of 8568 miles, according to the statement of Artemidorus, or ac- cording to that of Isidorus, 9818 miles. Artemidorus adds to this 491 miles, from Gades, going round by the Sacred Promontory, to the promontory of Artabrum, which is the most projecting part of Spain.

This measurement may be taken in two directions. From the Ganges, at its mouth, where it discharges itself into the Eastern ocean, passing through India and Parthyene, to Myriandrus, a city of Syria, in the bay of Issus, is a distance of 5215 miles. Thence, going directly by sea, by the island of Cyprus, Patara in Lycia, Rhodes, and Astypalæa, islands in the Carpathian sea, by Tænarum in Laconia, Lilybæum in Sicily and Calaris in Sardinia, is 2103 miles. Thence to Gades is 1250 miles, making the whole distance from the Eastern ocean 8568 miles.

The other way, which is more certain, is chiefly by land. From the Ganges to the Euphrates is 5169 miles; thence to Mazaca, a town in Cappadocia, is 319 miles; thence, through Phrygia and Caria, to Ephesus is 415 miles; from Ephesus, across the Ægean sea to Delos, is 200 miles; to the Isthmus is 212 1/2 miles; thence, first by land and afterwards by the sea of Lechæum and the gulf of Corinth, to Patræ in Peloponnesus, 90 miles; to the promontory of Leucate 87 1/2 miles; as much more to Corcyra; to the Acroceraunian mountains 132 1/2, to Brundisium 87 1/2, and to Rome 360 miles. To the Alps, at the village of Scingomagum, is 519 miles; through Gaul to Illiberis at the Pyrenees, 927; to the ocean and the coast of Spain, 331 miles; across the passage of Gades 7 1/2 miles; which distances, according to the estimate of Artemidorus, make altogether 8945 miles.

The breadth of the earth, from south to north, is commonly

supposed to be about one-half only of its length, viz. 4490 miles; hence it is evident how much the heat has stolen from it on one side and the cold on the other: for I do not suppose that the land is actually wanting, or that the earth has not the form of a globe; but that, on each side, the uninhabitable parts have not been discovered. This measure then extends from the coast of the Æthiopian ocean, the most distant part which is habitable, to Meroë, 1000 miles; thence to Alexandria 1250; to Rhodes 562; to Cnidos 87 1/2; to Cos 25; to Samos 100; to Chios 94; to Mitylene 65; to Tenedos 44; to the promontory of Sigæum 12 1/2; to the entrance of the Euxine 312 1/2; to the promontory of Carambis 350; to the entrance of the Palus Mæotis 312 1/2; and to the mouth of the Tanais 275 miles, which distance, if we went by sea, might be shortened 89 miles. Beyond the Tanais the most diligent authors have not been able to obtain any accurate measurement. Artemidorus supposes that everything beyond is undiscovered, since he confesses that, about the Tanais, the tribes of the Sarmatæ dwell, who extend towards the north pole. Isidorus adds 1250 miles, as the distance to Thule; but this is mere conjecture. For my part, I believe that the boundaries of Sarmatia really extend to as great a distance as that mentioned above: for if it were not very extensive, how could it contain the innumerable tribes that are always changing their residence ? And indeed I consider the uninhabitable portion of the world to be still greater; for it is well known that there are innu- merable islands lying off the coast of Germany, which have been only lately discovered.

The above is all that I consider worth relating about the length and the breadth of the earth. But Eratosthenes, a man who was peculiarly well skilled in all the more subtle parts of learning, and in this above everything else, and a person whom I perceive to be approved by every one, has stated the whole of this circuit to be 252,000 stadia, which, according to the Roman estimate, makes 31,500 miles. The attempt is presumptuous, but it is supported by such subtle arguments that we cannot refuse our assent. Hipparchus, whom we must admire, both for the ability with which he controverts Eratosthenes, as well as for his diligence in everything else, has added to the above number not much less than 25,000 stadia.

(109.) Dionysodorus is certainly less worthy of confidence; but I

cannot omit this most remarkable instance of Grecian vanity. He was a native of Melos, and was celebrated for his knowledge of geometry; he died of old age in his native country. His female relations, who inherited his property, attended his funeral, and when they had for several successive days performed the usual rites, they are said to have found in his tomb an epistle written in his own name to those left above; it stated that he had descended from his tomb to the lowest part of the earth, and that it was a distance of 42,000 stadia. There were not wanting certain geometricians, who interpreted this epistle as if it had been sent from the middle of the globe, the point which is at the greatest distance from the surface, and which must necessarily be the centre of the sphere. Hence the estimate has been made that it is 252,000 stadia in circumference.

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CHAP. 113.

THE HARMONICAL PROPORTION OF THE UNIVERSE.

That harmonical proportion, which compels nature to be always consistent with itself, obliges us to add to the above measure, 12,000 stadia; and this makes the earth one ninety-sixth part of the whole universe.

Summary. — The facts, statements, and observations contained in this Book amount in number to 417.

Roman Authors Quoted. — M. Varro, Sulpicius Gallus, Titus Cæsar the Emperor, Q. Tubero, Tullius Tiro, L. Piso, T. Livius, Cornelius Nepos, Sebosus, Cælius Antipater, Fabianus, Antias, Mucianus, Cæcina, who wrote on the Etruscan discipline, Tarquitius, who did the same, Julius Aquila, who also did the same, and Sergius.

Foreign Authors Quoted. — Plato, Hipparchus, Timæus, Sosigenes, Petosiris, Necepsos, the Pythago- rean Philosophers, Posidonius, Anaximander, Epigenes the philosopher who wrote on Gnomonics, Euclid, Coeranus the philosopher, Eudoxus, Democritus, Critodemus, Thrasyllus, Serapion, Dicæarchus, Archimedes, Onesi- critus, Eratosthenes, Pytheas, Herodotus, Aristotle, Ctesias, Artemidorus of Ephesus, Isidorus of Charax, and Theopompus.

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BOOK III. AN ACCOUNT OF COUNTRIES, NATIONS, SEAS, TOWNS, HAVENS, MOUNTAINS, RIVERS, DISTANCES, AND PEOPLES WHO NOW EXIST OR FORMERLY EXISTED.

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INTRODUCTION.

Thus far have I treated of the position and the wonders of the earth, of the waters, the stars, and the proportion of the universe and its dimensions. I shall now proceed to describe its individual parts; although indeed we may with reason look upon the task as of an infinite nature, and one not to be rashly commenced upon without incurring censure. And yet, on the other hand, there is nothing which ought less to require an apology, if it is only considered how far from surprising it is that a mere mortal cannot be acquainted with everything. I shall therefore not follow any single author, but shall employ, in relation to each subject, such writers as I shall look upon as most worthy of credit. For, indeed, it is the characteristic of nearly all of them, that they display the greatest care and accuracy in the description of the countries in which they respectively flourished; so that by doing this, I shall neither have to blame nor contradict any one.

The names of the different places will here be simply given, and as briefly as possible; the account of their celebrity, and the events which have given rise thereto, being deferred to a more appropriate occasion; for it must be remembered that I am here speaking of the earth as a whole, and I wish to be understood as using the names without any reference whatever to their celebrity, and as though the places themselves were in their infancy, and had not as yet acquired any fame through great events. The name is men- tioned, it is true, but only as forming a part of the world and the system of the universe.

The whole globe is divided into three parts, Europe, Asia, and Africa. Our description commences where the sun sets and at the Straits of Gades, where the Atlantic ocean, bursting in, is poured forth into the inland seas. As it makes its entrance from that side, Africa is on the right hand and Europe on the left; Asia lies between them; the boundaries being the rivers Tanais and Nile. The Straits of the ocean, of which I have just spoken, extend fifteen miles in length and five in breadth, measured from the village of Mellaria in Spain to the Album Promontorium or White Promontory in Africa, as we

learn from Turranius Gracilis, who was born in that vicinity. Titus Livius and Cornelius Nepos however have stated the breadth, where it is least, to be seven miles, and where greatest, ten; from so small a mouth as this does so immense an expanse of water open upon us! Nor is our astonishment diminished by the fact of its being of great depth; for, instead of that, there are numerous breakers and shoals, white with foam, to strike the mariner with alarm. From this circumstance it is, that many have called this spot the threshold of The Inland Sea.

At the narrowest part of the Straits, there are mountains placed to form barriers to the entrance on either side, Abyla in Africa, and Calpe in Europe, the boundaries formerly of the labours of Hercules. Hence it is that the inhabitants have called them the Columns of that god; they also believe that they were dug through by him; upon which the sea, which was before excluded, gained admission, and so changed the face of nature.

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CHAP. 1. (1.)

THE BOUNDARIES AND GULFS OF EUROPE FIRST SET FORTH IN A GENERAL WAY.

I shall first then speak of Europe, the foster-mother of that people which has conquered all other nations, and itself by far the most beauteous portion of the earth. Indeed, many persons have, not without reason, considered it, not as a third part only of the earth, but as equal to all the rest, looking upon the whole of our globe as divided into two parts only, by a line drawn from the river Tanais to the Straits of Gades. The ocean, after pouring the waters of the Atlantic through the inlet which I have here described, and, in its eager progress, overwhelming all the lands which have had to dread its approach, skirts with its winding course the shores of those parts which offer a more effectual resistance, hollowing out the coast of Europe especially into numerous bays, among which there are four Gulfs that are more particularly remarkable. The first of these begins at Calpe, which I have previously mentioned, the most distant mountain of Spain; and bends, describing an immense curve, as far as Locri and the Promontory of Bruttium.

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CHAP. 2.

OF SPAIN GENERALLY.

The first land situate upon this Gulf is that which is called the Farther Spain or Bætica; next to which, beginning at the frontier town of Urgi, is the Nearer, or Tarraconensian Spain, extending as far as the chain of the Pyrenees. The Farther Spain is divided lengthwise into two provinces, Lusitania and Bætica, the former stretching along the northern side of the latter, and being divided from it by the river Ana. The source of this river is in the district of Laminium, in the Nearer Spain. It first spreads out into a number of small lakes, and then again contracts itself into a narrow channel, or entirely disappears under ground, and after frequently disappearing and again coming to light, finally dis- charges itself into the Atlantic Ocean. Tarraconensian Spain lies on one side, contiguous to the Pyrenees, running down- wards along the sides of that chain, and, stretching across from the Iberian Sea to the Gallic ocean, is separated from Bætica and Lusitania by Mount Solorius, the chains of the Oretani and the Carpetani, and that of the Astures.

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CHAP. 3.

OF BÆTICA.

Bætica, so called from the river which divides it in the middle, excels all the other provinces in the richness of its cultivation and the peculiar fertility and beauty of its vegetation.

It consists of four jurisdictions, those of Gades, of Corduba, of Astigi, and of Hispali. The total number of its towns is 175; of these nine are colonies, and eight muni- cipal towns; twenty-nine have been long since presented with the old Latin rights; six are free towns, three federate, and 120 tributary.

In this district, the things that more especially deserve notice, or are more easily explained in the Latin tongue, are the following, beginning at the river Ana, along the line of the seashore; the town of Onoba, surnamed Æstuaria; the rivers Luxia and Urium, flowing through this territory between the Ana and the Bætis; the Marian Mountains; the river Bætis; the coast of Corum, with its winding bay; opposite to which is Gades, of which we shall have occasion to speak among the islands. Next comes the Promontory of Juno, and the port of Bæsippo; the towns of Bœlo and Mellaria, at which latter begin the Straits of the Atlantic; Carteia, called by the Greeks Tartessos; and the mountain of Calpe.

Along the coast of the inland sea is the town of Barbesula with its river; also Salduba; the town of Suel; and then Malaca, with its river, one of the federate towns. Next to this comes Mænoba, with its river; then Sexifirmum, surnamed Julium; Selambina; Abdera; and Murci, which is at the boundary of Bætica. M. Agrippa supposed that all this coast was peopled by colonists of Punic origin. Beyond the Anas, and facing the Atlantic, is the country of the Bastuli and the Turditani. M. Varro informs us, that the Iberians, the Persians, the Phœnicians, the Celts, and the Carthaginians spread themselves over the whole of Spain; that the name "Lusitania" is derived from the games (*lusus*) of Father Bacchus, or the fury (*lyssa*) of his frantic attendants, and that Pan was the governor of the whole of it. But the traditions respecting Hercules and Pyrene, as well as Saturn, I

conceive to be fabulous in the highest degree.

The Bætis does not rise, as some writers have asserted, near the town of Mentisa, in the province of Tarraco, but in the Tugiensian Forest; and near it rises the river Tader, which waters the territory of Carthage. At Ilorcum it turns away from the Funeral Pile of Scipio; then taking a sweep to the left, it falls into the Atlantic Ocean, giving its name to this province: at its source it is but small, though during its course it receives many other streams, which it deprives as well of their waters as their renown. It first enters Bætica in Ossigita-nia, and glides gently, with a smooth current, past many towns situate on either side of its banks.

Between this river and the sea-shore the most celebrated places inland are Segida, also surnamed Augurina; Julia, called Fidentia; Urgao or Alba, Ebora or Cerealis, Iliberri or Liberini, Ilipula or Laus, Artigi or Julienses, Vesci or Faventia, Singili, Attegua, Arialdunum, Agla Minor, Bæbro, Castra Vinaria, Cisimbrium, Hippo Nova or New Hippo, Ilurco, Osca, Escua, Sucubo, Nuditanum, Old Tuati; all which towns are in that part of Bastitania which extends towards the sea, but in the jurisdiction of Corduba. In the neighbourhood of the river itself is Ossigi, also surnamed Laconicum, Iliturgi or Forum Julium, Ipasturgi or Triumphale, Setia, and, fourteen miles inland, Obulco, which is also called Pontificense.

Next to these comes Epora, a federate town, Sacili Martialium, and Onoba. On the right bank is Corduba, a Roman colony, surnamed Patricia; here the Bætis first becomes navigable. There are also the towns of Carbula and Detunda, and the river Singulis, which falls into the Bætis on the same side.

The towns in the jurisdiction of Hispalis are the following: Celti, Arua, Canama, Evia, Ilipa, surnamed Illa, and Italica. On the left of the river is the colony of Hispalis named Romuliensis, and, on the opposite side, the town of Osset, surnamed Julia Constantia, Vergentum, or Juli Genius, Orippo, Caura, Siarum, and the river Menoba, which enters the Bætis on its right bank. Between the æstuaries of the Bætis lie the towns of Nebrissa, surnamed Veneria, and of Colobona. The colonies are, Asta, which is also called Regia, and, more inland, that of Asido, surnamed Cæsariana.

The river Singulis, discharging itself into the Bætis at the place

already mentioned, washes the colony of Astigi, sur- named Augusta Firma, at which place it becomes navigable. The other colonies in this jurisdiction which are exempt from tribute are Tucci, surnamed Augusta Gemella, Itucci called Virtus Julia, Attubi or Claritas Julia, Urso or Genua Urbanorum; and among them in former times Munda, which was taken with the son of Pompey. The free towns are Old Astigi and Ostippo; the tributary towns are Callet, Callecula, Castra Gemina, the Lesser Ilipula, Merucra, Sacrana, Obulcula, and Oningis. As you move away from the sea-coast, near where the river Menoba is navigable, you find, at no great distance, the Alontigiceli and the Alostigi.

The country which extends from the Bætis to the river Anas, beyond the districts already described, is called Bæturia, and is divided into two parts and the same number of nations; the Celtici, who border upon Lusitania, in the ju- risdiction of Hispalis, and the Turduli, who dwell on the verge of Lusitania and Tarraconensis, and are under the protection of the laws of Corduba. It is evident that the Celtici have sprung from the Celtiberi, and have come from Lusitania, from their religious rites, their language, and the names of their towns, which in Bætica are distinguished by the following epithets, which have been given to them. Seria has received the surname of Fama Julia, Nertobriga that of Concordia Julia, Segida that of Restituta Julia, and Contributa that of Julia. What is now Curiga was formerly Ucultuniacum, Constantia Julia was Laconimurgis, the present Fortunales were the Tereses, and the Emanici were the Callenses. Besides these, there are in Celtica the towns of Acinippo, Arunda, Aruci, Turobriga, Lastigi, Salpesa, Sæpone, and Serippo.

The other Bæturia, which we have mentioned, is inhabited by the Turduli, and, in the jurisdiction of Corduba, has some towns which are by no means inconsiderable; Arsa, Mellaria, Mirobriga, and Sisapo, in the district of Osintias.

To the jurisdiction of Gades belongs Regina, with Roman citizens; and Læpia, Ulia, Carisa surnamed Aurelia, Urgia or Castrum Julium, likewise called Cæsaris Salutariensis, all of which enjoy the Latian rights. The tributary towns are Besaro, Belippo, Barbesula, Lacippo, Bæsippo, Callet, Cappacum, Oleastro, Ituci,

Brana, Lacibi, Saguntia, and Audorisæ.

M. Agrippa has also stated the whole length of this province to be 475 miles, and its breadth 257; but this was at a time when its boundaries extended to Carthage, a circumstance which has often caused great errors in calculations; which are generally the result either of changes effected in the limits of provinces, or of the fact that in the reckoning of distances the length of the miles has been arbitrarily increased or diminished. In some parts too the sea has been long making encroachments upon the land, and in others again the shores have advanced; while the course of rivers in this place has become more serpentine, in that more direct. And then, besides, some writers begin their measurements at one place, and some at another, and so proceed in different directions; and hence the result is, that no two accounts agree.

(2.) At the present day the length of Bætica, from the town of Castulo, on its frontier, to Gades is 250 miles, and from Murci, which lies on the sea-coast, twenty-five miles more. The breadth, measured from the coast of Carteia, is 234 miles. Who is there that can entertain the belief that Agrippa, a man of such extraordinary diligence, and one who bestowed so much care on his subject, when he proposed to place before the eyes of the world a survey of that world, could be guilty of such a mistake as this, and that too when seconded by the late emperor the divine Augustus ? For it was that emperor who completed the Portico which had been begun by his sister, and in which the survey was to be kept, in conformity with the plan and descriptions of M. Agrippa.

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CHAP. 4. (3.)

OF NEARER SPAIN.

The ancient form of the Nearer Spain, like that of many other provinces, is somewhat changed, since the time when Pompey the Great, upon the trophies which he erected in the Pyrenees, testified that 877 towns, from the Alps to the borders of the Farther Spain, had been reduced to subjection by him. The whole province is now divided into seven jurisdictions, those of Carthage, of Tarraco, of Cæsar Augusta, of Clunia, of Asturica, of Lucus, and of the Bracari. To these are to be added the islands, which will be described on another occasion, as also 293 states which are dependent on others; besides which the province contains 179 towns. Of these, twelve are colonies, thirteen, towns with the rights of Roman citizens, eighteen with the old Latian rights, one confederate, and 135 tributary.

The first people that we come to on the coast are the Bastuli; after whom, proceeding according to the order which I shall follow, as we go inland, there are the Mentesani, the Oretani, and the Carpetani on the Tagus, and next to them the Vaccæi, the Vectones, and the Celtiberian Arevaci. The towns nearest to the coast are Urci, and Barea included in Bætica, the district of Mavitania, next to it Deitania, and then Contestania, and the colony of Carthago Nova; from the Promontory of which, known as the Promontorium Saturni, to the city of Cæsarea in Mauritania, the passage is a distance of 187 miles. The remaining objects worthy of mention on the coast are the river Tader, and the free colony of Ilici, whence the Ilicitanian Gulf derives its name; to this colony the Icositani are subordinate.

We next have Lucentum, holding Latian rights; Dianium, a tributary town; the river Sucro, and in former times a town of the same name, forming the frontier of Contestania. Next is the district of Edetania, with the delightful expanse of a lake before it, and extending backward to Celtiberia. Valentia, a colony, is situate three miles from the sea, after which comes the river Turium, and Saguntum at the same distance, a town of Roman citizens famous for its fidelity, the river Uduba, and the district of the Ilergaones. The

Iberus, a river enriched by its commerce, takes its rise in the country of the Cantabri, not far from the town of Juliobriga, and flows a distance of 450 miles; 260 of which, from the town of Varia namely, it is available for the purposes of navigation. From this river the name of Iberia has been given by the Greeks to the whole of Spain.

Next comes the district of Cossetania, the river Subi, and the colony of Tarraco, which was built by the Scipios as Carthage was by the Carthaginians. Then the district of the Ilergetes, the town of Subur, and the river Rubricatum, beyond which begin the Laletani and the Indigetes. Behind these, in the order in which they will be mentioned, going back from the foot of the Pyrenees, are the Ausetani, the Lacetani, and along the Pyrenees, the Cerretani, next to whom are the Vascones. On the coast is the colony of Barcino, surnamed Faventia; Bætulo and Iluro, towns with Roman citizens; the river Larnum, Blandæ, the river Alba; Emporiæ, a city consisting of two parts, one peopled by the original inhabitants, the other by the Greek descendants of the Phocæans; and the river Ticher. From this to the Venus Pyrenæa, on the other side of the Promontory, is a distance of forty miles.

I shall now proceed to give an account of the more remarkable things in these several jurisdictions, in addition to those which have been already mentioned. Forty-three different peoples are subject to the jurisdiction of the courts of Tarraco: of these the most famous are — holding the rights of Roman citizens, the Dertusani and the Bisgargitani; enjoying Latian rights, the Ausetani, and the Cerretani, both Julian and Augustan, the Edetani, the Gerundenses, the Gessorienses, and the Teari, also called Julienses. Among the tributaries are the Aquicaldenses, the Onenses, and the Bæculonenses.

Cæsar Augusta, a free colony, watered by the river Iberus, on the site of the town formerly called Salduba, is situate in the district of Edetania, and is the resort of fifty-five nations. Of these there are, with the rights of Roman citizens, the Bellitani, the Celsenses, a former colony, the Calagurritani, surnamed the Nassici, the Ilerdenses, of the nation of the Surdaones, near whom is the river Sicoris, the Oscenses in the district of Vescitania, and the Turiasonenses. Of those enjoying the rights of the ancient Latins,

there are the Cascantenses the Ergavicenses, the Graccuritani, the Leo- nicenses, and the Osicerdenses; of federate states, there are the Tarragenses; and of tributaries, the Arcobrigenses, the Andologenses, the Aracelitani, the Bursaonenses, the Calagurritani, who are also surnamed the Fibularenses, the Complutenses, the Carenses, the Cincenses, the Cortonenses, the Damanitani, the Larnenses, the Lursenses, the Lumberitani, the Lacetani, the Lubienses, the Pompelonenses, and the Segienses.

Sixty-five different nations resort to Carthage, besides the inhabitants of the islands. Of the Accitanian colony, there are the Gemellenses, and the town of Libisosona, surnamed Foroaugustana, to both of which have been granted Italian rights. Of the colony of Salaria, there are the people of the following towns, enjoying the rights of ancient Latium: the Castulonenses, also called the Cæsari Venales, the Sætabitani or Augustani, and the Valerienses. The best known among the tributaries are the Alabanenses, the Bastitani, the Consaburrenses, the Dianenses, the Egelestani, the Ilorcitani, the Laminitani, the Mentesani, both those called Oritani and those called Bastuli, and the Oretani who are surnamed Germani, the people of Segobriga the capital of Celtiberia, those of Toletum the capital of Carpetania, situate on the river Tagus, and after them the Viatienses and the Virgilienses.

To the jurisdiction of Clunia the Varduli contribute fourteen nations, of whom we need only particularize the Albanenses, the Turmodigi, consisting of four tribes, among which are the Segisamonenses and the Segisamaiulienses. To the same jurisdiction belong the Carietes and the Vennenses with five states, among which are the Velienses. Thither too resort the Pelendones of the Celtiberians, in four different nations, among whom the Numantini were especially famous. Also, among the eighteen states of the Vaccæi, there are the Intercatienses, the Pallantini, the Lacobrigenses, and the Caucenses. But among the seven peoples belonging to the Cantabri, Juliobriga is the only place worthy of mention; and of the ten states of the Autrigones, Tritium and Virovesca. The river Areva gives its name to the Arevaci; of whom there are six towns, Segontia and Uxama, names which are frequently given to other places, as also Segovia and Nova Augusta,

Termes, and Clunia itself, the frontier of Celtiberia. The remaining portion turns off towards the ocean, being occupied by the Varduli, already mentioned, and the Cantabri.

Next upon these touch the twenty-two nations of the Astures, who are divided into the Augustani and the Transmontani, with the magnificent city of Asturica. Among these we have the Cigurri, the Pæsici, the Lancienses, and the Zoëlæ. The total number of the free population amounts to 240,000 persons.

The jurisdiction of Lucus embraces, besides the Celtici and the Lebuni, sixteen different nations, but little known and with barbarous names. The number however of the free population amounts to nearly 166,000.

In a similar manner the twenty-four states of the jurisdiction of the Bracari contain a population of 175,000, among whom, besides the Bracari themselves, we may mention, without wearying the reader, the Bibali, the Cœlerni, the Gallæci, the Hequæsi, the Limici, and the Querquerni.

The length of the Nearer Spain, from the Pyrenees to the frontier of Castulo, is 607 miles, and a little more if we follow the line of the coast; while its breadth, from Tarraco to the shore of Olarson, is 307 miles. From the foot of the Pyrenees, where it is wedged in by the near approach of the two seas, it gradually expands until it touches the Farther Spain, and thereby acquires a width more than double.

Nearly the whole of Spain abounds in mines of lead, iron, copper, silver, and gold; in the Nearer Spain there is also found lapis specularis; in Bætica there is cinnabar. There are also quarries of marble. The Emperor Vespasianus Augustus, while still harassed by the storms that agitated the Roman state, conferred the Latian rights on the whole of Spain. The Pyrenean mountains divide Spain from Gaul, their extremities projecting into the two seas on either side.

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CHAP. 5. (4.)

OF THE PROVINCE OF GALLIA NARBONENSIS.

That part of the Gallias which is washed by the inland sea is called the province of [Gallia] Narbonensis, having formerly borne the name of Braccata. It is divided from Italy by the river Varus, and by the range of the Alps, the great safeguards of the Roman Empire. From the remainder of Gaul, on the north, it is separated by the mountains Cebenna and Jura. In the cultivation of the soil, the manners and civilization of the inhabitants, and the extent of its wealth, it is surpassed by none of the provinces, and, in short, might be more truthfully described as a part of Italy than as a province. On the coast we have the district of the Sordones, and more inland that of the Consuarani. The rivers are the Tecum and the Vernodubrum. The towns are Illiberis, the scanty remains of what was formerly a great city, and Ruscino, a town with Latian rights. We then come to the river Atax, which flows from the Pyrenees, and passes through the Rubrensian Lake, the town of Narbo Martius, a colony of the tenth legion, twelve miles distant from the sea, and the rivers Arauris and Liria. The towns are otherwise but few in number, in consequence of the numerous lakes which skirt the sea-shore. We have Agatha, formerly belonging to the Massilians, and the district of the Volcæ Tectosages; and there is the spot where Rhoda, a Rhodian colony, formerly stood, from which the river takes its name of Rhodanus; a stream by far the most fertilizing of any in either of the Gallias. Descending from the Alps and rushing through lake Lemanus, it carries along with it the sluggish Arar, as well as the torrents of the Isara and the Druentia, no less rapid than itself. Its two smaller mouths are called Libica, one being the Spanish, and the other the Metapinian mouth; the third and largest is called the Massiliotic. There are some authors who state that there was formerly a town called Heraclea at the mouth of the Rhodanus or Rhone.

Beyond this are the Canals leading out of the Rhone, a famous work of Caius Marius, and still distinguished by his name; the Lake

of Mastramela, the town of Maritima of the Avatici, and, above this, the Stony Plains, memorable for the battles of Hercules; the district of the Anatilii, and more inland, that of the Desuviates and the Cavari. Again, close upon the sea, there is that of the Tricorii, and inland, there are the Tricolli, the Vocontii, and the Segovellauni, and, after them, the Allobroges.

On the coast is Massilia, a colony of Phocæan Greeks, and a federate city; we then have the Promontory of Zao, the port of Citharista, and the district of the Camatullici; then the Suelteri, and above them the Verrucini. Again, on the coast, we find Athenopolis, belonging to the Massilians, Forum Julii Octavanorum, a colony, which is also called Pacensis and Classica, the river Argenteus, which flows through it, the district of the Oxubii and that of the Ligauni; above whom are the Suetri, the Quariates and the Adunicates. On the coast we have Antipolis, a town with Latian rights, the district of the Deciates, and the river Varus, which proceeds from Mount Cema, one of the Alps.

The colonies in the interior are Arelate Sextanorum, Beterræ Septimanorum, and Arausio Secundanorum; Valentia in the territory of the Cavari, and Vienna in that of the Allobroges. The towns that enjoy Latian rights are Aquæ Sextiæ in the territory of the Saluvii, Avenio in that of the Cavari, Apta Julia in that of the Volgientes, Alebece in that of the Reii Apollinares, Alba in that of the Helvi, and Augusta in that of the Tricastini, Anatilia, Aeria, the Bormanni, the Comaci, Cabellio, Carcasum in the territory of the Volcæ Tectosages, Cessero, Carpentoracte in the territory of the Memini, the Cenicenses, the Cambolectri, surnamed the Atlantici, Forum Voconi, Glanum Livi, the Lutevani, also called the Foroneronienses, Nemausum in the territory of the Arecomici, Piscenæ, the Ruteni, the Sanagenses, the Tolosani in the territory of the Tectosages on the confines of Aquitania, the Tasconi, the Tarusconienses, the Umbranici, Vasio and Lucus Augusti, the two capitals of the federate state of the Vocontii. There are also nineteen towns of less note, as well as twenty-four belonging to the people of Nemausum. To this list the Emperor Galba added two tribes dwelling among the Alps, the Avantici and the Bodiontici, to whom belongs the town of Dinia. According to Agrippa the length of the province of Gallia

Narbonensis is 370 miles, and its breadth 248.

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CHAP. 6. (5.)

OF ITALY.

Next comes Italy, and we begin with the Ligures, after whom we have Etruria, Umbria, Latium, where the mouths of the Tiber are situate, and Rome, the Capital of the world, sixteen miles distant from the sea. We then come to the coasts of the Volsci and of Campania, and the districts of Picenum, of Lucania, and of Bruttium, where Italy extends the farthest in a southerly direction, and projects into the [two] seas with the chain of the Alps, which there forms pretty nearly the shape of a crescent. Leaving Bruttium we come to the coast of [Magna] Græcia, then the Salentini, the Pediculi, the Apuli, the Peligni, the Frentani, the Marrucini, the Vestini, the Sabini, the Picentes, the Galli, the Umbri, the Tusci, the Veneti, the Carni, the Iapydes, the Histri, and the Liburni.

I am by no means unaware that I might be justly accused of ingratitude and indolence, were I to describe thus briefly and in so cursory a manner the land which is at once the foster-child and the parent of all lands; chosen by the providence of the Gods to render even heaven itself more glorious, to unite the scattered empires of the earth, to bestow a polish upon men's manners, to unite the discordant and uncouth dialects of so many different nations by the powerful ties of one common language, to confer the enjoyments of discourse and of civilization upon mankind, to become, in short, the mother-country of all nations of the Earth.

But how shall I commence this undertaking? So vast is the number of celebrated places (what man living could enumerate them all?), and so great the renown attached to each individual nation and subject, that I feel myself quite at a loss. The city of Rome alone, which forms a portion of it, a face well worthy of shoulders so beauteous, how large a work would it require for an appropriate description! And then too the coast of Campania, taken singly by itself! so blest with natural beauties and opulence, that it is evident that when nature formed it she took a delight in accumulating all her blessings in a single spot — how am I to do justice to it? And then

the climate, with its eternal freshness and so replete with health and vitality, the sereneness of the weather so enchanting, the fields so fertile, the hill sides so sunny, the thickets so free from every danger, the groves so cool and shady, the forests with a vegetation so varying and so luxuriant, the breezes descending from so many a mountain, the fruitfulness of its grain, its vines, and its olives so transcendent; its flocks with fleeces so noble, its bulls with necks so sinewy, its lakes recurring in never-ending succession, its numerous rivers and springs which refresh it with their waters on every side, its seas so many in number, its havens and the bosom of its lands opening everywhere to the commerce of all the world, and as it were eagerly stretching forth into the very midst of the waves, for the purpose of aiding as it were the endeavours of mortals!

For the present I forbear to speak of its genius, its manners, its men, and the nations whom it has conquered by eloquence and force of arms. The very Greeks themselves, a race fond in the extreme of expatiating on their own praises, have amply given judgment in its favour, when they named but a small part of it 'Magna Græcia.' But we must be content to do on this occasion as we have done in our description of the heavens; we must only touch upon some of these points, and take notice of but a few of its stars. I only beg my readers to bear in mind that I am thus hasten- ing on for the purpose of giving a general description of everything that is known to exist throughout the whole earth.

I may premise by observing that this land very much resembles in shape an oak leaf, being much longer than it is broad; towards the top it inclines to the left, while it terminates in the form of an Amazonian buckler, in which the spot at the central projection is the place called Cocinthos, while it sends forth two horns at the end of its crescent-shaped bays, Leucopetra on the right and Lacinium on the left. It extends in length 1020 miles, if we measure from the foot of the Alps at Prætoria Augusta, through the city of Rome and Capua to the town of Rhegium, which is situate on the shoulder of the Peninsula, just at the bend of the neck as it were. The distance would be much greater if measured to Lacinium, but in that case the line, being drawn obliquely, would incline too much to one side. Its breadth is variable; being 410 miles between the two seas, the Lower and the Upper, and

the rivers Varus and Arsia: at about the middle, and in the vicinity of the city of Rome, from the spot where the river Aternus flows into the Adriatic sea, to the mouth of the Tiber, the distance is 136 miles, and a little less from Castrum-novum on the Adriatic sea to Alsium on the Tuscan; but in no place does it exceed 200 miles in breadth. The circuit of the whole, from the Varus to the Arsia, is 3059 miles.

As to its distance from the countries that surround it- Istria and Liburnia are, in some places, 100 miles from it, and Epirus and Illyricum 50; Africa is less than 200, as we are informed by M. Varro; Sardinia is 120, Sicily 1 1/2, Corsica less than 80, and Issa 50. It extends into the two seas towards the southern parts of the heavens, or, to speak with more minute exactness, between the sixth hour and the first hour of the winter solstice.

We will now describe its extent and its different cities; in doing which, it is necessary to premise, that we shall follow the arrangement of the late Emperor Augustus, and adopt the division which he made of the whole of Italy into eleven districts; taking them, however, according to their order on the sea-line, as in so hurried a detail it would not be possible otherwise to describe each city in juxtaposition with the others in its vicinity. And for the same reason, in describing the interior, I shall follow the alphabetical order which has been adopted by that Emperor, pointing out the colonies of which he has made mention in his enumeration. Nor is it a very easy task to trace their situation and origin; for, not to speak of others, the Ingaunian Ligurians have had lands granted to them as many as thirty different times.

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CHAP. 7.

OF THE NINTH REGION OF ITALY.

To begin then with the river Varus; we have the town of Nicæa, founded by the Massilians, the river Paulo, the Alps and the Alpine tribes, distinguished by various names, but more especially the Capillati, Cemenelio, a town of the state of the Vediantii, the port of Hercules Monæcus, and the Ligurian coast. The more celebrated of the Ligurian tribes beyond the Alps are the Salluvii, the Deciates, and the Oxubii; on this side of the Alps, the Veneni, and the Vagienni, who are derived from the Caturiges, the Statielli, the Bimbelli, the Magelli, the Euburiates, the Casmonates, the Veleiates, and the peoples whose towns we shall describe as lying near the adjoining coast. The river Rutuba, the town of Albium Intemelium, the river Merula, the town of Albium Ingaunum, the port of Vadum Sabatiorum, the river Porcifera, the town of Genua, the river Feritor, the Portus Delphini, Tigullia, Tegesta of the Tigullii, and the river Macra, which is the boundary of Liguria.

Extending behind all the before-mentioned places are the Apennines, the most considerable of all the mountains of Italy, the chain of which extends unbroken from the Alps to the Sicilian sea. On the other side of the Apennines, towards the Padus, the richest river of Italy, the whole country is adorned with noble towns; Libarna, the colony of Dertona, Iria, Barderate, Industria, Pollentia, Carrea surnamed Potentia, Foro Fulvî or Valentinum, Augusta of the Vagienni, Alba Pompeia, Asta, and Aquæ Statiellorum. This is the ninth region, according to the arrangement of Augustus. The coast of Liguria extends 211 miles, between the rivers Varus and Macra.

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CHAP. 8.

THE SEVENTH REGION OF ITALY.

Next to this comes the seventh region, in which is Etruria, a district which begins at the river Macra, and has often changed its name. At an early period the Umbri were expelled from it by the Pelasgi; and these again by the Lydians, who from a king of theirs were named Tyrrheni, but afterwards, from the rites observed in their sacrifices, were called, in the Greek language, Tusci. The first town in Etruria is Luna, with a noble harbour, then the colony of Luca, at some distance from the sea, and nearer to it again the colony of Pisæ, between the rivers Auser and Arnus, which owes its origin to Pelops and the Pisans, or else to the Teutani, a people of Greece. Next is Vada Volaterrana, then the river Cecinna, and Populonium formerly belonging to the Etrurians, the only town they had on this coast. Next to these is the river Prile, then the Umbro, which is navigable, and where the district of Umbria begins, the port of Telamon, Cosa of the Volcientes, founded by the Roman people, Graviscæ, Castrum novum, Pyrgi, the river Cæretanus, and Cære itself, four miles inland, called Agylla by the Pelasgi who founded it, Alsium, Fregenæ, and the river Tiber, 284 miles from the Macra.

In the interior we have the colonies of Falisci, founded by the Argives, according to the account of Cato, and surnamed Falisci Etruscorum, Lucus Feroniæ, Rusellana, the Senienses, and Sutrina. The remaining peoples are the Arretini Veteres, the Arretini Fidentes, the Arretini Julienses, the Amitinenses, the Aquenses, surnamed Taurini, the Blerani, the Cortonenses, the Capenates, the Clusini Novi, the Clusini Veteres, the Florentini, situate on the stream of the Arnus, Fæsulæ, Ferentinum, Fescennia, Hortanum, Herbanum, Nepeta, Novem Pagi, the Claudian præfecture of Foroclodium, Pistorium, Perusia, the Suanenses, the Saturnini, formerly called the Aurinini, the Subertani, the Statones, the Tarquinienses, the Tuscanienses, the Vetulonienses, the Veietani, the Vesentini, the Volaterrani, the Voleentini, surnamed Etrusci, and the Volsinienses. In the same district the territories of Crustumerium and Caletra retain

the names of the ancient towns.

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CHAP. 9.

THE FIRST REGION OF ITALY; THE TIBER; ROME.

The Tiber or Tiberis, formerly called Thybris, and previously Albula, flows down from nearly the central part of the chain of the Apennines, in the territory of the Arretini. It is at first small, and only navigable by means of sluices, in which the water is dammed up and then discharged, in the same manner as the Timia and the Glanis, which flow into it; for which purpose it is found necessary to collect the water for nine days, unless there should happen to be a fall of rain. And even then, the Tiber, by reason of its rugged and uneven channel, is really more suitable for navigation by rafts than by vessels, for any great distance. It winds along for a course of 150 miles, passing not far from Tifernum, Perusia, and Ocriculum, and dividing Etruria from the Umbri and the Sabini, and then, at a distance of less than sixteen miles from the city, separating the territory of Veii from that of Crustuminum, and afterwards that of the Fidenates and of Latium from Vaticanum.

Below its union with the Glanis from Arretinum the Tiber is swollen by two and forty streams, particularly the Nar and the Anio, which last is also navigable and shuts in Latium at the back; it is also increased by the numerous aqueducts and springs which are conveyed to the City. Here it becomes navigable by vessels of any burden which may come up from the Italian sea; a most tranquil dispenser of the produce of all parts of the earth, and peopled and embellished along its banks with more villas than nearly all the other rivers of the world taken together. And yet there is no river more circumscribed than it, so close are its banks shut in on either side; but still, no resistance does it offer, although its waters frequently rise with great suddenness, and no part is more liable to be swollen than that which runs through the City itself. In such case, however, the Tiber is rather to be looked upon as pregnant with prophetic warnings to us, and in its increase to be considered more as a promoter of religion than a source of devastation.

Latium has preserved its original limits, from the Tiber to Circeii,

a distance of fifty miles: so slender at the beginning were the roots from which this our Empire sprang. Its inhabitants have been often changed, and different nations have peopled it at different times, the Aborigines, the Pelasgi, the Arcades, the Seculi, the Aurunci, the Rutuli, and, beyond Circeii, the Volsci, the Osci, and the Ausones whence the name of Latium came to be extended as far as the river Liris.

We will begin with Ostia, a colony founded by a king of Rome, the town of Laurentum, the grove of Jupiter Indiges, the river Numicius, and Ardea, founded by Danaë, the mother of Perseus. Next come the former site of Aphrodisium, the colony of Antium, the river and island called Astura, the river Nymphæus, the Clostra Romana, and Circeii, formerly an island, and, if we are to believe Homer, surrounded by the open sea, though now by an extensive plain. The circumstances which we are enabled to publish on this subject for the information of the world are very remarkable. Theophrastus, the first foreigner who treated of the affairs of Rome with any degree of accuracy (for Theopompus, before whose time no Greek writer had made mention of us, only stated the fact that the city had been taken by the Gauls, and Clitarchus, the next after him, only spoke of the embassy that was sent by the Romans to Alexander) — Theophrastus, I say, following something more than mere rumour, has given the circuit of the island of Circeii as being eighty stadia, in the volume which he wrote during the archonship of Nicodorus at Athens, being the 440th year of our city. Whatever land therefore has been annexed to that island beyond the circumference of about ten miles, has been added to Italy since the year previously mentioned.

Another wonderful circumstance too. — Near Circeii are the Pomptine Marshes, formerly the site, according to Mucianus, who was thrice consul, of four-and-twenty cities. Next to this comes the river Ufens, upon which is the town of Terracina, called, in the language of the Volsci, Anxur; the spot too where Amyclæ stood, a town destroyed by serpents. Next is the site of the Grotto, Lake Fundanus, the port of Caieta, and then the town of Formiæ, formerly called Hormiæ, the ancient seat of the Læstrygones, it is supposed. Beyond this, formerly stood the town of Pyræ; and we then come to

the colony of Minturnæ, which still exists, and is divided by the river Liris, also called the Glanis. The town of Sinuessa is the last in the portion which has been added to Latium; it is said by some that it used to be called Sinope.

At this spot begins that blessed country Campania, and in this vale first take their rise those hills clad with vines, the juice of whose grape is extolled by Fame all over the world; the happy spot where, as the ancients used to say, father Liber and Ceres are ever striving for the mastery. Hence the fields of Setia and of Cæcubum extend afar. and, next to them those of Falernum and of Calinum. As soon as we have passed these, the hills of Massica, of Gaurus, and of Surrentum rise to our view. Next, the level plains of Laborium are spread out far and wide, where every care is bestowed on cultivating crops of spelt, from which the most delicate fermenty is made. These shores are watered by warm springs, while the seas are distinguished beyond all others for the superlative excellence of their shell and other fish. In no country too has the oil of the olive a more exquisite flavour. This territory, a battle-ground as it were for the gratification of every luxurious pleasure of man, has been held successively by the Osci, the Greeks, the Umbri, the Tusci, and the Campani.

On the coast we first meet with the river Savo, the town of Volturnum with a river of the same name, the town of Liternum, Cumæ, a Chalcidian colony, Misenum, the port of Baiæ, Bauli, the Lucrine Lake, and Lake Avernus, near which there stood formerly a town of the Cimmerians. We then come to Puteoli, formerly called the colony of Dicæ- archia, then the Phlegræn Plains, and the Marsh of Acherusia in the vicinity of Cumæ.

Again, on the coast we have Neapolis, also a colony of the Chalcidians, and called Parthenope from the tomb there of one of the Sirens, Herculaneum, Pompeii, from which Mount Vesuvius may be seen at no great distance, and which is watered by the river Sarnus; the territory of Nuceria, and, at the distance of nine miles from the sea, the town of that name, and then Surrentum, with the Promontory of Minerva, formerly the abode of the Sirens. The distance thence by sea to Circeii is seventy-eight miles This region, beginning at the Tiber, is looked upon as the first of Italy according to the division of Augustus.

Inland there are the following colonies: — Capua, so called from its champaign country, Aquinum, Suessa, Venafrum, Sora, Teanum surnamed Sidicinum, Nola; and the towns of Abella, Aricia, Alba Longa, the Acer- rani, the Allifani, the Atinates, the Aletrinates, the Anagnini, the Atellani, the Affilani, the Arpinates, the Auximates, the Abellani, the Alfaterni (both those who take their names from the Latin, the Hernican and the Labicanian territory), Bovillæ, Calatia, Casi- num, Calenum, Capitulum of the Hernici, the Cereatini, surnamed Mariani, the Corani, descended from the Trojan Dardanus, the Cubulterini, the Castrimœnienses, the Cingulani, the Fabienses on the Alban Mount, the Foropopulienses of the Falernian district, the Frusinates, the Ferentinates, the Freginates, the old Frabaterni, the new Frabaterni, the Ficolenses, the Fre- gellani, Forum Appî, the Forentani, the Gabini, the Interamnates Succasini, also surnamed Lirinates, the Ilionenses Lavinii, the Norbani, the Nomentani, the Prænestini (whose city was formerly called Stephané), the Privernates, the Setini, the Signini, the Suessulani, the Telesini, the Trebulani, surnamed Balinienses, the Trebani, the Tusculani, the Verulani, the Veliterni, the Ulubrenses, the Urbinates, and, last and greater than all, Rome herself, whose other name the hallowed mysteries of the sacred rites forbid us to mention without being guilty of the greatest impiety. After it had been long kept buried in secresy with the strictest fidelity and in respectful and salutary silence, Valerius Soranus dared to divulge it, but soon did he pay the penalty of his rashness.

It will not perhaps be altogether foreign to the purpose, if I here make mention of one peculiar institution of our forefathers which bears especial reference to the inculcation of silence on religious matters. The goddess Angerona, to whom sacrifice is offered on the twelfth day before the calends of January [21st December], is represented in her statue as having her mouth bound with a sealed fillet.

Romulus left the city of Rome, if we are to believe those who state the very greatest number, having three gates and no more. When the Vespasians were emperors and censors, in the year from its building 826, the circumference of the walls which surrounded it was thirteen miles and two-fifths. Surrounding as it does the Seven Hills,

the city is divided into fourteen districts, with 265 cross-roads under the guardianship of the Lares. If a straight line is drawn from the mile-column placed at the entrance of the Forum, to each of the gates, which are at present thirty-seven in number (taking care to count only once the twelve double gates, and to omit the seven old ones, which no longer exist), the result will be [taking them altogether], a straight line of twenty miles and 765 paces. But if we draw a straight line from the same mile-column to the very last of the houses, including therein the Prætorian encampment, and follow throughout the line of all the streets, the result will then be something more than seventy miles. Add to these calculations the height of the houses, and then a person may form a fair idea of this city, and will certainly be obliged to admit that there is not a place throughout the whole world that for size can be compared to it. On the eastern side it is bounded by the *agger* of Tarquinius Superbus, a work of surpassing grandeur; for he raised it so high as to be on a level with the walls on the side on which the city lay most exposed to attack from the neighbouring plains. On all the other sides it has been fortified either with lofty walls or steep and precipitous hills, but so it is, that its buildings, increasing and extending beyond all bounds, have now united many other cities to it.

Besides those previously mentioned, there were formerly in the first region the following famous towns of Latium: Satricum, Pometia, Scaptia, Politorium, Tellene, Tifata, Cænina, Ficana, Crustumerium, Ameriola, Medullum, Corniculum, Saturnia, on the site of the present city of Rome, Antipolis, now Janiculum, forming part of Rome, Antemnæ, Carnerium, Collatia, Amitinum, Norbe, Sulmo, and, with these, those Alban nations who used to take part in the sacrifices upon the Alban Mount, the Albani, the Æsulani, the Accienses, the Abolani, the Bube- tani, the Bolani, the Cusuetani, the Coriolani, the Fidenates, the Foretii, the Hortenses, the Latinienses, the Longulani, the Manates, the Macrales, the Mutucumenses, the Munienses, the Numinienses, the Olliculani, the Octulani, the Pedani, the Polluscini, the Querquetulani, the Sicani, the Sisolenses, the Tolerienses, the Tutienses, the Vimitellarii, the Velienses, the Venetulani, and the Vitellenses. Thus we see, fifty-three peoples of ancient Latium have passed away without leaving any traces of their

existence.

In the Campanian territory there was also the town of Stabiæ, until the consulship of Cneius Pompeius and L. Cato, when, on the day before the calends of May [30th of April], it was destroyed in the Social War by L. Sulla the legatus, and all that now stands on its site is a single farmhouse. Here also Taurania has ceased to exist, and the remains of Casilinum are fast going to ruin. Besides these, we learn from Antias that king L. Tarquinius took Apiolæ, a town of the Latins, and with its spoils laid the first foundations of the Capitol. From Surrentum to the river Silarus, the former territory of Picentia extends for a distance of thirty miles. This belonged to the Etruscans, and was remarkable for the temple of the Argive Juno, founded by Jason. In it was Picentia, a town of the territory of Salernum.

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CHAP. 10.

THE THIRD REGION OF ITALY.

At the Silarus begins the third region of Italy, consisting of the territory of Lucania and Bruttium; here too there have been no few changes of the population. These districts have been possessed by the Pelasgi, the Œnotrii, the Itali, the Morgetes, the Siculi, and more especially by people who emigrated from Greece, and, last of all, by the Leucani, a people sprung from the Samnites, who took possession under the command of Lucius. We find here the town of Pæstum, which received from the Greeks the name of Posidonia, the Gulf of Pæstum, the town of Elea, now known as Velia, and the Promontory of Palinurum, a point at which the land falls inwards and forms a bay, the distance across which to the pillar of Rhegium is 100 miles. Next after Palinurum comes the river Melpes, then the town of Buxentum, called in [Magna] Græcia Pyxus, and the river Laus; there was formerly a town also of the same name.

At this spot begins the coast of Bruttium, and we come to the town of Blanda, the river Batum, Parthenius, a port of the Phocians, the bay of Vibo, the place where Clampetia formerly stood, the town of Temsa, called Temese by the Greeks, and Terina founded by the people of Crotona, with the extensive Gulf of Terina; more inland, the town of Consentia. Situate upon a peninsula is the river Acheron, from which the people of Acherontia derive the name of their town; then Hippo, now called Vibo Valentia, the Port of Hercules, the river Metaurus, the town of Tauroentum, the Port of Orestes, and Medma. Next, the town of Scyllæum, the river Cratæis, the mother of Scylla it is said; then the Pillar of Rhegium, the Straits of Sicily, and the two promontories which face each other, Cænys on the Italian, and Pelorus on the Sicilian side, the distance between them being twelve stadia. At a distance thence of twelve miles and a half, we come to Rhegium, after which begins Sila, a forest of the Apennines, and then the pro- montory of Leucopetra, at a distance of fifteen miles; after which come the Locri, who take their surname from the promontory of Zephyrium, being distant from the river Silarus 303 miles.

At this spot ends the first great Gulf of Europe; the seas in which bear the following names: — That from which it takes its rise is called the Atlantic, by some the Great Atlantic, the entrance of which is, by the Greeks, called Porthmos, by us the Straits of Gades. After its entrance, as far as it washes the coasts of Spain, it is called the Hispanian Sea, though some give it the name of the Iberian or Balearic Sea. Where it faces the province of Gallia Narbonensis it has the name of the Gallic, and after that, of the Ligurian, Sea. From Liguria to the island of Sicily, it is called the Tuscan Sea, the same which is called by some of the Greeks the Notian, by others the Tyrrhenian, while many of our people call it the Lower Sea. Beyond Sicily, as far as the country of the Salentini, it is styled by Polybius the Ausonian Sea. Eratosthenes however gives to the whole expanse that lies between the inlet of the ocean and the island of Sardinia, the name of the Sardoan Sea; thence to Sicily, the Tyrrhenian; thence to Crete, the Sicilian; and beyond that island, the Cretan Sea.

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CHAP. 11.

SIXTY-FOUR ISLANDS, AMONG WHICH ARE THE BALEARES.

The first islands that we meet with in all these seas are the two to which the Greeks have given the name of Pityussæ, from the pine-tree, which they produce. These islands now bear the name of Ebusus, and form a federate state. They are separated by a narrow strait of the sea, and are forty-six miles in extent. They are distant from Dianium 700 stadia, Dianium being by land the same distance from New Carthage. At the same distance from the Pityussæ, lie, in the open sea, the two Baleares, and, over against the river Sucro, Colubraria. The Baleares, so formidable in war with their slingers, have received from the Greeks the name of Gymnasiæ.

The larger island is 100 miles in length, and 475 in circumference. It has the following towns; Palma and Pollentia, enjoying the rights of Roman citizens, Cinium and Tucis, with Latin rights: Bocchorum, a federate town, is no longer in existence. At thirty miles' distance is the smaller island, 40 miles in length, and 150 in circumference; it contains the states of Jamnon, Sanisera, and Magon.

In the open sea, at twelve miles' distance from the larger island, is Capraria with its treacherous coast, so notorious for its numerous shipwrecks; and, opposite to the city of Palma, are the islands known as the Mænariæ, Tiquadra, and Little Hannibalis.

The earth of Ebusus has the effect of driving away serpents, while that of Colubraria produces them; hence the latter spot is dangerous to all persons who have not brought with them some of the earth of Ebusus. The Greeks have given it the name of Ophiusa. Ebusus too produces no rabbits to destroy the harvests of the Baleares. There are also about twenty other small islands in this sea, which is full of shoals. Off the coast of Gaul, at the mouth of the Rhodanus, there is Metina, and near it the island which is known as Blascon, with the three Stœchades, so called by their neighbours the Massilians, on account of the regular order in which they are placed; their respective names are Prote, Mese, also called Pomponiana, and Hypæa. After these come Sturium, Phœnice, Phila, Lero, and, opposite to

Antipolis, Lerina, where there is a remembrance of a town called Vergoanum having once existed.

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CHAP. 12. (6.)

CORSICA.

In the Ligurian Sea, but close to the Tuscan, is Corsica, by the Greeks called Cyrnos, extending, from north to south 150 miles, and for the most part 50 miles in breadth, its circumference being 325. It is 62 miles distant from the Vada Volaterrana. It contains thirty-two states, and two colonies, that of Mariana, founded by C. Marius, and that of Aleria, founded by the Dictator Sylla. On this side of it is Oglasa, and, at a distance of less than sixty miles from Corsica, Planaria, so called from its appearance, being nearly level with the sea, and consequently treacherous to mariners.

We next have Urgo, a larger island, and Capraria, which the Greeks have called Ægilion; then Igilium and Dianium, which they have also called Artemisia, both of them opposite the coast of Cosa; also Barpana, Mænaria, Co- lumbaria, and Venaria. We then come to Ilva with its iron mines, an island 100 miles in circumference, 10 miles distant from Populonium, and called Æthalia by the Greeks: from it the island of Planasia is distant 28 miles. After these, beyond the mouths of the Tiber, and off the coast of Antium, we come to Astura, then Palmaria and Sinonia, and, opposite to Formiæ, Pontiæ. In the Gulf of Puteoli are Pandateria, and Prochyta, so called, not from the nurse of Æneas, but because it has been poured forth or detached from Ænaria, an island which received its name from having been the anchorage of the fleet of Æneas, though called by Homer Inarime; it is also called Pithecusa, not, as many have fancied, on account of the multitudes of apes found there, but from its extensive manufactories of pottery. Between Pausilipum and Neapolis lies the island of Megaris, and then, at a distance of eight miles from Surrentum, Capreæ, famous for the castle of the emperor Tiberius: it is eleven miles in circumference.

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CHAP. 13.

SARDINIA.

Leucothea comes next, and after it, but out of sight, as it lies upon the verge of the African Sea, Sardinia. It is situate somewhat less than eight miles from the nearest point of Corsica, and the Straits between them are even still more reduced by the small islands there situate, called the Cunicularіæ, as also those of Phintonis and Fossæ, from which last the Straits themselves have obtained the name of Taphros.

(7.) Sardinia extends, upon the east side, a distance of 188 miles, on the west 175, on the south 77, and on the north 125, being 565 miles in circumference. Its promontory of Caralis is distant from Africa 200, and from Gades 1400 miles. Off the promontory of Gordis it has two islands called the Isles of Hercules, off that of Sulcis, the island of Enosis, and off that of Caralis, Ficaria. Some writers place Beleris not far from it, as also Callodis, and the island known as Heras Lutra.

The most celebrated peoples of this island are the Ilienses, the Balari, and the Corsi; and among its eighteen towns, there are those of the Sulcitani, the Valentini, the Neapoli- tani, the Bosenses, the Caralitani, who enjoy the rights of Roman citizens, and the Norenses. There is also one colony which is called Ad Turrim Libysonis. Timæus has called this island Sandaliotis, on account of the similarity of its shape to the sole of a shoe, while Myrtilus has given it the name of Ichnusa, from its resemblance to the print of a footstep. Opposite to the Gulf of Pæstum is Leucasia, so called from a Siren who is buried there; opposite to Velia are Poiitia and Isacia, both known by one name, that of Œnotrides, a proof that Italy was formerly possessed by the Œnotrians. Opposite to Vibo are the little islands called Ithacesiæ from the watch-tower of Ulysses situate there.

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CHAP. 14. (8.)

SICILY.

But more celebrated than all is Sicily, called Sicania by Thucydides, and by many writers Trinacria or Trinacia, from its triangular appearance. According to Agrippa it is 618 miles in circumference. In former times it was a continuation of the territory of Bruttium, but, in consequence of the overflowing of the sea, became severed from it; thus forming a strait of 15 miles in length, and a mile and a half in width in the vicinity of the Pillar of Rhegium. It was from this circumstance of the land being severed asunder that the Greeks gave the name of Rhegium to the town situate on the Italian shore.

In these Straits is the rock of Scylla, as also Charybdis, a whirlpool of the sea, both of them noted for their perils. Of this triangle, the promontory, which, as we have already mentioned, is called Pelorus, faces Scylla and juts out towards Italy, while Pachynum extends in the direction of Greece, Peloponnesus being at a distance from it of 440 miles, and Lilybæum, towards Africa, being distant 180 miles from the promontory of Mercury, and from that of Caralis in Sardinia 190. These promontories and sides are situate at the following distances from each other: by land it is 186 miles from Pelorus to Pachynum, from Pachynum to Lilybæum 200, and from Lilybæum to Pelorus 170.

In this island there are five colonies and sixty-three cities or states. Leaving Pelorus and facing the Ionian Sea, we have the town of Messana, whose inhabitants are also called Mamertini and enjoy the rights of Roman citizens; the promontory of Drepanum, the colony of Tauromenium, formerly called Naxos, the river Asines, and Mount Ætna, wondrous for the flames which it emits by night. Its crater is twenty stadia in circumference, and from it red-hot cinders are thrown as far as Tauromenium and Catina, the noise being heard even at Maroneum and the Gemellian Hills. We then come to the three rocks of the Cyclopes, the Port of Ulysses, the colony of Catina, and the rivers Symæthus and Terias; while more inland lie the Læstrygonian Plains.

To these rivers succeed the towns of Leontinum and Megaris, the river Pantagies, the colony of Syracuse, with the fountain of Arethusa, (the people in the Syracusan ter- ritory drink too of the fountains of Temenitis, Archidemia, Magæa, Cyane, and Milichie,) the port of Naustathmus, the river Elorus, and the promontory of Pachynum. This side of Sicily begins with the river Hirminius, then follow the town of Camarina, the river Gelas, and the town of Agragas, which our people have named Agrigentum. We next come to the colony of Thermæ, the rivers Achates, Mazara, and Hypsa; the town of Selinus, and then the Promontory of Lilybæum, which is succeeded by Drepana, Mount Eryx, the towns of Panhormus, Solus and Himera, with a river of the same name, Cephalœdis, Aluntium, Agathyrnum, the colony of Tyndaris, the town of Mylæ, and then Pelorus, the spot at which we began.

In the interior there are the following towns enjoying Latin privileges, those of the Centuripini, the Netini, and the Segestani; tributary towns are those of the Assorini, the Ætnenses, the Agyrini, the Acestæi, the Acrenses, the Bidini, the Cetarini, the Cacyrini, the Drepanitani, the Ergetini, the Echetlienses, the Erycini, the Entellini, the Enini, the Enguini, the Gelani, the Gala- tini, the Halesini, the Hennenses, the Hyblenses, the Herbitenses, the Herbessenses, the Herbulenses, the Halicyenses, the Hadranitani, the Imacarenses, the Ipanenses, the Ietenses, the Mytistratini, the Magellini, the Murgentini, the Mutycenses, the Menanini, the Naxii, the Noæi, the Petrini, the Paropini, the Phthinthienses, the Semellitani, the Scherini, the Selinuntii, the Symæthii, the Talarienses, the Tissinenses, the Triocalini, the Tyraci- nenses, and the Zanclæi, a Messenian colony on the Straits of Sicily. Towards Africa, its islands are Gaulos, Melita, 87 miles from Camerina, and 113 from Lilybæum, Cosyra, Hieronnesos, Cæne, Galata, Lopadusa, Æthusa, written by some Ægusa, Bucinna, Osteodes, distant from Soluntum 75 miles, and, opposite to Paropus, Ustica.

On this side of Sicily, facing the river Metaurus, at a di- stance of nearly 25 miles from Italy, are the seven islands called the Æolian, as also the Liparæan islands; by the Greeks they are called the Hephæstiades, and by our writers the Vulcanian Isles; they are called "Æolian" because in the Trojan times Æolus was king there.

(9.) Lipara, with a town whose inhabitants enjoy the rights of Roman citizens, is so called from Liparus, a former king who succeeded Æolus, it having been previously called Melogonis or Meligunis. It is 25 miles distant from Italy, and in circumference a little less. Between this island and Sicily we find another, the name of which was formerly Therasia, but now called Hiera, because it is sacred to Vulcan: it contains a hill which at night vomits forth flames. The third island is Strongyle, lying one mile to the east of Lipara, over which Æolus reigned as well; it differs only from Lipara in the superior brilliancy of its flames. From the smoke of this volcano it is said that some of the inhabitants are able to predict three days beforehand what winds are about to blow; hence arose the notion that the winds are governed by Æolus. The fourth of these islands is Didyme, smaller than Lipara, the fifth Ericusa, the sixth Phœnicusa, left to be a pasture-ground for the cattle of the neighbouring islands, and the last and smallest Euonymos. Thus much as to the first great Gulf of Europe.

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CHAP. 15. (10.)

MAGNA GRÆCIA, BEGINNING AT LOCRI.

At Locri begins the fore-part of Italy, called Magna Græcia, whose coast falls back in three bays formed by the Ausonian sea, so called from the Ausones, who were the first inhabitants of the country. According to Varro it is 86 miles in extent; but most writers have made it only 75. Along this coast there are rivers innumerable, but we shall mention those only that are worthy of remark. After leaving Locri we come to the Sagra, and the ruins of the town of Caulon, Mystiæ, Consilinum Castrum, Cocinthum, in the opinion of some, the longest headland of Italy, and then the Gulf of Scylacium, and Scylacium itself, which was called by the Athenians, when they founded it, Scylletium. This part of Italy is nearly a peninsula, in consequence of the Gulf of Terinæum running up into it on the other side; in it there is a harbour called Castra Hannibalis: in no part is Italy narrower than here, it being but twenty miles across. For this reason the Elder Dionysius entertained the idea of severing this portion from the main-land of Italy at this spot, and adding it to Sicily. The navigable rivers in this district are the Carcines, the Crotalus, the Semirus, the Arocas, and the Targines. In the interior is the town of Petilia, and there are besides, Mount Clibanus, the promontory of Lacinium, in front of which lies the island of Dioscoron, ten miles from the main-land, and another called the Isle of Calypso, which Homer is supposed to refer to under the name of Ogygia; as also the islands of Tiris, Eranusa, and Meloessa. According to Agrippa, the promontory of Lacinium is seventy miles from Caulon.

(11.) At the promontory of Lacinium begins the second Gulf of Europe, the bend of which forms an are of great depth, and terminates at Acroceraunium, a promontory of Epirus, from which it is distant seventy-five miles. We first come to the town of Croton, and then the river Neæthus, and the town of Thurii, situate between the two rivers Crathis and Sybaris, upon the latter of which there was once a city of the same name. In a similar manner Heraclia,

sometimes called Siris, lies between the river of that name and the Aciris. We next come to the rivers Acalandrus and Casuentum, and the town of Metapontum, with which the third region of Italy terminates. In the interior of Bruttium, the Aprustani are the only people; but in Lucania we find the Atinates, the Bantini, the Eburini, the Grumentini, the Potentini, the Sontini, the Sirini, the Tergilani, the Ursentini, and the Volcentani, whom the Numestrani join. Besides these, we learn from Cato that Thebes in Lucania has disappeared, and Theopompus informs us that there was formerly a city of the Lucani called Pandosia, at which Alexander, the king of Epirus, died.

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CHAP. 16.

THE SECOND REGION OF ITALY.

Adjoining to this district is the second region of Italy, which embraces the Hirpini, Calabria, Apulia, and the Salentini, extending a distance of 250 miles along the Gulf of Tarentum, which receives its name from a town of the Laconians so called, situate at the bottom of the Gulf; to which was annexed the maritime colony which had previously settled there. Tarentum is distant from the promontory of Lacinium 136 miles, and throws out the territory of Calabria opposite to it in the form of a peninsula. The Greeks called this territory Messapia, from their leader; before which it was called Peucetia, from Peucetius, the brother of Œnotrius, and was comprised in the territory of Salentinum. Between the two promontories there is a distance of 100 miles. The breadth across the peninsula from Tarentum to Brundusium by land is 35 miles, considerably less if measured from the port of Sasina. The towns inland from Tarentum are Varia surnamed Apulia, Messapia, and Aletium; on the coast, Senum, and Callipolis, now known as Anxa, 75 miles from Tarentum. Thence, at a distance of 32 miles, is the Pro- montory of Acra Iapygia, at which point Italy projects the greatest distance into the sea. At a distance of 19 miles from this point is the town of Basta, and then Hydruntum, the spot at which the Ionian is separated from the Adriatic sea, and from which the distance across to Greece is the shortest. The town of the Apolloniates lies opposite to it, and the breadth of the arm of the sea which runs between is not more than fifty miles. Pyrrhus, king of Epirus, was the first who entertained the notion of uniting these two points and making a passage on foot, by throwing a bridge across, and after him M. Varro, when commanding the fleet of Pompey in the war against the Pirates. Other cares however prevented either of them from accomplishing this design. Passing Hydruntum, we come to the deserted site of Soletum, then Fratuertium, the Portus Tarentinus, the haven of Miltopa, Lupia, Balesium, Cælia, and then Brundusium, fifty miles from Hydruntum. This last place is one of the most

famous .ports of Italy, and, although more distant, affords by far the safest passage across to Greece, the place of disembarkation being Dyrrachium, a city of Illyria; the distance across is 225 miles.

Adjoining Brundusium is the territory of the Pediculi; nine youths and as many maidens, natives of Illyria, became the parents of sixteen nations. The towns of the Pediculi are Rudiæ, Egnatia, and Barium; their rivers are the Iapyx (so called from the son of Dædalus, who was king there, and who gave it the name of Iapygia), the Pactius, and the Aufidus, which rises in the Hirpinian mountains and flows past Canusium.

At this point begins Apulia, surnamed the Daunian, from the Daunii, who take their name from a former chief, the father-in-law of Diomedes. In this territory are the towns of Salapia, famous for Hannibal's amour with a courtezan, Sipontum, Uria, the river Cerbalus, forming the boundary of the Daunii, the port of Agasus, and the Promontory of Mount Garganus, distant from the Promontory of Salentinum or Iapygia 234 miles. Making the circuit of Garganus, we come to the port of Garna, the Lake Pantanus, the river Frento, the mouth of which forms a harbour, Teanum of the Apuli, and Larinum, Cliternia, and the river Tifernus, at which the district of the Frentani begins. Thus there were three different nations of the Apulians, [the Daunii,] the Teani, so called from their leader, and who sprang from the Greeks, and the Lucani, who were subdued by Calchas, and whose country is now possessed by the Atinates. Besides those already mentioned, there are, of the Daunii, the colonies of Luceria and Venusia, the towns of Canusium and Arpi, formerly called Argos Hippium and founded by Diomedes, afterwards called Argyrippa. Here too Diomedes destroyed the nations of the Monadi and the Dardi, and the two cities of Apina and Trica, whose names have passed into a by-word and a proverb.

Besides the above, there is in the interior of the second region one colony of the Hirpini, Beneventum, so called by an exchange of a more auspicious name for its old one of Maleventum; also the Æculani, the Aquilonii, the Abellinates surnamed Protropi, the Compsani, the Caudini, the Ligures, both those called the Corneliani and Bebiani, the Vescellani, the Æclani, the Aletrini, the Abellinates surnamed Marsi, the Atrani, the Æcani, the Alfellani, the Atinates,

the Arpani, the Borcani, the Collatni, the Cori- nenses, the Cannenses, rendered famous by the defeat of the Romans, the Dirini, the Forentani, the Genusini, the Herdo- nienses, the Hyrini, the Larinates surnamed Frentani, the Merinates of Garganus, the Mateolani, the Netini, the Ru- bustini, the Silvini, the Strapellini, the Turmentini, the Vibinates, the Venusini, and the Ulurtini. In the interior of Calabria there are the Ægetini, the Apamestini, the Argentini, the Butuntinenses, the Deciani, the Grumbestini, the Norbanenses, the Palionenses, the Sturnini, and the Tutini: there are also the following Salentine nations; the Aletini, the Basterbini, the Neretini, the Uxentini, and the Veretini.

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CHAP. 17. (12.)

THE FOURTH REGION OF ITALY.

We now come to the fourth region, which includes the most valiant probably of all the nations of Italy. Upon the coast, in the territory of the Frentani, after the river Tifernus, we find the river Trinium, with a good harbour at its mouth, the towns of Histonium, Buca, and Ortona, and the river Aternus. In the interior are the Anxani surnamed Frentani, the Higher and Lower Carentini, and the Lanuenses; in the territory of the Marrucini, the Teatini; in that of the Peligni, the Corfinienses, the Superæquani, and the Sulmonenses; in that of the Marsi, the Anxantini, the Atinates, the Fucentes, the Lucenses, and the Marruvini; in that of the Albenses, the town of Alba on Lake Fucinus; in that of the Æquiculani, the Cliternini, and the Carseolani; in that of the Vestini, the Angulani, the Pinnenses, and the Peltuinates, adjoining to whom are the Aufinates Cismontani; in that of the Samnites, who have been called Sabelli, and whom the Greeks have called Saunitæ, the colony of old Bovianum, and that of the Undecumani, the Aufidenates, the Esernini, the Fagifulani, the Ficolenses, the Sæpinates, and the Tereventinates; in that of the Sabini, the Amiternini, the Curenses, Forum Decî, Forum Novum, the Fidenates, the Interamnates, the Nursini, the Nomentani, the Reatini, the Trebulani, both those called Mutusci and those called Suffenates, the Tiburtes, and the Tarinates.

In these districts, the Comini, the Tadiates, the Cædici, and the Alfaterni, tribes of the Æquiculi, have disappeared. From Gellianus we learn that Archippe, a town of the Marsi, built by Marsyas, a chieftain of the Lydians, has been swallowed up by Lake Fucinus, and Valerianus informs us that the town of the Viticini in Picenum was destroyed by the Romans. The Sabini (called, according to some writers, from their attention to religious observances and the worship of the gods, Sevini) dwell on the dew-clad hills in the vicinity of the Lakes of the Velinus. The Nar, with its sulphureous waters, exhausts these lakes, and, descending from Mount Fiscellus, unites with them near the groves of Vacuna and Reate, and then directs its course

towards the Tiber, into which it discharges itself. Again, in another direction, the Anio, taking its rise in the mountain of the Trebani, carries into the Tiber the waters of three lakes remarkable for their picturesque beauty, and to which Subla- queum is indebted for its name. In the territory of Reate is the Lake of Cutiliæ, in which there is a floating island, and which, according to M. Varro, is the navel or central point of Italy. Below the Sabine territory lies that of La- tium, on one side Picenum, and behind it Umbria, while the range of the Apennines flanks it on either side.

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CHAP. 18. (13.)

THE FIFTH REGION OF ITALY.

The fifth region is that of Picenum, once remarkable for the denseness of its population; 360,000 Picentines took the oaths of fidelity to the Roman people. They are descended from the Sabines, who had made a vow to celebrate a holy spring. Their territory commenced at the river Aternus, where the present district and colony of Adria is, at a distance of six miles from the sea. Here we find the river Vomanus, the territories of Prætutia and Palma, Castrum Novum, the river Batinus; Truentum, with its river of the same name, which place is the only remnant of the Liburni in Italy; the river Albula; Tervium, at which the Prætutian district ends, and that of Picenum begins; the town of Cupra, Castellum Firmanorum, and above it the colony of Asculum, the most illustrious in Picenum; in the interior there is the town of Novana. Upon the coast we have Cluana, Potentia, Numana, founded by the Siculi, and Ancona, a colony founded by the same people on the Promontory of Cumerus, forming an elbow of the coast, where it begins to bend in- wards, and distant from Garganus 183 miles. In the interior are the Auximates, the Beregrani, the Cingulani, the Cuprenses surnamed Montani, the Falarienses, the Pausulani, the Planinenses, the Ricinenses, the Septempedani, the Tollentinates, the Treienses, and the Pollentini of Urbs Salvia.

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CHAP. 19. (14.)

THE SIXTH REGION OF ITALY.

Adjoining to this is the sixth region, which includes Umbria and the Gallic territory in the vicinity of Ariminum. At Ancona begins the coast of that part of Gaul known as Gallia Togata. The Siculi and the Liburni possessed the greater part of this district, and more particularly the territories of Palma, of Prætutia, and of Adria. These were expelled by the Umbri, these again by the Etrurians, and these in their turn by the Gauls. The Umbri are thought to have been the most ancient race in Italy, it being supposed that they were called "Ombrii" by the Greeks, from the fact of their having survived the rains which had inundated the earth. We read that 300 of their towns were conquered by the Tusci; at the present day we find on their coast the river Æsis, Senogallia, the river Metaurus, the colonies of Fanum Fortunæ and Pisaurum, with a river of the same name; and, in the interior, those of Hispellum and Tuder.

Besides the above, there are the Amerini, the Attidiates, the Asisinates, the Arnates, the Æsinates, the Camertes, the Casuentillani, the Carsulani, the Dolates surnamed Salentini, the Fulginiates, the Foroflaminienses, the Forojulienses surnamed Concupienses, the Forobrentani, the Forosempronienses, the Iguvini, the Interamnates surnamed Nartes, the Mevanates, the Mevanionenses, the Matilicates, the Narnienses, whose town used formerly to be called Nequinum; the Nucerini, both those surnamed Favonienses and those called Camellani; the Ocriculani, the Ostrani, the Pitulani, both those surnamed Pisuertes and the others called Mergentini; the Plestini, the Sentinates, the Sarsi- nates, the Spoletini, the Suasini, the Sestinates, the Suillates, the Tadinates, the Trebiates, the Tuficani, the Tifernates surnamed Tiberini, and the others called Metaurenses, the Vesinicates, the Urbinates, both those surnamed Metaurenses and the others called Hortenses, the Vettonenses, the Vindinates, and the Viventani. In this district there exist no longer the Feliginates who possessed Clusiolum above Interamna, and the Sarranates, with their towns of Acerræ, surnamed

Vafriæ, and Turocelum, also called Vettiolum; as also the Solinates, the Curiates, the Fallienates, and the Apiennates. The Arienates also have disappeared with the town of Crinovolum, as well as the Usidicani, the Plangenses, the Pæsinates, and the Cælestini. Cato writes that Ameria above-mentioned was founded 964 years before the war with Perseus.

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CHAP. 20. (15.)

THE EIGHTH REGION OF ITALY; THE PADUS.

The eighth region is bounded by Ariminum, the Padus, and the Apennines. Upon the coast we have the river Crustumium, and the colony of Ariminum, with the rivers Ariminus and Aprusa. Next comes the river Rubico, once the boundary of Italy, and after it the Sapis, the Vitis, and the Anemo, and then, Ravenna, a town of the Sabines, with the river Bedesis, 105 miles from Ancona; and, not far from the sea, Butrium, a town of the Umbri. In the interior there are the colonies of Bononia, formerly called Felsina, when it was the chief place of Etruria, Brixillum, Mutina, Parma, and Placentia. There are also the towns of Cæsena, Claterna, Forum Clodî, Forum Livî, Forum Popilî, Forum Truentinorum, Forum Cornelî, Forum Licinî, the Faventini, the Fidentini, the Otesini, the Padinates, the Regi- enses, who take their name from Lepidus, the Solonates, the Saltus Galliani, surnamed Aquinates, the Tannetani, the Veliates, who were anciently surnamed Regiates, and the Urbanates. In this district the Boii have disappeared, of whom there were 112 tribes according to Cato; as also the Senones, who captured Rome.

(16.) The Padus descends from the bosom of Mount Vesulus, one of the most elevated points of the chain of the Alps, in the territories of the Ligurian Vagienni, and rises at its source in a manner that well merits an inspection by the curious; after which it hides itself in a subterranean channel until it rises again in the country of the Forovibienses. It is inferior in fame to none whatever among the rivers, being known to the Greeks as the Eridanus and famous as the scene of the punishment of Phaëton. At the rising of the Dog-star it is swollen by the melted snows; but, though it proves more furious in its course to the adjoining fields than to the vessels that are upon it, still it takes care to carry away no portion of its banks, and when it recedes, renders them additionally fertile. Its length from its source is 300 miles, to which we must add eighty-eight for its sinuosities; and it receives from the Apennines and Alps not only several navigable rivers, but immense lakes as well, which discharge themselves into

its waters, thus conveying altogether as many as thirty streams into the Adriatic Sea.

Of these the best known are the following — flowing from the range of the Apennines, the Jactus, the Tanarus, the Trebia which passes Placentia, the Tarus, the Incia, the Gabellus, the Scultenna, and the Rhenus: from the chain of the Alps, the Stura, the Orgus, the two Duriæ, the Sessites, the Ticinus, the Lambrus, the Addua, the Ollius, and the Mincius. There is no river known to receive a larger increase than this in so short a space; so much so indeed that it is impelled onwards by this vast body of water, and, invading the land, forms deep channels in its course: hence it is that, although a portion of its stream is drawn off by rivers and canals between Ravenna and Altinum, for a space of 120 miles, still, at the spot where it discharges the vast body of its waters, it is said to form seven seas.

By the Augustan Canal the Padus is carried to Ravenna, at which place it is called the Padusa, having formerly borne the name of Messanicus. The nearest mouth to this spot forms the extensive port known as that of Vatrenus, where Claudius Cæsar, on his triumph over the Britons, entered the Adriatic in a vessel that deserved rather the name of a vast palace than a ship. This mouth, which was formerly called by some the Eridanian, has been by others styled the Spinetic mouth, from the city of Spina, a very powerful place which formerly stood in the vicinity, if we may form a conclusion from the amount of its treasure deposited at Delphi; it was founded by Diomedes. At this spot the river Vatrenus, which flows from the territory of Forum Corneli, swells the waters of the Padus.

The next mouth to this is that of Caprasia, then that of Sagis, and then Volane, formerly called Olane; all of which are situate upon the Flavian Canal, which the Tuscans formerly made from Sagis, thus drawing the impetuous stream of the river across into the marshes of the Atriani, which they call the Seven Seas; and upon which is the noble port of Atria, a city of the Tuscans, from which place the sea was formerly called the Atriatic, though now the Adriatic.

We next come to the overflowing mouths of Carbonaria, and the Fosses of Philistina, by some called Tarta- rus, all of which originate in the overflow of the waters in the Philistinian Canal, swollen by the streams of the Atesis, descending from the Tridentine Alps, and of

the Togisonus, flowing from the territory of the Patavini. A portion of them also forms the adjoining port of Brundulum, in the same manner as Edron is formed by the two rivers Meduacus and the Clodian Canal. With the waters of these streams the Padus unites, and with them discharges itself into the sea, forming, according to most writers, between the Alps and the sea-shore a triangular figure, 2000 stadia in circumference, not unlike the Delta formed by the Nile in Egypt. I feel somewhat ashamed to have to borrow from the Greeks any statement in reference to Italy; Metrodorus of Scepsos, however, informs us that this river has obtained its name of Padus from the fact, that about its source there are great numbers of pine-trees, which in the Gallic language are called "padi." In the tongue of the Ligurians this river is called "Bodincus," which signifies "the bottomless." This derivation is in some measure supported by the fact that near this river there is the town of Industria, of which the ancient name was Bodincomagum, and where the river begins to be of greater depth than in other parts.

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CHAP. 21. (17.)

THE ELEVENTH REGION OF ITALY; ITALIA TRANSPAIDANA.

From the river Padus the eleventh region receives its name of Transpadana; to which, situate as it is wholly in the interior, the river, by its bounteous channel, conveys the gifts of all the seas. The towns are Vibî Forum and Segusio; and, at the foot of the Alps, the colony of Augusta Taurinorum, at which place the Padus becomes navigable, and which was founded by the ancient race of the Ligurians, and of Augusta Prætoria of the Salassi, near the two passes of the Alps, the Grecian and the Penine (by the latter it is said that the Carthaginians passed into Italy, by the Grecian, Hercules) — the town of Eporedia, the foundation of which by the Roman people was enjoined by the Sibylline books; the Gauls call tamers of horses by the name of "Epore- diæ" — Vercellæ, the town of the Libici, derived its origin from the Salluvii, and Novaria, founded by the Vertacoma- cori, is at the present day a district of the Vocontii, and not, as Cato supposes, of the Ligurians; of whom two nations, called the Lævi and the Marici, founded Ticinum, not far from the Padus, as the Boii, descended from the Transalpine nations, have founded Laus Pompeia and the Insubres Me- diolanum.

From Cato we also learn that Comum, Bergomum, and Licinîforum, and some other peoples in the vicinity, originated with the Orobii, but he admits that he is ignorant as to the origin of that nation. Cornelius Alexander however informs us that they came from Greece, interpreting their name as meaning "those who live upon the mountains." In this district, Parra has disappeared, a town of the Orobii, from whom, according to Cato, the people of Bergomum are descended; its site even yet shows that it was situate in a position more elevated than fruitful. The Caturiges have also perished, an exiled race of the Insubres, as also Spina previously mentioned; Melpum too, a place distinguished for its opulence, which, as we are informed by Cornelius Nepos, was destroyed by the Insubres, the Boii, and the Senones, on the very day on which Camillus took Veii.

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CHAP. 22. (18.)

THE TENTH REGION OF ITALY.

We now come to the tenth region of Italy, situate on the Adriatic Sea. In this district are Venetia, the river Silis, rising in the Tarvisanian mountains, the town of Alti- num, the river Liquentia rising in the mountains of Opitergium, and a port with the same name, the colony of Concordia; the rivers and harbours of Romatinum, the greater and less Tiliaventum, the Anaxum, into which the Varamus flows, the Alsa, and the Natiso with the Turrus, which flow past the colony of Aquileia at a distance of fifteen miles from the sea. This is the country of the Carni, and adjoining to it is that of the Iapydes, the river Timavus, the fortress of Pucinum, famous for its wines, the Gulf of Tergeste, and the colony of that name, thirty-three miles from Aquileia. Six miles beyond this place lies the river Formio, 189 miles distant from Ravenna, the ancient boundary of enlarged Italy, and now the frontier of Istria. That this region takes its name from the river Ister which flows from the Danube, also called the Ister, into the Adriatic opposite the mouth of the Padus, and that the sea which lies between them is rendered fresh by their waters running from opposite directions, has been erroneously asserted by many, and among them by Nepos even, who dwelt upon the banks of the Padus. For it is the fact that no river which runs from the Danube discharges itself into the Adriatic. They have been misled, I think, by the circumstance that the ship Argo came down some river into the Adriatic sea, not far from Tergeste; but what river that was is now unknown. The most careful writers say that the ship was carried across the Alps on men's shoulders, having passed along the Ister, then along the Savus, and so from Nauportus, which place, lying between Æmona and the Alps, from that circumstance derives its name.

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CHAP. 23. (19.)

ISTRIA, ITS PEOPLE AND LOCALITY.

Istria projects in the form of a peninsula. Some writers have stated its length to be forty miles, and its circumference 125; and the same as to Liburnia which adjoins it, and the Flanatic Gulf, while others make it 225; others again make the circumference of Liburnia 180 miles. Some persons too extend Iapydia, at the back of Istria, as far as the Flanatic Gulf, a distance of 130 miles, thus making Liburnia but 150 miles. Tuditanus, who subdued the Istri, had this inscription on his statue which was erected there: "From Aquileia to the river Titus is a distance of 1000 stadia."

The towns of Istria with the rights of Roman citizens are Ægida, Parentium, and the colony of Pola, now Pietas Julia, formerly founded by the Colchians, and distant from Tergeste 100 miles: after which we come to the town of Nesactium, and the river Arsia, now the boundary of Italy. The distance across from Ancona to Pola is 120 miles. In the interior of the tenth region are the colonies of Cremona, Brixia in the territory of the Cenomanni, Ateste belonging to the Veneti, and the towns of Acelum, Patavium, Opitergium, Belunum, and Vicetia; with Mantua, the only city of the Tuscans now left beyond the Padus. Cato informs us that the Veneti are descendants of the Trojans, and that the Cenomanni dwelt among the Volcæ in the vicinity of Massilia. There are also the towns of the Fertini, the Tridentini, and the Beruenses, belonging to the Rhæti, Verona, belonging to the Rhæti and the Euganei, and Ju- lienses to the Carni. We then have the following peoples, whom there is no necessity to particularize with any degree of exactness, the Alutrenses, the Asseriates, the Flamonienses with those surnamed Vanienses, and the others called Culici, the Forojulienses surnamed Transpadani, the Foretani, the Nedinates, the Quarqueni, the Taurisani, the Togienses, and the Varvari. In this district there have disappeared — upon the coast — Iramene, Pellaon, and Palsatium, Atina and Cælina belonging to the Veneti, Segeste and Ocra to the Carni, and Noreia to the Taurisci. L. Piso also informs us that

although the senate disapproved of his so doing, M. Claudius Marcellus razed to the ground a tower situate at the twelfth milestone from Aquileia.

In this region also and the eleventh there are some celebrated lakes, and several rivers that either take their rise in them or else are fed by their waters, in those cases in which they again emerge from them. These are the Addua, fed by the Lake Larius, the Ticinus by Lake Verbannus, the Mincius by Lake Benacus, the Ollius by Lake Sebinnus, and the Lambrus by Lake Eupilis — all of them flowing into the Padus.

Cælius states that the length of the Alps from the Upper Sea to the Lower is 1000 miles, a distance which Timagenes shortens by twenty-two. Cornelius Nepos assigns to them a breadth of 100 miles, and T. Livius of 3000 stadia; but then in different places. For in some localities they exceed 100 miles; where they divide Germany, for instance, from Italy; while in other parts they do not reach seventy, being thus narrowed by the providential dispensation of nature as it were. The breadth of Italy, taken from the river Var at the foot of these mountains, and passing along by the Vada Sabatia, the Taurini, Comum, Brixia, Verona, Vicetia, Opitergium, Aquileia, Tergeste, Pola, and Arsia, is 745 miles.

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CHAP. 24. (20.)

THE ALPS, AND THE ALPINE NATIONS.

Many nations dwell among the Alps; but the more remarkable, between Pola and the district of Tergeste, are the Secusses, the Subocrini, the Catali, the Menocaleni, and near the Carni the people formerly called the Taurisci, but now the Norici. Adjoining to these are the Rhæti and the Vindelici, who are all divided into a multitude of states. It is supposed that the Rhæti are the descendants of the Tuscans, who were expelled by the Gauls and migrated hither under the command of their chief, whose name was Rhætus. Turning then to the side of the Alps which fronts Italy, we have the Euganean nations enjoying Latin rights, and of whom Cato enumerates thirty-four towns. Among these are the Triumpilini, a people who were sold with their territory; and then the Camuni, and several similar tribes, each of them in the jurisdiction of its neighbouring municipal town. The same author also considers the Lepontii and the Salassi to be of Tauriscan origin, but most other writers, giving a Greek interpretation to their name, consider the Lepontii to have been those of the followers of Hercules who were left behind in consequence of their limbs being frozen by the snow of the Alps. They are also of opinion that the inhabitants of the Grecian Alps are descended from a portion of the Greeks of his army, and that the Euganeans, being sprung from an origin so illustrious, thence took their name. The head of these are the Stœni. The Vennonenses and the Sarunetes, peoples of the Rhæti, dwell about the sources of the river Rhenus, while the tribe of the Lepontii, known as the Uberi, dwell in the vicinity of the sources of the lhodanus, in the same district of the Alps. There are also other native tribes here, who have received Latin rights, such as the Octodurenses, and their neighbours the Centrones, the Cottian states, the Ligurian Vagienni, descended from the Caturiges, as also those called Montani; besides numerous nations of the Capillati, on the confines of the Ligurian Sea.

It may not be inappropriate in this place to subjoin the inscription now to be seen upon the trophy erected on the Alps, which is to the

following effect:— “To the Emperor Cæsar — The son of Cæsar now deified, Augustus, Pontifex Maximus, and emperor fourteen years, in the seventeenth year of his holding the tribuni- tial authority, the Senate and the Roman people, in remembrance that under his command and auspices all the Alpine nations which extended from the upper sea to the lower were reduced to subjection by the Roman people — The Alpine nations so sub- dued were: the Triumpilini, the Camuni, the Ve- nostes, the Vennonenses, the Isarci, the Breuni, the Genaunes, the Focunates, four nations of the Vindelici, the Consuanetes, the Rucinates, the Licates, the Catenates, the Ambisontes, the Ru- gusci, the Suanetes, the Calucones, the Brixentes, the Lepontii, the Uberi, the Nantuates, the Seduni, the Varagri, the Salassi, the Acitavones, the Medulli, the Uceni, the Caturiges, the Bri- giani, the Sogiontii, the Brodiontii, the Nemaloni, the Edenates, the Esubiani, the Veamini, the Gal- litæ, the Triulatti, the Ecdini, the Vergunni, the Eguituri, the Nementuri, the Oratelli, the Nerusi, the Velauni, and the Suetri.”

The twelve states of the Cottiani were not included in the list, as they had shown no hostility, nor yet those which had been placed by the Pompeian law under the jurisdiction of the municipal towns.

Such then is Italy, sacred to the gods, such are the nations, such the cities of her peoples; to which we may add, that this is that same Italy, which, when L. Æmilius Paulus and C. Attilius Regulus were Consuls, on hearing of the rising in Gaul, unaided, and without any foreign assistance whatever, without the help even of that portion which lies beyond the Padus, armed 80,000 horse and 700,000 foot. In abundance of metals of every kind. Italy yields to no land whatever; but all search for them has been prohibited by an ancient decree of the Senate, who gave orders thereby that Italy shall be exempted from such treatment.

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CHAP. 25. (21.)

LIBURNIA AND ILLYRICUM.

The nation of the Liburni adjoins the river Arsia, and extends as far as the river Titus. The Mentores, the Hymani, the Encheleæ, the Buni, and the people whom Callimachus calls the Peucetiæ, formerly formed part of it; but now the whole in general are comprised under the one name of Illyricum. But few of the names of these nations are worthy of mention, or indeed very easy of pronunciation. To the jurisdiction of Scardona resort the Iapydes and fourteen cities of the Liburni, of which it may not prove tedious if I mention the Lacinienses, the Stlupini, the Burnistæ, and the Olbonenses. Belonging to the same jurisdiction there are, in the enjoyment of Italian rights, the Alutæ, the Flanates, from whom the Gulf takes its name, the Lopsi, and the Varvarini; the Assesiates, who are exempt from tribute; and upon the islands, the Fertinates and the Curicttæ.

Besides these, there are on the coast, after leaving Nesactium, Alvona, Flanona, Tarsatica, Senia, Lopsica, Ortopula, Vegium, Argyruntum, Corinium, Ænona, the city of Pasinum, and the river Tedanius, at which Iapydia terminates. The islands of this Gulf, with their towns, besides those above mentioned, are Absyrtium, Arba, Crexa, Gissa, and Portunata. Again, on the mainland there is the colony of Iadera, distant from Pola 160 miles; then, at a distance of thirty miles, the island of Colentum, and of eighteen, the mouth of the river Titus.

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CHAP. 26. (22.)

DALMATIA.

Scardona, situate upon the river, at a distance of twelve miles from the sea, forms the boundary of Liburnia and the beginning of Dalmatia. Next to this place comes the ancient country of the Autariatares and the fortress of Tariona, the Promontory of Diomedes, or, as others call it, the peninsula of Hyllis, 100 miles in circuit. Then comes Tragurium, a place with the rights of Roman citizens, and celebrated for its marble, Sicum, a place to which Claudius, the emperor lately deified, sent a colony of his veterans, and Salona, a colony, situate 112 miles from ladera. To this place resort for legal purposes, having the laws dispensed according to their divisions into decuries or tithings, the Dahmatæ, forming 342 decuries, the Deurici 22, the Ditiones 239, the Mazæi 269, and the Sardiates 52. In this region are Burnum, Andetrium, and Tribulium, fortresses ennobled by the battles of the Roman people. To the same jurisdiction also belong the Issæi, the Colentini, the Separi, and the Epetini, nations inhabiting the islands. After these come the fortresses of Peguntium and of Rataneum, with the colony of Narona, the seat of the third jurisdiction, distant from Salona eighty-two miles, and situate upon a river of the same name, at a distance of twenty miles from the sea. M. Varro states that eighty-nine states used to resort thither, but now nearly the only ones that are known are the Cerauni with 24 decuries, the Daorizi with 17, the Dæsitiates with 103, the Docleatæ with 33, the Deretini with 14, the Deremistæ with 30, the Dindari with 33, the Glinditiones with 44, the Melcomani with 24, the Naresii with 102, the Scirtarii with 72, the Siculotæ with 24, and the Vardæi, once the scourges of Italy, with no more than 20 decuries. In addition to these, this district was possessed by the Ozuæi, the Partheni, the Hemasini, the Arthitæ, and the Armistæ. The colony of Epidaurum is distant from the river Naron 100 miles. After Epidaurum come the following towns, with the rights of Roman citizens: — Rhizinium, Acruvium, Butua, Olcinium, formerly called Colchinium, having been founded by the

Colchians; the river Drilo, and, upon it, Scodra, a town with the rights of Roman citizens, situate at a distance of eighteen miles from the sea; besides in former times many Greek towns and once powerful states, of which all remem- brance is fast fading away. For in this region there were formerly the Labeatæ, the Enderini, the Sasæi, the Grabæi, properly called Illyrii, the Taulantii, and the Pyrei. The Promontory of Nymphæum on the sea-coast still retains its name; and there is Lissum, a town enjoying the rights of Roman citizens, at a distance from Epidaurum of 100 miles.

(23.) At Lissum begins the province of Macedonia, the nations of the Parthini, and behind them the Dassaretæ. The mountains of Candavia are seventy-eight miles from Dyrrhachium. On the coast lies Denda, a town with the rights of Roman citizens, the colony of Epidamnum, which, on account of its inauspicious name, was by the Romans called Dyrrhachium, the river Aöus, by' some called Æas, and Apollonia, formerly a colony of the Corinthians, at a distance of four miles from the sea, in the vicinity of which the celebrated Nymphæum is inhabited by the barbarous Amantes and Buliones. Upon the coast too is the town of Oricum, founded by the Colchians. At this spot begins Epirus, with the Acroceraunian mountains, by which we have previously mentioned this Gulf of Europe as bounded. Oricum is distant from the Promontory of Salentinum in Italy eighty miles.

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CHAP. 27. (24.)

THE NORICI.

In the rear of the Carni and the Iapydes, along the course of the great river Ister, the Rhæti touch upon the Norici: their towns are Virunum, Celeia, Teurnia, Aguntum, Vianiomina, Claudia, and Flavium Solvense. Adjoining to the Norici is Lake Peiso, and the deserts of the Boii; they are however now inhabited by the people of Sabaria, a colony of the now deified emperor Claudius, and the town of Scarabantia Julia.

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CHAP. 28. (25.)

PANNONIA.

Next to them comes acorn-bearing Pannonia, along which the chain of the Alps, gradually lessening as it runs through the middle of Illyricum from north to south, forms a gentle slope on the right hand and the left. The portion which looks towards the Adriatic Sea is called Dalmatia and Illyricum, above mentioned, while Pannonia stretches away towards the north, and has the Danube for its extreme boundary. In it are the colonies of Ælmona and Siscia. The following rivers, both known to fame and adapted for commerce, flow into the Danube; the Draus, which rushes from Noricum with great impetuosity, and the Savus, which flows with a more gentle current from the Carnic Alps, there being a space between them of 120 miles. The Draus runs through the Serretes, the Serrapilli, the Iasi, and the Andizetes; the Savus through the Colapiani and the Breuci; these are the principal peoples. Besides them there are the Arivates, the Azali, the Amantini, the Belgites, the Catari, the Cornacates, the Eravisci, the Hercuniates, the Latovici, the Oseriates, the Varciani, and, in front of Mount Claudius, the Scordisci, behind it the Taurisci. In the Savus there is the island of Metubarris, the greatest of all the islands formed by rivers. Besides the above, there are these other rivers worthy of mention: — the Colapis, which flows into the Savus near Siscia, where, dividing its channel, it forms the island which is called Segestica a; and the river Bacuntius, which flows into the Savus at the town of Sirmium, where we find the state of the Sirmienses and the Amantini. Forty-five miles thence is Taurunum, where the Savus flows into the Danube; above which spot the Valdanus and the Urpanus, themselves far from ignoble rivers, join that stream.

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CHAP. 29. (26.)

MŒSIA.

Joining up to Pannonia is the province called Mœsia, which runs, with the course of the Danube, as far as the Euxine. It commences at the confluence previously mentioned. In it are the Dardani, the Celegeri, the Triballi, the Timachi, the Mœsi, the Thracians, and the Scythians who border on the Euxine. The more famous among its rivers are the Margis, which rises in the territory of the Dardani, the Pingus, the Timachus, the Œscus which rises in Mount Rhodope, and, rising in Mount Hæmus, the Utus, the Asamus, and the Ieterus.

The breadth of Illyricum at its widest part is 325 miles, and its length from the river Arsia to the river Drinius 530; from the Drinius to the Promontory of Acroceraunia Agrippa states to be 175 miles, and he says that the entire circuit of the Italian and Illyrian Gulf is 1700 miles. In this Gulf, according to the limits which we have drawn, are two seas, the Ionian in the first part, and the Adriatic, which runs more inland and is called the Upper Sea.

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CHAP. 30.

ISLANDS OF THE IONIAN SEA AND THE ADRIATIC.

In the Ausonian Sea there are no islands worthy of notice beyond those which we have already mentioned, and only a few in the Ionian; those, for instance, upon the Calabrian coast, opposite Brundusium, by the projection of which a harbour is formed; and, over against the Apulian coast, Diomedia, remarkable for the monument of Diomedes, and another island called by the same name, but by some Teutria.

The coast of Illyricum is clustered with more than 1000 islands, the sea being of a shoaly nature, and numerous creeks and æstuaries running with their narrow channels between portions of the land. The more famous are those before the mouths of the Timavus, with warm springs that rise with the tides of the sea, the island of Cissa near the territory of the Istri, and the Pullaria and Absyrtides, so called by the Greeks from the circumstance of Absyrtus, the brother of Medea, having been slain there. Some islands near them have been called the Electrides, upon which amber, which they call "electrum," was said to be found; a most assured instance however of that untruthfulness which is generally ascribed to the Greeks, seeing that it has never vet been ascertained which of the islands were meant by them under that name. Opposite to the Iader is Lissa, and other islands whose names have been already mentioned. Opposite to the Liburni are some islands called the Crateæ, and no smaller number styled Liburniecæ and Celadussæ. Opposite to Surium is Bavo, and Brattia, famous for its goats, Issa with the rights of Roman citizens, and Pharia with a town. At a distance of twenty-five miles from Issa is Corcyra, surnamed Melæna, with a town founded by the Cnidians; between which and Illyricum is Melite, from which, as we learn from Callimachus, a certain kind of little dogs were called Melitæi; fifteen miles from it we find the seven Elaphites. In the Ionian Sea, at a distance of twelve miles from Oricum, is Sasonis, notorious from having been a harbour of pirates.

Summary. — The towns and nations mentioned are in number* * * *. The rivers of note are in number* * * *. The mountains of note are in number* * * *. The islands are in number* * * *. The towns or nations which have disappeared are in number* * * *. The facts, statements, and observations are in number 326.

Roman Authors quoted. — Turannius Gracilis, Cornelius Nepos, T. Livius, Cato the Censor, M. Agrip- pa, M. Varro, the Emperor Augustus now deified, Varro Atacinus, Antias, Hyginus, L. Vetus, Pomponius Mela, Curio the Elder, Cælius, Arruntius, Sebosus, Licinius Mucianus, Fabricius Tuscus, L. Ateius, Capito, Verrius Flaccus, L. Piso, Gellianus, and Valerianus.

Foreign Authors quoted. — Artemidorus, Alexander Polyhistor, Thucydides, Theophrastus, Isidorus, Theopompus, Metrodorus of Scepsis, Callicrates, Xenophon of Lampsacus, Diodorus of Syracuse, Nymphodorus, Calliphanes, and Timagenes.

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BOOK IV. AN ACCOUNT OF COUNTRIES, NATIONS, SEAS, TOWNS, HAVENS, MOUNTAINS, RIVERS, DISTANCES, AND PEOPLES WHO NOW EXIST OR FORMERLY EXISTED.

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CHAP. 1. (1.)

EPIRUS.

The third great Gulf of Europe begins at the mountains of Acroceraunia, and ends at the Hellespont, embracing an extent of 2500 miles, exclusive of the sea-line of nineteen smaller gulfs. Upon it are Epirus, Acarnania, Ætolia, Phocis, Locris, Achaia, Messenia, Laconia, Argolis, Megaris, Attica, Bœotia; and again, upon the other sea, the same Phocis and Locris, Doris, Phthiotis, Thessalia, Magnesia, Macedonia and Thracia. All the fabulous lore of Greece, as well as the effulgence of her literature, first shone forth upon the banks of this Gulf. We shall therefore dwell a little the longer upon it.

Epirus, generally so called, begins at the mountains of Acroceraunia. The first people that we meet are the Chaones, from whom Chaonia receives its name, then the Thesproti, and then the Antigonenses. We then come to the place where Aornos stood, with its exhalations so deadly to the feathered race, the Cestrinis, the Perrhæbi, in whose coun- try Mount Pindus is situate, the Cassiopæi, the Dryopes, the Sellæ, the Hellopes, the Molossi, in whose territory is the temple of the Dodonæan Jupiter, so famous for its oracle; and Mount Tomarus, so highly praised by Theopompus, with its hundred springs gushing from its foot.

(2.) Epirus, properly so called, advances towards Magnesia and Macedonia, having at its back the Dassaretæ, previously mentioned, a free nation, and after them the Dardani, a savage race. On the left hand, before the Dardani are extended the Triballi and the nations of Mœsia, while in front of them the Medi and the Denselatæ join, and next to them the Thracians, who stretch away as far as the Euxine: in such a manner is a rampart raised around the lofty heights of Rhodope, and then of Hæmus.

On the coast of Epirus is the fortress of Chimær, situate upon the Acroceraunian range, and below it the spring known as the Royal Waters; then the towns of Mæandria, and Cestria, the Thyamis, a river of Thesprotia, the colony of Buthrotum, and the Ambracian

Gulf, so famed in history; which, with an inlet only half a mile in width, receives a vast body of water from the sea, being thirty-seven miles in length, and fifteen in width. The river Acheron, which runs through Acherusia, a lake of Thesprotia, flows into it after a course of thirty-six miles; it is considered wonderful for its bridge, 1000 feet in length, by a people who look upon everything as wonderful that belongs to themselves. Upon this Gulf is also situate the town of Ambracia. There are also the Aphas and the Arachthus, rivers of the Molossi; the city of Anactoria, and the place where Pandosia stood.

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CHAP. 2.

ACARNANIA.

The towns of Acarnania, the ancient name of which was Curetis, are Heraclia, Echinus, and, on the coast, Actium, a colony founded by Augustus, with its famous temple of Apollo and the free city of Nicopolis. Passing out of the Ambracian Gulf into the Ionian Sea, we come to the coast of Leucadia, with the Promontory of Leucate, and then the Gulf and the peninsula of Leucadia, which last was formerly called Neritis. By the exertions of the inhabitants it was once cut off from the mainland, but was again joined to it by the vast bodies of sand accumulated through the action of the winds. This spot is called Dioryctos, and is three stadia in length: on the peninsula is the town of Leucas, formerly called Neritus. We next come to Alyzia, Stratos, and Argos, surnamed Amphilochian, cities of the Acarnanians: the river Acheloüs flows from the heights of Pindus, and, after separating Acarnania from Ætolia, is fast adding the island of Artemita to the mainland by the continual deposits of earth which it brings down its stream.

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CHAP. 3. (2.)

ÆTOLIA.

The peoples of Ætolia are the Athamanes, the Tymphæi, the Ephyri, the Ænienses, the Perrhæbi, the Dolopes, the Maraces, and the Atraces, in whose territory rises the river Atrax, which flows into the Ionian Sea. Calydon is a city of Ætolia, situate at a distance of seven miles from the sea, and near the banks of the river Evenus. We then come to Macynia, and Molycria, behind which lie Mounts Chalcis and Taphiassus. On the coast again, there is the promontory of Antirrhium, off which is the mouth of the Corinthian Gulf, which flows in and separates Ætolia from the Peloponnesus, being less than one mile in width. The promontory which faces it on the opposite side is called Rhion. The towns of Ætolia, however, on the Corinthian Gulf are Naupactus and Pylene; and, more inland, Pleuron and Hali- cyrna. The most famous mountains are Tomarus, in the district of Dodona, Crania in Ambracia, Aracynthus in Acarnania, and Acanthon, Panætolium, and Macynium, in Ætolia.

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CHAP. 4. (3.)

LOCRIS AND PHOCIS.

Next to Ætolia are the Locri, surnamed Ozolæ; a people exempt from tribute. Here is the town of Œanthe, the port of Apollo Phæstius, and the Gulf of Crissa. In the interior are the towns of Argyna, Eupalia, Phæstum, and Calamisus. Beyond are the Cirrhaean plains of Phocis, the town of Cirrha, and the port of Chalæon, seven miles from which, in the interior, is situate the free town of Delphi, at the foot of Mount Parnassus, and having the most celebrated oracle of Apollo throughout the whole world. There is the Fountain too of Castalia, and the river Cephisus which flows past Delphi, rising in the former city of Lilæa. Besides these, there is the town of Crissa and that of Anticyra, with the Bulenses; as also Naulochum, Pyrrha, Amphissa, exempt from all tribute, Tithrone, Tritea, Ambrysus, and Drymæa, which district has also the name of Daulis. The extremity of the gulf washes one corner of Bœotia, with its towns of Siphæ and Thebes, surnamed the Corsian, in the vicinity of Helicon. The third town of Bœotia on this sea is that of Pagæ, from which point the Isthmus of the Peloponnesus projects in the form of a neck.

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CHAP. 5. (4.)

THE PELOPONNESUS.

The Peloponnesus, which was formerly called Apia and Pelasgia, is a peninsula, inferior in fame to no land upon the face of the earth. Situate between the two seas, the Ægæan and the Ionian, it is in shape like the leaf of a plane-tree, in consequence of the angular indentations made in its shores. According to Isidorus, it is 563 miles in circumference; and nearly as much again, allowing for the sea-line on the margin of its gulfs. The narrow pass at which it commences is know by the name of the Isthmus. At this spot the two seas, which we have previously mentioned, running from the north and the east, invade the land from opposite sides, and swallow up its entire breadth, the result being that through these inroads in opposite directions of such vast bodies of water, the sides of the land are eaten away to such an extent, that Hellas only holds on to the Peloponnesus by the narrow neck, five miles in width, which intervenes. The Gulfs thus formed, the one on this side, the other on that, are known as the Corinthian and the Saronic Gulfs. The ports of Lecheæ, on the one side, and of Cenchreæ on the other, form the frontiers of this narrow passage, which thus compels to a tedious and perilous circumnavigation such vessels as from their magnitude cannot be carried across by land on vehicles. For this reason it is that both King Demetrius, Cæsar the Dictator, the prince Caius, and Domitius Nero, have at different times made the attempt to cut through this neck by forming a navigable canal; a profane design, as may be clearly seen by the result in every one of these instances.

Upon the middle of this intervening neck which we have called the Isthmus, stands the colony of Corinth, formerly known by the name of Ephyre, situate upon the brow of a hill, at a distance of sixty stadia from the shore of either sea. From the heights of its citadel, which is called Acrocorinthos, or the "Heights of Corinth," and in which is the Fountain of Pirene, it looks down upon the two seas which lie in the opposite directions. From Leucas to Patræ upon the Corinthian gulf is a distance of eighty-eight miles. The colony of

Patræ is founded upon the most extensive promontory of the Peloponnesus, facing Ætolia and the river Evenus, the Corinthian Gulf being, as we have previously stated, less than a mile in width at the entrance there, though extending in length as far as the isthmus, a distance of eighty-five miles.

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CHAP. 6. (5.)

ACHAIA.

The province called Achaia begins at the Isthmus; from the circumstance of its cities being ranged in regular succession on its coast, it formerly had the name of Ægialos. The first place there is Lecheæ, already mentioned, a port of the Corinthians; next to which is Olyros, a fortress of the people of Pellene; then the former towns of Helice and Bura, and the places in which their inhabitants took refuge after their towns had been swallowed up by the sea, Sicyon namely, Ægira, Ægium, and Erineos. In the interior are Cleonæ and Hysiæ; then come the port of Panormus, and Rhium already mentioned; from which promontory, Patræ, of which we have previously spoken, is distant five miles; and then the place where Pheræ stood. Of the nine mountains of Achaia, Scioessa is the most famous; there is also the Fountain of Cymothoë. Beyond Patræ we find the town of Olenum, the colony of Dyme, the places where Bupra- sium and Hyrmine once stood, the Promontory of Araxus, the Bay of Cyllene, and the Promontory of Chelonates, at five miles' distance from Cyllene. There is also the fortress of Phlius; the district around which was called by Homer Aræthyrea, and, after his time, Asopis.

The territory of the Eleans then begins, who were formerly called Epei, with the city of Elis in the interior, and, at a distance of twelve miles from Phlius, being also in the interior, the temple of Olympian Jupiter, which by the universal celebrity of its games, gives to Greece its mode of reckoning. Here too once stood the town of Pisa, the river Alpheus flowing past it. On the coast there is the Promontory of Ichthys. The river Alpheus is navigable six miles, nearly as far as the towns of Aulon and Leprion. We next come to the Promontory of Platanodes. All these localities lie to the west.

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CHAP. 7.

MESSENIA.

Further south is the Gulf of Cyparissus, with the city of Cyparissa on its shores, the line of which is seventy-two miles in length. Then, the towns of Pylos and Methone, the place where Helos stood, the Promontory of Acritas, the Asinæan Gulf, which takes its name from the town of Asine, and the Coronean, so called from Corone; which gulfs terminate at the Promontory of Tanarum. These are all in the country of Messenia, which has eighteen mountains, and the river Pamisus also. In the interior are Messene, Ithome, Œchalia, Arene, Pteleon, Thryon, Dorion, and Zancle, all of them known to fame at different periods. The margin of this gulf measures eighty miles, the distance across being thirty.

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CHAP. 8.

LACONIA.

At Tænarum begins the territory of Laconia, inhabited by a free nation, and situate on a gulf 106 miles in circuit, and 38 across. The towns are, Tænarum, Amyclæ, Pheræ, and Leuctra; and, in the interior, Sparta, Theramne, and the spots where Cardamyle, Pitane, and Anthea formerly stood; the former site of Thyrea, and Gerania. Here is also Mount Taygetus, the river Eurotas, the Gulf of Egilodes, the town of Psamathus, the Gulf of Gytheum, so called from the town of that name, from which place the passage is the safest across to the island of Crete. All these places are bounded by the Promontory of Malea.

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CHAP. 9.

ARGOLIS.

The next gulf, which extends as far as Scyllæum, is called the Argolic Gulf, being fifty miles across, and 162 in circuit. The towns upon it are, Bœa, Epidaurus, surnamed Limera, Zarax, and the port of Cyphanta. The rivers are the Inachus and the Erasinus, between which lies Argos, surnamed Hippium, situate beyond the place called Lerna, and at a distance of two miles from the sea. Nine miles farther is Mycenæ, and the place where, it is said, Tiryns stood; the site, too, of Mantinea. The mountains are, Artemius, Apesantus, Asterion, Parparus, and some others, eleven in number. The fountains are those of Niobe, Amymone, and Psamathe.

From Scyllæum to the Isthmus of Corinth is a distance of 177 miles. We find here the towns of Hermione, Trœzen, Coryphasium, and Argos, sometimes called "Ina- chian," sometimes "Dipsian" Argos. Then comes the port of Schœnites, and the Saronic Gulf, which was formerly encircled with a grove of oaks, from which it derives its present name, oaks in ancient Greece having been so called. Upon this gulf is the town of Epidaurus, famous for its temple of Æsculapius, the Promontory of Spiræum, the port of Anthedus, Bucephalus, and then Cenchreæ, previously mentioned, on this side of the Isthmus, with its temple of Neptune, famous for the games celebrated there every five years. So many are the gulfs which penetrate the shores of the Peloponnesus, so many the seas which howl around it. Invaded by the Ionian on the north, it is beaten by the Sicilian on the west, buffeted by the Cretan on the south, by the Ægean on the S.E., and by the Myrtoan on the N.E.; which last sea begins at the Gulf of Megara, and washes all the coast of Attica.

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CHAP. 10. (6.)

ARCADIA.

Its interior is occupied for the greater part by Arcadia, which, remote from the sea on every side, was ori- ginally called Drymodes, and at a later period Pelasgis. The cities of Arcadia are, Psophis, Mantinea, Stymphalus, Tegea, Antigonea, Orchomenus, Pheneum, Palantium (from which the Palatium at Rome derives its name), Megalopolis, Gortyna, Bucolium, Carnion, Parrhasia, Thelpusa, Melænæ, Heræa, Pylæ, Pallene, Agræ, Epium, Cynæthæ, Lepreon of Arcadia, Parthenium, Alea, Methydrium, Enispe, Macistum, Lampia, Clitorium, and Cleonæ; between which two last towns is the district of Nemea, commonly known as Bembinadia.

The mountains of Arcadia are, Pholöe, with a town of the same name, Cyllene, Lycæus, upon which is the temple of Lycæan Jupiter; Mænalus, Artemisius, Parthenius, Lampeus, and Nonacris, besides eight others of no note. The rivers are the Ladon, which rises in the marshes of Pheneus, and the Erymanthus, which springs from a mountain of the same name, and flows into the Alpheus.

The other cities of Achaia worthy of mention are those of the Aliphiræi, the Abeatæ, the Pyrgenses, the Paro- reatæ, the Paragenitæ, the Tortuni, the Typanei, the Thriasii, and the Tritienses. Domitius Nero [the emperor] granted liberty to the whole of Achaia. The Peloponnesus, from the Promontory of Malea to the town of Ægium on the Corinthian Gulf, is 190 miles in length, and 125 miles across from Elis to Epidaurus; the distance being, from Olympia to Argos, through Arcadia, sixty-eight miles. The distance from Olympia to Phlius has been already mentioned. Throughout the whole of this region, as though nature had been desirous to compensate for the inroads of the sea, seventy-six mountains raise their lofty heads.

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CHAP. 11. (7.)

ATTICA.

At the narrow neck of the Isthmus, Hellas begins, by our people known as Græcia. The first state that presents itself is Attica, anciently called Acte. It touches the Isthmus in that part of it which is called Megaris, from the colony of Megara, lying on the opposite side to Pagæ.

These two towns are situate at the spot where the Peloponnesus projects to the greatest distance; being placed, one on each side, upon the very shoulders of Hellas as it were. The Pagæans, as well as the people of Ægosthena, belong to the jurisdiction of Megara. On the coast there is the port of Schœnos, the towns of Sidus and Cremmyon, the Scironian Rocks, six miles in length, Geranea, Megara, and Eleusis. Œnoë and Probalinthos also formerly existed here; the ports of Piræus and Phalerum are distant from the Isthmus fifty-five miles, being united to Athens, which lies in the interior, by a wall five miles in length. Athens is a free city, and needs not a word more from us in its commendation; of fame it enjoys even more than enough. In Attica there are the Fountains of Cephisia, Larine, Callirrhoë Enneacrunos, and the mountains of Brilessus, Ægialeus, Icarius, Hymettus, Lycabettus, and the place where Ilissus stood. At the distance of forty-five miles from the Piræus is the Promontory of Sunium. There is also the Promontory of Thoricos; Potamos, Steria, and Brauron, once towns, the borough of Rhamus, the place where Marathon stood, the Thriasian plain, the town of Melite, and Oropus upon the confines of Bœotia.

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CHAP. 12.

BŒOTIA.

In this country are Anthedon, Onchestus, the free town of Thespiæ, Lebadea, and then Thebes, surnamed Bœotian, which does not yield the palm to Athens even in celebrity; the native land, according to the common notion, of the two Divinities Liber and Hercules. The birth-place of the Muses too is pointed out in the grove of Helicon. To this same Thebes also belong the forest of Cithæron, and the river Ismenus. Besides these, there are in Bœotia the Fountains of Œdipodia, Psamathe, Dirce, Epicrane, Arethusa, Hippocrene, Aganippe, and Gargaphie; and, besides the mountains already mentioned, Mycalesos, Hadylius, and Acontius. The remaining towns between Megara and Thebes are Eleutheræ, Haliartus, Plat, Pheræ, Aspledon, Hyle, Thisbe, Erythræ, Glissas, and Copæ; near the river Cephisus, Larymna and Anchoa; as also Medeon, Phlygone, Acræphia, Coronea, and Chæronea. Again, on the coast and below Thebes, are Ocalea, Heleon, Scolos, Schœnos, Peteon, Hyriæ, Mycalesos, Iresion, Pteleon, Olyros, and Tanagra, the people of which are free; and, situate upon the very mouth of the Euripus, a strait formed by the opposite island of Eubœa, Aulis, so famous for its capacious harbour. The Bœotians formerly had the name of Hyantes.

After them come the Locrians, surnamed Epicnemidii, formerly called Leleges, through whose country the river Cephisus passes, in its course to the sea. Their towns are Opus; from which the Opuntian Gulf takes its name, and Cynos. Daphnus is the only town of Phocis situate on the coast. In the interior of Locris is Elatea, and on the banks of the Cephisus, as we have previously stated, Lilæa, and, facing Delphi, Cnemis and Hyampolis. Again, upon the coast of the Locrians, are Larymna, and Thronium, near which last the river Boagrius enters the sea. Also, the towns of Narycion, Alope, and Scarphia; and then the gulf which receives the name of the Maliac from the people who dwell there, and upon which are the towns of Halcyone, Econia, and Phalara.

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CHAP. 13.

DORIS.

Doris comes next, in which are Sperchios, Erineon, Boion, Pindus, and Cytinum. Behind Doris lies Mount Œta.

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CHAP. 14.

PHTHIOTIS.

Hæmonia follows, a country which has often changed its name, having been successively called Pelasgic Argos, Hellas, Thessaly, and Dryopis, always taking its surname from its kings. In this country was born the king whose name was Græcus; and from whom Græcia was so called; and here too was born Hellen, from whom the Hellenes derive their name. The same people Homer has called by three different names, Myrmidones, Hellenes, and Achæi.

That portion of these people which inhabit the country adjacent to Doris are called Phthiotæ. Their towns are Echinus, at the mouth of the river Sperchius, and, at four miles from the narrow pass of Thermopylæ, Heraclea, which from it takes its surname of Trachin. Here too is Mount Callidromus, and the celebrated towns of Hellas, Halos, Lamia, Phthia, and Arne.

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CHAP. 15. (8.)

THESSALY PROPER.

In Thessaly is Orchomenus, formerly called the Minyan, and the towns of Almon, by some called Salmon, Atrax, and Pelinna; the Fountain of Hyperia; the towns also of Pheræ, at the back of which is Pieria, extending to Macedonia, Larisa, Gomphi, Thebes of Thessaly, the grove of Pteleon, the Gulf of Pagasa, the town of Pagasa, which was afterwards called Demetrias, the Plains of Pharsalia, with a free city of similar name, Crannon, and Iletia. The mountains of Phthiotis are Nymphæus, once so beautiful for its garden scenery, the work of nature; Busygæus, Donacesa, Bermius, Daphusa, Chimerion, Athamas, and Stephane. In Thessaly there are thirty-four, of which the most famous are Cercetii, Olympus, Pierus, and Ossa, opposite to which last are Pindus and Othrys, the abodes of the Lapithæ. These mountains look towards the west, Pelion towards the east, all of them forming a curve like an amphitheatre, in the interior of which, lying before them, are no less than seventy-five cities. The rivers of Thessaly are the Apidanus, the Phœnix, the Enipeus, the Onochonus, and the Pamisus. There is also the Fountain of Messeis, and the lake Bœbeis. The river Peneus too, superior to all others in celebrity, takes its rise near Gomphi, and flows down a well-wooded valley between Ossa and Olympus, a distance of five hundred stadia, being navigable half that distance. The vale, for a distance of five miles through which this river runs, is called by the name of Tempe; being a jugerum and a half nearly in breadth, while on the right and left, the mountain chain slopes away with a gentle elevation, beyond the range of human vision, the foliage imparting its colour to the light within. Along this vale glides the Peneus, reflecting the green tints as it rolls along its pebbly bed, its banks covered with tufts of verdant herbage, and enlivened by the melodious warblings of the birds. The Peneus receives the river Orcus, or rather, I should say, does not receive it, but merely carries its waters, which swim on its surface like oil, as Homer says; and then, after a short time, rejects them, refusing to allow the waters of a river devoted to penal sufferings and

engendered for the Furies to mingle with his silvery streams.

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CHAP. 16. (9.)

MAGNESIA.

To Thessaly Magnesia joins, in which is the fountain of Libethra. Its towns are Iolcos, Hormenium, Pyrrha, Methone, and Olizon. The Promontory of Sepias is here situate. We then come to the towns of Casthanea and Spa- lathra, the Promontory of Æantium, the towns of Melibœa, Rhizus, and Erymnæ; the mouth of the Peneus, the towns of Homolium, Orthe, Thespiæ, Phalanna, Thaumacie, Gyrton, Crannon, Acharne, Dotion, Melitæa, Phylace, and Potniæ. The length of Epirus, Achaia, Attica, and Thessaly is said altogether to amount to 490 miles, the breadth to 287.

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CHAP. 17. (10.)

MACEDONIA.

Macedonia comes next, including 150 nations, and renowned for its two kings and its former empire over the world; it was formerly known by the name of Emathia. Stretching away towards the nations of Epirus on the west it lies at the back of Magnesia and Thessaly, being itself exposed to the attacks of the Dardani. Pæonia and Pelagonia protect its northern parts from the Triballi. Its towns are Ægiæ, at which place its kings were usually buried, Beræa, and, in the country called Pieria from the grove of that name, Æginium. Upon the coast are Heraclea, the river Apilas, the towns of Pydna and Aloros, and the river Haliacmon. In the interior are the Aloritæ, the Vallæi, the Ph1lylacæi, the Cyrrhestæ, the Tyrissæi, the colony of Pella, and Stobi, a town with the rights of Roman citizens. Next comes Antigonea, Europus upon the river Axius, and another place of the same name by which the Rhœmdias flows, Scydra, Eordæa, Mieza, and Gordyniæ. Then, upon the coast, Ichne, and the river Axius: along this frontier the Dardani, the Treres, and the Pieres, border on Macedonia. Leaving this river, there are the nations of Pæonia, the Paroræi, the Eordenses, the Almopii, the Pelagones, and the Mygdones.

Next come the mountains of Rhodope, Scopius, and Orbelus; and, lying along the extent of country in front of these mountains, the Arethusii, the Antiochienses, the Idomenenses, the Doberi, the Æstræenses, the Allantenses, the Audaristenses, the Morylli, the Garesci, the Lyncestæ, the Othryonei, and the Amantini and Orestæ, both of them free peoples; the colonies of Bullis and Dium, the Xylopolitæ, the Scotussæi, a free people, Heraclea Sintica, the Tymphæi, and the Toronæi.

Upon the coast of the Macedonian Gulf there are the town of Chalastra, and, more inland, Piloros; also Lete, and at the extreme bend of the Gulf, Thessalonica, a free city; (from this place to Dyrrhachium it is 245 miles,) and then Thermæ. Upon the Gulf of Thermæ are the towns of Dicæa, Pydna, Derra, Scione, the

Promontory of Canastræum, and the towns of Pallene and Phlegra. In this region also are the mountains Hypsizorus, Epitus, Halcyone, and Leoomne; the towns of Nyssos, Phryxelon, Mendæ, and what was formerly Potidæa on the isthmus of Pallene, but now the Colony of Cassandria; Anthemus, Olophyxus, and the Gulf of Mecyberna; the towns of Miscella, Ampelos, Torone, Singos, and the canal, a mile and a half in length, by means of which Xerxes, king of the Persians, cut off Mount Athos from the main land. This mountain projects from the level plain of the adjacent country into the sea, a distance of seventy-five miles; its circumference at its base being 150 miles in extent. There was formerly upon its summit the town of Acroathon: the present towns are Uranopolis, Palæorium, Thyssus, Cleonæ, and Apollonia, the inhabitants of which have the surname of Macrobii. The town also of Cassera, and then the other side of the Isthmus, after which come Acanthus, Stagira, Sithone, Heraclea, and the country of Mygdonia that lies below, in which are situate, at some distance from the sea, Apollonia and Arethusa. Again, upon the coast we have Posidium, and the bay with the town of Cermorus, Amphipolis, a free town, and the nation of the Bisaltæ. We then come to the river Strymon which takes its rise in Mount Hæmus and forms the boundary of Macedonia: it is worthy of remark that it first discharges itself into seven lakes before it proceeds onward in its course.

Such is Macedonia, which was once the mistress of the world, which once extended her career over Asia, Armenia, Iberia, Albania, Cappadocia, Syria, Egypt, Taurus, and Caucasus, which reduced the whole of the East under her power, and triumphed over the Bactri, the Medes, and the Persians. She too it was who proved the conqueror of India, thus treading in the footsteps of Father Liber and of Hercules; and this is that same Macedonia, of which our own general Paulus Æmilius sold to pillage seventy-two cities in one day. So great the difference in her lot resulting from the actions of two individuals!

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CHAP. 18. (11.)

THRACE; THE ÆGEAN SEA.

Thrace now follows, divided into fifty strategies, and to be reckoned among the most powerful nations of Europe. Among its peoples whom we ought not to omit to name are the Denseletæ and the Medi, dwelling upon the right bank of the Strymon, and joining up to the Bisaltæ above mentioned; on the left there are the Digerri and a number of tribes of the Bessi, with various names, as far as the river Mestus, which winds around the foot of Mount Pan- gæum, passing among the Elethi, the Diobessi, the Carbilesi; and then the Brysæ, the Sapæi, and the Odomanti. The territory of the Odrysæ gives birth to the Hebrus, its banks being inhabited by the Cabyleti, the Pyrogeri, the Drugeri, the Cænici, the Hypsalti, the Beni, the Corpili, the Bottiæi, and the Edoni. In the same district are also the Selletæ, the Priantæ, the Doloncæ, the Thyni, and the Greater Cœletæ, below Mount Hæmus, the Lesser at the foot of Rhodope. Between these tribes runs the river Hebrus. We then come to a town at the foot of Rhodope, first called Poneropolis, afterwards Philippopolis from the name of its founder, and now, from the peculiarity of its situation, Trimontium. To reach the summit of Hæmus you have to travel six miles. The sides of it that look in the opposite direction and slope towards the Ister are inhabited by the Mœsi, the Getæ, the Aorsi, the Gaudæ, and the Clariæ; below them, are the Arræi Sarmatæ, also called Arreatæ, the Scythians, and, about the shores of the Euxine, the Moriseni and the Sithonii, the forefathers of the poet Orpheus, dwell.

Thus is Thrace bounded by the Ister on the north, by the Euxine, and the Propontis on the east, and by the Ægean Sea on the south; on the coast of which, after leaving the Strymon, we come in turn to Apollonia, Œsyma, Neapolis and Datos. In the interior is the colony of Philippi, distant from Dyrrhachium 325 miles; also Scotussa, the city of Topiris, the mouth of the river Mestus, Mount Pangæus, Heraclea, Olynthos, Abdera, a free city, the people of the Bistones and their Lake. Here was formerly the city of Tirida, which struck

such terror with its stables of the horses of Diomedes. At the present day we find here Dicæa, Ismaron, the place where Parthenion stood, Phalesina, and Maronea, formerly called Orthagorea. We then come to Mount Serrium and Zone, and then the place called Doriscus, capable of containing ten thousand men, for it was in bodies of ten thousand that Xerxes here numbered his army. We then come to the mouth of the Hebrus, the Port of Stentor, and the free town of Ænos, with the tomb there of Polydorus, the region formerly of the Cicones.

From Doriscus there is a winding coast as far as Macron Tichos, or the "Long Wall," a distance of 122 miles; round Doriscus flows the river Melas, from which the Gulf of Melas receives its name. The towns are, Cypsela, Bisanthe, and Macron Tichos, already mentioned, so called because a wall extends from that spot between the two seas, — that is to say, from the Propontis to the Gulf of Melas, thus excluding the Chersonesus, which projects beyond it.

The other side of Thrace now begins, on the coast of the Euxine, where the river Ister discharges itself; and it is in this quarter perhaps that Thrace possesses the finest cities, Histropolis, namely, founded by the Milesians, Tomi, and Callatis, formerly called Acervetis. It also had the cities of Heraclea and Bizone, which latter was swallowed up by an earthquake; it now has Dionysopolis, formerly called Cruni, which is washed by the river Zyras. All this country was formerly possessed by the Scythians, surnamed Aroteres; their towns were, Aphrodisias, Libistos, Zygere, Rocobe, Eumenia, Parthenopolis, and Gerania, where a nation of Pigmies is said to have dwelt; the barbarians used to call them Cattuzi, and entertain a belief that they were put to flight by cranes. Upon the coast, proceeding from Dionysopolis, is Odessus, a city of the Milesians, the river Panysus, and the town of Tetranaulo- chus. Mount Hæmus, which, with its vast chain, overhangs the Euxine, had in former times upon its summit the town of Aristæum. At the present day there are upon the coast Mesembria, and Anchialum, where Messa formerly stood. The region of Astice formerly had a town called Anthium; at the present day Apollonia occupies its site. The rivers here are the Panisos, the Riras, the Tearus, and the Orosines; there are also the towns of Thynias, Halmydessos, Develton, with its lake, now known as Deultum, a colony of veterans, and Phinopolis, near which last is

the Bosporus. From the mouth of the Ister to the entrance of the Euxine, some writers have made to be a distance of 555 miles; Agrippa, however, increases the length by sixty miles. The distance thence to Macron Tichos, or the Long Wall, previously mentioned, is 150 miles; and, from it to the extremity of the Chersonesus, 125.

On leaving the Bosporus we come to the Gulf of Casthenes, and two harbours, the one called the Old Men's Haven, and the other the Women's Haven. Next comes the promontory of Chrysoceras, upon which is the town of Byzantium, a free state, formerly called Lygos, distant from Dyrrhachium 711 miles, — so great being the space of land that intervenes between the Adriatic Sea and the Propontis. We next come to the rivers Bathynias and Pydaras, or Athyras, and the towns of Selymbria and Perinthus, which join the mainland by a neck only 200 feet in width. In the interior are Bizya, a citadel of the kings of Thrace, and hated by the swallows, in consequence of the sacrilegious crime of Tereus; the district called Cænica, and the colony of Flaviopolis, where formerly stood a town called Cæla. Then, at a distance of fifty miles from Bizya, we come to the colony of Apros, distant from Philippi 180 miles. Upon the coast is the river Erginus; here formerly stood the town of Ganos; and Lysimachia in the Chersonesus is being now gradually deserted.

At this spot there is another isthmus, similar in name to the other, and of about equal width; and, in a manner by no means dissimilar, two cities formerly stood on the shore, one on either side, Pactye on the side of the Propontis, and Cardia on that of the Gulf of Melas, the latter deriving its name from the shape which the land assumes. These, however, were afterwards united with Lysimachia, which stands at a distance of five miles from Macron Tichos. The Chersonesus formerly had, on the side of the Propontis, the towns of Tiristasis, Crithotes, and Cissa, on the banks of the river Ægos; it now has, at a distance of twenty-two miles from the colony of Apros, Resistos, which stands opposite to the colony of Parium. The Hellespont also, which separates, as we have already stated, Europe from Asia, by a channel seven stadia in width, has four cities facing each other, Callipolis and Sestos in Europe, and Lampsacus and Abydos in Asia. On the Chersonesus, there is the promontory of Mastusia, lying opposite to Sigeum; upon one side of it stands the

Cynossema (for so the tomb of Hecuba is called), the naval station of the Achæans, and a tower; and near it the shrine of Protesilaüs. On the ex- treme front of the Chersonesus, which is called Æolium, there is the city of Elæs. Advancing thence towards the Gulf of Melas, we have the port of Cœlos, Panormus, and then Cardia, previously mentioned.

In this manner is the third great Gulf of Europe bounded. The mountains of Thrace, besides those already mentioned, are Edonus, Gigemoros, Meritus, and Melamphyllos; the rivers are the Bargus and the Syrmus, which fall into the Hebrus. The length of Macedonia, Thrace, and the Hellespont has been already mentioned; some writers, however, make it 720 miles, the breadth being 384.

What may be called a rock rather than an island, lying between Tenos and Chios, has given its name to the Ægean Sea; it has the name of Æx from its strong resemblance to a goat, which is so called in Greek, and shoots precipitately from out of the middle of the sea. Those who are sailing towards the isle of Andros from Achaia, see this rock on the left, boding no good, and warning them of its dangers. Part of the Ægean Sea bears the name of Myrtoan, being so called from the small island [of Myrtos] which is seen as you sail towards Macedonia from Geræstus, not far from Carystus in Eubœa. The Romans include all these seas under two names, — the Macedonian, in those parts where it touches the coasts of Macedonia or Thrace, and the Grecian where it washes the shores of Greece The Greeks, however, divide the Ionian Sea into the Sicilian and the Cretan Seas, after the name of those islands; and they give the name of Icarian to that part which lies between Samos and Myconos. The gulfs which we have already mentioned, have given to these seas the rest of their names. Such, then, are the seas and the various nations which are comprehended in the third great Gulf of Europe.

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CHAP. 19. (12.)

THE ISLANDS WHICH LIE BEFORE THE LANDS ALREADY MENTIONED.

Lying opposite to Thesprotia, at a distance of twelve miles from Buthrotus, and of fifty from Acroceraunia, is the island of Corcyra, with a city of the same name, the citizens of which are free; also a town called Cassiope, and a temple dedicated to Jupiter Cassius. This island is ninety-seven miles in length, and in Homer has the names of Scheria and Phæacia; while Callimachus calls it Drepane. There are some other islands around it, such as Thoronos, lying in the direction of Italy, and the two islands of Paxos in that of Leucadia, both of them five miles distant from Corcyra. Not far from these, and in front of Corcyra, are Ericusa, Marathe, Elaphusa, Malthace, Trachie, Pythionia, Ptychia, Tarachie, and, off Phalacrum, a promontory of Corcyra, the rock into which (according to the story, which arises no doubt from the similarity of appearance) the ship of Ulysses was changed.

Before Leucimna we find the islands of Sybota, and between Leucadia and Achaia a great number of islands, among which are those called Teleboïdes, as also Taphiæ; by the natives, those which lie before Leucadia are called by the names of Taphias, Oxiæ, and Prinoessa; while those that are in front of Ætolia are the Echinades, consisting of Ægialia, Cotonis, Thyatira, Geoaris, Dionysia, Cyrnus, Chalcis, Pinara, and Mystus.

In front of these, and lying out at sea, are Cephallenia and Zacynthus, both of them free, Ithaca, Dulichium, Same, and Crocyle. Cephallenia, formerly known as Melæna, lies at a distance of eleven miles from Paxos, and is ninety-three miles in circumference: its city of Same has been levelled to the ground by the Romans; but it still possesses three others. Between this island and Achaia lies the island of Zacynthus, remarkable for its city of the same name, and for its singular fertility. It formerly had the name of Hyrie, and lies to the south of Cephallenia, at a distance of twenty-five miles; in it there is the famous mountain of Elatus. This island is thirty-six miles in circumference. At a distance of fifteen miles from Zacynthus is

Ithaca, in which is Mount Neritus; its circumference in all is twenty-five miles. Twelve miles distant from this island is Araxus, a promontory of the Peloponnesus. Before Ithaca, lying out in the main sea, are Asteris and Prote; and before Zacynthus, at a distance of thirty-five miles in the direction of the south-east wind, are the two Strophades, by some known as the Plotæ. Before Cephallenia lies Letoia, before Pylos the three Sphagiæ, and before Messene the Œnussæ, as many in number.

In the Asinæan Gulf there are the three Thyrides, and in that of Laconia Theganusa, Cothon, and Cythera, with the town of that name, the former name of which island was Porphyris. It is situate five miles from the promontory of Malea, thus forming a strait very dangerous to navigation. In the Gulf of Argolis are Pityusa, Irine, and Ephyre; opposite the territory of Hermione, Tiparenus, Aperopia, Colonis, and Aristera; and, opposite that of Trœzen, Calauria, at a distance of half a mile, Plateis, Belbina, Lasia, and Baucidias. Opposite Epidaurus is Cecryphalos, and Pityonesos, six miles distant from the mainland; and, at a distance of fifteen miles from this last, Ægina, a free island, the length of which, as you sail past it, is eighteen miles. This island is twenty miles distant from Piræus, the port of Athens: it used formerly to be called Œnone. Opposite the promontory of Spiræum, lie Eleusa, Adendros, the two islands called Craugiæ, the two Cæciæ, Selachusa Cenehreis, and Aspis; as also, in the Gulf of Megara, the four Methurides. Ægila lies at a distance of fifteen miles from Cythera, and of twenty-five from Phalasarna, a city of Crete.

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CHAP. 20.

CRETE.

Crete itself lies from east to west, the one side facing the south, the other the north, and is known to fame by the renown of its hundred cities. Dosiades says, that it took its name from the nymph Crete, the daughter of Hesperides; Anaximander, from a king of the Curetes, Philistides of Mallus * * * * *; while Crates says that it was at first called Aëria, and after that Curetis; and some have been of opinion that it had the name of Macaron from the serenity of its climate. In breadth it nowhere exceeds fifty miles, being widest about the middle. In length, however, it is full 270 miles, and 589 in circumference, forming a bend towards the Cretan Sea, which takes its name from it. At its eastern extremity is the Promontory of Sammonium, facing Rhodes, while towards the west it throws out that of Criumetopon, in the direction of Cyrene.

The more remarkable cities of Crete are, Phalasarna, Etæa, Cisamon, Pergamum, Cydonia, Minoium, Apteron, Pantomatrium, Amphimalla, Rhithymna, Panormus, Cytæum, Apollonia, Matium, Heraclea, Miletos, Ampelos, Hierapytna, Lebena, and Hierapolis; and, in the interior, Gortyna, Phæstum, Cnossus, Polyrrenium, Myrina, Lycastus, Rhamnus, Lyctus, Dium, Asus, Pyloros, Rhytion, Elatos, Pharæ, Holopyxos, Lasos, Eleuthernæ, Therapnæ, Marathusa, and Tylisos; besides some sixty others, of which the memory only exists. The mountains are those of Cadistus, Ida, Dictynnæus, and Corycus. This island is distant, at its promontory of Criumetopon, according to Agrippa, from Phycus, the promontory of Cyrene, 125 miles; and at Cadistus, from Malea in the Peloponnesus, eighty. From the island of Carpathos, at its promontory of Sammonium it lies in a westerly direction, at a distance of sixty miles; this last-named island is situate between it and Rhodes.

The other islands in its vicinity, and lying in front of the Peloponnesus, are the two isles known as Corycæ, and the two called Mylæ. On the north side, having Crete on the right, and opposite to

Cydonia, is Leuce, and the two islands known as Budroæ. Opposite to Matium lies Dia; opposite to the promontory of Itanum, Onisia and Leuce; and over against Hierapytna, Chrysa and Gaudos. In the same neighbourhood, also, are Ophiussa, Butoa, and Aradus; and, after doubling Criumetopon, we come to the three islands known as Musagorus. Before the promontory of Sammonium lie the islands of Phocœ, the Platiæ, the Sirnides, Naulochos, Armedon, and Zephyre.

Belonging to Hellas, but still in the Ægean Sea, we have the Lichades, consisting of Scarphia, Coresa, Phocaria, and many others which face Attica, but have no towns upon them, and are consequently of little note. Opposite Eleusis, however, is the far-famed Salamis; before it, Psyttalia; and, at a distance of five miles from Sunium, the island of Helene. At the same distance from this last is Ceos, which some of our countrymen have called Cea, and the Greeks Hydrussa, an island which has been torn away from Eubœa. It was formerly 500 stadia in length; but more recently four-fifths of it, in the direction of Bœotia, have been swallowed up by the sea. The only towns it now has left are Iulis and Carthæa; Coresus and Pœëssa have perished. Varro informs us, that from this place there used to come a cloth of very fine texture, used for women's dresses.

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CHAP. 21.

EUBŒA.

Eubœa itself has also been rent away from Bœotia; the channel of the Euripus, which flows between them, being so narrow as to admit of the opposite shores being united by a bridge. At the south, this island is remarkable for its two promontories, that of Geræstus, which looks towards Attica, and that of Caphareus, which faces the Hellespont; on the north it has that of Cenæum. In no part does this island extend to a greater breadth than forty miles, while it never contracts to less than two. In length it runs along the whole coast of Bœotia, extending from Attica as far as Thessaly, a distance of 150 miles. In circumference it measures 365, and is distant from the Hellespont, on the side of Caphareus, 225 miles. The cities for which it was formerly famous were, Pyrrha, Porthmos, Nesos, Cerinthos, Oreum, Dium, Ædepsos, Ocha, and Œchalia; at present it is ennobled by those of Chalcis (opposite which, on the mainland, is Aulis), Geræstus, Eretria, Carystus, Oritanum, and Artemisium. Here are also the Fountain of Arethusa, the river Lelantus, and the warm springs known as Ellopiæ; it is still better known, however, for the marble of Carystus. This island used formerly to be called Chalcodontis and Macris, as we learn from Dionysius and Ephorus; according to Aristides, Macra; also, as Callidemus says, Chalcis, because copper was first discovered here. Menæchmus says that it was called Abantias, and the poets generally give it the name of Asopis.

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CHAP. 22.

THE CYCLADES.

Beyond Eubœa, and out in the Myrtoan Sea, are numerous other islands; but those more especially famous are, Glau- connesos and the Ægila. Off the promontory, too, of Geræstus are the Cyclades, lying in a circle around Delos, from which circumstance they derive their name. The first of them is the one called Andros with a city of the same name, distant from Geræstus ten miles, and from Ceos thirty-nine. Myrsilus tells us that this island was at first called Cauros, and after that Antandros; Callimachus calls it Lasia, and others again Nonagria, Hydrussa, and Epagris. It is ninety-three miles in circumference. At a distance of one mile from Andros and of fifteen from Delos, is Tenos, with a city of the same name; this island is fifteen miles in length. Aristotle says that it was formerly called Hydrussa, from the abundance of water found here, while some writers call it Ophiussa. The other islands are, Myconos, with the mountain of Dimastus, distant from Delos fifteen miles; Siphnus, formerly called Meropia and Acis, twenty-eight miles in circumference; Seriphus, twelve miles in circuit; Prepesinthus; Cythnos; and then, by far the most famous among the Cyclades, and lying in the very middle of them, Delos itself; so famous for its temple of Apollo, and its extensive commerce. This island long floated on the waves, and, as tradition says, was the only one that had never experienced an earthquake, down to the time of M. Varro; Mucianus however has informed us, that it has been twice so visited. Aristotle states that this island received its name from the fact of its having so suddenly made its appearance on emerging from the sea; Aglaosthenes, however, gives it the name of Cynthia, and others of Ortygia, Asteria, Lagia, Chlamydia, Cynthus, and, from the circumstance of fire having been first discovered here, Pyrpile. Its circumference is five miles only; Mount Cynthus here raises his head.

Next to this island is Rhene, which Anticlides calls by the name of Celadussa, and Callidemus, Artemite; Scyros, which the old writers

have stated to be twenty miles in circumference, but Mucianus 160; Oliaros; and Paros, with a city of the same name, distant from Delos thirty-eight miles, and famous for its marble; it was first called Platea, and after that, Minois. At a distance of seven miles from this last island is Naxos, with a town of the same name; it is eighteen miles distant from Delos. This island was formerly called Strongyle, then Dia, and then Dionysias, in consequence of the fruitfulness of its vineyards; others again have called it the Lesser Sicily, or Callipolis. It is seventy-five miles in circumference — half as large again as Paros.

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CHAP. 23.

THE SPORADES.

The islands thus far are considered as belonging to the Cyclades; the rest that follow are the Sporades. These are, Helene, Phacussa, Nicasia, Schinussa, Pholegandros, and, at a distance of thirty-eight miles from Naxos, Icaros, which has given its name to the surrounding sea, and is the same number of miles in length, with two cities, and a third now no longer in existence: this island used formerly to be called Doliche, Macris, and Ichthyoëssa. It is situate fifty miles to the north-east of Delos, and thirty-five from the island of Samos. Between Eubœa and Andros, there is an arm of the sea ten miles in width, and from Icaros to Geræstus is a distance of 112 1/2 miles.

After we pass these, no regular order can be well observed; the rest must therefore be mentioned indiscriminately. There is the island of Scyros, and that of los, eighteen miles distant from Naxos, and deserving of all veneration for the tomb there of Homer; it is twenty-five miles in length, and was formerly known by the name of Phœnice; also Odia, Oletandros, and Gyara, with a city of the same name, the island being twelve miles in circumference, and distant from Andros sixty-two. At a distance of eighty miles from Gyara is Syrnos, then Cynæthus, Telos, noted for its unguents, and by Callimachus called Agathussa, Donusa, Patmos, thirty miles in circumference, the Corassiæ, Le- binthus, Leros, Cinara; Sicinus, formerly called Œnoe; Hieracia, also called Onus; Casos, likewise called Astrabe; Cimolus, or Echinussa; and Melos, with a city of that name, which island Aristides calls Memblis, Aristotle Zephyria, Callimachus Mimallis, Heraclides Siphis and Acytos. This last is the most circular in form of all these islands. After this comes Machia, then Hypere, formerly Patage, or, as others have it, Platage, but now called Amorgos, Polyægos, Phyle, and Thera, known as Calliste when it first sprang from the waves. From this, at a later period, the island of Therasia was torn away, and between the two afterwards arose Automate, also called Hiera, and Thia, which in our own times

came into existence in the vicinity of these islands. Ios is distant from Thera twenty-five miles.

Next to these follow Lea, Ascania, Anaphe, Hippuris, and Astypalæa, a free state. This island is eighty-eight miles in circumference, and 125 miles distant from Cadistus, in Crete. From Astypalæa, Platea is distant sixty miles, and Caminia thirty-eight from this last. We then come to the islands of Azibintha, Lanise, Tragæa, Pharmacussa, Techedia, Chalcia, Calymna, in which is the town of Coös, Calymna, at a distance of twenty-five miles from which is Carpathum, which has given its name to the Carpathian Sea. The distance thence to Rhodes, in the direction of the south-west wind, is fifty miles. From Carpathum to Casus is seven miles, and from Casus to Sammonium, the promontory of Crete, thirty. In the Euripus of Eubœa, almost at the very mouth of it, are the four islands called Petaliæ; and, at its outlet, Atalante. The Cyclades and the Sporades are bounded on the east by the Asiatic shores of the Icarian Sea, on the west by the Attic shores of the Myrtoan Sea, on the north by the Ægean, and on the south by the Cretan and Carpathian seas, extending 700 miles in length, and 200 in breadth.

The Gulf of Pagasa has in front of it Euthia, Cicynethus, Scyros, previously mentioned, and the very furthermost of the Cyclades and Sporades, Gerontia and Scandila; the Gulf of Thermæ, Iræsia, Solimnia, Eudemia, and Nea, which last is sacred to Minerva. Athos has before it four islands; Peparethus, formerly called Evœnus, with a city of that name, at a distance from Athos of nine miles; Sciathus, at a distance of fifteen, and Imbros, with a city of the same name, at a distance of eighty-eight, miles. This last island is distant from Mastusia, in the Chersonesus, twenty-five miles; it is sixty-two miles in circumference, and is washed by the river Ilisus. At a distance of twenty-two miles from it is Lemnos, being distant from Mount Athos eighty- seven; it is 112 miles in circumference, and has the cities of Hephæstia and Myrina; into the market-place of which last city Athos throws its shadow at the summer solstice. The island of Thasos, constituting a free state, is six miles distant from Lemnos; it formerly had the name of Aëria, or Æthria. Abdera, on the mainland, is distant from Thasos twenty-two miles, Athos sixty-two. The island of Samothrace, a free state, facing the river Hebrus, is the same

distance from Thasos, being also thirty-two miles from Imbros, twenty-two from Lemnos, and thirty-eight from the coast of Thrace; it is thirty-two miles in circumference, and in it rises Mount Saoce, ten miles in height. This island is the most inaccessible of them all. Callimachus mentions it by its ancient name of Dardania.

Between the Chersonesus and Samothrace, at a distance of about fifteen miles from them both, is the island of Halonnesos, and beyond it Gethone, Lamponia, and Alopeconnesus, not far from Cœlos, a port of the Chersonesus, besides some others of no importance. The following names may be also mentioned, as those of uninhabited islands in this gulf, of which we have been enabled to discover the names: — Desticos, Sarnos, Cyssiros, Charbrusa, Calathusa, Scylla, Draconon, Arconnesus, Diethusa, Scapos, Capheris, Mesate, Æantion, Pateronnesos, Pateria, Calate, Neriphus, and Polendos.

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CHAP. 24.

THE HELLESPONT. — THE LAKE MÆOTIS.

The fourth great Gulf of Europe begins at the Hellespont and ends at the entrance of the Mæotis. But in order that the several portions of the Euxine and its coasts may be the better known, we must briefly embrace the form of it in one general view. This vast sea, lying in front of Asia, is shut out from Europe by the projection of the shores of the Chersonesus, and effects an entrance into those countries by a narrow channel only, of the width, as already mentioned, of seven stadia, thus separating Europe from Asia. The entrance of these Straits is called the Hellespont; over it Xerxes, the king of the Persians, constructed a bridge of boats, across which he led his army. A narrow channel extends thence a distance of eighty-six miles, as far as Priapus, a city of Asia, at which Alexander the Great passed over. At this point the sea becomes wider, and after some distance again takes the form of a narrow strait. The wider part is known as the Propontis, the Straits as the Thracian Bosporus, being only half-a- mile in width, at the place where Darius, the father of Xerxes, led his troops across by a bridge. The extremity of this is distant from the Hellespont 239 miles.

We then come to the vast sea called the Euxine, which invades the land as it retreats afar, and the name of which was formerly Axenus. As the shores bend inwards, this sea with a vast sweep stretches far away, curving on both sides after the manner of a pair of horns, so much so that in shape it bears a distinct resemblance to a Scythian bow. In the middle of the curve it is joined by the mouth of Lake Mæotis, which is called the Cimmerian Bosporus, and is two miles and a half in width. Between the two Bospori, the Thracian and the Cimmerian, there is a distance in a straight line, of 500 miles, as Polybius informs us. We learn from Varro and most of the ancient writers, that the circumference of the Euxine is altogether 2150 miles; but to this number Cornelius Nepos adds 350 more; while Artemidorus makes it 2919 miles, Agrippa 2360, and Mucianus 2425. In a similar manner some writers have fixed the length of the

European shores of this sea at 1478 miles, others again at 1172. M. Varro gives the measurement as follows: — from the mouth of the Euxine to Apollonia 187 miles, and to Callatis the same distance; thence to the mouth of the Ister 125 miles; to the Borysthenes 250; to Chersonesus, a town of the Heracleotæ, 325; to Panticapæum, by some called Bosporus, at the very extremity of the shores of Europe, 212 miles: the whole of which added together, makes 1337 miles. Agrippa makes the distance from Byzantium to the river Ister 560 miles, and from thence to Panticapæum, 635.

Lake Mæotis, which receives the river Tanais as it flows from the Riphæan Mountains, and forms the extreme boundary between Europe and Asia, is said to be 1406 miles in circumference; which however some writers state at only 1125. From the entrance of this lake to the mouth of the Tanais in a straight line is, it is generally agreed, a distance of 375 miles.

The inhabitants of the coasts of this fourth great Gulf of Europe, as far as Istropolis, have been already mentioned in our account of Thrace. Passing beyond that spot we come to the mouths of the Ister. This river rises in Germany in the heights of Mount Abnoba, opposite to Rauricum, a town of Gaul, and flows for a course of many miles beyond the Alps and through nations innumerable, under the name of the Danube. Adding immensely to the volume of its waters, at the spot where it first enters Illyricum, it assumes the name of Ister, and, after receiving sixty rivers, nearly one half of which are navigable, rolls into the Euxine by six vast channels. The first of these is the mouth of Peuce, close to which is the island of Peuce itself, from which the neighbouring channel takes its name; this mouth is swallowed up in a great swamp nineteen miles in length. From the same channel too, above Istropolis, a lake takes its rise, sixty-three miles in circuit; its name is Halmyris. The second mouth is called Naracu-Stoma; the third, which is near the island of Sarmatica, is called Calon-Stoma; the fourth is known as Pseudo-Stomon, with its island called Conopon-Diabasis; after which come the Boreon- Stoma and the Psilon-Stoma. These mouths are each of them so considerable, that for a distance of forty miles, it is said, the saltness of the sea is quite overpowered, and the water found to be fresh.

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CHAP. 25.

DACIA, SARMATIA.

On setting out from this spot, all the nations met with are Scythian in general, though various races have occupied the adjacent shores; at one spot the Getæ, by the Romans called Daci; at another the Sarmatæ, by the Greeks called Sauromatæ, and the Hamaxobii or Aorsi, a branch of them; then again the base-born Scythians and descendants of slaves, or else the Troglodytæ; and then, after them, the Alani and the Rhoxalani. The higher parts again, between the Danube and the Hercynian Forest, as far as the winter quarters of Pannonia at Carnuntum, and the borders of the Germans, are occupied by the Sarmatian lazyges, who inhabit the level country and the plains, while the Daci, whom they have driven as far as the river Pathissus, inhabit the mountain and forest ranges. On leaving the river Marus, whether it is that or the Duria, that separates them from the Suevi and the kingdom of Vannius, the Basternæ, and, after them, other tribes of the Germans occupy the opposite sides. Agrippa considers the whole of this region, from the Ister to the ocean, to be 2100 miles in length, and 4400 miles in breadth to the river Vistula in the deserts of Sarmatia. The name “Scythian” has extended, in every direction, even to the Sarmatæ and the Germans; but this ancient appellation is now only given to those who dwell beyond those nations, and live unknown to nearly all the rest of the world.

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CHAP. 26.

SCYTHIA.

Leaving the Ister, we come to the towns of Cremniscos, Æpolium, the mountains of Macrocremnus, and the famous river Tyra, which gives name to a town on the spot where Ophiusa is said formerly to have stood. The Tyragetæ inhabit a large island situate in this river, which is distant from Pseudostomos, a mouth of the Ister, so called, 130 miles. We then come to the Axiacæ, who take their name from the river Axiaces, and beyond them, the Crobyzi, the river Rhodes, the Sagarian Gulf, and the port of Ordesos. At a distance of 120 miles from the Tyra is the river Borysthenes, with a lake and a people of similar name, as also a town in the interior, at a distance of fifteen miles from the sea, the ancient names of which were Olbiopolis and Miletopolis. Again, on the shore is the port of the Achæi, and the island of Achilles, famous for the tomb there of that hero, and, at a distance of 125 miles from it, a peninsula which stretches forth in the shape of a sword, in an oblique direction, and is called, from having been his place of exercise, Dromos Achilleos: the length of this, according to Agrippa, is eighty miles. The Taurian Scythians and the Siraci occupy all this tract of country.

At this spot begins a well-wooded district, which has given to the sea that washes its banks the name of the Hylæan Sea; its inhabitants are called Enœchadlæ. Beyond them is the river Pantieapes, which separates the Nomades and the Georgi, and after it the Acesinus. Some authors say that the Panticapes flows into the Borysthenes below Olbia. Others, who are more correct, say that it is the Hypanis: so great is the mistake made by those who have placed it in Asia.

The sea runs in here and forms a large gulf, until there is only an intervening space of five miles between it and the Lake Mæotis, its margin forming the sea-line of extensive tracts of land, and numerous nations; it is known as the Gulf of Carcinites. Here we find the river Pacyris, the towns of Navarum and Carcine, and behind it Lake Buges, which discharges itself by a channel into the sea. This Buges is separated by a ridge of rocks from Coretus, a gulf in the Lake

Mæotis; it receives the rivers Buges, Gerrus, and Hypacaris, which approach it from regions that lie in various directions. For the Gerrus separates the Basilidæ from the Nomades, the Hypacaris flows through the Nomades and the Hylæi, by an artificial channel into Lake Buges, and by its natural one into the Gulf of Coretus: this region bears the name of Scythia Sindice.

At the river Carcinites, Scythia Taurica begins, which was once covered by the sea, where we now see level plains extended on every side: beyond this the land rises into mountains of great elevation. The peoples here are thirty in number, of which twenty-three dwell in the interior, six of the cities being inhabited by the Orgocyni, the Characeni, the Lagyrani, the Tractari, the Arsilachitæ, and the Caliordi. The Scythotauri possess the range of mountains: on the west they are bounded by the Chersonesus, and on the east by the Scythian Satarchæ. On the shore, after we leave Carcinites, we find the following towns; Taphræ, situate on the very isthmus of the peninsula, and then Heraclea Chersonesus, to which its freedom has been granted by the Romans. This place was formerly called Megarice, being the most polished city throughout all these regions, in consequence of its strict preservation of Grecian manners and customs. A wall, five miles in length, surrounds it. Next to this comes the Promontory of Parthenium, the city of the Tauri, Placia, the port of the Symboli, and the Promontory of Criumetopon, opposite to Carambis, a promontory of Asia, which runs out in the middle of the Euxine, leaving an intervening space between them of 170 miles, which circumstance it is in especial that gives to this sea the form of a Scythian bow. After leaving this headland we come to a great number of harbours and lakes of the Tauri. The town of Theodosia is distant from Criumetopon 125 miles, and from Chersonesus 165. Beyond it there were, in former times, the towns of Cytæ, Zephyrium, Acræ, Nymphæum, and Dia. Panticapæum, a city of the Milesians, by far the strongest of them all, is still in existence; it lies at the entrance of the Bosporus, and is distant from Theodosia eighty-seven miles and a half, and from the town of Cimmerium, which lies on the other side of the Strait, as we have previously stated, two miles and a half. Such is the width here of the channel which separates Asia from Europe, and which too, from being

generally quite frozen over, allows of a passage on foot. The width of the Cimmerian Bosporus is twelve miles and a half: it contains the towns of Hermisium, Myrmecium, and, in the interior of it, the island of Alopece. From the spot called Taphræ, at the extremity of the isthmus, to the mouth of the Bosporus, along the line of the Lake Mæotis, is a distance of 260 miles.

Leaving Taphræ, and going along the mainland, we find in the interior the Auchetæ, in whose country the Hypanis has its rise, as also the Neurœ, in whose district the Borysthenes has its source, the Geloni, the Thyssagetæ, the Budini, the Basilidæ, and the Agathyrsi with their azure-coloured hair. Above them are the Nomades, and then a nation of Anthropophagi or cannibals. On leaving Lake Buges, above the Lake Mæotis we come to the Sauromatæ and the Essedones. Along the coast, as far as the river Tanais, are the Mæotæ, from whom the lake derives its name, and the last of all, in the rear of them, the Arimaspi. We then come to the Riphæan mountains, and the region known by the name of Pterophoros, because of the perpetual fall of snow there, the flakes of which resemble feathers; a part of the world which has been condemned by the decree of nature to lie immersed in thick darkness; suited for nothing but the generation of cold, and to be the asylum of the chilling blasts of the northern winds.

Behind these mountains, and beyond the region of the northern winds, there dwells, if we choose to believe it, a happy race, known as the Hyperborei, a race that lives to an extreme old age, and which has been the subject of many marvellous stories. At this spot are supposed to be the hinges upon which the world revolves, and the extreme limits of the revolutions of the stars. Here we find light for six months together, given by the sun in one continuous day, who does not, however, as some ignorant persons have asserted, conceal himself from the vernal equinox to autumn. On the contrary, to these people there is but one rising of the sun for the year, and that at the summer solstice, and but one setting, at the winter solstice. This region, warmed by the rays of the sun, is of a most delightful temperature, and exempt from every noxious blast. The abodes of the natives are the woods and groves; the gods receive their worship singly and in groups, while all discord and every kind of sickness are

things utterly unknown. Death comes upon them only when satiated with life; after a career of feasting, in an old age sated with every luxury, they leap from a certain rock there into the sea; and this they deem the most desirable mode of ending existence. Some writers have placed these people, not in Europe, but at the very verge of the shores of Asia, because we find there a people called the Attacori, who greatly resemble them and occupy a very similar locality. Other writers again have placed them midway between the two suns, at the spot where it sets to the Antipodes and rises to us; a thing however that cannot possibly be, in consequence of the vast tract of sea which there intervenes. Those writers who place them nowhere but under a day which lasts for six months, state that in the morning they sow, at mid-day they reap, at sunset they gather in the fruits of the trees, and during the night conceal themselves in caves. Nor are we at liberty to entertain any doubts as to the existence of this race; so many authors are there who assert that they were in the habit of sending their first-fruits to Delos to present them to Apollo, whom in especial they worship. Virgins used to carry them, who for many years were held in high veneration, and received the rites of hospitality from the nations that lay on the route; until at last, in consequence of repeated violations of good faith, the Hyperboreans came to the determination to deposit these offerings upon the frontiers of the people who adjoined them, and they in their turn were to convey them on to their neighbours, and so from one to the other, till they should have arrived at Delos. However, this custom, even, in time fell into disuse.

The length of Sarmatia, Scythia, and Taurica, and of the whole of the region which extends from the river Borysthenes, is, according to Agrippa, 980 miles, and its breadth 717. I am of opinion, however, that in this part of the earth all estimates of measurement are exceedingly doubtful.

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CHAP. 27.

THE ISLANDS OF THE EUXINE. THE ISLANDS OF THE NORTHERN OCEAN.

But now, in conformity with the plan which I originally proposed, the remaining portions of this gulf must be described. As for its seas, we have already made mention of them.

(13.) The Hellespont has no islands belonging to Europe that are worthy of mention. In the Euxine there are, at a distance of a mile and a half from the European shore, and of fourteen from the mouth of the Strait, the two Cyanæan islands, by some called the Symplegades, and stated in fabulous story to have run the one against the other; the reason being the circumstance that they are separated by so short an interval, that while to those who enter the Euxine opposite to them they appear to be two distinct islands, but if viewed in a somewhat oblique direction they have the appearance of becoming gradually united into one. On this side of the Ister there is the single island of the Apolloniates, eighty miles from the Thracian Bosporus; it was from this place that M. Lucullus brought the Capitoline Apollo. Those islands which are to be found between the mouths of the Ister we have already mentioned. Before the Borysthenes is Achillea previously referred to, known also by the names of Leuce and Macaron. Researches which have been made at the present day place this island at a distance of 140 miles from the Borysthenes, of 120 from Tyra, and of fifty from the island of Peuce. It is about ten miles in circumference. The remaining islands in the Gulf of Carcinites are Cephalonnesos, Rhosphodusa, and Macra. Before we leave the Euxine, we must not omit to notice the opinion expressed by many writers that all the interior seas take their rise in this one as the principal source, and not at the Straits of Gades. The reason they give for this supposition is not an improbable one — the fact that the tide is always running out of the Euxine and that there is never any ebb.

We must now leave the Euxine to describe the outer portions of Europe. After passing the Riphæan mountains we have now to

follow the shores of the Northern Ocean on the left, until we arrive at Gades. In this direction a great number of islands are said to exist that have no name; among which there is one which lies opposite to Scythia, mentioned under the name of Raunonia, and said to be at a distance of the day's sail from the mainland; and upon which, according to Timæus, amber is thrown up by the waves in the spring season. As to the remaining parts of these shores, they are only known from reports of doubtful authority. With reference to the Septentrional or Northern Ocean; Hecatæus calls it, after we have passed the mouth of the river Parapanisus, where it washes the Scythian shores, the Amalchian sea, the word 'Amalchian' signifying in the language of these races, frozen. Philemon again says that it is called Morimarusa or the "Dead Sea" by the Cimbri, as far as the Promontory of Rubeas, beyond which it has the name of the Cronian Sea. Xenophon of Lampsacus tells us that at a distance of three days' sail from the shores of Scythia, there is an island of immense size called Baltia, which by Pytheas is called Basilia. Some islands called Oönæ are said to be here, the inhabitants of which live on the eggs of birds and oats; and others again upon which human beings are produced with the feet of horses, thence called Hippopodes. Some other islands are also mentioned as those of the Panotii, the people of which have ears of such extraordinary size as to cover the rest of the body, which is otherwise left naked.

Leaving these however, we come to the nation of the Ingævones, the first in Germany; at which we begin to have some information upon which more implicit reliance can be placed. In their country is an immense mountain called Sevo, not less than those of the Riphæan range, and which forms an immense gulf along the shore as far as the Promontory of the Cimbri. This gulf, which has the name of the 'Codanian,' is filled with islands; the most famous among which is Scandinavia, of a magnitude as yet unascertained: the only portion of it at all known is inhabited by the nation of the Hilleviones, who dwell in 500 villages, and call it a second world: it is generally supposed that the island of Eningia is of not less magnitude. Some writers state that these regions, as far as the river Vistula, are inhabited by the Sarmati, the Venedi, the Sciri, and the Hirri, and that there is a gulf there known by the name of Cylipenus,

at the mouth of which is the island of Latris, after which comes another gulf, that of Lagnus, which borders on the Cimbri. The Cimbrian Promontory, running out into the sea for a great distance, forms a peninsula which bears the name of Cartris. Passing this coast, there are three and twenty islands which have been made known by the Roman arms: the most famous of which is Burcana, called by our people Fabaria, from the resemblance borne by a fruit which grows there spontaneously. There are those also called Glæsaria by our soldiers, from their amber; but by the barbarians they are known as Austeravia and Actania.

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CHAP. 28.

GERMANY.

The whole of the shores of this sea as far as the Scaldis, a river of Germany, is inhabited by nations, the dimensions of whose respective territories it is quite impossible to state, so immensely do the authors differ who have touched upon this subject. The Greek writers and some of our own countrymen have stated the coast of Germany to be 2500 miles in extent, while Agrippa, comprising Rhætia and Noricum in his estimate, makes the length to be 686 miles, and the breadth 148. (14.) The breadth of Rhætia alone however very nearly exceeds that number of miles, and indeed we ought to state that it was only subjugated at about the period of the death of that general; while as for Germany, the whole of it was not thoroughly known to us for many years after his time. If I may be allowed to form a conjecture, the margin of the coast will be found to be not far short of the estimate of the Greek writers, while the distance in a straight line will nearly correspond with that mentioned by Agrippa.

There are five German races; the Vandili, parts of whom are the Burgundiones, the Varini, the Carini, and the Gutones: the Ingævones, forming a second race, a portion of whom are the Cimbri, the Teutoni, and the tribes of the Chauci. The Istævones, who join up to the Rhine, and to whom the Cimbri belong, are the third race; while the Hermiones, forming a fourth, dwell in the interior, and include the Suevi, the Hermunduri, the Chatti, and the Cherusci: the fifth race is that of the Peucini, who are also the Basternæ, adjoining the Daci previously mentioned. The more famous rivers that flow into the ocean are the Guttalus, the Vistillus or Vistula, the Albis, the Visurgis, the Amisius, the Rhine, and the Mosa. In the interior is the long extent of the Hercynian range, which in grandeur is inferior to none.

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CHAP. 29. (15.)

NINETY-SIX ISLANDS OF THE GALLIC OCEAN.

In the Rhine itself, nearly 100 miles in length, is the most famous island of the Batavi and the Canninefates, as also other islands of the Frisii, the Chauci, the Frisiabones, the Sturii, and the Marsacii, which lie between Helium and Flevum. These are the names of the mouths into which the Rhine divides itself, discharging its waters on the north into the lakes there, and on the west into the river Mosa. At the middle mouth which lies between these two, the river, having but a very small channel, preserves its own name.

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CHAP. 30. (16.)

BRITANNIA.

Opposite to this coast is the island called Britannia, so celebrated in the records of Greece and of our own country. It is situate to the north-west, and, with a large tract of intervening sea, lies opposite to Germany, Gaul, and Spain, by far the greater part of Europe. Its former name was Albion; but at a later period, all the islands, of which we shall just now briefly make mention, were included under the name of "Britanniæ." This island is distant from Gesoriacum, on the coast of the nation of the Morini, at the spot where the passage across is the shortest, fifty miles. Pytheas and Isidorus say that its circumference is 4875 miles. It is barely thirty years since any extensive knowledge of it was gained by the successes of the Roman arms, and even as yet they have not penetrated beyond the vicinity of the Caledonian forest. Agrippa believes its length to be 800 miles, and its breadth 300; he also thinks that the breadth of Hibernia is the same, but that its length is less by 200 miles. This last island is situate beyond Britannia, the passage across being the shortest from the territory of the Silures, a distance of thirty miles. Of the remaining islands none is said to have a greater circumference than 125 miles. Among these there are the Orcades, forty in number, and situate within a short distance of each other, the seven islands called Acmodæ, the Hæbudes, thirty in number, and, between Hibernia and Britannia, the islands of Mona, Monapia, Ricina, Vectis, Limnus, and Andros. Below it are the islands called Samnis and Axantos, and opposite, scattered in the German Sea, are those known as the Glæsariæ, but which the Greeks have more recently called the Electrides, from the circumstance of their producing *electrum* or amber. The most remote of all that we find mentioned is Thule, in which, as we have previously stated, there is no night at the summer solstice, when the sun is passing through the sign of Cancer, while on the other hand at the winter solstice there is no day. Some writers are of opinion that this state of things lasts for six whole months together. Timæus the historian says that an island called Mictis is

within six days' sail of Britannia, in which white load is found; and that the Britons sail over to it in boats of osier, covered with sewed hides. There are writers also who make mention of some other islands, Scandia namely, Dumna, Bergos, and, greater than all, Nerigos, from which persons embark for Thule. At one day's sail from Thule is the frozen ocean, which by some is called the Cronian Sea.

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CHAP. 31. (17.)

GALLIA BELGICA.

The whole of Gaul that is comprehended under the one general name of *Comata*, is divided into three races of people, which are more especially kept distinct from each other by the following rivers. From the Scaldis to the Sequana it is Belgic Gaul; from the Sequana to the Garumna it is Celtic Gaul or Lugdunensis; and from the Garumna to the promontory of the Pyrenæan range it is Aquitanian Gaul, formerly called Aremorica. Agrippa makes the entire length of the coast of Gaul to be 1800 miles, measured from the Rhine to the Pyrenees: and its length, from the ocean to the mountains of Gebenna and Jura, excluding there from Gallia Narbonensis, he computes at 420 miles, the breadth being 318.

Beginning at the Scaldis, the parts beyond are inhabited by the Toxandri, who are divided into various peoples with many names; after whom come the Menapii, the Morini, the Oromarsaci, who are adjacent to the burgh which is known as Gesoriacum, the Britanni, the Ambiani, the Bel- lovaci, the Hassi, and, more in the interior, the Catoslugi, the Atrebates, the Nervii, a free people, the Veromandui, the Suæuconi, the Suessiones, a free people, the Ulmanetes, a free people, the Tungri, the Sunuci, the Frisiabones, the Betasi, the Leuci, a free people, the Treveri, who were formerly free, and the Lingones, a federal state, the federal Remi, the Mediomatrici, the Sequani, the Raurici, and the Helvetii. The Roman colonies are Equestris and Rauriaca. The nations of Germany which dwell in this province, near the sources of the Rhine, are the Nemetes, the Triboci, and the Vangiones; nearer again, the Ubii, the Colony of Agrippina, the Cugerni, the Batavi, and the peoples whom we have already mentioned as dwelling on the islands of the Rhine.

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CHAP. 32. (18.)

GALLIA LUGDUNENSIS.

That part of Gaul which is known as Lugdunensis con- tains the Lexovii, the Vellocasses, the Galeti, the Veneti, the Abrincatui, the Ossismi, and the celebrated river Ligeris, as also a most remarkable peninsula, which extends into the ocean at the extremity of the territory of the Ossismi, the circumference of which is 625 miles, and its breadth at the neck 125. Beyond this are the Nannetes, and in the interior are the Ædui, a federal people, the Carnuti, a federal people, the Boii, the Senones, the Aulerci, both those surnamed Eburovices and those called Cenomanni, the Meldi, a free people, the Parisii, the Tricasses, the An- decavi, the Viducasses, the Bodiocasses, the Venelli, the Cariosvelites, the Diablinti, the Rhedones, the Turones, the Atesui, and the Secusiani, a free people, in whose territory is the colony of Lugdunum.

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CHAP. 33. (19.)

GALLIA AQUITANICA.

In Aquitanica are the Ambilatri, the Anagnutes, the Pictones, the Santoni, a free people, the Bituriges, surnamed Vivisci, the Aquitani, from whom the province derives its name, the Sediboviates, the Convenæ, who together form one town, the Begerri, the Tarbelli Quatuorsignani, the Cocosates Sexsignani, the Venami, the Onobrisates, the Belendi, and then the Pyrenæan range. Below these are the Monesi, the Oscidates a mountain race, the Sibyllates, the Camponi, the Bercorcates, the Pindedunni, the Lassunni, the Vellates, the Tornates, the Consoranni, the Ausci, the Elusates, the Sottiates, the Oscidates Campestres, the Succasses, the Tarusates, the Basabocates, the Vassei, the Sennates, and the Cambolectri Agessinates. Joining up to the Pictones are the Bituriges, a free people, who are also known as the Cubi, and then the Lemovices, the Arverni, a free people, and the Gabales.

Again, adjoining the province of Narbonensis are the Ruteni, the Cadurci, the Nitiobriges, and the Petrocori, separated by the river Tarnis from the Tolosani. The seas around the coast are the Northern Ocean, flowing up to the mouth of the Rhine, the Britannic Ocean between the Rhine and the Sequana, and, between it and the Pyrenees, the Gallic Ocean. There are many islands belonging to the Veneti, which bear the name of “Veneticæ,” as also in the Aquitanic Gulf, that of Uliarus.

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CHAP. 34. (20.)

NEARER SPAIN, ITS COAST ALONG THE GALLIC OCEAN.

At the Promontory of the Pyrenees Spain begins, more narrow, not only than Gaul, but even than itself in its other parts, as we have previously mentioned, seeing to what an immense extent it is here hemmed in by the ocean on the one side, and by the Iberian Sea on the other. A chain of the Pyrenees, extending from due east to south-west, divides Spain into two parts, the smaller one to the north, the larger to the south. The first coast that presents itself is that of the Nearer Spain, otherwise called Tarraconensis. On leaving the Pyrenees and proceeding along the coast, we meet with the forest ranges of the Vascones, Olarso, the towns of the Varduli, the Morosgi, Menosca, Vesperies, and the Port of Amanus, where now stands the colony of Flaviobriga. We then come to the district of the nine states of the Cantabri, the river Sauga, and the Port of Victoria of the Juliobrigenses, from which place the sources of the Iberus are distant forty miles. We next come to the Port of Blendium, the Orgenomesci, a people of the Cantabri, Vereasueca their port, the country of the As- tures, the town of Noega, and on a peninsula, the Pæsici. Next to these we have, belonging to the jurisdiction of Lucus, after passing the river Navilubio, the Cibarci, the Egovarri, surnamed Namarini, the Iadoni, the Arrotrebæ, the Celtic Promontory, the rivers Florius and Nelo, the Celtici, surnamed Neri, and above them the Tamarici, in whose peninsula are the three altars called Sestianæ, and dedicated to Augustus; the Capori, the town of Noela, the Celtici surnamed Præsamarci, and the Cilen: of the islands, those worthy of mention are Corticata and Aunios. After passing the Cileni, belonging to the jurisdiction of the Bracari, we have the Heleni, the Gravii, and the fortress of Tyde, all of them deriving their origin from the Greeks. Also, the islands called Cicæ, the famous city of Abobrica, the river Minius, four miles wide at its mouth, the Leuni, the Seurbi, and Augusta, a town of the Bracari, above whom lies Gallæcia. We then come to the river Limia, and the river Durius, one of the largest in Spain, and which rises in the district of the

Pelendones, passes near Numantia, and through the Arevaci and the Vaccæi, dividing the Vettones from Asturia, the Gallæci from Lusitania, and separating the Turduli from the Bracari. The whole of the region here mentioned from the Pyrenees is full of mines of gold, silver, iron, and lead, both black and white.

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CHAP. 35. (21.)

LUSITANIA.

After passing the Durius, Lusitania begins. We here have the ancient Turdul, the Pæsuri, the river Vaga, the town of Talabrica, the town and river of Æminium, the towns of Conimbrica, Collippo, and Eburobritium. A promontory then advances into the sea in shape of a large horn; by some it has been called Artabrum, by others the Great Promon- tory, while many call it the Promontory of Olisipo, from the city near it. This spot forms a dividing line in the land, the sea, and the heavens. Here ends one side of Spain; and, when we have doubled the promontory, the front of Spain begins. (22.) On one side of it lie the North and the Gallic Ocean, on the other the West and the Atlantic. The length of this promontory has been estimated by some persons at sixty miles, by others at ninety. A considerable number of writers estimate the distance from this spot to the Pyrenees at 1250 miles; and, committing a manifest error, place here the nation of the Artabri, a nation that never was here. For, making a slight change in the name, they have placed at this spot the Arrotrebæ, whom we have previously spoken of as dwelling in front of the Celtic Promontory.

Mistakes have also been made as to the more celebrated rivers. From the Minius, which we have previously mentioned, according to Varro, the river Æminius is distant 200 miles, which others suppose to be situate elsewhere, and called Limæa. By the ancients it was called the "River of Oblivion," and it has been made the subject of many fabulous stories. At a distance of 200 miles from the Durius is the Tagus, the Munda lying between them. The Tagus is famous for its golden sands. At a distance of 160 miles from it is the Sacred Promontory, projecting from nearly the very middle of the front of Spain. From this spot to the middle of the Pyrenees, Varro says, is a distance of 1400 miles; while to the Anas, by which we have mentioned Lusitania as being separated from Bætica, is 126 miles, it being 102 more to Gades.

The peoples are the Celtici, the Turduli, and, about the Tagus, the Vettones. From the river Anas to the Sacred Promontory are the

Lusitani. The cities worthy of mention on the coast, beginning from the Tagus, are that of Olisipo, famous for its mares, which conceive from the west wind; Salacia, which is surnamed the Imperial City; Merobrica; and then the Sacred Promontory, with the other known by the name of Cuneus, and the towns of Ossonoba, Balsa, and Myrtili.

The whole of this province is divided into three jurisdictions, those of Emerita, Pax, and Scalabis. It contains in all forty-six peoples, among whom there are five colonies, one municipal town of Roman citizens, three with the ancient Latin rights, and thirty-six that are tributaries. The colonies are those of Augusta Emerita, situate on the river Anas, Metallinum, Pax, and Norba, surnamed Cæsariana. To this last place of jurisdiction the people of Castra Servilia and Castra Cæcilia resort. The fifth jurisdiction is that of Scalabis, which also has the name of Præsidium Julium. Olisipo, surnamed Felicitas Julia, is a municipal city, whose inhabitants enjoy the rights of Roman citizens. The towns in the enjoyment of the ancient Latin rights are Ebora, which also has the name of Liberalitas Julia, and Myrtili and Salacia, which we have previously mentioned. Those among the tributaries whom it may not be amiss to mention, in addition to those already alluded to among the names of those in Bætica, are the Augustobrigenses, the Ammienses, the Aranditani, the Arabricenses, the Balsenses, the Cesarobricenses, the Caperenses, the Caurenses, the Colarni, the Cibilitani, the Concordienses, the Elbocorii, the Interannienses, the Lan- cienses, the Mirobrigenses, surnamed Celtici, the Medubrigenses, surnamed Plumbarii, the Ocelenses or Lancienses, the Turduli, also called Barduli, and the Tapori. Agrippa states, that Lusitania, with Asturia and Gallæcia, is 540 miles in length, and 536 in breadth. The provinces of Spain, measured from the two extreme promontories of the Pyrenees, along the sea-line of the entire coast, are thought to be 3922 miles in circumference; while some writers make them to be but 2600.

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CHAP. 36.

THE ISLANDS IN THE ATLANTIC OCEAN.

Opposite to Celtiberia are a number of islands, by the Greeks called Cassiterides, in consequence of their abounding in tin: and, facing the Promontory of the Arrotrebæ, are the six Islands of the Gods, which some persons have called the Fortunate Islands. At the very commencement of Bætica, and twenty-five miles from the mouth of the Straits of Gades, is the island of Gadis, twelve miles long and three broad, as Polybius states in his writings. At its nearest part, it is less than 700 feet distant from the mainland, while in the remaining portion it is distant more than seven miles. Its circuit is fifteen miles, and it has on it a city which enjoys the rights of Roman citizens, and whose people are called the Augustani of the city of Julia Gaditana. On the side which looks towards Spain, at about 100 paces distance, is another long island, three miles wide, on which the original city of Gades stood. By Ephorus and Philistides it is called Erythia, by Timæus and Silenus Aphrodisias, and by the natives the Isle of Juno. Timæus says, that the larger island used to be called Cotinusa, from its olives; the Romans call it Tartessos; the Carthaginians Gadir, that word in the Punic language signifying a hedge. It was called Erythia because the Tyrians, the original an- cestors of the Carthaginians, were said to have come from the Erythræn, or Red Sea. In this island Geryon is by some thought to have dwelt, whose herds were carried off by Hercules. Other persons again think, that his island is another one, opposite to Lusitania, and that it was there formerly called by that name.

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CHAP. 37. (23.)

THE GENERAL MEASUREMENT OF EUROPE.

Having thus made the circuit of Europe, we must now give the complete measurement of it, in order that those who wish to be acquainted with this subject may not feel themselves at a loss. Artemidorus and Isidorus have given its length, from the Tanais to Gades, as 8214 miles. Polybius in his writings has stated the breadth of Europe, in a line from Italy to the ocean, to be 1150 miles. But, even in his day, its magnitude was but little known. The distance of Italy, as we have previously stated, as far as the Alps, is 1120 miles, from which, through Lugdunum to the British port of the Morini, the direction which Polybius seems to follow, is 1168 miles. But the better ascertained, though greater length, is that taken from the Alps through the Camp of the Legions in Germany, in a north-westerly direction, to the mouth of the Rhine, being 1543 miles. We shall now have to speak of Africa and Asia.

Summary. — Towns and nations mentioned * * * *. Noted rivers * * * *. Famous mountains * * * *. Islands * * * *. People or towns no longer in existence * * * *. Remarkable events, narratives, and observations * * * *.

Roman Authors Quoted. — Cato the Censor, M. Varro, M. Agrippa, the late Emperor Augustus, Varro Atacinus, Cornelius Nepos, Hyginus, L. Vetus, Mela Pomponius, Licinius Mucianus, Fabricius Tuscus, Ateius Capito, Ateius the Philologist.

Foreign Authors Quoted. — Polybius, Hecatæus, Hellanicus, Damastes, Eudoxus, Dicæarchus, Timosthenes, Eratosthenes, Ephorus, Crates the Grammarian, Serapion of Antioch, Callimachus, Artemidorus, Apollodorus, Agathocles, Eumachus, Timæus the Sicilian, Myrsilus, Alexander Polyhistor, Thucydides, Dosiades, Anaximander, Philistides Mallotes, Dionysius, Aristides, Callidemus Menæchmus, Agla- osthenes, Anticlides, Heraclides, Philemon, Xenophon, Pytheas, Isidorus, Philonides, Xenagoras, Astynomus,

Staphylus, Aristocritus, Metrodorus, Cleobulus, Posidonius.

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BOOK V. AN ACCOUNT OF COUNTRIES, NATIONS, SEAS, TOWNS, HAVENS, MOUNTAINS, RIVERS, DISTANCES, AND PEOPLES WHO NOW EXIST OR FORMERLY EXISTED.

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CHAP. 1.

THE TWO MAURITANIAS.

The Greeks have given the name of Libya to Africa, and have called the sea that lies in front of it the Libyan Sea. It has Egypt for its boundary, and no part of the earth is there that has fewer gulfs or inlets, its shores extending in a lengthened line from the west in an oblique direction. The names of its peoples, and its cities in especial, cannot possibly be pronounced with correctness, except by the aid of their own native tongues. Its population, too, for the most part dwells only in fortresses.

(1.) On our entrance into Africa, we find the two Mauritanias, which, until the time of Caius Cæsar, the son of Germanicus, were kingdoms; but, suffering under his cruelty, they were divided into two provinces. The extreme promontory of Africa, which projects into the ocean, is called Ampelusia by the Greeks. There were formerly two towns, Lissa and Cotte, beyond the Pillars of Hercules; but, at the present day, we only find that of Tingi, which was formerly founded by Antæus, and afterwards received the name of Traducta Julia, from Claudius Cæsar, when he established a colony there. It is thirty miles distant from Belon, a town of Bætica, where the passage across is the shortest. At a distance of twenty-five miles from Tingi, upon the shores of the ocean, we come to Julia Constantia Zilis, a colony of Augustus. This place is exempt from all subjection to the kings of Mauritania, and is included in the legal jurisdiction of Bætica. Thirty-two miles distant from Julia Constantia is Lixos, which was made a Roman colony by Claudius Cæsar, and which has been the subject of such wondrous fables, related by the writers of antiquity. At this place, according to the story, was the palace of Antaeus; this was the scene of his combat with Hercules, and here were the gardens of the Hesperides. An arm of the sea flows into the land here, with a serpentine channel, and, from the nature of the locality, this is interpreted at the present day as having been what was really represented by the story of the dragon keeping guard there. This tract of water surrounds an island, the only spot which is

never overflowed by the tides of the sea, although not quite so elevated as the rest of the land in its vicinity. Upon this island, also, there is still in existence the altar of Hercules; but of the grove that bore the golden fruit, there are no traces left, beyond some wild olive-trees. People will certainly be the less surprised at the marvellous falsehoods of the Greeks, which have been related about this place and the river Lixos, when they reflect that some of our own countrymen as well, and that too very recently, have related stories in reference to them hardly less monstrous; how that this city is remarkable for its power and extensive influence, and how that it is even greater than Great Carthage ever was; how, too, that it is situate just opposite to Carthage, and at an almost immeasurable distance from Tingi, together with other details of a similar nature, all of which Cornelius Nepos has believed with the most insatiate credulity.

In the interior, at a distance of forty miles from Lixos, is Babba, surnamed Julia Campestris, another colony of Augustus; and, at a distance of seventy-five, a third, called Banasa, with the surname of Valentia. At a distance of thirty-five miles from this last is the town of Volubilis, which is just that distance also from both seas. On the coast, at a distance of fifty miles from Lixos, is the river Subur, which flows past the colony of Banasa, a fine river, and available for the purposes of navigation. At the same distance from it is the city of Sala, situate on a river which bears the same name, a place which stands upon the very verge of the desert, and though infested by troops of elephants, is much more exposed to the attacks of the nation of the Autololes, through whose country lies the road to Mount Atlas, the most fabulous locality even in Africa.

It is from the midst of the sands, according to the story, that this mountain raises its head to the heavens; rugged and craggy on the side which looks toward the shores of the ocean to which it has given its name, while on that which faces the interior of Africa it is shaded by dense groves of trees, and refreshed by flowing streams; fruits of all kinds springing up there spontaneously to such an extent, as to more than satiate every possible desire. Throughout the daytime, no inhabitant is to be seen; all is silent, like that dreadful stillness which reigns in the desert. A religious horror steals imperceptibly over the

feelings of those who approach, and they feel themselves smitten with awe at the stupendous aspect of its summit, which reaches beyond the clouds, and well nigh approaches the very orb of the moon. At night, they say, it gleams with fires innumerable lighted up; it is then the scene of the gambols of the Ægipans and the Satyr crew, while it re-echoes with the notes of the flute and the pipe, and the clash of drums and cymbals. All this is what authors of high character have stated, in addition to the labours which Hercules and Perseus there experienced. The space which intervenes before you arrive at this mountain is immense, and the country quite unknown.

There formerly existed some Commentaries written by Hanno, a Carthaginian general, who was commanded, in the most flourishing times of the Punic state, to explore the sea-coast of Africa. The greater part of the Greek and Roman writers have followed him, and have related, among other fabulous stories, that many cities there were founded by him, of which no remembrance, nor yet the slightest vestige, now exists.

While Scipio Æmilianus held the command in Sicily, Polybius the historian received a fleet from him for the purpose of proceeding on a voyage of discovery in this part of the world. He relates, that beyond Mount Atlas, pro- ceeding in a westerly direction, there are forests filled with wild beasts, peculiar to the soil of Africa, as far as the river Anatis, a distance of 485 miles, Lixos being distant from it 205 miles. Agrippa says, that Lixos is distant from the Straits of Gades 112 miles. After it we come to a gulf which is called the Gulf of Saguti, a town situate on the Promontory of Mulelacha, the rivers Subur and Salat, and the port of Rutubis, distant from Lixos 213 miles We then come to the Promontory of the Sun, the port of Risardir, the Gætulian Autololes, the river Cosenus, the nations of the Selatiti and the Masati, the river Masathat, and the river Darat, in which crocodiles are found. After this we come to a large gulf, 616 miles in extent, which is enclosed by a promontory of Mount Barce, which runs out in a westerly direction, and is called Surrentium. Next comes the river Salsus, beyond which lie the Æthiopian Perorsi, at the back of whom are the Pharusii, who are bordered upon by the Gætulian Daræ, lying in the interior. Upon the coast again, we find the Æthiopian Daratitæ, and the river Bambotus, teeming with

crocodiles and hippopotami. From this river there is a continuous range of mountains till we come to the one which is known by the name of Theon Ochema, from which to the Hesperian Promontory is a voyage of ten days and nights; and in the middle of this space he has placed Mount Atlas, which by all other writers has been stated to be in the extreme parts of Mauritania.

The Roman arms, for the first time, pursued their conquests into Mauritania, under the Emperor Claudius, when the freedman Ædemon took up arms to avenge the death of King Ptolemy, who had been put to death by Caius Cæsar; and it is a well-known fact, that on the flight of the barbarians our troops reached Mount Atlas. It became a boast, not only among men of consular rank, and generals selected from the senate, who at that time held the command, but among persons of equestrian rank as well, who after that period held the government there, that they had penetrated as far as Mount Atlas. There are, as we have already stated, five Roman colonies in this province; and it may very possibly appear, if we listen only to what report says, that this mountain is easily accessible. Upon trial, however, it has been pretty generally shown, that all such statements are utterly fallacious; and it is too true, that men in high station, when they are disinclined to take the trouble of inquiring into the truth, through a feeling of shame at their ignorance arc not averse to be guilty of falsehood; and never is implicit credence more readily given, than when a falsehood is supported by the authority of some personage of high consideration. For my own part, I am far less surprised that there are still some facts remaining undiscovered by men of the equestrian order, and even those among them who have attained senatorial rank, than that the love of luxury has left anything unascertained; the impulse of which must be great indeed, and most powerfully felt, when the very forests are ransacked for their ivory and citron-wood, and all the rocks of Gætulia are searched for the murex and the purple.

From the natives, however, we learn, that on the coast, at a distance of 150 miles from the Salat, the river Asana presents itself; its waters are salt, but it is remarkable for its fine harbour. They also say that after this we come to a river known by the name of Fut, and then, after crossing another called Vior which lies on the road, at a

distance of 200 miles we arrive at Dyris, such being the name which in their language they give to Mount Atlas. According to their story there are still existing in its vicinity many vestiges which tend to prove that the locality was once inhabited; such as the remains of vineyards and plantations of palm-trees.

Suetonius Paulinus, whom we have seen Consul in our own time, was the first Roman general who advanced a distance of some miles beyond Mount Atlas. He has given us the same information as we have received from other sources with reference to the extraordinary height of this mountain, and at the same time he has stated that all the lower parts about the foot of it are covered with dense and lofty forests composed of trees of species hitherto unknown. The height of these trees, he says, is remarkable; the trunks are without knots, and of a smooth and glossy surface; the foliage is like that of the cypress, and besides sending forth a powerful odour, they are covered with a flossy down, from which, by the aid of art, a fine cloth might easily be manufactured, similar to the textures made from the produce of the silk-worm. He informs us that the summit of this mountain is covered with snow even in summer, and says that having arrived there after a march of ten days, he proceeded some distance beyond it as far as a river which bears the name of Ger; the road being through deserts covered with a black sand, from which rocks that bore the appearance of having been exposed to the action of fire, projected every here and there; localities rendered quite uninhabitable by the intensity of the heat, as he himself experienced, although it was in the winter season that he visited them. We also learn from the same source that the people who inhabit the adjoining forests, which are full of all kinds of elephants, wild beasts, and serpents, have the name of Canarii; from the circumstance that they partake of their food in common with the canine race, and share with it the entrails of wild beasts.

It is a well-known fact, that adjoining to these localities is a nation of Æthiopians, which bears the name of Perorsi. Juba, the father of Ptolemy, who was the first king who reigned over both the Mauritanias, and who has been rendered even more famous by the brilliancy of his learning than by his kingly rank, has given us similar information relative to Mount Atlas, and states that a certain herb

grows there, which has received the name of ‘euphorbia’ from that of his physician, who was the first to discover it. Juba extols with wondrous praises the milky juice of this plant as tending to improve the sight, and acting as a specific against the bites of serpents and all kinds of poison; and to this subject alone he has devoted an entire book. Thus much, if indeed not more than enough, about Mount Atlas.

(2.) The province of Tingitana is 170 miles in length. Of the nations in this province the principal one was formerly that of the Mauri, who have given to it the name of Mauritania, and have been by many writers called the Maurusii. This nation has been greatly weakened by the disasters of war, and is now dwindled down to a few families only. Next to the Mauri was formerly the nation of the Massæsyli; they in a similar manner have become extinct. Their country is now occupied by the Gætulian nations, the Baniuræ, the Autololes, by far the most powerful people among them all, and the Vesuni, who formerly were a part of the Autololes, but have now separated from them, and, turning their steps towards the Æthiopians, have formed a distinct nation of their own. This province, in the mountainous district which lies on its eastern side produces elephants, as also on the heights of Mount Abyla and among those elevations which, from the similarity of their height, are called the Seven Brothers. Joining the range of Abyla these mountains overlook the Straits of Gades. At the extremity of this chain begin the shores of the inland sea and we come to the Tamuda, a navigable stream, with the site of a former town of the same name, and then the river Laud, which is also navigable for vessels, the town and port of Rhysaddir, and Malvane, a navigable stream.

The city of Siga, formerly the residence of King Syphax, lies opposite to that of Malaca in Spain: it now belongs to the second Mauritania. But these countries, I should remark, for a long time retained the names of their respective kings, the further Mauritania being called the “land of Bogud,” while that which is now called Cæsariensis was called the “country of Bocchus.” After passing Siga we come to the haven called “Portus Magnus” from its great extent, with a town whose people enjoy the rights of Roman citizens, and then the river Mulucha, which served as the limit between the

territory of Bocchus and that of the Massæsyli. Next to this is Quiza Xenitana, a town founded by strangers, and Arsenaria, a place with the ancient Latin rights, three miles distant from the sea. We then come to Cartenna, a colony founded under Augustus by the second legion, and Gunugum, another colony founded by the same emperor, a prætorian cohort being established there; the Promontory of Apollo, and a most celebrated city, now called Cæsarea, but formerly known by the name of Iol; this place was the residence of King Juba, and received the rights of a colony from the now deified Emperor Claudius. Oppidum Novum is the next place; a colony of veterans was established here by command of the same emperor. Next to it is Tipasa, which has received Latin rights, as also Icasium, which has been presented by the Emperor Vespasianus with similar rights; Rusconiæ, a colony founded by Augustus; Rusucurium, honoured by Claudius with the rights of Roman citizens; Ruzacus, a colony founded by Augustus; Salde, another colony founded by the same emperor; Igilgili, another; and the town of Tucca, situate on the sea-shore and upon the river Ampsaga. In the interior are the colony of Augusta, also called Succabar, Tubusuptus, the cities of Timici and Tigavæ, the rivers Sardabal, Aves, and Nabar, the nation of the Macurebi, the river Usar, and the nation of the Nababes. The river Ampsaga is distant from Cæsarea 322 miles. The length of the two Mauritanias is 1038, and their breadth 467 miles.

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CHAP. 2. (3.)

NUMIDIA.

At the river Ampsaga Numidia begins, a country rendered illustrious by the fame of Masinissa. By the Greeks this region was called Metagonitis; and the Numidians received the name of "Nomades" from their frequent changes of pasturage; upon which occasions they were accustomed to carry their *mapalia,* or in other words, their houses, upon waggons. The towns of this country are Cullu and Rusicade; and at a distance of forty-eight miles from the latter, in the interior, is the colony of Cirta, surnamed "of the Sitiani;" still more inland is another colony called Sicca, with the free town of Bulla Regia. On the coast are Tacatua, Hippo Regius, the river Armua, and the town of Tabraca, with the rights of Roman citizens. The river Tusca forms the boundary of Numidia. This country produces nothing remarkable except its marble and wild beasts.

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CHAP. 3. (4.)

AFRICA.

Beyond the river Tusca begins the region of Zeugitana, and that part which properly bears the name of Africa. We here find three promontories; the White Promontory, the Promontory of Apoll, facing Sardinia, and that of Mercury, opposite to Sicily. Projecting into the sea these headlands form two gulfs, the first of which bears the name of "Hipponensis" from its proximity to the city called Hippo Dirutus, a corruption of the Greek name Diarrhytus, which it has received from the channels made for irrigation. Adjacent to this place, but at a greater distance from the sea-shore, is Theudalis, a town exempt from tribute. We then come to the Promontory of Apollo, and upon the second gulf, we find Utica, a place enjoying the rights of Roman citizens, and famous for the death of Cato; the river Bagrada, the place called Castra Cornelia, the co- lony of Carthage, founded upon the remains of Great Carthage, the colony of Maxula, the towns of Carpi, Misua, and Clypea, the last a free town, on the Promontory of Mercury; also Curubis, a free town, and Neapolis.

Here commences the second division of Africa properly so called. Those who inhabit Byzacium have the name of Libyphœnices. Byzacium is the name of a district which is 250 miles in circumference, and is remarkable for its extreme fertility, as the ground returns the seed sown by the husbandman with interest a hundred-fold. Here are the free towns of Leptis, Adrumetum, Ruspina, and Thapsus; and then Thenæ, Macomades, Tacape, and Sabrata which touches on the Lesser Syrtis; to which spot, from the Ampsaga, the length of Numidia and Africa is 580 miles, and the breadth, so far as it has been ascertained, 200. That portion which we have called Africa is divided into two provinces, the Old and the New; these are separated by a dyke which was made by order of the second Scipio Africanus and the kings, and extended to Thenæ, which town is distant from Carthage 216 miles.

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CHAP. 4.

THE SYRTES.

A third Gulf is divided into two smaller ones, those of the two Syrtes, which are rendered perilous by the shallows of their quicksands and the ebb and flow of the sea. Polybius states the distance from Carthage to the Lesser Syrtis, the one which is nearest to it, to be 300 miles. The inlet to it he also states to be 100 miles across, and its circumference 300. There is also a way to it by land, to find which we must employ the guidance of the stars and cross deserts which present nothing but sand and serpents. After passing these we come to forests filled with vast multitudes of wild beasts and elephants, then desert wastes, and beyond them the Garamantes, distant twelve days' journey from the Augylæ. Above the Garamantes was formerly the na- tion of the Psylli, and above them again the Lake of Lycomedes, surrounded with deserts. The Augylæ themselves are situate almost midway between Æthiopia which faces the west, and the region which lies between the two Syrtes, at an equal distance from both. The distance along the coast that lies between the two Syrtes is 250 miles. On it are found the city of Œa, the river Cinyps, and the country of that name, the towns of Neapolis, Graphara, and Abrotonum, and the second, surnamed the Greater, Leptis.

We next come to the Greater Syrtis, 625 miles in circumference, and at the entrance 312 miles in width; next after which dwells the nation of the Cisippades. At the bottom of this gulf was the coast of the Lotophagi, whom some writers have called the Alachroæ, extending as far as the Altars of the Philæni; these Altars are formed of heaps of sand. On passing these, not far from the shore there is a vast swamp which receives the river Triton and from it takes its name: by Callimachus it is called Pallantias, and is said by him to be on the nearer side of the Lesser Syrtis; many other writers however place it between the two Syrtes. The promontory which bounds the Greater Syrtis has the name of Borion; beyond it is the province of Cyrene.

Africa, from the river Ampsaga to this limit, includes 516 peoples, who are subject to the Roman sway, of which six are colonies; among them Uthina and Tuburbi, besides those already mentioned. The towns enjoying the rights of Roman citizens are fifteen in number, of which I shall mention, as lying in the interior, those of Assuræ, Abutucum, Aborium, Canopicum, Cilma, Simithium, Thunusidium, Tuburnicum, Tynidrumum, Tibiga, the two towns called Ucita, the Greater and the Lesser, and vaga. There is also one town with Latin rights, Uzalita by name, and one town of tributaries, Castra Cornelia. The free towns are thirty in number, among which we may mention, in the interior, those of Acholla, Aggarita, Avina, Abzirita, Cano- pita, Melizita, Matera, Salaphita, Tusdrita, Tiphica, Tunica, Theuda, Tagasta, Tiga, Ulusubrita, a second Vaga, Visa, and Zama. Of the remaining number, most of them should be called, in strictness, not only cities, but nations even; such for instance as the Natabudes, the Capsitani, the Musulami, the Sabarbares, the Massyli, the Nisives, the Vamacures, the Cinithi, the Musuni, the Marchubii, and the whole of Gætulia, as far as the river Nigris, which separates Africa proper from Æthiopia.

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CHAP. 5. (5.)

CYRENAICA.

The region of Cyrenaica, also called Pentapolis, is rendered famous by the oracle of Hammon, which is distant 400 miles from the city of Cyrene; also by the Fountain of the Sun there, and five cities in especial, those of Berenice, Arsinoë, Ptolemais, Apollonia, and Cyrene itself. Berenice is situate upon the outer promontory that bounds the Syrtis; it was formerly called the city of the Hesperides (previously mentioned), according to the fables of the Greeks, which very often change their localities. Not far from the city, and running before it, is the river Lethon, and with it a sacred grove, where the gardens of the Hesperides are said to have formerly stood; this city is distant from Leptis 375 miles. From Berenice to Arsinoë, commonly called Teuchira, is forty-three miles; after which, at a distance of twenty-two, we come to Ptolemais, the ancient name of which was Barce; and at a distance of forty miles from this last the Promontory of Phycus, which extends far away into the Cretan Sea, being 350 miles distant from Tænarum, the promontory of Laconia, and from Crete 225. After passing this promontory we come to Cyrene, which stands at a distance of eleven miles from the sea. From Phycus to Apollonia is twenty-four miles, and from thence to the Chersonesus eighty-eight; from which to Catabathmos is a distance of 216 miles. The Marmaridæ inhabit this coast, extending from almost the region of Parætonium to the Greater Syrtis; after them the Ararauceles, and then, upon the coasts of the Syrtis, the Nasamones, whom the Greeks formerly called Mesammones, from the circumstance of their being located in the very midst of sands. The territory of Cyrene, to a distance of fifteen miles from the shore, is said to abound in trees, while for the same distance beyond that district it is only suitable for the cultivation of corn: after which, a tract of land, thirty miles in breadth and 250 in length, is productive of nothing but laser [or silphium].

After the Nasamones we come to the dwellings of the Asbystæ and the Macæ, and beyond them, at eleven days' journey to the west

of the Greater Syrtis, the Amantes, a people also surrounded by sands in every direction. They find water however without any difficulty at a depth mostly of about two cubits, as their district receives the overflow of the waters of Mauritania. They build houses with blocks of salt, which they cut out of their mountains just as we do stone. From this nation to the Troglodytæ the distance is seven days' journey in a south-westerly direction, a people with whom our only intercourse is for the purpose of procuring from them the precious stone which we call the carbuncle, and which is brought from the interior of Æthiopia. Upon the road to this last people, but turning off towards the deserts of Africa, of which we have previously made mention as lying beyond the Lesser Syrtis, is the region of Phazania; the nation of Phazanii, belonging to which, as well as the cities of Alele and Cilliba, we have subdued by force of arms, as also Cydamus, which lies over against Sabrata. After passing these places a range of mountains extends in a prolonged chain from east to west: these have received from our people the name of the Black Mountains, either from the appearance which they naturally bear of having been exposed to the action of fire, or else from the fact that they have been scorched by the reflection of the sun's rays. Beyond it is the desert, and then Talgæ, a city of the Garamantes, and Debris, at which place there is a spring, the waters of which, from noon to midnight, are at boiling heat, and then freeze for as many hours until the following noon; Garama too, that most famous capital of the Garamantes; all which places have been subdued by the Roman arms. It was on this occasion that Cornelius Balbus was honoured with a triumph, the only foreigner indeed that was ever honoured with the triumphal chariot, and presented with the rights of a Roman citizen; for, although by birth a native of Gades, the Roman citizenship was granted to him as well as to the elder Balbus, his uncle by the father's side. There is also this remarkable circumstance, that our writers have handed down to us the names of the cities above-men- tioned as having been taken by Balbus, and have informed us that on the occasion of his triumph, besides Cydamus and Garama, there were carried in the procession the names and models of all the other nations and cities, in the following order: the town of Tabudium, the nation of Niteris, the town of

Nigligemella, the nation or town of Bubeium, the nation of Enipi, the town of Thuben, the mountain known as the Black Mountain, Nitibrum, the towns called Rapsa, the nation of Discera, the town of Debris, the river Nathabur, the town of Thapsagum, the nation of Nannagi, the town of Boin, the town of Pege, the river Dasibari; and then the towns, in the following order, of Baracum, Buluba, Alasit, Galia, Balla, Maxalla, Zizama, and Mount Gyri, which was preceded by an inscription stating that this was the place where precious stones were produced.

Up to the present time it has been found impracticable to keep open the road that leads to the country of the Garamantes, as the predatory bands of that nation have filled up the wells with sand, which do not require to be dug for to any great depth, if you only have a knowledge of the locality. In the late war however, which, at the beginning of the reign of the Emperor Vespasian, the Romans carried on with the people of Œa, a short cut of only four days' journey was discovered; this road is known as the "Pæter Caput Saxi." The last place in the territory of Cyrenaica is Catabathmos, consisting of a town, and a valley with a sudden and steep descent. The length of Cyrenean Africa, up to this boundary from the Lesser Syrtis, is 1060 miles; and, so far as has been ascertained, it is 800 in breadth.

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CHAP. 6. (6.)

LIBYA MAREOTIS.

The region that follows is called Libya Mareotis, and borders upon Egypt. It is held by the Marmaridæ, the Adyrmachidæ, and, after them, the Mareotœ. The distance from Catabathmos to Parætonium is eighty-six miles. In this district is Apis, a place rendered famous by the religious belief of Egypt. From this town Parætonium is distant sixty-two miles, and from thence to Alexandria the distance is 200 miles, the breadth of the district being 169. Eratosthenes says that it is 525 miles by land from Cyrene to Alexandria; while Agrippa gives the length of the whole of Africa from the Atlantic Sea, and including Lower Egypt, as 3040 miles. Polybius and Eratosthenes, who are generally considered as remarkable for their extreme correctness, state the length to be, from the ocean to Great Carthage 1100 miles, and from Carthage to Canopus, the nearest mouth of the Nile, 1628 miles; while Isidorus speaks of the distance from Tingi to Canopus as being 3599 miles. Artemidorus makes this last distance forty miles less than Isidorus.

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CHAP. 7. (7.)

THE ISLANDS IN THE VICINITY OF AFRICA.

These seas contain not so very many islands. The most famous among them is Meninx, twenty-five miles in length and twenty-two in breadth: by Eratosthenes it is called Lotophagitis. This island has two towns, Meninx on the side which faces Africa, and Troas on the other; it is situate off the promontory which lies on the right-hand side of the Lesser Syrtis, at a distance of a mile and a half. One hundred miles from this island, and opposite the promontory that lies on the left, is the free island of Cercina, with a city of the same name. It is twenty-five miles long, and half that breadth at the place where it is the widest, but not more than five miles across at the extremity: the diminutive island of Cercinitis, which looks towards Carthage, is united to it by a bridge. At a distance of nearly fifty miles from these is the island of Lopadusa, six miles in length; and beyond it Gaulos and Galata, the soil of which kills the scorpion, that noxious reptile of Africa. It is also said that the scorpion will not live at Clypea; opposite to which place lies the island of Cosyra, with a town of the same name. Opposite to the Gulf of Carthage are the two islands known as the Ægimuri; the Altars, which are rather rocks than islands, lie more between Sicily and Sardinia. There are some authors who state that these rocks were once inhabited, but that they have gradually subsided in the sea.

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CHAP. 8. (8.)

COUNTRIES ON THE OTHER SIDE OF AFRICA.

If we pass through the interior of Africa in a southerly direction, beyond the Gætuli, after having traversed the intervening deserts, we shall find, first of all the Liby- Egyptians, and then the country where the Leucæthio- pians dwell. Beyond these are the Nigritæ, nations of Æthiopia, so called from the river Nigris, which has been previously mentioned, the Gymnetes, surnamed Pharusii, and, on the very margin of the ocean, the Perorsi, whom we have already spoken of as lying on the boundaries of Mauritania. After passing all these peoples, there are vast deserts towards the east until we come to the Garamantes, the Augylæ, and the Troglodytæ; the opinion of those being exceedingly well founded who place two Æthiopias beyond the deserts of Africa, and more particularly that expressed by Homer, who tells us that the Æthiopians are divided into two nations, those of the east and those of the west. The river Nigris has the same characteristics as the Nile; it produces the calamus, the papyrus, and just the same animals, and it rises at the same seasons of the year. Its source is between the Tarrælian Æthiopians and the Œcalicæ. Magium, the city of the latter people, has been placed by some writers amid the deserts, and, next to them the Atlantes; then the Ægipani, half men, half beasts, the Blemmyæ, the Gamphasantes, the Satyri, and the Himantopodes.

The Atlantes, if we believe what is said, have lost all characteristics of humanity; for there is no mode of distinguishing each other among them by names, and as they look upon the rising and the setting sun, they give utterance to direful imprecations against it, as being deadly to themselves and their lands; nor are they visited with dreams, like the rest of mortals. The Troglodytæ make excavations in the earth, which serve them for dwellings; the flesh of serpents is their food; they have no articulate voice, but only utter a kind of squeaking noise; and thus are they utterly destitute of all means of communication by language. The Garamantes have no institution of marriage among them, and live in promiscuous

concubinage with their women. The Augylæ worship no deities but the gods of the infernal regions. The Gamphasantes, who go naked, and are unacquainted with war, hold no intercourse whatever with strangers. The Blemmyæ are said to have no heads, their mouths and eyes being seated in their breasts. The Satyri, beyond their figure, have nothing in common with the manners of the human race, and the form of the Ægipani is such as is commonly represented in paintings. The Himantopodes are a race of people with feet resembling thongs, upon which they move along by nature with a serpentine, crawling kind of gait. The Pharusii, descended from the ancient Persians, are said to have been the companions of Hercules when on his expedition to the Hesperides. Beyond the above, I have met with nothing relative to Africa worthy of mention.

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CHAP. 9. (9.)

EGYPT AND THEBAIS.

Joining on to Africa is Asia, the extent of which, according to Timosthenes, from the Canopic mouth of the Nile to the mouth of the Euxine, is 2639 miles. From the mouth of the Euxine to that of Lake Mæotis is, according to Eratosthenes, 1545 miles. The whole distance to the Tanais, including Egypt, is, according to Artemidorus and Isidorus, 6375 miles. The seas of Egypt, which are several in number, have received their names from those who dwell upon their shores, for which reason they will be mentioned together.

Egypt is the country which lies next to Africa; in the interior it runs in a southerly direction, as far as the territory of the Æthiopians, who lie extended at the back of it. The river Nile, dividing itself, forms on the right and left the boundary of its lower part, which it embraces on every side. By the Canopic mouth of that river it is separated from Africa, and by the Pelusiac from Asia, there being a distance between the two of 170 miles. For this reason it is that some persons have reckoned Egypt among the islands, the Nile so dividing itself as to give a triangular form to the land which it encloses: from which circumstance also many persons have named Egypt the Delta, after that of the Greek letter so called. The distance from the spot where the channel of the river first divides into branches, to the Canopic mouth, is 146 miles, and to the Pelusiac, 166.

The upper part of Egypt, which borders on Æthiopia, is known as Thebais. This district is divided into prefectures of towns, which are generally designated as "Nomes." These are Ombites, Apollopolites, Hermonthites, Thinites, Phaturites, Coptites, Tentyrites, Diopolites, An- tæopolites, Aphroditopolites, and Lycopolites. The district which lies in the vicinity of Pelusium contains the following Nomes, Pharbæthites, Bubastites, Sethroites, and Tanites. The remaining Nomes are those called the Arabian; the Hammonian, which lies on the road to the oracle of Jupiter Hammon; and those known by the names of Oxyrynchites, Leontopolites, Athribites, Cynopolites, Hermopolites, Xoites, Mendesim, Sebennytes, Cabasites,

Latopolites, Heliopolites, Prosopites, Panopolites, Busirites, Onuphites, Saïtes, Ptenethu, Phthemphu, Naucratites, Metelites, Gynæcopolites, Menelaites, — all in the region of Alexandria, besides Mareotis in Libya.

Heracleopolites is a Nome on an island of the Nile, fifty miles in length, upon which there is a city, called the 'City of Hercules.' There are two places called Arsinoïtes: these and Memphites extend to the apex of the Delta; adjoining to which, on the side of Africa, are the two Nomes of Oasites. Some writers vary in some of these names and substitute for them other Nomes, such as Heroöpolites and Crocodilopolites. Between Arsinoïtes and Memphites, a lake, 250 miles, or, according to what Mucianus says, 450 miles in circumference and fifty paces deep, has been formed by artificial means: after the king by whose orders it was made, it is called by the name of Mœris. The distance from thence to Memphis is nearly sixty-two miles, a place which was formerly the citadel of the kings of Egypt; from thence to the oracle of Hammon it is twelve days' journey. Memphis is fifteen miles from the spot where the river Nile divides into the different channels which we have mentioned as forming the Delta.

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CHAP. 10.

THE RIVER NILE.

The sources of the Nile are unascertained, and, travelling as it does for an immense distance through deserts and burning sands, it is only known to us by common report, having neither experienced the vicissitudes of warfare, nor been visited by those arms which have so effectually explored all other regions. It rises, so far indeed as King Juba was enabled to ascertain, in a mountain of Lower Mauritania, not far from the ocean; immediately after which it forms a lake of standing water, which bears the name of Nilides. In this lake are found the several kinds of fish known by the names of alabeta, coracinus, and silurus; a crocodile also was brought thence as a proof that this really is the Nile, and was consecrated by Juba himself in the temple of Isis at Cæsarea, where it may be seen at the present day. In addition to these facts, it has been observed that the waters of the Nile rise in the same proportion in which the snows and rains of Mauritania increase. Pouring forth from this lake, the river disdains to flow through arid and sandy deserts, and for a distance of several days' journey conceals itself; after which it bursts forth at another lake of greater magnitude in the country of the Massæsyli, a people of Mauritania Cæsariensis, and thence casts a glance around, as it were, upon the communities of men in its vicinity, giving proofs of its identity in the same peculiarities of the animals which it produces. It then buries itself once again in the sands of the desert, and remains concealed for a distance of twenty days' journey, till it has reached the confines of Æthiopia. Here, when it has once more become sensible of the presence of man, it again emerges, at the same source, in all probability, to which writers have given the name of Niger, or Black. After this, forming the boundary-line between Africa and Æthiopia, its banks, though not immediately peopled by man, are the resort of numbers of wild beasts and animals of various kinds. Giving birth in its course to dense forests of trees, it travels through the middle of Æthiopia, under the name of Astapus, a word which signifies, in the language of the nations who dwell in those regions,

"water issuing from the shades below." Proceeding onwards, it divides innumerable islands in its course, and some of them of such vast magnitude, that although its tide runs with the greatest rapidity, it is not less than five days in passing them. When making the circuit of Meroë, the most famous of these islands, the left branch of the river is called Astobores, or, in other words, "an arm of the water that issues from the shades," while the right arm has the name of Astosapes, which adds to its original signification the meaning of "side." It does not obtain the name of "Nile" until its waters have again met and are united in a single stream; and even then, for some miles both above and below the point of confluence, it has the name of Siris. Homer has given to the whole of this river the name of Ægyptus, while other writers again have called it Triton. Every now and then its course is interrupted by islands which intervene, and which only serve as so many incentives to add to the impetuosity of its torrent; and though at last it is hemmed in by mountains on either side, in no part is the tide more rapid and precipitate. Its waters then hastening onwards, it is borne along to the spot in the country of the Æthiopians which is known by the name of "Catadupi;" where, at the last Cataract, the complaint is, not that it flows, but that it rushes, with an immense noise between the rocks that lie in its way: after which it becomes more smooth, the violence of its waters is broken and subdued, and, wearied out as it were by the length of the distance it has travelled, it discharges itself, though by many mouths, into the Egyptian sea. During certain days of the year, however, the volume of its waters is greatly increased, and as it traverses the whole of Egypt, it inundates the earth, and, by so doing, greatly promotes its fertility.

There have been various reasons suggested for this increase of the river. Of these, however, the most probable are, either that its waters are driven back by the Etesian winds, which are blowing at this season of the year from an opposite direction, and that the sea which lies beyond is driven into the mouths of the river; or else that its waters are swollen by the summer rains of Æthiopia, which fall from the clouds conveyed thither by the Etesian winds from other parts of the earth. Timæus the mathematician has alleged a reason of an occult nature: he says that the source of the river is known by the

name of Phiala, and that the stream buries itself in channels underground, where it sends forth vapours generated by the heat among the steaming rocks amid which it conceals itself; but that, during the days of the inundation, in consequence of the sun approaching nearer to the earth, the waters are drawn forth by the influence of his heat, and on being thus exposed to the air, overflow; after which, in order that it may not be utterly dried up, the stream hides itself once more. He says that this takes place at the rising of the Dog-Star, when the sun enters the sign of Leo, and stands in a vertical position over the source of the river, at which time at that spot there is no shadow thrown. Most authors, however, are of opinion, on the contrary, that the river flows in greater volume when the sun takes his departure for the north, which he does when he enters the signs of Cancer and Leo, because its waters then are not dried up to so great an extent; while on the other hand, when he returns towards the south pole and re-enters Capricorn, its waters are absorbed by the heat, and consequently flow in less abundance. If there is any one inclined to be of opinion, with Timæus, that the waters of the river may be drawn out of the earth by the heat, it will be as well for him to bear in mind the fact, that the absence of shadow is a phænomenon which lasts continuously in these regions.

The Nile begins to increase at the next new moon after the summer solstice, and rises slowly and gradually as the sun passes through the sign of Cancer; it is at its greatest height while the sun is passing through Leo, and it falls as slowly and gradually as it arose while he is passing through the sign of Virgo. It has totally subsided between its banks, as we learn from Herodotus, on the hundredth day, when the sun has entered Libra. While it is rising it has been pronounced criminal for kings or prefects even to sail upon its waters. The measure of its increase is ascertained by means of wells. Its most desirable height is sixteen cubits; if the waters do not attain that height, the overflow is not universal; but if they exceed that measure, by their slowness in receding they tend to retard the process of cultivation. In the latter case the time for sowing is lost, in consequence of the moisture of the soil; in the former, the ground is so parched that the seed-time comes to no purpose. The country has reason to make careful note of either extreme. When the water rises

to only twelve cubits, it experiences the horrors of famine; when it attains thirteen, hunger is still the result; a rise of fourteen cubits is productive of gladness; a rise of fifteen sets all anxieties at rest; while an increase of sixteen is productive of unbounded transports of joy. The greatest increase known, up to the present time, is that of eighteen cubits, which took place in the time of the Emperor Claudius; the smallest rise was that of five, in the year of the battle of Pharsalia, the river by this prodigy testifying its horror, as it were, at the murder of Pompeius Magnus. When the waters have reached their greatest height, the people open the embankments and admit them to the lands. As each district is left by the waters, the business of sowing commences. This is the only river in existence that emits no vapours.

The Nile first enters the Egyptian territory at Syene, on the frontiers of Æthiopia; that is the name of a peninsula a mile in circumference, upon which Castra is situate, on the side of Arabia. Opposite to it are the four islands of Philæ, at a distance of 600 miles from the place where the Nile divides into two channels; at which spot, as we have already stated, the Delta, as it is called, begins. This, at least, is the distance, according to Artemidorus, who also informs us that there were in it 250 towns; Juba says, however, that the distance between these places is 400 miles. Aristocreon says that the distance from Elephantis to the sea is 750 miles; Elephantis being an inhabited island four miles below the last Cataract, sixteen beyond Syene, 585 from Alexandria, and the extreme limit of the navigation of Egypt. To such an extent as this have the above-named authors been mistaken! This island is the place of rendezvous for the vessels of the Æthiopians: they are made to fold up, and the people carry them on their shoulders whenever they come to the Cataracts.

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CHAP. 11.

THE CITIES OF EGYPT.

Egypt, besides its boast of extreme antiquity, asserts that it contained, in the reign of King Amasis, 20,000 inhabited cities: in our day they are still very numerous, though no longer of any particular note. Still however we find the following ones mentioned as of great renown — the city of Apollo; next, that of Leucothea; then Great Diospolis, otherwise Thebes, known to fame for its hundred gates; Coptos, which from its proximity to the Nile, forms its nearest emporium for the merchandise of India and Arabia; then the town of Venus, and then another town of Jupi- ter. After this comes Tentyris, below which is Abydus, the royal abode of Memnon, and famous for a temple of Osiris, which is situate in Libya, at a distance from the river of seven miles and a half. Next to it comes Ptolemais, then Panopolis, and then another town of Venus, and, on the Libyan side, Lycon, where the mountains form the boundary of the province of Thebais. On passing these, we come to the towns of Mercury, Alabastron, the town of Dogs, and that of Hercules already mentioned. We next come to Arsinoë, and Memphis, which has been previously mentioned; between which last and the Nome of Arsinoïtes, upon the Libyan side, are the towers known as the Pyramids, the Labyrinth on Lake Mœris, in the construction of which no wood was employed, and the town of Crialon. Besides these, there is one place in the interior, on the confines of Arabia, of great celebrity, the City of the Sun.

(10.) With the greatest justice, however, we may lavish our praises upon Alexandria, built by Alexander the Great on the shores of the Egyptian Sea, upon the soil of Africa, at twelve miles' distance from the Canopic Mouth and near Lake Mareotis; the spot having previously borne the name of Rhacotes. The plan of this city was designed by the architect Dinochares, who is memorable for the genius which he displayed in many ways. Building the city upon a wide space of ground fifteen miles in circumference, he formed it in the circular shape of a Macedonian chlamys, uneven at the edge,

giving it an angular projection on the right and left; while at the same time he devoted one-fifth part of the site to the royal palace.

Lake Mareotis, which lies on the south side of the city, is connected by a canal which joins it to the Canopic mouth, and serves for the purposes of communication with the interior. It has also a great number of islands, and is thirty miles across, and 150 in circumference, according to Claudius Cæsar. Other writers say that it is forty schœni in length, making the schœnum to be thirty stadia; hence, according to them, it is 150 miles in length and the same in breadth.

There are also, in the latter part of the course of the Nile, many towns of considerable celebrity, and more especially those which have given their names to the mouths of the river — I do not mean, all the mouths, for there are no less than twelve of them, as well as four others, which the people call the False Mouths. I allude to the seven more famous ones, the Canopic Mouth, next to Alexandria, those of Bolbitine, Sebennys, Phatnis, Mendes, Tanis, and, last of all, Pelusium. Besides the above there are the towns of Butos, Pharbæthos, Leontopolis, Athribis, the town of Isis, Busiris, Cynopolis, Aphrodites, Sais, and Naucratis, from which last some writers call that the Naucratitic Mouth, which is by others called the Heracleotic, and mention it instead of the Canopic Mouth, which is the next to it.

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CHAP. 12. (11.)

THE COASTS OF ARABIA, SITUATE ON THE EGYPTIAN SEA.

Beyond the Pelusiac Mouth is Arabia, which extends to the Red Sea, and joins the Arabia known by the surname of Happy, so famous for its perfumes and its wealth. This is called Arabia of the Catabanes, the Esbonitæ, and the Scenitæ; it is remarkable for its sterility, except in the parts where it joins up to Syria, and it has nothing remarkable in it except Mount Casius. The Arabian nations of the Canchlæi join these on the east, and, on the south the Cedrei, both of which peoples are adjoining to the Nabatæi. The two gulfs of the Red Sea, where it borders upon Egypt, are called the Heroöpolitic and the Ælanitic. Between the two towns of Ælana and Gaza upon our sea there is a distance of 150 miles. Agrippa says that Arsinoë, a town on the Red Sea, is, by way of the desert, 125 miles from Pelusium. How different the characteristics impressed by nature upon two places separated by so small a distance!

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CHAP. 13. (12.)

SYRIA.

Next to these countries Syria occupies the coast, once the greatest of lands, and distinguished by many names; for the part which joins up to Arabia was formerly called Palæstina, Judæa, Cœle, and Phœnice. The country in the interior was called Damascena, and that further on and more to the south, Babylonia. The part that lies between the Euphrates and the Tigris was called Mesopotamia, that beyond Taurus Sophene, and that on this side of the same chain Comagene. Beyond Armenia was the country of Adiabene, anciently called Assyria, and at the part where it joins up to Cilicia, it was called Antiochia. Its length, between Cilicia and Arabia, is 470 miles, and its breadth, from Seleucia Pieria to Zeugma, a town on the Euphrates, 175. Those who make a still more minute division of this country will have it that Phœnice is surrounded by Syria, and that first comes the maritime coast of Syria, part of which is Idumæa and Judæa, after that Phœnice, and then Syria. The whole of the tract of sea that lies in front of these shores is called the Phœnician Sea. The Phœnician people enjoy the glory of having been the inventors of letters, and the first discoverers of the sciences of astronomy, navigation, and the art of war.

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CHAP. 14.

IDUMÆA, PALÆSTINA, AND SAMARIA.

On leaving Pelusium we come to the Camp of Chabrias, Mount Casius, the temple of Jupiter Casius, and the tomb of Pompeius Magnus. Ostracine, at a distance of sixty-five miles from Pelusium, is the frontier town of Ara- bia. (13.) After this, at the point where the Sirbonian Lake becomes visible, Idumæa and Palæstina begin. This lake, which some writers have made to be 150 miles in circumference, Herodotus has placed at the foot of Mount Casius; it is now an inconsiderable fen. The towns are Rhinocolura, and, in the interior, Rhaphea, Gaza, and, still more inland, Anthedon: there is also Mount Argaris. Proceeding along the coast we come to the region of Samaria; Ascalo, a free town, Azotus, the two Jamniæ, one of them in the in- terior; and Joppe, a city of the Phœnicians, which existed, it is said, before the deluge of the earth. It is situate on the slope of a hill, and in front of it lies a rock, upon which they point out the vestiges of the chains by which Andromeda was bound. Here the fabulous goddess Ceto is worshipped. Next to this place comes Apollonia, and then the Tower of Strato, otherwise Cæsarea, built by King Herod, but now the Colony of Prima Flavia, established by the Emperor Vespasianus: this place is the frontier town of Palæstina, at a distance of 188 miles from the confines of Arabia; after which comes Phœnice. In the interior of Samaria are the towns of Neapolis, formerly called Mamortha, Sebaste, situate on a mountain, and, on a still more lofty one, Gamala.

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CHAP. 15. (14.)

JUDÆA.

Beyond Idumæa and Samaria, Judæa extends far and wide. That part of it which joins up to Syria is called Galilæa, while that which is nearest to Arabia and Egypt bears the name of Peræa. This last is thickly covered with rugged mountains, and is separated from the rest of Judæa by the river Jordanes. The remaining part of Judæa is divided into ten Toparchies, which we will mention in the following order: — That of Hiericus, covered with groves of palm-trees, and watered by numerous springs, and those of Emmaüs, Lydda, Joppe, Acrabatena, Gophna, Thamna, Bethleptephene, Orina, in which formerly stood Hierosolyma, by far the most famous city, not of Judæa only, but of the East, and Herodium, with a celebrated town of the same name.

(15.) The river Jordanes rises from the spring of Panias, which has given its surname to Cæsarea, of which we shall have occasion to speak. This is a delightful stream, and, so far as the situation of the localities will allow of, winds along in its course and lingers among the dwellers upon its banks. With the greatest reluctance, as it were, it moves onward towards Asphaltites, a lake of a gloomy and unpropitious nature, by which it is at last swallowed up, and its be praised waters are lost sight of on being mingled with the pestilential streams of the lake. For this reason it is that, as soon as ever the valleys through which it runs afford it the opportunity, it discharges itself into a lake, by many writers known as Genesara, sixteen miles in length and six wide; which is skirted by the pleasant towns of Julias and Hippo on the east, of Tarichea on the south (a name which is by many persons given to the lake itself), and of Tiberias on the west, the hot springs of which are so conducive to the restoration of health.

(16.) Asphaltites produces nothing whatever except bitu- men, to which indeed it owes its name. The bodies of animals will not sink in its waters, and even those of bulls and camels float there. In length it exceeds 100 miles being at its greatest breadth twenty-five, and at its

smallest six. Arabia of the Nomades faces it on the east, and Machærus on the south, at one time, next to Hierosolyma, the most strongly fortified place in Judæa. On the same side lies Callirrhoë, a warm spring, remarkable for its medicinal qualities, and which, by its name, indicates the celebrity its waters have gained.

(17.) Lying on the west of Asphaltites, and sufficiently distant to escape its noxious exhalations, are the Esseni, a people that live apart from the world, and marvellous beyond all others throughout the whole earth, for they have no women among them; to sexual desire they are strangers; money they have none; the palm-trees are their only companions. Day after day, however, their numbers are fully recruited by multitudes of strangers that resort to them, driven thither to adopt their usages by the tempests of fortune, and wearied with the miseries of life. Thus it is, that through thousands of ages, incredible to relate, this people eternally prolongs its existence, without a single birth taking place there; so fruitful a source of population to it is that weariness of life which is felt by others. Below this people was formerly the town of Engadda, second only to Hierosolyma in the fertility of its soil and its groves of palm-trees; now, like it, it is another heap of ashes. Next to it we come to Masada, a fortress on a rock, not far from Lake Asphaltites. Thus much concerning Judæa.

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CHAP. 16. (18.)

DECAPOLIS.

On the side of Syria, joining up to Judæa, is the region of Decapolis, so called from the number of its cities; as to which all writers are not agreed. Most of them, however, agree in speaking of Damascus as one, a place fertilized by the river Chrysorroös, which is drawn off into its meadows and eagerly imbibed; Philadelphia, and Rhaphana, all which cities fall back towards Arabia; Scythopolis (formerly called Nysa by Father Liber, from his nurse having been buried there), its present name being derived from a Scythian colony which was established there; Gadara, before which the river Hieromix flows; Hippo, which has been previously mentioned; Dion, Pella, rich with its waters; Galasa, and Canatha. The Tetrar- chies lie between and around these cities, equal, each of them, to a kingdom, and occupying the same rank as so many kingdoms. Their names are, Trachonitis, Panias, in which is Cæsarea, with the spring previously mentioned, Abila, Arca, Ampeloëssa, and Gabe.

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CHAP. 17. (19.)

PUŒNICE.

We must now return to the coast and to Phœnice. There was formerly a town here known as Crocodilon; there is still a river of that name: Dorum and Sycaminon are the names of cities of which the remembrance only exists. We then come to the Promontory of Carmelus, and, upon the mountain, a town of that name, formerly called Acbatana. Next to this are Getta, Jeba, and the river Pacida, or Belus, which throws up on its narrow banks a kind of sand from which glass is made: this river flows from the marshes of Cendebia, at the foot of Mount Carmelus. Close to this river is Ptolemais, formerly called Ace, a colony of Claudius Cæsar; and then the town of Ecdippa, and the promontory known as the White Promontory. We next come to the city of Tyre, formerly an island, separated from the mainland by a channel of the sea, of great depth, 700 paces in width, but now joined to it by the works which were thrown up by Alexander when besieging it, — the Tyre so famous in ancient times for its offspring, the cities to which it gave birth, Leptis, Utica, and Carthage, — that rival of the Roman sway, that thirsted so eagerly for the conquest of the whole earth; Gades, too, which she founded beyond the limits of the world. At the present day, all her fame is confined to the production of the murex and the purple. Its circumference, including therein Palætyrus, is nineteen miles, the place itself extending twenty-two stadia. The next towns are Sarepta and Ornithon, and then Sidon, famous for its manufacture of glass, and the parent of Thebes in Bœotia.

(20.) In the rear of this spot begins the chain of Libanus, which extends 1500 stadia, as far as Simyra; this district has the name of Cœle Syria. Opposite to this chain, and separated from it by an intervening valley, stretches away the range of Antilibanus, which was formerly connected with Libanus by a wall. Beyond it, and lying in the interior, is the region of Decapolis, and, with it, the Tetrarchies already mentioned, and the whole expanse of Palæstina. On the coast, again, and lying beneath Libanus, is the river Magoras, the

colony of Berytus, which bears the name of Felix Julia, the town of Leontos, the river Lycos, Palæbyblos, the river Adonis, and the towns of Byblos, Botrys, Gigarta, Trieris, Calamos, Tripolis, inhabited by the Tyrians, Sidonians, and Aradians; Orthosia, the river Eleutheros the towns of Simyra and Marathos; and opposite, Arados, a town seven stadia long, on an island, distant 200 paces from the mainland. After passing through the country in which the before-named mountains end and the plains that lie between, Mount Bargylus is seen to rise.

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CHAP. 18.

SYRIA ANTIOCHIA.

Here Phœnicia ends, and Syria recommences. The towns are, Carne, Balanea, Paltos, and Gabale; then the promontory upon which is situate the free town of Laodicea; and then Diospolis, Heraclea, Charadrus, and Posidium.

(21.) We then come to the Promontory of Syria Antiochia. In the interior is the free city of Antiochia itself, surnamed Epidaphnes, and divided by the river Orontes. On the promontory is Seleucia, called Pieria, a free city. (22.) Beyond it lies Mount Casius, a different one from the mountain of the same name which we have already mentioned. The height of this mountain is so vast, that, at the fourth watch of the night, you can see from it, in the midst of the darkness, the sun rising on the east; and thus, by merely turning round, we may at one and the same time behold both day and night. The winding road which leads to its summit is nineteen miles in length, its perpendicular height four. Upon this coast there is the river Orontes, which takes its rise near Heliopolis, between the range of Libanus and Antilibanus. The towns are, Rhosos, and, behind it, the Gates of Syria, lying in the space between the chain of the Rhosian mountains and that of Taurus. On the coast there is the town of Myriandros, and Mount Amanus, upon which is the town of Bomitæ. This mountain separates Cilicia from Syria.

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CHAP. 19. (23.)

THE REMAINING PARTS OF SYRIA.

We must now speak of the interior of Syria. Cœle Syria has the town of Apamea, divided by the river Marsyas from the Tetrarchy of the Nazerini; Bambyx, the other name of which is Hierapolis, but by the Syrians called Mabog, (here the monster Atargatis, called Derceto by the Greeks, is worshipped); and the place called Chalcis on the Belus, from which the region of Chalcidene, the most fertile part of Syria, takes its name. We here find also Cyrrhestice, with Cyrrhum, the Gazatæ, the Gindareni, the Gabeni, the two Tetrarchies called Granucomatæ, the Emeseni, the Hyla- tæ, the nation of the Ituræi, and a branch of them, the people called the Bætarreni; the Mariamitani, the Tetrarchy known as Marnmisea, Paradisus, Pagræ, the Pinaritæ, two cities called Seleucia, besides the one already mentioned, the one Seleucia on the Euphrates, and the other Seleucia on the Belus, and the Cardytenses. The remaining part of Syria (except those parts which will be spoken of in conjunction with the Euphrates) contains the Arethusii, the Berœenses, and the Epiphanæenses; and on the east, the Laodiceni, who are called the Laodiceni on the Libanus, the Leucadii, and the Larissæi, besides seventeen other Tetrarchies, divided into kingdoms and bearing barbarous names.

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CHAP. 20. (24.)

THE EUPHRATES.

This place, too, will be the most appropriate one for making some mention of the Euphrates. This river rises in Caranitis, a præfecture of Greater Armenia, according to the statement of those who have approached the nearest to its source. Domitius Corbulo says, that it rises in Mount Aba; Licinius Mucianus, at the foot of a mountain which he calls Capotes, twelve miles above Zimara, and that at its source it has the name of Pyxurates. It first flows past Derxene, and then Anaitica, shutting out the regions of Armenia from Cappadocia. Dascusa is distant from Zimara seventy-five miles; from this spot it is navigable as far as Sartona, a distance of fifty miles, thence to Melitene, in Cappadocia, distant seventy-four miles, and thence to Elegia, in Armenia, distant ten miles ; receiving in its course the rivers Lycus, Arsanias, and Arsanus. At Elegia it meets the range of Mount Taurus, but no effectual resistance is offered to its course, although the chain is here twelve miles in width. At its passage between the mountains, the river bears the name of Omma; but afterwards, when it has passed through, it receives that of Euphrates. Beyond this spot it is full of rocks, and runs with an impetuous tide. It then divides that part of Arabia which is called the country of the Orei, on the left, by a channel three schœni in width, from the territory of the Commageni on the right, and it admits of a bridge being thrown across it, even where it forces a passage through the range of Taurus. At Claudiopolis, in Cappadocia, it takes an easterly direction; and here, for the first time in this contest, Taurus turns it out of its course; though conquered before, and rent asunder by its channel, the mountain-chain now gains the victory in another way, and, breaking its career, compels it to take a southerly direction. Thus is this warfare of nature equally waged, — the river proceeding onward to the destination which it intends to reach, and the mountains forbidding it to proceed by the path which it originally intended. After passing the Cataracts, the river again becomes navigable; and, at a distance of forty miles from thence, is Samosata,

the capital of Commagene.

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CHAP. 21

SYRIA UPON THE EUPHRATES.

Arabia, above mentioned, has the cities of Edessa, formerly called Antiochia, and, from the name of its fountain, Callirhoë, and Carrhæ, memorable for the defeat of Crassus there. Adjoining to this is the præfecture of Mesopotamia, which derives its origin from the Assyrians, and in which are the towns of Anthemusia and Nicephorium; after which come the Arabians, known by the name of Prætavi, with Singara for their capital. Below Samosata, on the side of Syria, the river Marsyas flows into the Euphrates. At Cingilla ends the territory of Commagene, and the state of the Immei begins. The cities which are here washed by the river are those of Epiphania and Antiochia, generally known as Epiphania and Antiochia on the Euphrates; also Zeugma, seventy-two miles distant from Samosata, famous for the passage there across the Euphrates. Opposite to it is Apamia, which Seleucus, the founder of both cities, united by a bridge. The people who join up to Mesopotamia are called the Rhoali. Other towns in Syria are those of Europus, and what was formerly Thapsa- cus, now Amphipolis. We then come to the Arabian Scenitæ. The Euphrates then proceeds in its course till it reaches the place called Ura, at which, taking a turn to the east, it leaves the Syrian Deserts of Palmyra, which extend as far as the city of Petra and the regions of Arabia Felix.

(25.) Palmyra is a city famous for the beauty of its site, the riches of its soil, and the delicious quality and abundance of its water. Its fields are surrounded by sands on every side, and are thus separated, as it were, by nature from the rest of the world. Though placed between the two great empires of Rome and Parthia, it still maintains its independence; never failing, at the very first moment that a rupture between them is threatened, to attract the careful attention of both. It is distant 337 miles from Seleucia of the Parthians, generally known as Seleucia on the Tigris, 203 from the nearest part of the Syrian coast, and twenty-seven less from Damascus.

(26.) Below the deserts of Palmyra is the region of Stelendene,

and Hierapolis, Berœa, and Chalcis, already mentioned. Beyond Palmyra, Emesa takes to itself a portion of these deserts; also Elatium, nearer to Petra by one-half than Damascus. At no great distance from Sura is Philiscum, a town of the Parthians, on the Euphrates. From this place it is ten days' sail to Seleucia, and nearly as many to Babylon. At a distance of 594 miles beyond Zeugma, near the village of Massice, the Euphrates divides into two channels, the left one of which runs through Mesopotamia, past Seleucia, and falls into the Tigris as it flows around that city. Its channel on the right runs towards Babylon, the former capital of Chaldæa, and flows through the middle of it; and then through another city, the name of which is Otris, after which it becomes lost in the marshes. Like the Nile, this river increases at stated times, and at much about the same period. When the sun has reached the twentieth degree of Cancer, it inundates Mesopotamia; and, after he has passed through Leo and entered Virgo, its waters begin to subside. By the time the sun has entered the twenty-ninth degree of Virgo, the river has fully regained its usual height.

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CHAP. 22. (27.)

CILICIA AND THE ADJOINING NATIONS.

But let us now return to the coast of Syria, joining up to which is Cilicia. We here find the river Diaphanes, Mount Crocodilus, the Gates of Mount Amanus, the rivers Androcus, Pinarus, and Lycus, the Gulf of Issos, and the town of that name; then Alexandria, the river Chlorus, the free town of Ægæ, the river Pyramus, the Gates of Cilicia, the towns of Mallos and Magarsos, and, in the interior, Tarsus. We then come to the Aleian Plains, the town of Cassipolis, Mopsos, a free town on the river Pyramus, Thynos, Zephyrium, and Anchiale. Next to these are the rivers Saros and Cydnus, the latter of which, at some distance from the sea, runs through the free city of Tarsus, the region of Celenderitis with a town of similar name, the place where Nymphæum stood, Soli of Cilicia, now called Pompeiopolis, Adana, Cibyra, Pinare, Pedalie, Ale, Selinus, Arsinoë, Iotape, Doron, and, near the sea, Corycos, there being a town, port, and cave all of the same name. Passing these, we come to the river Calycadnus, the Promontory of Sarpedon, the towns of Holmœ and Myle, and the Promontory and town of Venus, at a short distance from the island of Cyprus. On the mainland there are the towns of Myanda, Anemurium, and Coracesium, and the river Melas, the ancient boundary of Cilicia. In the interior the places more especially worthy of mention are Anazarbus, now called Cæsarea, Augusta, Castabala, Epiphania, formerly called Œniandos, Eleusa, Iconium, Seleucia upon the river Calycadnus, surnamed Tracheotis, a city removed from the sea-shore, where it had the name of Holmia. Besides those already mentioned, there are in the interior the rivers Liparis, Bombos, Paradisus, and Mount Imbarus.

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CHAP. 23.

ISAURIA AND THE HOMONADES.

All the geographers have mentioned Pamphylia as joining up to Cilicia, without taking any notice of the people of Isauria. Its cities are, in the interior, Isaura, Clibanus, and Lalasis; it runs down towards the sea by the side of Anemurium already mentioned. In a similar manner also, all who have treated of this subject have been ignorant of the existence of the nation of the Homonades bordering upon Isauria, and their town of Homona in the interior. There are forty-four other fortresses, which lie concealed amid rugged crags and valleys.

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CHAP. 24.

PISIDIA.

The Pisidæ, formerly called the Solymi, occupy the higher parts of the mountains. In their country there is the colony of Cæsarea, also called Antiochia, and the towns of Oroanda and Sagalessos.

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CHAP. 25

LYCAONIA.

These people are bounded by Lycaonia, which belongs to the jurisdiction of the province of Asia, to which also resort the people of Philomelium, Tymbrium, Leucolithium, Pelta, and Tyrium. To this jurisdiction is also added a Tetrarchy of Lycaonia in that part which joins up to Galatia, containing fourteen states, with the famous city of Iconium. In Lycaonia itself the most noted places are Thebasa on Taurus, and Hyde, on the confines of Galatia and Cappadocia. On the [western] side of Lycaonia, and above Pamphylia, come the Milyæ, a people descended from the Thracians; their city is Arycanda.

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CHAP. 26.

PAMPHYLIA.

The former name of Pamphylia was Mopsopia. The Pamphylian Sea joins up to that of Cilicia. The towns of Pamphylia are Side, Aspendum, situate on the side of a mountain, Pletenissum, and Perga. There is also the Promontory of Leucolla, the mountain of Sardemisus, and the rivers Eurymedon, which flows past Aspendus, and Catarractes, near to which is Lyrnesus: also the towns of Olbia, and Phaselis, the last on this coast.

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CHAP. 27.

MOUNT TAURUS.

Adjoining to Pamphylia is the Sea of Lycia and the country of Lycia itself, where the chain of Taurus, coming from the eastern shores, terminates the vast Gulf by the Promontory of Chelidonium. Of immense extent, and separating nations innumerable, after taking its first rise at the Indian Sea, it branches off to the north on the right-hand side, and on the left towards the south. Then taking a direction towards the west, it would cut through the middle of Asia, were it not that the seas check it in its triumphant career along the land. It accordingly strikes off in a northerly direction, and forming an arc, occupies an immense tract of country, nature, designedly as it were, every now and then throwing seas in the way to oppose its career; here the Sea of Phœnicia, there the Sea of Pontus, in this direction the Caspian and Hyrcanian, and then, opposite to them, the Lake Mæotis. Although somewhat curtailed by these obstacles, it still winds along between them, and makes its way even amidst these barriers; and victorious after all, it then escapes with its sinuous course to the kindred chain of the Riphæan mountains. Numerous are the names which it bears, as it is continuously designated by new ones throughout the whole of its course. In the first part of its career it has the name of Imaüs, after which it is known successively by the names of Emodus, Paropanisus, Circius, Cambades, Paryadres, Choatras, Oreges, Oroandes, Niphates, Taurus, and, where it even out-tops itself, Caucasus. Where it throws forth its arms as though every now and then it would attempt to invade the sea, it bears the names of Sarpedon, Coracesius, Cragus, and then again Taurus. Where also it opens and makes a passage to admit mankind, it still claims the credit of an unbroken continuity by giving the name of "Gates" to these passes, which in one place are called the "Gates of Armenia," in another the "Gates of the Caspian," and in another the "Gates of Cilicia." In addition to this, when it has been cut short in its onward career, it retires to a distance from the seas, and covers itself on the one side and the other with the names of numerous

nations, being called, on the right-hand side the Hyrcanian and the Caspian, and on the left the Parvadrian, the Moschian, the Amazonian, the Coraxican, and the Scythian chain. Among the Greeks it bears the one general name of Ceraunian.

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CHAP. 28.

LYCIA.

In Lycia, after leaving its promontory, we come to the town of Simena, Mount Chimæra, which sends forth flames by night, and the city of Hephæstium, the heights above which are also frequently on fire. Here too formerly stood the city of Olympus; now we find the mountain places known as Gagæ, Corydalla, and Rhodiopolis. Near the sea is Limyra with a river of like name, into which the Arycandus flows, Mount Masycites, the state of Andriaca, Myra, the towns of Aperræ and Antiphellos, formerly called Habessus, and in a corner Phellos, after which comes Pyrra, and then the city of Xanthus, fifteen miles from the sea, as also a river known by the same name. We then come to Patara, formerly Pataros, and Sidyma, situate on a moun- tain. Next comes the Promontory of Cragus, and beyond it a gulf, equal to the one that comes before it; upon it are Pinara, and Telmessus, the frontier town of Lycia.

Lycia formerly contained seventy towns, now it has but thirty-six. Of these, the most celebrated, besides those already mentioned, are Canas, Candyba, so celebrated for the Œnian Grove, Podalia, Choma, past which the river Ædesa flows, Cyaneæ, Ascandalis, Amelas, Noscopium, Tlos, and Telandrus. It includes also in the interior the district of Cabalia, the three cities of which are Œnianda, Balbura, and Bubon.

On passing Telmessus we come to the Asiatic or Carpathian Sea, and the district which is properly called Asia. Agrippa has divided this region into two parts; one of which he has bounded on the east by Phrygia and Lycaonia, on the west by the Ægean Sea, on the south by the Egyptian Sea, and on the north by Paphlagonia, making its length to be 473 miles and its breadth 320. The other part he has bounded by the Lesser Armenia on the east, Phrygia, Lycaonia, and Pamphylia on the west, the province of Pontus on the north, and the Sea of Pamphylia on the south, making it 575 miles in length and 325 in breadth.

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CHAP. 29

CARIA.

Upon the adjoining coast is Caria, then Ionia, and beyond it Æolis. Caria surrounds Doris, which lies in the middle, and runs down on both sides of it to the sea. In it is the Promontory of Pedalium, the river Glaucus, into which the Telmedium discharges itself, the towns of Dædala, Crya, peopled by fugitives, the river Axon, and the town of Calynda.

(28.) The river Indus, which rises in the mountains of the Cibyratæ, receives sixty-five rivers which are constantly flowing, besides upwards of 100 mountain torrents. Here is the free town of Caunos, then the town of Pyrnos, the port of Cressa, from which the island of Rhodes is distant twenty miles; the place where Loryma formerly stood, the towns of Tisanusa, Paridion, and Larymna, the Gulf of Thymnias, the Promontory of Aphrodisias, the town of Hyda, the Gulf of Schœnus, and the district of Bubasus. There was formerly the town of Acanthus here, another name of which was Dulopolis. We then come to Cnidos, a free town, situate on a promontory, Triopia, and after that the towns of Pegusa and Stadia.

At this last town Doris begins; but, first, it may be as well to describe the districts that lie to the back of Caria and the several jurisdictions in the interior. The first of these is called Cibyratica; Cibyra being a town of Phrygia. Twenty-five states resort to it for legal purposes, together with the most famous city of Laodicea.

(29.) This place at first bore the name of Diospolis, and after that of Rhoas, and is situate on the river Lycus, the Asopus and the Caprus washing its sides. The other people belonging to the same jurisdiction, whom it may be not amiss to mention, are the Hydrelitæ, the Themisones, and the Hierapolitæ. The second jurisdiction receives its title from Synnas; to it resort the Lycaones, the Appiani, the Eucarpeni, the Dorylæi, the Midæi, the Julienses, and fifteen other peoples of no note. The third jurisdiction has its seat at Apamea, formerly called Celænæ, and after that Cibotos. This place is situate at the foot of Mount Signia, the Marsyas, the Obrima, and

the Orga, rivers which fall into the Mæander, flowing past it. Here the Marsyas, rising from the earth, again makes its appearance, but soon after buries itself once more at Aulocreneæ, the spot where Marsyas had the musical contest with Apollo as to superiority of skill in playing on the flute. Aulocrenæ is the name given to a valley which lies ten miles on the road towards Phrygia from Apamea. As belonging to this jurisdiction, it may be as well to mention the Metropolitæ, the Dionysopolitæ, th>e Euphorbeni, the Aemonenses, the Pelteni, and the Silbiani, besides nine other nations of no note.

Upon the Gulf of Doris we have Leucopolis, Hamaxitos, Eleus, and Euthene. We then come to Pitaium, Eutane, and Halicarnassus, towns of Caria. To the jurisdiction of this last place six towns were appended by Alexander the Great, Theangela, Sibde, Medmasa, Euralium, Pedasus, and Telmissus. Halicarnassus lies between two gulfs, those of Ceramus and Iasus. We then come to Myn- dos, and the former site of Palæomyndos; also Nariandos, Neapolis, Caryanda, the free town of Termera, Bargyla, and the town of Iasus, from which the Iasian Gulf takes its name.

Caria is especially distinguished for the fame of its places in the interior; for here are Mylasa, a free town, and that of Antiochia, on the site of the former towns of Symmæthos and Cranaos: it is now surrounded by the rivers Mæander and Orsinus. In this district also was formerly Mæandropolis; we find also Eumenia, situate on the river Cludros, the river Glaucus, the town of Lysias and Orthosa, the district of Berecynthus, Nysa, and Tralles, also called Euanthia, Seleucia, and Antiochia: it is washed by the river Eudon, while the Thebais runs through it. Some authors say that a nation of Pygmies formerly dwelt here. Besides the preceding towns, there are Thydonos, Pyrrha, Eurome, Heraclea, Amyzon, the free town of Alabanda, which has given name to that jurisdiction, the free town of Stratonicea, Hynidos, Ceramus, Trœzene, and Phorontis. At a greater distance, but resorting to the same place of jurisdiction, are the Orthronienses, the Alindienses or Hippini, the Xystiani, the Hydissenses, the Apolloniataæ, the Trapezopolitæ, and the Aphrodisienses, a free people. Besides the above, there are the towns of Coscinus, and Harpasa, situate on the river Harpasus, which also passed the town of Trallicon when it was in existence.

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CHAP. 30.

LYDIA.

Lydia, bathed by the sinuous and ever-recurring windings of the river Mæander, lies extended above Ionia; it is joined by Phrygia on the east and Mysia on the north, while on the south it runs up to Caria: it formerly had the name of Mæonia. Its place of the greatest celebrity is Sardes, which lies on the side of Mount Tmolus, formerly called Timolus. From this mountain, which is covered with vineyards, flows the river Pactolus, also called the Chrysorroas, and the sources of the Tarnus: this famous city, which is situate upon the Gygæan Lake, used to be called Hyde by the people of Mæonia. This jurisdiction is now called that of Sardes, and besides the people of the places already mentioned, the following now resort to it — the Macedonian Cadueni, the Loreni, the Philadelpheni, the Mæonii, situate on the river Cogamus at the foot of Mount Tmolus, the Tripolitani, who are also called the Antoniopolitæ, situate on the banks of the Mæander, the Apollonihieritæ, the Mesotimolitæ, and some others of no note.

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CHAP. 31.

IONIA.

Ionia begins at the Gulf of Iasos, and has a long winding coast with numerous bays. First comes the Gulf of Basilicum, then the Promontory and town of Posideum, and the oracle once called the oracle of the Branchidæ, but now of Didymæan Apollo, a distance of twenty stadia from the seashore. One hundred and eighty stadia thence is Miletus, the capital of Ionia, which formerly had the names of Lelegëis, Pityusa, and Anactoria, the mother of more than ninety cities, founded upon all seas; nor must she be deprived of the honour of having Cadmus for her citizen, who was the first to write in prose. The river Mæander, rising from a lake in Mount Aulocrene, waters many cities and receives numerous tributary streams. It is so serpentine in its course, that it is often thought to turn back to the very spot from which it came. It first runs through the district of Apamea, then that of Eumenia, and then the plains of Bargyla; after which, with a placid stream it passes through Caria, watering all that territory with a slime of a most fertilizing quality, and then at a distance of ten stadia from Miletus with a gentle current enters the sea. We then come to Mount Latmus, the towns of Heraclea, also called by the same name as the mountain, Carice, Myus, said to have been first built by Ionians who came from Athens, Naulochum, and Priene. Upon that part of the coast which bears the name of Trogilia is the river Gessus. This district is held sacred by all the Ionians, and thence receives the name of Panionia. Near to it was formerly the town of Phygela, built by fugitives, as its name implies, and that of Marathesium. Above these places is Magnesia, distinguished by the surname of the "Mæandrian," and sprung from Magnesia in Thessaly: it is distant from Ephesus fifteen miles, and three more from Tralles. It formerly had the names of Thessaloche and Androlitia, and, lying on the sea-shore, it has withdrawn from the sea the islands known as the Derasidæ and joined them to the mainland. In the interior also is Thyatira, washed by the Lycus; for some time it was also called Pelopia and Euhippia.

Upon the coast again is Mantium, and Ephesus, which was founded by the Amazons, and formerly called by so many names: Alopes at the time of the Trojan war, after that Ortygia and Morges, and then Smyrna, with the surname of Trachia, as also Samornion and Ptelea. This city is built on Mount Pion, and is washed by the Caÿster, a river which rises in the Cilbian range and brings down the waters of many streams, as also of Lake Pegasæus, which receives those discharged by the river Phyrites. From these streams there accumulates a large quantity of slime, which vastly increases the soil, and has added to the mainland the island of Syrie, which now lies in the midst of its plains. In this city is the fountain of Calippia and the temple of Diana, which last is surrounded by two streams, each known by the name of Selenus, and flowing from opposite directions.

After leaving Ephesus there is another Mantium, belonging to the Colophonians, and in the interior Colophon itself, past which the river Halesus flows. After this we come to the temple of the Clarian Apollo, and Lebedos: the city of Notium once stood here. Next comes the Promontory of Coryceium, and then Mount Mimas, which projects 150 miles into the sea, and as it approaches the mainland sinks down into extensive plains. It was at this place that Alexander the Great gave orders for the plain to be cut through, a distance of seven miles and a half, for the purpose of joining the two gulfs and making an island of Erythræ and Mimas. Near Erythræ formerly stood the towns of Pteleon, Helos, and Dorion; we now find the river Aleon, Corynæum, a Promontory of Mount Mimas, Clazomenæ, Parthenie, and Hippi, known by the name of Chytrophoria, when it formed a group of islands; these were united to the continent by the same Alexander, by means of a causeway two stadia in length. In the interior, the cities of Daphnus, Hermesia, and Sipylum, formerly called Tantalis, and the capital of Mæonia, where Lake Sale now stands, are now no longer in existence: Archæopolis too, which succeeded Sipylum, has perished, and in their turns Colpe and Libade, which succeeded it.

On returning thence towards the coast, at a distance of twelve miles we find Smyrna, originally founded by an Amazon [of that name], and rebuilt by Alexander; it is refreshed by the river Meles, which rises not far off. Through this district run what may almost be

called the most famous mountains of Asia, Mastusia in the rear of Smyrna, and Termetis, joining the foot of Olympus. Termetis is joined by Draco, Draco running into Tmolus, Tmolus into Cadmus, and Cadmus into Taurus. Leaving Smyrna, the river Hermus forms a tract of plains, and gives them its own name. It rises near Dorylæum, a city of Phrygia, and in its course receives several rivers, among them the one called the Phryx, which divides Caria from the nation to which it gives name; also the Hyllus and the Cryos, themselves swollen by the rivers of Phrygia, Mysia, and Lydia. At the mouth of the Hermus formerly stood the town of Temnos: we now see at the extremity of the gulf the rocks called Myrmeces, the town of Leuce on a promontory which was once an island, and Phocæa, the frontier town of Ionia.

A great part also of Æolia, of which we shall have presently to speak, has recourse to the jurisdiction of Smyrna; as well as the Macedones, surnamed Hyrcani, and the Magnetes from Sipylus. But to Ephesus, that other great luminary of Asia, resort the more distant peoples known as the Cæsarienses, the Metropolitæ, the Cilbiani, both the Lower and Upper, the Mysomacedones, the Mastaurenses, the Briulitæ, the Hypæpeni, and the Dioshïeritæ.

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CHAP. 32. (30.)

ÆOLIS.

Æolis comes next, formerly known as Mysia, and Troas which is adjacent to the Hellespont. Here, after passing Phocæa, we come to the Ascanian Port, then the spot where Larissa stood, and then Cyme, Myrina, also called Sebastopolis, and in the interior, Ægæ, Attalia, Posidea, Neon- tichos, and Temnos. Upon the shore we come to the river Titanus, and the city which from it derives its name. Grynia also stood here on an island reclaimed from the sea and joined to the land: now only its harbours are left. We then come to the town of Elæa, the river Caïcus, which flows from Mysia, the town of Pitane, and the river Canaïus. The following towns no longer exist — Canæ, Lysimachia, Atarnea, Carene, Cisthene, Cilla, Cocylium, Theba, Astyre, Chrysa, Palæscepsis, Gergitha, and Neandros. We then come to the city of Perperene, which still survives, the district of Heracleotes, the town of Coryphas, the rivers Grylios and Ollius, the region of Aphrodisias, which formerly had the name of Politice Orgas, the district of Scepsis, and the river Evenus, on whose banks the towns of Lyrnesos and Miletos have fallen to decay. In this district also is Mount Ida, and on the coast Adramytteos, formerly called Pedasus, which gives its name to the gulf and the jurisdiction so called. The other rivers are the Astron, Cormalos, Crianos, Alabastros, and Hieros, flowing from Mount Ida: in the interior is Mount Gargara, with a town of the same name. Again, on the coast we meet with Antandros, formerly called Edonis, and after that Cimmeris and Assos, also called Apollonia. The town of Palamedium also formerly stood here. The Promontory of Lecton separates Æolis from Troas. In Æolis there was formerly the city of Polymedia, as also Chrysa, and a second Larissa. The temple of Smintheus is still standing; Colone in the interior has perished. To Adramyttium resort upon matters of legal business the Apolloniatæ, whose town is on the river Rhyndacus, the Erizii, the Miletopolitæ, the Pœmaneni, the Macedonian Asculacæ, the Polichnæi, the Pionitæ, the Cilician Mandacadeni, and, in Mysia, the Abrettini, the

people known as the Hellespontii, and others of less note.

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CHAP. 33.

TROAS AND THE ADJOINING NATIONS.

The first place in Troas is Hamaxitus, then Cebrenia, and then Troas itself, formerly called Antigonia, and now Alexandria, a Roman colony. We then come to the town of Nee, the Scamander, a navigable river, and the spot where in former times the town of Sigeum stood, upon a promontory. We next come to the Port of the Achæans, into which the Xanthus flows after its union with the Simois, and forms the Palæscamander, which was formerly a lake. The other rivers, rendered famous by Homer, namely, the Rhesus, the Heptaporus, the Caresus, and the Rhodius, have left no vestiges of their existence. The Granicus, taking a different route, flows into the Propontis. The small city of Scamandria, however, still exists, and, at a distance of a mile and a half from its harbour, Ilium, a place exempt from tribute, the fountain-head of universal fame. Beyond the gulf are the shores of Rhœteum, peopled by the towns of Rhœteum, Dardanium, and Arisbe. There was also in former times a town of Achilleon, founded near the tomb of Achilles by the people of Mitylene, and afterwards rebuilt by the Athenians, close to the spot where his fleet had been stationed near Sigeum. There was also the town of Æantion, founded by the Rhodians upon the opposite point, near the tomb of Ajax, at a distance of thirty stadia from Sigeum, near the spot where his fleet was stationed. Above Æolis and part of Troas, in the interior, is the place called Teuthrania, inhabited in ancient times by the Mysians. Here rises the river Caicus already mentioned. Teuthrania was a powerful nation in itself, even when the whole of Æolis was held by the Mysians. In it are the Pioniæ, Andera, Cale, Stabulum, Conisium, Teium, Balcea, Tiare, Teuthranie, Sarnaca, Haliserne, Lycide, Parthenium, Thymbre, Oxyopum, Lygdamum, Apollonia, and Pergamum, by far the most famous city in Asia, and through which the river Selinus runs; the Cetius, which rises in Mount Pindasus, flowing before it. Not far from it is Elæa, which we have mentioned as situate on the sea-shore. The jurisdiction of this district is called that of Pergamus; to it resort

the Thyatireni, the Mosyni, the Mygdones, the Bregmeni, the Hierocometæ, the Perpereni, the Tiareni, the Hierolophienses, the Hermocapelitæ, the Attalenses, the Panteenses, the Apollonidienses, and some other states unknown to fame. The little town of Dardanum is distant from Rhœteum seventy stadia. Eighteen miles thence is the Promontory of Trapeza, from which spot the Hellespont first commences its course.

Eratosthenes tells us that in Asia there have perished the nations of the Solymi, the Leleges, the Bebryces, the Colycantii, and the Tripsedri. Isidorus adds to these the Arimi, as also the Capretæ, settled on the spot where Apamea stands, which was founded by King Seleucus, between Cilicia, Cappadocia, Cataonia, and Armenia, and was at first called Damea, from the fact that it had conquered nations most remarkable for their fierceness.

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CHAP. 34. (31.)

THE ISLANDS WHICH LIE IN FRONT OF ASIA.

Of the islands which lie before Asia the first is the one situate in the Canopic Mouth of the Nile, and which received its name, it is said, from Canopus, the pilot of Menelaüs. A second, called Pharos, is joined by a bridge to Alexandria, and was made a colony by the Dictator Cæsar. In former times it was one day's sail from the mainland of Egypt; at the present day it directs ships in their course by means of the fires which are lighted at night on the tower there; for in consequence of the insidious nature of the shoals, there are only three channels by which Alexandria can be approached, those of Steganus, Posideum and Taurus.

In the Phœnician Sea, before Joppe there is the island of Paria, the whole of it forming a town. Here, they say, Andromeda was exposed to the monster: the island also of Arados, already mentioned, between which and the continent, as we learn from Mucianus, at a depth of fifty cubits in the sea, fresh water is brought up from a spring at the very bottom by means of leather pipes.

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CHAP. 35.

CYPRUS.

The Pamphylian Sea contains some islands of little note. The Cilician, besides four others of very considerable size, has Cyprus, which lies opposite to the shores of Cilicia and Syria, running east and west; in former times it was the seat of nine kingdoms. Timosthenes states that the circumference of this island is 427 miles, Isidorus 375; its length, between the two Promontories of Dinæ and Acamas lying on the west, is, according to Artemidorus, 160 1/2 miles, according to Timosthenes, 200. Philonides says that it was formerly called Acamantis, Xenagoras that it had the names of Cerastis, Aspelia, Amathusia, and Macaria, while Astynomus gives it the names of Cryptos and Colinia. Its towns are fifteen in number, Neapaphos, Palæpaphos, Curias, Citium, Corineum, Salamis, Amathus, Lapethos, Solœ, Tamasos, Epidarum, Chytri, Arsinoë, Carpasimn, and Golgi. The towns of Cinyria, Marium, and Idalium are no longer in existence. It is distant from Anemurium in Cilicia fifty miles; the sea which runs between the two shores being called the Channel of Cilicia. In the same locality is the island of Eleusa, and the four islands known as the Clides, lying before the promontory which faces Syria; and again at the end of the other cape is Stiria: over against Neapaphos is Hierocepia, and opposite to Salamis are the Salaininiæ.

In the Lycian Sea are the islands of Illyris, Telendos, and Attelebussa, the three barren isles called Cypriæ, and Dionysia, formerly called Caretha. Opposite to the Promontory of Taurus are the Chelidoniæ, as many in number, and extremely dangerous to mariners. Further on we find Leucolla with its town, the Pactyæ, Lasia, Nymphäis, Macris, and Megista, the city on which last no longer exists. After these there are many that are not worthy of notice. Opposite, however, to Cape Chimæra is Dolichiste, Chœrogylion, Crambussa, Rhoge, Enagora, eight miles in circumference, the two islands of Dædala, the three of Crya, Strongyle, and over against Sidyma the isle of Antiochus. Towards

the mouth of the river Glaucus, there are Lagussa, Macris, Didymæ Helbo, Scope, Aspis, Telandria, the town of which no longer exists, and, in the vicinity of Caunus, Rhodussa.

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CHAP. 36

RHODES.

But the fairest of them all is the free island of Rhodes, 125, or, if we would rather believe Isidorus, 103 miles in circumference. It contains the inhabited cities of Lindos, Camirus, and Ialysus, now called Rhodos. It is distant from Alexandria in Egypt, according to Isidorus, 583 miles; but, according to Eratosthenes, 469. Mucianus says, that its distance from Cyprus is 166. This island was formerly called Ophiussa, Asteria, Æthria, Trinacrie, Corymbia, Pœeëssa, Atabyria, from the name of one of its kings; and, in later times, Macaria and Oloessa. The islands of the Rhodians are Carpathus, which has given its name to the surrounding sea; Casos, formerly known as Achne; Nisyros, twelve miles distant from Cnidos, and formerly called Porphyris; and, in the same vicinity, midway between Rhodes and Cnidos, Syme. This island is thirty-seven miles and a half in circumference, and welcomes us with eight fine harbours. Besides these islands, there are, in the vicinity of Rhodes, those of Cyclopis, Teganon, Cordylussa, the four islands called Diabetæ, Hymos, Chalce, with its city of that name, Sentlussa, Narthecussa, Dimastos, Progne; and, off Cnidos, Cisserussa, Therionarce, and Calydne, with the three towns of Notium, Nisyros, and Mendeterus. In Arconnesus there is the town of Ceramus. Off the coast of Caria, there are the islands known as the Argiæ, twenty in number; also Hyetussa, Lepsia, and Leros.

The most noted island, however, in this gulf is that of Cos, fifteen miles distant from Halicarnassus, and 100 in circumference, according to the opinion of many writers. It was formerly called Merope; according to Staphylus, Cea; Meropis, as Dionysius tells us; and, after that, Nymphæa. In this island there is Mount Prion. Nisyros, formerly called Porphyris, is supposed to have been severed from the island of Cos. We next come to the island of Caryanda, with a city of that name, and that of Pidosus, not far from Halicarnassus. In the Gulf of Ceramicus we also find Priaponnesos, Hipponnesos, Psyra, Mya, Lampsa. Æmyndus, Passala, Crusa, Pinnicussa,

Sepiussa, and Melano. At a short distance from the mainland is an island which bears the name of Cinædopolis, from the circumstance that King Alexander left behind there certain persons of a most disgraceful character.

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CHAP. 37.

SAMOS.

The coast of Ionia has the islands of Trageæ, Corseæ, and Icaros, which has been previously mentioned; Lade, formerly called Late; and, among others of no note, the two Camelidæ, in the vicinity of Miletus; and the three Trogiliæ, near Mycale, consisting of Philion, Argennon, and Sandalion. There is Samos also, a free island, eighty-seven miles in circumference, or, according to Isidorus, 100. Aristotle tells us, that it was at first called Parthenia, after that Dryussa, and then Anthemussa. To these names Aristocritus has added Melamphllus and Cyparissia: other writers, again, call it Parthenoarussa and Stephane. The rivers of tis island are the Imbrasus, the Chesius, and the Ibettes. There are also the fountains of Gigartho and Leucothea; and Mount Cercetius. In the vicinity of Samos are the islands of Rhypara, Nymphæa, and Achillea.

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CHAP. 38.

CHIOS.

At a distance of ninety-four miles from Samos is the free island of Chios, its equal in fame, with a town of the same name. Ephorus says, that the ancient name of this island was Æthalia: Metrodorus and Cleobulus tell us, that it had the name of Chia from the nymph Chione; others again say, that it was so called from the word signifying snow; it was also called Macris and Pityusa. It has a mountain called Pelennæus; and the Chian Marble is well known. It is 125 miles in circumference, according to the ancient writers; Isidorus however makes it nine more. It is situate between Samos and Lesbos, and, for the most part, lies opposite to Erythræ.

The adjacent islands are Thallusa, by some writers called Daphnusa, Œnussa, Elaphitis, Euryanassa, and Arginusa, with a town of that name. All these islands are in the vicinity of Ephesus, as also those called the Islands of Pisistratus, Anthinæ, Myonnesos, Diarreusa, — in both of these last there were cities, now no longer in existence, — Poroselene, with a city of that name, Cerciæ, Halone, Commone, Illetia, Lepria and Rhesperia, Procusæ, Bolbulæ, Phanæ, Priapos, Syce, Melane, Ænare, Sidusa, Pele, Drymusa, Anhydros, Scopelos, Sycussa, Marathussa, Psile, Perirreusa, and many others of no note. In the main sea lies the celebrated island of Teos, with a city of that name, seventy-one miles and a half distant from Chios, and the same from the Erythræ.

In the vicinity of Smyrna are the Peristerides, Carteria, Alopece, Elæussa, Bachina, Pystira, Crommyonnesos, and Megale. Facing Troas there are the Ascaniæ, and the three islands called Plateæ. We find also the Lamiæ, the two islands called Plitaniæ, Plate, Scopelos, Getone, Arthedon, Cœlæ, Lagussæ, and Didymæ.

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CHAP. 39.

LESBOS.

But Lesbos, distant from Chios sixty-five miles, is the most celebrated of them all. It was formerly called Himerte, Lasia, Pelasgia, Ægira, Æthiope, and Macaria, and is famous for its nine cities. Of these, however, that of Pyrrha has been swallowed up by the sea, Arisbe has perished by an earthquake, and Methymna is now united to Antissa; these lie in the vicinity of nine cities of Asia, along a coast of thirty-seven miles. The towns of Agamede and Hiera have also perished. Eresos, Pyrrha, and the free city of Mitylene, still survive, the last of which was a powerful city for a space of 1500 years. The circumference of the whole island is, according to Isidorus, 168 miles, but the older writers say 195. Its mountains are, Lepethymnus, Ordymnus, Maicistus, Creon, and Olympus. It is distant seven miles and a half from the nearest point of the mainland. The islands in its vicinity are, Sandaleon, and the five called Leucæ; Cydonea, which is one of them, contains a warm spring. The Arginussæ are four miles distant from Ægе; after them come Phellusa and Pedna. Beyond the Hellespont, and opposite the shore of Sigeum, lies Tenedos, also known by the names of Leucophrys, Phœnice, and Lyrnesos. It is distant from Lesbos fifty-six miles, and twelve and a half from Sigeum.

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CHAP. 40. (32.)

THE HELLESPONT AND MYSIA

The tide of the Hellespont now begins to run with greater violence, and the sea beats against the shore, undermining with its eddies the barriers that stand in its way, until it has succeeded in separating Asia from Europe. At this spot is the promontory which we have already mentioned as Trapeza; ten miles distant from which is the city of Abydos, where the straits are only seven stadia wide; then the town of Percote; Lampsacus, at first called Pityusa; the colony of Parium, which Homer calls by the name of Adrastia; the town of Priapos; the river Æsepus; Zelia; and then the Propontis, that being the name given to the tract of sea where it enlarges. We then come to the river Granicus, and the harbour of Artace, where a town formerly stood. Beyond this is an island which Alexander joined to the continent, and upon which is Cyzicus, a city of the Milesians, which was formerly called Arctonnesos, Dolionis, and Dindymis; above it are the heights of Mount Dindymus. We then come to the towns of Placia, Ariace, and Scylace; in the rear of which places is Mount Olympus, known as the "Mysian Olympus," and the city of Olympena. There are also the rivers Horisius and Rhyndacus, formerly called the Lycus; this last river rises in Lake Artynias, near Miletopolis, and receives the Macestos, and many other streams, dividing in its course Asia from Bithynia.

This country was at first called by the name of Cronia, after that, Thessalis, and then Malianda and Strymonis. The people of it are by Homer called Halizones, from the fact that it was a nation begirt by the sea. There was formerly a vast city here, Attussa by name; at present there are twelve cities in existence; among which is Gordiucome, otherwise Juliopolis; and, on the coast, Dascylos. We then come to the river Gelbes; and, in the interior, the town of Helgas, or Germanicopolis, which has also the other name of Booseœte Apamea, now more generally known as Myrlea of the Colophonians: the river Etheleus also. the ancient boundary of Troas, and the commencement of Mysia. Next to this comes the gulf into

which the river Ascanius flows, the town of Bryllion, and the rivers Hylas and Cios, with a town of the same name as the last- mentioned river; it was founded by the Milesians at a place which was called Aseania of Phrygia, as an entrepôt for the trade of the Phrygians who dwelt in the vicinity. We may therefore look upon this as a not ineligible opportunity for making further mention of Phrygia.

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CHAP. 41.

PHRYGIA.

Phrygia lies above Troas, and the peoples already men- tioned as extending from the Promontory of Lectum to the river Etheleus. On its northern side it borders upon Galatia, on the south it joins Lyeaonia, Pisidia, and Mygdonia, and, on the east, it touches upon Cappadocia. The more celebrated towns there, besides those already mentioned, are Ancyra, Andria, Celænæ, Colossæ, Carina, Cotyaion, Ceraine, Conium, and Midaium. There are authors who say that the Mœsi, the Brygi, and the Thyni crossed over from Europe, and that from them are descended the peoples called the Mysi, Phryges, and Bithyni.

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CHAP. 42.

GALATIA AND THE ADJOINING NATIONS.

On this occasion also it seems that we ought to speak of Galatia, which lies above Phrygia, and includes the greater part of the territory taken from that province, as also its former capital, Gordium. The Gauls who have settled in these parts, are called the Tolistobogi, the Voturi, and the Ambitouti; those who dwell in Mæonia and Paphlagonia are called the Trocmi. Cappadocia stretches along to the north-east of Galatia, its most fertile parts being possessed by the Tectosages and the Teutobodiaci. These are the nations by which those parts are occupied; and they are divided into peoples and tetrarchies, 195 in number. Its towns are, among the Tectosages, Ancyra; among the Troemi, Tavium; and, among the Tolistobogi, Pessinus. Besides the above, the best known among the peoples of this region are the Actalenses, the Arasenses, the Comenses, the Didienses, the Hierorenses, the Lystreni, the Neapolitani, the Œandenses, the Seleucenses, the Sebas- teni, the Timoniacenses, and the Thebaseni. Galatia also touches upon Carbalia in Pamphylia, and the Milyæ, about Baris; also upon Cyllanticum and Oroandicum, a district of Pisidia, and Obizene, a part of Lycaonia. Besides those already mentioned, its rivers are the Sangarius and the Gallus, from which last the priests of the Mother of the gods have taken their name.

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CHAP. 43.

BITHYNIA.

And now as to the remaining places on this coast. On the road from Cios into the interior is Prusa, in Bithynia, founded by Hannibal at the foot of Olympus, at a distance of twenty-five miles from Nicæa, Lake Ascanius lying between them. We then come to Nicæa, formerly called Olbia, and situate at the bottom of the Ascanian Gulf; as also a second place called Prusa, at the foot of Mount Hypius. Pythopolis, Parthenopolis, and Coryphanta are no longer in existence. Along the coast we find the rivers Æsius, Bryazon, Plataneus, Areus, Æsyros, Geodos, also called Chrysorroas, and the promontory upon which once stood the town of Megarice. The gulf that here runs inland received the name of Craspedites from the circumstance of that town lying, as it were, upon its skirt. Astacum, also, formerly stood here, from which the same gulf has received the name of the 'Astacenian': the town of Libyssa formerly stood at the spot where we now see nothing but the tomb of Hannibal. At the bottom of the gulf lies Nicomedia, a famous city of Bithynia; then comes the Promontory of Leucatas, by which the Astacenian Gulf is bounded, and thirty-seven miles distant from Nicomedia; and then, the land again approaching the other side, the straits which extend as far as the Thracian Bosporus. Upon these are situate Chalcedon, a free town, sixty-two miles from Nicomedia, formerly called Procerastis, then Colpusa, and after that the "City of the Blind," from the circumstance that its founders did not know where to build their city, Byzantium being only seven stadia distant, a site which is preferable in every respect.

In the interior of Bithynia are the colony of Apamea, the Agrippenses, the Juliopolitæ, and Bithynion; the rivers Syrium, Laphias, Pharnacias, Alces, Serinis, Lilæus, Scopius, and Hieras, which separates Bithynia from Galatia. Beyond Chalcedon formerly stood Chrysopolis, and then Nicopolis, of which the gulf, upon which stands the Port of Amycus, still retains the name; then the Promontory of Naulochum, and Estiæ, a temple of Neptune. We then

come to the Bosporus, which again separates Asia from Europe, the distance across being half a mile; it is distant twelve miles and a half from Chalcedon. The first entrance of this strait is eight miles and three-quarters wide, at the place where the town of Spiropolis formerly stood. The Thyni occupy the whole of the coast, the Bithyni the interior. This is the termination of Asia, and of the 282 peoples, that are to be found between the Gulf of Lycia and this spot. We have already mentioned the length of the Hellespont and Propontis to the Thracian Bosporus as being 239 miles; from Chalcedon to Sigeum, Isidorus makes the distance 322 1/2.

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CHAP. 44.

THE ISLANDS OF THE PROPONTIS.

The islands of the Propontis are, before Cyzicus, Elaphonnesus, from whence comes the Cyzican marble; it is also known by the names of Neuris and Proconnesus. Next come Ophiussa, Acanthus, Phœbe, Scopelos, Porphyrione, Halone, with a city of that name, Delphacia, Polydora, and Artaceon, with its city. There is also, opposite to Nicomedia, Demonnesos; and, beyond Heraclea, and opposite to Bithynia, the island of Thynias, by the barbarians called Bithynia; the island of Antiochia: and, at the mouth of the Rhyndacus, Besbicos, eighteen miles in circumference; the islands also of Elæa, the two called Rhodussæ, and those of Erebinthus, Megale, Chalcitis, and Pityodes.

Summary. — Towns and nations spoken of * * * *, Noted rivers * * * *. Famous mountains * * * *. Islands, 118 in number. People or towns no longer in existence * * * *. Remarkable events, narratives, and observations * * * *.

Roman Authors Quoted. — Agrippa, Suetonius Paulinus, M. Varro, Varro Atacinus, Cornelius Nepos, Hyginus. L. Vetus, Mela, Domitius Corbulo, Licinius Mucianus, Claudius Cæsar, Arruntius, Livius the Son, Sebosus, the Register of the Triumphs.

foreign authors quoted. — King Juba Hecatæus Hellanicus, Damastes, Dicæarchus, Bæton, Timosthenes, Philonides, Zenagoras, Astynomus, Staphylus, Aristoteles, Aristocritus, Dionysius, Ephorus, Eratosthenes, Hipparchus, Panætius, Serapion of Antioch, Callimachus, Agathocles, Polybius, Timæus the mathematician, Herodotus, Myrsilus, Alexander Polyhistor, Metrodorus, Posidonius, who wrote the Periplus and the Periegesis, Sotades, Periander, Aristar- chus of Sicyon, Eudoxus, Antigenes, Callicrates, Xenophon of Lampsacus, Diodorus of Syracuse, Hanno, Himilco, Nymphodorus, Calliphanes, Artemidorus, Megasthenes, Isidorus, Cleobulus, and Aristocreon.

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BOOK VI. AN ACCOUNT OF COUNTRIES, NATIONS, SEAS, TOWNS, HAVENS, MOUNTAINS, RIVERS, DISTANCES, AND PEOPLES WHO NOW EXIST, OR FORMERLY EXISTED.

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CHAP. 1. (1.)

THE EUXINE AND THE MARYANDINI.

THE Euxine Sea, which in former times had the name of Axenus, from the savage and inhospitable character of the nations living on its borders, by a peculiar whim of nature, which is continually giving way before the greedy inroads of the sea, lies between Europe and Asia. It was not enough for the ocean to have surrounded the earth, and then deprived us of a considerable portion of it, thus rendering still greater its uninhabitable proportion; it was not enough for it to have forced a passage through the mountains, to have torn away Calpe from Africa, and to have swallowed up a much larger space than it left untouched; it was not enough for it to have poured its tide into the Propontis through the Hellespont, after swallowing up still more of the dry land — for beyond the Bosporus, as well, it opens with its insatiate appetite upon another space of immense extent, until the Mæotian lakes unite their ravening waters with it as it ranges far and wide.

That all this has taken place in spite, as it were, of the earth, is manifested by the existence of so many straits and such numbers of narrow passages formed against the will of Nature — that of the Hellespont, being only eight hundred and seventy-five paces in width, while at the two Bospori the passage across may be effected by oxen swimming, a fact from which they have both derived their name. And then besides, although they are thus severed, there are certain points on which these coasts stand in the relation of brotherhood towards each other — the singing of birds and the barking of dogs on the one side can be heard on the other, and an intercourse can be maintained between these two worlds by the medium even of the human voice, if the winds should not happen to carry away the sound thereof.

The length of the borders of the Euxine from the Bosporus to the Lake Mæotis has been reckoned by some writers at fourteen hundred and thirty-eight miles; Eratosthenes, however, says that it is one hundred less. According to Agrippa, the distance from Chalcedon to

the Phasis is one thousand miles, and from that river to the Cimmerian Bosporus three hundred and sixty. We will here give in a general form the distances as they have been ascertained in our own times; for our arms have even penetrated to the very mouth of the Cimmerian Straits.

After passing the mouth of the Bosporus we come to the river Rhebas, by some writers called the Rhesus. We next come to Psillis, the port of Calpas, and the Sagaris, a famous river, which rises in Phrygia and receives the waters of other rivers of vast magnitude, among which are the Tembrogius and the Gallus, the last of which is by many called the Sangarius. After leaving the Sagaris the Gulf of the Mariandyni begins, and we come to the town of Heraclea, on the river Lycus; this place is distant from the mouth of the Euxine two hundred miles. The sea-port of Acone comes next, which has a fearful notoriety for its aconite or wolf's-bane, a deadly poison, and then the cavern of Acherusia, the rivers Pædopides, Callichorus, and Sonautes, the town of Tium, distant from Heraclea thirty-eight miles, and the river Billis.

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CHAP. 2. (2.)

PAPHLAGONIA.

Beyond this river begins the nation of Paphlagonia, by some writers called Pylæmenia; it is closed in behind by the country of Galatia. In it are Mastya, a town founded by the Milesians, and then Cromna, at which spot Cornelius Nepos also places the Heneti, from whom he would have us believe that the Veneti of Italy, who have a similar name, are descended. The city also of Sesamon, now called Amastris, Mount Cytorus, distant sixty-three miles from Tium, the towns of Cimolis and Stephane, and the river Parthenius. The promontory of Carambis, which extends a great distance into the sea, is distant from the mouth of the Euxine three hundred and twenty-five miles, or, according to some writers, three hundred and fifty, being the same distance from the Cimmerian Bosporus, or, as some persons think, only three hundred and twelve miles. There was formerly also a town of the same name, and another near it called Armene; we now find there the colony of Sinope, distant from Mount Cytorus one hundred and sixty-four miles. We then come to the river Evarchus, and after that a people of the Cappadocians, the towns of Gaziura and Gazelum, the river Halys, which runs from the foot of Mount Taurus through Cataonia and Cappadocia, the towns of Gangre and Carusa, the free town of Amisus, distant from Sinope one hundred and thirty miles, and a gulf of the same name, of such vast extent as to make Asia assume the form of a peninsula, the isthmus of which is only some two hundred miles in breadth, or a little more, across to the gulf of Issus in Cilicia. In all this district there are, it is said, only three races that can rightly be termed Greeks, the Dorians, the Ionians, and the Æolians, all the rest being of barbarian origin. To Amisus was joined the town of Eupatoria, founded by Mithridates: after his defeat they were both included under the name of Pompeiopolis.

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CHAP. 3. (3.)

CAPPADOCIA.

Cappadocia has in the interior Archelais, a colony founded by Claudius Cæsar, and past which the river Halys flows; also the towns of Comana, watered by the Sarus, Neocæsarea, by the Lycus, and Amasia, in the region of Gazacene, washed by the Iris. In Colopene it has Sebastia and Sebastopolis; these are insignificant places, but still equal in importance to those just mentioned. In its remaining districts there is Melita, founded by Semiramis, and not far from the Euphrates, Diocæsarea, Tyana, Castabala, Magnopolis, Zela, and at the foot of Mount Argæus Mazaca, now called Cæsarea. That part of Cappadocia which lies stretched out before the Greater Armenia is called Melitene, before Commagene Cataonia, before Phrygia Garsauritis, Sargarausene, and Cammanene, before Galatia Morimene, where their territories are divided by the river Cappadox, from which this people have taken their name; they were formerly known as the Leucosyri. From Neocæsarea above mentioned, the lesser Armenia is separated by the river Lycus. In the interior also there is the famous river Ceraunus, and on the coast beyond the town of Amisus, the town and river of Chadisia, and the town of Lycastum, after which the region of Themiseyra begins.

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CHAP. 4.

THE REGION OF THEMISCYRA, AND THE NATIONS THEREIN.

The river Iris brings down to the sea the waters of the Lycus. In the interior is the city of Ziela, famous for the defeat of Triarius and the victory of C. Cæsar. Upon the coast there is the river Thermodon, which rises at the fortified place called Phanarœa, and flows past the foot of Mount Amazonius. There was formerly a town of the same name as the river, and five others in all, Amazonium, Themiseyra, Sotira, Amasia, and Comana, now only a Manteium. (4.) We find here the nations of the Genetæ, the Chalybes, the town of Cotyorum, the nations of the Tibareni and the Mossyni, who make marks upon their bodies, the people called Macro- cephali, the town of Cerasus, the port of Chordule, the nations called the Bechires and the Buzeri, the river Melas, the people called the Macrones, and Sidene with its river Sidenus, by which the town of Polemonium is washed, at a distance from Amisus of one hundred and twenty miles. We next come to the rivers Iasonius on the site of the older city of Side, at the mouth of the Sidenus and Melanthius, and at a distance of eighty miles from Amisus, the town of Pharnacea, the fortress and river of Tripolis; the fortress and river of Philocalia, the fortress of Liviopolis, but not upon a river, and at a distance of one hundred miles from Pharnacea, the free city of Trapezus, shut in by a mountain of vast size. Beyond this town is the nation of the Armenochalybes and the Greater Armenia, at a distance of thirty miles. On the coast, before Trapezus, flows the river Pyxites, and beyond it is the nation of the Sanni Heniochi. Next comes the river Absarus, with a fortress of the same name at its mouth, distant from Trapezus one hundred and forty miles.

At the back of the mountains of this district is Iberia, while on the coast are the Heniochi, the Ampreutæ, the Lazi, the rivers Acampsis, Isis, Mogrus, and Bathys, the nations of the Colchi, the town of Matium, the river Heracleum and the promontory of the same name, and the Phasis, the most celebrated river of Pontus. This river rises among the Moschi, and is navigable for the largest vessels a distance

of thirty-eight miles and a half, and for small ones very much higher up; it is crossed by one hundred and twenty bridges. It formerly had many cities of note on its banks, the more famous of which were Tyndaris, Circæum, Cygnus, and Phasis at its mouth. But the most celebrated of them all was Æa, fifteen miles distant from the sea, where the Hippos and the Cyaneos, rivers of vast size, flow into it from opposite directions. At the present day its only place of note is Surium, which derives its name from the river which flows at that spot into the Phasis, and up to which place the Phasis is navigable for large vessels, as we have already mentioned. It receives also some other rivers, wonderful for their number and magnitude, and among them the Glaucus. At the mouth of the Phasis, at a distance of seventy miles from Absarus, are some islands, which, however, have no name. After passing this, we come to another river, the Charieis, and the nation of the Salæ, by the ancients called Phthirophagi, as also Suani. The river Chobus flows from the Caucasus through the country of the Suani. The river Rhoas comes next, then the region of Ecrectice, the rivers Singames, Tarsuras, Astelephus, Chrysorrhoas, the nation of the Absilæ, the castle of Sebastopolis, one hundred miles distant from Phasis, the nation of the Sannigæ, the town of Cygnus, and the river and town of Penius. We then come to the tribes of the Heniochi, who are distinguished by numerous names.

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CHAP. 5. (5)

THE REGION OF COLICA, THE NATIONS OF THE ACHÆI, AND OTHER NATIONS IN THE SAME PARTS.

Below this lies the region of Pontus known as Colica, in which the mountain chain of Caucasus bends away towards the Riphæan mountains, as we have previously mentioned; one side running down towards the Euxine and the Lake Mæotis, the other towards the Caspian and the Hyrcanian sea. The remaining portion of these shores is peopled by savage nations, the Melanchlæni, and the Coraxi, who formerly dwelt in Dios- curias, near the river Anthemus, now deserted, but once a famous city; so much so, indeed, that we learn from Timos- thenes, that three hundred nations, all of different languages, were in the habit of resorting to it, and in later times we had there one hundred and thirty interpreters for the purpose of transacting business. There are some authors who are of opinion that this place was built by Amphitus and Telchius, the charioteers of Castor and Pollux, from whom it is generally understood that the nation of the Heniochi sprang. After passing Dioscurias we come to the town of Heracleium, seventy miles distant from Sebastopolis, and then the Achæi, the Mardi, and the Cercetæ, and, behind them, the Cerri and the Cephalotomi. In the innermost part of this district there was Pityus, a city of very considerable opulence, but destroyed by the Heniochi: behind it are the Epageritæ, a people of Sarmatian origin, dwelling upon the range of the Caucasus, and beyond them, the Sauromatæ. It was with these people that Mithridates took refuge in the reign of the Emperor Claudius: and from him we learn that the Thalli join up to them, a people who border on the eastern side upon the mouth of the Caspian sea: he tells us also that at the reflux the channel is dry there. Upon the coast of the Euxine, near the country of the Cercetæ, is the river Icarusa, with the town and river of Hierus , distant from Heracleium one hundred and thirty-six miles. Next to this, is the promontory of Cruni, after passing which, we find the Toretæ upon a lofty ridge of mountains. The city of Sindos is distant from Hierus sixty-seven miles and a half; after passing which, we

come to the river Setheries. (6.) From thence to the entrance of the Cimmerian Bosporus the distance is eighty-eight miles and a half.

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CHAP. 6.

THE CIMMERIAN BOSPORUS.

The length of the peninsula which projects between the Euxine and Lake Mæotis, is not more than sixty-seven miles and a half, and the width across never less than two jugera: it has the name of Eion. The shores of the Bosporus then take a curve both on the side of Europe and of Asia, thus forming the Mæotis. The towns at the entrance of the Bosporus are, first Hermonassa, next Cepi, founded by the Milesians, and then Stratoclia and Phanagoria, and the almost deserted town of Apaturos, and, at the extremity of the mouth, Cimmerium, which was formerly called Cerberion. (7.) We then come to Lake Mæotis, which has been already mentioned in the description of Europe.

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CHAP. 7.

LAKE MIEOTIS AND THE ADJOINING NATIONS.

After passing Cimmerium, the coast is inhabited by the Mæotici, the Vali, the Serbi, the Arrechi, the Zingi, and the Psessi. We then come to the river Tanais, which discharges itself into the sea by two mouths, and the banks of which are inhabited by the Sarmatæ, the descendants of the Medi, it is said, a people divided into numerous tribes. The first of these are the Sauromatæ Gynæcocratumeni, the husbands of the Amazons. Next to them are the Ævazæ, the Coitæ, the Cicimeni, the Messeniani, the Costobocci, the Choatræ, the Zigæ, the Dandarii, the Thyssagetæ, and the Iyrcæ, as far as certain rugged deserts and densely wooded vallies, beyond which again are the Arimphæi, who extend as far as the Riphæan Mountains. The Scythians call the river Tanais by the name of Silis, and the Mæotis the Temarunda, meaning the "mother of the sea." There is a city also at the mouth of the Ta- nais. The neighbouring country was inhabited first by the Carians, then by the Clazomenii and Mæones, and after them by the Panticapenses.

There are some writers who state that there are the following nations dwelling around the Mæotis, as far as the Ceraunian mountains; at a short distance from the shore, the Napitæ, and beyond them, the Essedones, who join up to the Colchians, and dwell upon the summits of the mountains: after these again, the Camacæ, the Orani, the Autacæ, the Mazacasi, the Cantiocæ, the Agamathæ, the Pici, the Rimosoli, the Acascomarci, and, upon the ridges of the Caucasus, the Itacalæ, the Imadochi, the Rami, the Anclacæ, the Tydii, the Carastasei, and the Anthiandæ. The river Lagoüs runs from the Cathæan mountains, and into it flows the Opharus. Upon it are the tribes of the Cauthadæ, and the Opharitæ. Next to these are the rivers Menotharus and Imityes, which flow from the Cissian mountains, among the peoples called the Acdei, the Carnæ, the Oscardei, the Accisi, the Gabri, the Gogari, and, around the source of the Imityes, the Imityi, and the Apatræi. Some writers say that the Auchetæ, the Athernei, and the Asampatæ, Scythian tribes, have

made inroads upon this territory, and have destroyed the Tanaitæ and the Inapæi to a man. Others again represent the Ocharius as running through the Cantici and the Sapæi, and the Tanais as passing through the territories of the Sarcharcei, the Herticei, the Spondolici, the Synhietæ, the Anasi, the Issi, the Catetæ, the Tagoræ, the Caroni, the Neripi, the Agandei, the Mandarei, the Satarchei, and the Spalei.

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CHAP. 8. (8.)

THE SITUATION OF CAPPADOCIA.

We have now gone over the coast which borders upon the Inner Sea, and have enumerated the various nations that dwell thereon; let us now turn to those vast tracts of land which lie further in the interior. I do not deny that in my description I shall differ very materially from the ancient writers, but still it is one that has been compiled with the most anxious research, from a full examination into the events which have transpired of late in these countries under the command of Domitius Corbulo, and from information received either from kings who have been sent thence to Rome, as suppliants for our mercy, or else the sons of kings who have visited us in the character of hostages.

We will begin then with the nation of the Cappadocians.

Of all the countries of Pontus, this extends the greatest distance into the interior. On the left it leaves behind the Lesser and the Greater Armenia, as well as Commagene, and on the right all the nations of the province of Asia which we have previously described. Spreading over numerous peoples, it rises rapidly in elevation in an easterly direction towards the range of Taurus. Then passing Lycaonia, Pisidia, and Cilicia, it advances above the district of Antiochia, the portion of it known as Cataonia extending as far as Cyrrhestica, which forms part of that district. The length of Asia here is twelve hundred and fifty miles, its breadth six hundred and forty.

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CHAP. 9. (9.)

THE LESSER AND THE GREATER ARMENIA.

Greater Armenia, beginning at the mountains known as the Paryadres, is separated, as we have already stated, from Cappadocia by the river Euphrates, and, where that river turns off in its course, from Mesopotamia, by the no less famous river Tigris. Both of these rivers take their rise in Armenia, which also forms the commencement of Mesopotamia, a tract of country which lies between these streams; the intervening space between them being occupied by the Arabian Orei. It thus extends its frontier as far as Adiabene, at which point it is stopped short by a chain of mountains which takes a cross direction; whereupon the province extends in width to the left, crossing the course of the Araxes, as far as the river Cyrus; while in length it reaches as far as the Lesser Armenia, from which it is separated by the river Absarus, which flows into the Euxine, and by the mountains known as the Paryadres, in which the Absarus takes its rise.

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CHAP. 10.

THE RIVERS CYRUS AND ARAXES.

The river Cyrus takes its rise in the mountains of the Heniochi, by some writers called the Coraxici; the Araxes rises in the same mountains as the river Euphrates, at a distance from it of six miles only; and after being increased by the waters of the Usis, falls itself, as many authors have supposed, into the Cyrus, by which it is carried into the Caspian Sea.

The more famous towns in Lesser Armenia are Cæsarea, Aza, and Nicopolis; in the Greater Arsamosata, which lies near the Euphrates, Carcathiocerta upon the Tigris, Tigranocerta which stands on an elevated site, and, on a plain adjoining the river Araxes, Artaxata. According to Aufidius, the circumference of the whole of Armenia is five thousand miles, while Claudius Cæsar makes the length, from Dascusa to the borders of the Caspian Sea, thirteen hundred miles, and the breadth, from Tigranocerta to Iberia, half that distance. It is a well-known fact, that this country is divided into prefectures, called "Strategies," some of which singly formed a kingdom in former times; they are one hundred and twenty in number, with barbarous and uncouth names. On the east, it is bounded, though not immediately, by the Ceraunian Mountains and the district of Adiabene. The space that intervenes is occupied by the Sopheni, beyond whom is the chain of mountains, and then beyond them the inhabitants of Adiabene. Dwelling in the valleys adjoining to Armenia are the Menobardi and the Moscheni. The Tigris and inaccessible mountains surround Adiabene. To the left of it is the territory of the Medi, and in the distance is seen the Caspian Sea; which, as we shall state in the proper place, receives its waters from the ocean, and is wholly surrounded by the Caucasian Mountains. The inhabitants upon the confines of Armenia shall now be treated of.

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CHAP. 11. (10.)

ALBANIA, IBERIA, AND THE ADJOINING NATIONS.

The whole plain which extends away from the river Cyrus is inhabited by the nation of the Albani, and, after them, by that of the Iberi, who are separated from them by the river Alazon, which flows into the Cyrus from the Caucasian chain. The chief cities are Cabalaca, in Albania, Harmastis, near a river of Iberia, and Neoris; there is the region also of Thasie, and that of Triare, extending as far as the mountains known as the Paryadres. Beyond these are the deserts of Colchios, on the side of which that looks towards the Ceraunian Mountains dwell the Armenochalybes; and there is the country of the Moschi, extending to the river Iberus, which flows into the Cyrus; below them are the Sacassani, and after them the Macrones, upon the river Absarus. Such is the manner in which the plains and low country are parcelled out. Again, after passing the confines of Albania, the wild tribes of the Silvi inhabit the face of the mountains, below them those of the Lubieni, and after them the Diduri and the Sodii.

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CHAP. 12. (11.)

THE PASSES OF THE CAUCASUS.

After passing the last, we come to the Gates of Caucasus, by many persons most erroneously called the Caspian Passes; a vast work of nature, which has suddenly wrenched asunder in this place a chain of mountains. At this spot are gates barred up with beams shod with iron, while beneath the middle there runs a stream which emits a most fetid odour; on this side of it is a rock, defended by a fortress, the name of which is Cumania, erected for the purpose of preventing the passage of the innumerable tribes that lie beyond. Here, then, we may see the habitable world severed into two parts by a pair of gates; they are just opposite to Harmastis, a town of the Iberi.

Beyond the Gates of Caucasus, in the Gordyæan Mountains, the Valli and the Suani, uncivilized tribes, are found; still, however, they work the mines of gold there. Beyond these nations, and extending as far away as Pontus, are numerous nations of the Heniochi, and, after them, of the Achæi. Such is the present state of one of the most famous tracts upon the face of the earth.

Some writers have stated that the distance between the Euxine and the Caspian Sea is not more than three hundred and seventy-five miles; Cornelius Nepos makes it only two hundred and fifty. Within such straits is Asia pent up in this second instance by the agency of the sea! Claudius Cæsar has informed us that from the Cimmerian Bosporus to the Caspian Sea is a distance of only one hundred and fifty miles, and that Nicator Seleucus contemplated cutting through this isthmus just at the time when he was slain by Ptolemy Ceraunus. It is a well-known fact that the distance from the Gates of Caucasus to the shores of the Euxine is two hundred miles.

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CHAP. 13. (12.)

THE ISLANDS OF THE EUXINE.

The islands of the Euxine are the Placate or Cyaneæ, otherwise called Symplegades, and Apollonia, surnamed Thynias, to distinguish it from the island of that name in Europe; it is four miles in circumference, and one mile distant from the mainland. Opposite to Pharnacea is Chalceritis, to which the Greeks have given the name of Aria, and consecrated it to Mars; here, they say, there were birds that used to attack strangers with blows of their wings.

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CHAP. 14. (13.)

NATIONS IN THE VICINITY OF THE SCYTHIAN OCEAN.

Having now stated all that bears reference to the interior of Asia, let us cross in imagination the Riphæan Mountains, and traverse the shores of the ocean to the right. On three sides does this ocean wash the coasts of Asia, as the Scythian Ocean on the north, the Eastern Ocean on the east, and the Indian Ocean on the south; and it is again divided into various names, derived from the numerous gulfs which it forms, and the nations which dwell upon its shores. A great part of Asia, however, which lies exposed to the north, through the noxious effects of those freezing climates, consists of nothing but vast deserts. From the extreme north northeast to the point where the sun rises in the summer, it is the country of the Scythians. Still further than them, and beyond the point where north north-east begins, some writers have placed the Hyperborei, who are said, indeed, by the majority to be a people of Europe. After passing this point, the first place that is known is Lytarmis, a promontory of Celtica, and next to it the river Carambucis, where the chain of the Riphæan Mountains terminates, and with it the extreme rigour of the climate; here, too, we have heard of a certain people being situate, called the Arimphæi, a race not much unlike the Hyperborei. Their habitations are the groves, and the berries their diet; long hair is held to be disgraceful by the women as well as the men, and they are mild in their manners. Hence it is that they are reported to be a sacred race, and are never molested even by the savage tribes which border upon them, and not only they, but such other persons as well as may have fled to them for refuge. Beyond these we come straight to the Scythians, the Cimmerii, the Cisianthi, the Georgi, and a nation of Amazons. These last extend to the Caspian and Hyrcanian Sea.

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CHAP. 15.

THE CASPIAN AND HYRCANIAN SEA.

Bursting through, this sea makes a passage from the Scythian Ocean into the back of Asia, receiving various names from the nations which dwell upon its banks, the two most famous of which are the Caspian and the Hyrcanian races. Clitarchus is of opinion that the Caspian Sea is not less in area than the Euxine. Eratosthenes gives the measure of it on the south-east, along the coast of Cadusia and Albania, as five thousand four hundred stadia; thence, through the territories of the Anariaci, the Amardi, and the Hyrcani, to the mouth of the river Zonus he makes four thousand eight hundred stadia, and thence to the mouth of the Jaxartes two thousand four hundred; which makes in all a distance of one thousand five hundred and seventy-five miles. Artemidorus, however, makes this sum smaller by twenty-five miles. Agrippa bounds the Caspian Sea and the nations around it, including Armenia, on the east by the Ocean of the Seres, on the west by the chain of the Caucasus, on the south by that of Taurus, and on the north by the Scythian Ocean; and he states it, so far as its extent is known, to be four hundred and eighty miles in length, and two hundred and ninety in breadth. There are not wanting, however, some authors who state that its whole circumference, from the Straits, is two thousand five hundred miles.

Its waters make their way into this sea by a very narrow mouth, but of considerable length; and where it begins to enlarge, it curves obliquely with horns in the form of a crescent, just as though it would make a descent from its mouth into Lake Mæotis, resembling a sickle in shape, as M. Varro says. The first of its gulfs is called the Scythian Gulf; it is inhabited on both sides, by the Scythians, who hold communication with each other across the Straits, the Nomades being on one side, together with the Sauromatæ, divided into tribes with numerous names, and on the other, the Abzoæ, who are also divided into an equal number. At the entrance, on the right hand side, dwell the Udini, a Scythian tribe, at the very angle of the mouth. Then along the coast there are the Albani, the descendants of Jason,

it is said; that part of the sea which lies in front of them, bears the name of ‘ Albanian.’ This nation, which lies along the Caucasian chain, comes down, as we have previously stated, as far as the river Cyrus, which forms the boundary of Armenia and Iberia. Above the maritime coast of Albania and the nation of the Udini, the Sarmatæ, the Utidorsi, and the Aroteres stretch along its shores, and in their rear the Sauromatian Amazons, already spoken of

The rivers which run through Albania in their course to the sea are the Casius and the Albanus, and then the Cambyses, which rises in the Caucasian mountains, and next to it the Cyrus, rising in those of the Coraxici, as already mentioned. Agrippa states that the whole of this coast, inaccessible from rocks of an immense height, is four hundred and twenty-five miles in length, beginning from the river Casius. After we pass the mouth of the Cyrus, it begins to be called the ‘Caspian Sea;’ the Caspii being a people who dwell upon its shores.

In this place it may be as well to correct an error into which many persons have fallen, and even those who lately took part with Corbulo in the Armenian war. The Gates of Iberia, which we have mentioned as the Caucasian, they have spoken of as being called the ‘Caspian,’ and the coloured plans which have been sent from those parts to Rome have that name written upon them. The menaced expedition, too, that was contemplated by the Emperor Nero, was said to be designed to extend as far as the Caspian Gates, where- as it was really intended for those which lead through Iberia into the territory of the Sarmatæ; there being hardly any possibility of approach to the Caspian Sea, by reason of the close juxtaposition of the mountains there. There are, however, other Caspian Gates, which join up to the Caspian tribes; but these can only be distinguished from a perusal of the narrative of those who took part in the expedition of Alexander the Great.

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CHAP. 16.

ADIABENE.

The kingdom of the Persians, by which we now understand that of Parthia, is elevated upon the Caucasian chain between two seas, the Persian and the Hyrcanian. To the Greater Armenia, which in the front slopes towards Commagene, is joined Sophene, which lies upon the descent on both sides thereof, and next to it is Adiabene, the most advanced frontier of Assyria; a part of which is Arbelitis, He alludes to the town of Arbela, where, as it is generally said, the army of Darius was defeated by Alexander the Great; by which engagement the conflict was terminated. It was the fact, however, that Darius left his baggage and treasures at Arbela, while the battle really took place near the village of Gaugamela, about twenty miles to the north-west of Arbela. This place still retains its name of Arbil, where Alexander con- quered Darius, and which joins up to Syria. The whole of this country was called Mygdonia by the Macedonians, on account of the resemblance it bore to Mygdonia in Europe. Its cities are Alexandria, and Antiochia, also called Nisibis; this last place is distant from Artaxata seven hundred and fifty miles. There was also in former times Ninus, a most renowned city, on the banks of the Tigris, with an aspect towards the west. Adjoining the other front of Greater Armenia, which runs down towards the Caspian Sea, we find Atropatene, which is separated from Otene, a region of Armenia, by the river Araxes; Gazæ is its chief city, distant from Artaxata four hundred and fifty miles, and the same from Ecbatana in Media, to which country Atropatene belongs.

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CHAP. 17. (14.)

MEDIA AND THE CASPIAN GATES.

Ecbatana, the capital of Media, was built by king Seleucus, at a distance from Great Seleucia of seven hundred and fifty miles, and twenty miles from the Caspian Gates. The remaining towns of the Medians are Phazaca, Aganzaga, and Apamea, surnamed Rhagiane. The reason of these passes receiving the name of "Gates," is the same that has been stated above. The chain of mountains is suddenly broken by a passage of such extreme narrowness that, for a distance of eight miles, a single chariot can barely find room to move along: the whole of this pass has been formed by artificial means. Both on the right hand and the left are overhanging rocks, which look as though they had been exposed to the action of fire; and there is a tract of country, quite destitute of water, twenty-eight miles in extent. This narrow pass, too, is rendered still more difficult by a liquid salt which oozes from the rocks, and uniting in a single stream, makes its way along the pass. Besides this, it is frequented by such multitudes of serpents, that the passage is quite impracticable except in winter.

(15.) Joining up to Adiabene are the people formerly known as the 'Carduchi,' now the Cordueni, in front of whom the river Tigris flows: and next to them are the Pratitæ, entitled the *Par Odon,* who hold possession of the Caspian Gates. On the other side of these gates we come to the deserts of Parthia and the mountain chain of Cithenus; and after that, the most pleasant locality of all Parthia, Choara by name. Here were two cities of the Parthians, built in former times for their protection against the people of Media, Calliope, and Issatis, the last of which stood formerly on a rock. Hecatompylos, the capital of Parthia, is distant from the Caspian Gates one hundred and thirty-three miles. In such an effectual manner is the kingdom of Parthia shut out by these passes. After leaving these gates we find the nation of the Caspii, extending as far as the shores of the Caspian, a race which has given its name to these gates as well as to the sea: on the left there is a mountainous district. Turning back from this nation to the river Cyrus, the distance is said

to be two hundred and twenty miles; but if we go from that river as far down as the Caspian Gates, the distance is seven hundreds miles. In the itineraries of Alexander the Great these gates were made the central or turning point in his expeditions; the distance from the Caspian Gates to the frontier of India being there set down as fifteen thousand six hundred and eighty stadia, to the city of Bactra, commonly called Zariaspa, three thousand seven hundred, and thence to the river Jaxartes five thousand stadia.

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CHAP. 18. (16.)

NATIONS SITUATE AROUND THE HYRCANIAN SEA.

Lying to the east of the Caspii is the region known as Apavortene, in which there is a place noted for its singular fertility, called Dareium. We then come to the nations of the Tapyri, the Anariaci, the Staures, and the Hyrcani, past whose shores and beyond the river Sideris the Caspian begins to take the name of the 'Hyrcanian' Sea: on this side of that stream are also the rivers Maxeras and Strato: all of them take their rise in the Caucasian chain. Next comes the district of Margiane, so remarkable for its sunny climate. It is the only spot in all these regions that produces the vine, being shut in on every side by verdant and refreshing hills. This district is fifteen hundred stadia in circumference, but is rendered remarkably difficult of access by sandy deserts, which extend a distance of one hundred and twenty miles: it lies opposite to the country of Parthia, and in it Alexander founded the city of Alexandria. This place having been destroyed by the barbarians, Antiochus, the son of Seleucus, rebuilt it on the same site as a Syrian city. For, seeing that it was watered by the Margus, which passes through it, and is afterwards divided into a number of streams for the irrigation of the district of Zothale, he restored it, but preferred giving it the name of Antiochia. The circumference of this city is seventy stadia: it was to this place that Orodes conducted such of the Romans as had survived the defeat of Crassus. From the mountain heights of this district, along the range of Caucasus, the savage race of the Mardi, a free people, extends as far as the Bactri. Below the district inhabited by them, we find the nations of the Orciani, the Commori, the Berdrigæ, the Harmatotropi, the Citomaræ, the Comani, the Marucæi, and the Mandruani. The rivers here are the Mandrus and the Chindrus. Beyond the nations already mentioned, are the Chorasmii, the Candari, the Attasini, the Paricani, the Sarangæ, the Marotiani, the Aorsi, the Gaëli, by the Greek writers called Cadusii, the Matiani, the city of Heraclea, which was founded by Alexander, but was afterwards destroyed, and rebuilt by Antiochus, and by him called Achaïs; the Derbices also, through the

middle of whose territory the river Oxus runs, after rising in Lake Oxus, the Syrmatæ, the Oxydracæ, the Heniochi, the Bateni, the Saraparæ, and the Bactri, whose chief city is Zariaspe, which afterwards received the name of Bactra, from the river there. This last nation lies at the back of Mount Paropanisus, over against the sources of the river Indus, and is bounded by the river Ochus. Beyond it are the Sogdiani, the town of Panda, and, at the very extremity of their territory, Alexandria, founded by Alexander the Great. At this spot are the altars which were raised by Hercules and Father Liber, as also by Cyrus, Semiramis, and Alexander; for the expeditions of all these conquerors stopped short at this region, bounded as it is by the river Jaxartes, by the Scythians known as the Silis, and by Alexander and his officers supposed to have been the Tanais. This river was crossed by Demodamas, a general of kings Seleucus and Antiochus, and whose account more particularly we have here followed. He also consecrated certain altars here to Apollo Didymæus.

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CHAP. 19. (17.)

THE NATIONS OF SCYTHIA AND THE COUNTRIES ON THE EASTERN OCEAN.

Beyond this river are the peoples of Scythia. The Persians have called them by the general name of Sacæ, which properly belongs to only the nearest nation of them. The more ancient writers give them the name of Aramii. The Scythians themselves give the name of "Chorsari" to the Persians, and they call Mount Caucasus Graucasis, which means "white with snow." The multitude of these Scythian nations is quite innumerable: in their life and habits they much resemble the people of Parthia. The tribes among them that are better known are the Sacæ, the Massagetæ, the Dahæ, the Essedones, the Ariacæ, the Rhymmici, the Pæsici, the Amardi, the Histi, the Edones, the Came, the Camacæ, the Euchatæ, the Cotieri, the Anthusiani, the Psacæ, the Arimaspi, the Antacati, the Chroasai, and the Œtei; among them the Napæi are said to have been destroyed by the Palæi. The rivers in their country that are the best known, are the Mandragæus and the Carpasus. Indeed upon no subject that I know of are there greater discrepancies among writers, from the circumstance, I suppose, of these nations being so extremely numerous, and of such migratory habits. Alexander the Great has left it stated that the water of this sea is fresh, and M. Varro informs us, that some of it, of a similar character, was brought to Pompey, when holding the chief command in the Mithridatic war in its vicinity; the salt, no doubt, being overpowered by the volume of water discharged by the rivers which flow into it. He adds also, that under the direction of Pompey, it was ascertained that it is seven days' journey from India to the river Icarus, in the country of the Bactri, which discharges itself into the Oxus, and that the merchandize of India being conveyed from it through the Caspian Sea into the Cyrus, may be brought by land to Phasis in Pontus, in five days at most. There are numerous islands throughout the whole of the Caspian sea: the only one that is well known is that of Tazata.

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CHAP. 20.

THE SERES.

After we have passed the Caspian Sea and the Scythian Ocean, our course takes an easterly direction, such being the turn here taken by the line of the coast. The first portion of these shores, after we pass the Scythian Promontory, is totally uninhabitable, owing to the snow, and the regions adjoining are uncultivated, in consequence of the savage state of the nations which dwell there. Here are the abodes of the Scythian Anthropophagi, who feed on human flesh. Hence it is that all around them consists of vast deserts, inhabited by multitudes of wild beasts, which are continually lying in wait, ready to fall upon human beings just as savage as themselves. After leaving these, we again come to a nation of the Scythians, and then again to desert tracts tenanted by wild beasts, until we reach a chain of mountains which runs up to the sea, and bears the name of Tabis. It is not, however, before we have traversed very nearly one half of the coast that looks towards the north-east, that we find it occupied by inhabitants.

The first people that are known of here are the Seres, so famous for the wool that is found in their forests. After steeping it in water, they comb off a white down that adheres to the leaves; and then to the females of our part of the world they give the twofold task of unravelling their textures, and of weav- ing the threads afresh. So manifold is the labour, and so distant are the regions which are thus ransacked to supply a dress through which our ladies may in public display their charms. The Seres are of inoffensive manners, but, bearing a strong resemblance therein to all savage nations, they shun all intercourse with the rest of mankind, and await the approach of those who wish to traffic with them. The first river that is known in their territory is the Psitharas, next to that the Cambari, and the third the Laros; after which we come to the Promontory of Chryse, the Gulf of Cynaba, the river Atianos, and the nation of the Attacori on the gulf of that name, a people protected by their sunny hills from all noxious blasts, and living in a climate of the same temperature as

that of the Hyperborei. Amometus has written a work entirely devoted to the history of these people, just as Hecatæus has done in his treatise on the Hyperborei. After the Attacori, we find the nations of the Phruri and the Tochari, and, in the interior, the Casiri, a people of India, who look toward the Scythians, and feed on human flesh. Here are also numerous wandering Nomad tribes of India. There are some authors who state that in a north-easterly direction these nations touch upon the Cicones and the Brysari.

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CHAP. 21.

THE NATIONS OF INDIA.

But we come now to nations as to which there is a more general agreement among writers. Where the chain of Emodus rises, the nations of India begin, which borders not only on the Eastern sea, but on the Southern as well, which we have already mentioned as being called the Indian Ocean. That part which faces the east runs in a straight line a distance of eighteen hundred and seventy-five miles until it comes to a bend, at which the Indian Ocean begins. Here it takes a turn to the south, and continues to run in that direction a distance of two thousand four hundred and seventy-five miles, according to Eratosthenes, as far as the river Indus, the boundary of India on the west. Many authors have represented the entire length of the Indian coast as being forty days' and nights' sail, and as being, from north to south, two thousand eight hundred and fifty miles. Agrippa states its length to be three thousand three hundred miles, and its breadth, two thousand three hundred. Posidonius has given its measurement as lying from north-east to south-east, placing it opposite to Gaul, of which country he has given the measurement as lying from north-west to south-west; making the whole of India to lie due west of Gaul. Hence, as he has shewn by undoubted proofs, India lying opposite to Gaul must be refreshed by the blowing of that wind, and derive its salubrity there- from.

In this region, the appearance of the heavens is totally changed, and quite different is the rising of the stars; there are two summers in the year, and two harvests, while the winter intervenes between them during the time that the Etesian winds are blowing: during our winter too, they enjoy light breezes, and their seas are navigable. In this country there are nations and cities which would be found to be quite innumerable, if a person should attempt to enumerate them. For it has been explored not only by the arms of Alexander the Great and of the kings who succeeded him, by Seleucus and Antiochus, who sailed round even to the Caspian and Hyrcanian Sea, and by Patrocles, the admiral of their fleet, but has been treated of by several

other Greek writers who resided at the courts of Indian kings, such, for instance, as Megasthenes, and by Dionysius, who was sent thither by Philadelphus, expressly for the purpose: all of whom have enlarged upon the power and vast resources of these nations. Still, however, there is no possibility of being rigorously exact, so different are the accounts given, and often of a nature so incredible. The followers of Alexander the Great have stated in their writings, that there were no less than five thousand cities in that portion of India which they vanquished by force of arms, not one of which was smaller than that of Cos; that its nations were eight in number, that India forms one-third of the whole earth, and that its populations are innumerable — a thing which is certainly far from improbable, seeing that the Indians are nearly the only race of people who have never migrated from their own territories. From the time of Father Liber to that of Alexander the Great, one hundred and fifty-three kings of India are reckoned, extending over a period of six thousand four hundred and fifty-one years and three months. The vast extent of their rivers is quite marvellous; it is stated that on no one day did Alexander the Great sail less than six hundred stadia on the Indus, and still was unable to reach its mouth in less than five months and some few days: and yet it is a well-known fact that this river is not so large as the Ganges. Seneca, one of our fellow-countrymen, who has written a treatise upon the subject of India, has given its rivers as sixty-five in number, and its nations as one hundred and eighteen. The difficulty too would be quite as great, if we were to attempt to enumerate its mountains. The chains of Emaüs, of Emodus, of Paropanisus, and of Caucasus, are all connected, the one with the other; and from their foot, the country of India runs down in the form of a vast plain, bearing a very considerable resemblance to that of Egypt.

However, that we may come to a better understanding relative to the description of these regions, we will follow in the track of Alexander the Great. Diognetus and Bæton, whose duty it was to ascertain the distances and length of his expeditions, have written that from the Caspian Gates to Hecatompylon, the city of the Parthians, the distance is the number of miles which we have already stated; and that from thence to Alexandria, of the Arii, which city

was founded by the same king, the distance is five hundred and seventy-five miles; from thence to Prophthasia, the city of the Drangæ, one hundred and ninety-nine; from thence to the city of the Arachosii, five hundred and sixty-five; from thence to Ortospanum, one hundred and seventy-five; and from thence to the city built by Alexander, fifty, miles. In some copies, however, the numbers are found differently stated; and we find this last city even placed at the very foot of Mount Caucasus! From this place to the river Cophes and Peucolaitis, a city of India, is two hundred and thirty-seven miles; from thence to the river Indus and the city of Taxilla sixty; from thence to the famous river Hydaspes one hundred and twenty; and from thence to the Hypasis, a river no less famous, two hundred and ninety miles, and three hundred and ninety paces. This last was the extreme limit of the expedition of Alexander, though he crossed the river and dedicated certain altars on the opposite side. The dispatches written by order of that king fully agree with the distances above stated.

The remaining distances beyond the above point were ascertained on the expedition of Seleucus Nicator. They are, to the river Sydrus, one hundred and sixty-eight miles; to the river Jomanes, the same; some copies, however, add to this last distance five miles; thence to the Ganges, one hundred and twelve miles; to Rhodapha, five hundred and sixty-nine — though, according to some writers, this last distance is only three hundred and twenty-five miles; to the town of Calinipaxa, one hundred and sixty-seven, according to some, two hundred and sixty-five; thence to the confluence of the river Jomanes and Ganges, six hundred and twenty-five; most writers, however, add thirteen miles to this last distance; thence to the city of Palibothra, four hundred and twenty-five — and thence to the mouth of the Ganges, six hundred and thirty-seven miles and a half.

The nations whom it may be not altogether inopportune to mention, after passing the Emodian Mountains, a cross range of which is called “Imaus,” a word which, in the language of the natives, signifies “snowy,” are the Isari, the Cosyri, the Izi, and, upon the chain of mountains, the Chisiotosagi, with numerous peoples, which have the surname of Brachmanæ, among whom are the Maccocalingæ. There are also the rivers Prinas and Cainas, which

last flows into the Ganges, both of them navigable streams. The nation of the Calingæ comes nearest to the sea, and above them are the Mandei and the Malli. In the territory of the last-named people is a mountain called Mallus: the boundary of this region is the river Ganges.

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CHAP. 22. (18.)

THE GANGES.

Some writers have stated that this river, like the Nile, takes its rise from unknown sources, and, in a similar manner, waters the neighbouring territory; others, again, say that it rises in the mountains of Scythia. They state also that nineteen rivers discharge their waters into it; those among them that are navigable, besides the rivers already mentioned, are the Condochates, the Erannoboas, the Cosoagus, and the Sonus. Other writers again say that it bursts forth at its very source with a loud noise, hurling itself over rocks and precipices; and that after it has reached the plains, its waters become more tranquil, and it pauses for a time in a certain lake, after which it flows gently on. They say also that it is eight miles in breadth, where it is the very narrowest, and one hundred stadia where it is but moderately wide, and that it is nowhere less than twenty paces in depth. The last nation situate on the banks of the Ganges is that of the Gangarides Calingæ; the city where their king dwells has the name of Protalis. (19.) This king has sixty thousand foot-soldiers, one thousand horse, and seven hundred elephants, always caparisoned ready for battle. The people of the more civilized nations of India are divided into several classes. One of these classes tills the earth, another attends to military affairs, others again are occupied in mercantile pursuits, while the wisest and the most wealthy among them have the management of the affairs of state — act as judges, and give counsel to the king. The fifth class, entirely devoting themselves to the pursuit of wisdom, which in these countries is almost held in the same veneration as religion, always end their life by a voluntary death upon the lighted pile. In addition to these, there is a class in a half-savage state, and doomed to endless labour; by means of their exertions, all the classes previously mentioned are supported. It is their duty to hunt the elephant, and to tame him when captured; for it is by the aid of these animals that they plough; by these animals they are conveyed from place to place; these in especial they look upon as constituting their flocks and herds; by

their aid they wage their wars, and fight in defence of their territories. Strength, age, and size, are the points usually considered in making choice of these animals.

In the Ganges there is an island of very considerable size, inhabited by a single nation; it is called Modogalinga. Beyond the Ganges are situate the Modubæ, the Molindæ, the Uberæ, with a magnificent city of the same name, the Modresi, the Preti, the Caloæ, the Sasuri, the Passalæ, the Colobæ, the Orumcolæ, the Abali, and the Thalutæ. The king of the last-named people has fifty thousand foot-soldiers, four thousand horse, and four hundred armed elephants. We next come to a still more powerful nation, the Andaræ, who dwell in numerous villages, as well as thirty cities fortified with walls and towers. They furnish for their king one hundred thousand foot, two thousand horse, and a thousand elephants. The country of the Dardæ is the most productive of gold, that of the Setæ of silver.

But more famous and more powerful than any nation, not only in these regions, but throughout almost the whole of India, are the Prasii, who dwell in a city of vast extent and of remarkable opulence, called Palibothra; from which circumstance some writers have given to the people themselves the name of Palibothri, and, indeed, to the whole tract of country between the Ganges and the Indus. These people keep on daily pay in their king's service an army, consisting of six hundred thousand foot, thirty thousand horse, and nine thousand elephants, from which we may easily form a conjecture as to the vast extent of their resources. Behind these people, and lying still more in the interior, are the Monedes, and the Suari, among whom is a mountain known as Maleus, upon which the shadow falls to the north in winter, and to the south in summer, six months alternately. In this district the Constellation of the Greater Bear is seen at only one period in the year, and then but for fifteen days, according to what Bæton states. Megasthenes, however, informs us that the same is the case also in many other localities of India. The South Pole is by the Indians called Diamasa.

The river Jomanes runs into the Ganges through the territory of the Palibothri, between the cities of Methora and Chrysobora. In the regions which lie to the south of the Ganges, the people are tinted by the heat of the sun, so much so as to be quite coloured, but yet not

burnt black, like the Æthiopians. The nearer they approach the Indus, the deeper their colour, a proof of the heat of the climate. After leaving the nation of the Prasii, we immediately come to the Indus; in the mountains of the Prasii a race of Pygmies is said to exist. Artemidorus says that between these two rivers there is a distance of two thousand one hundred miles.

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CHAP. 23. (20.)

THE INDUS.

The Indus, called Sindis by the natives, rises in that branch of the Caucasian range which bears the name of Paropanisus, and runs in an easterly direction, receiving in its course the waters of nineteen rivers. The most famous of these are the Hydaspes, into which four other rivers have already discharged themselves, the Cantaba, which receives three other rivers, the Acesinus, and the Hypasis, which last two are navigable themselves. Still however, so moderate, as it were, do the waters of this river show themselves in their course, that it is never more than fifty stadia in width, nor does it ever exceed fifteen paces in depth. Of two islands, which it forms in its course, the one, which is known as Prasiane, is of very considerable size; the other, which is smaller, is called Patale. According to the accounts given by the most moderate writers, this river is navigable for a distance of twelve hundred and fifty miles, and after following the sun's course to the west, in some degree, discharges itself into the ocean. I will here give the distances of various places situate on the coast to the mouth of this river, in a general way, just as I find them stated, although they none of them tally with each other.

From the mouth of the Ganges to the Promontory of the Calingi and the town of Dandaguda, is six hundred and twenty-five miles; from thence to Tropina twelve hundred and twenty-five; from thence to the promontory of Perimula, where is held the most celebrated mart in all India, seven hundred and fifty, and from thence to the city of Patala, in the island just mentioned, six hundred and twenty miles.

The mountain races between the Indus and the Jomanes are the Cesi, the Cetriboni, who dwell in the woods, and after them the Megallæ, whose king possesses five hundred elephants, and an army of horse and foot, the numbers of which are unknown; then the Chrysei, the Parasangæ, and the Asmagi, whose territory is infested by wild tigers; these people keep in arms thirty thousand foot, three hundred elephants, and eight hundred horse. They are bounded by the river Indus, and encircled by a range of mountains and deserts for

a distance of six hundred and twenty-five miles. Below these deserts are the Dari and the Surve, and then deserts again for one hundred and eighty-seven miles, sands in general encircling these spots just as islands are surrounded by the sea. Below these deserts, again, are the Maltecoræ, the Singæ, the Marohæ, the Rarungæ, and the Morontes. These last peoples, who possess the mountains throughout the whole range of country as far as the shores of the ocean, are free, and independent of all kings, and hold numerous cities upon the declivities of the mountains. After them come the Nareæ, who are bounded by Capitalia, the most lofty of all the Indian peaks: the inhabitants who dwell on the other side of it have extensive mines of gold and silver. After these again are the Oratæ, whose king possesses only ten elephants, but a large army of foot; next come the Suarataratæ, who live under the rule of a king as well, but breed no elephants, as they depend solely on their horse and foot; then the Odonbeores, the Arabastree, and the Horacæ, which last inhabit a fine city fortified by trenches cut in the marshes. It is quite impossible to approach the city, except by the bridge, as the water in the trenches is full of crocodiles, an animal most insatiate for human flesh. There is another city also in their territory, which has been greatly extolled, Automula by name, situate on the sea-shore, a famous mart, lying at the point of confluence of five rivers: their king possesses sixteen hundred elephants, one hundred and fifty thousand foot, and five thousand horse. The king of the Charmæ is a less opulent potentate; he has only sixty elephants and some small remains of his former strength. After these we come to the nation of the Pandæ, the only one throughout all India which is ruled by women. It is said that Hercules had but one child of the female sex, for which reason she was his especial favourite, and he bestowed upon her the principal one of these kingdoms. The sovereigns who derive their origin from this female, rule over three hundred towns, and have an army of one hundred and fifty thousand foot, and five hundred elephants. After passing through this list of three hundred cities, we come to the Darangæ, the Posingæ, the Butæ, the Gogaræi, the Umbræ, the Nereæ, the Brancosi, the Nobundæ, the Cocondæ, the Nesei, the Palatitæ, the Salobriasæ, and the Olostræ, who reach up to the island of Patala, from the extremity of whose shores to the

Caspian Gates it is a distance of nineteen hundred and twenty-five miles.

After passing this island, the other side of the Indus is occupied, as we know by clear and undoubted proofs, by the Athoæ, the Bolingæ, the Gallitalutæ, the Dimuri, the Megari, the Ardabæ, the Mesæ, and after them, the Uri and the Silæ; beyond which last there are desert tracts, extending a distance of two hundred and fifty miles. After passing these nations, we come to the Organagæ, the Abortæ, the Bassuertæ, and, after these last, deserts similar to those previously 'mentioned. We then come to the peoples of the Sorofages, the Arbæ, the Marogomatræ, the Umbrittæ, of whom there are twelve nations, each with two cities, and the Asini, a people who dwell in three cities, their capital being Bucephala, which was founded around the tomb of the horse belonging to king Alexander, which bore that name. Above these peoples there are some mountain tribes, which lie at the foot of Caucasus, the Soseadæ and the Sondræ, and, after passing the Indus and going down its stream, the Samarabriæ, the Sambraceni, the Bisambritæ, the Orsi, the Anixeni, and the Taxilæ, with a famous city, which lies on a low but level plain, the general name of the district being Amenda: there are four nations here, the Peucolaitæ, the Arsagalitæ, the Geretæ, and the Assoï.

The greater part of the geographers, in fact, do not look upon India as bounded by the river Indus, but add to it the four Satrapies of the Gedrosi, the Arachotæ, the Arii, and the Paropauisidæ, the river Cophes thus forming the extreme boundary of India. All these territories, however, according to other writers, are reckoned as belonging to the country of the Arii. (21.) Many writers, too, place in India the city of Nysa, and the mountain of Merus, sacred to Father Bacchus; in which circumstance originated the story that he sprang from the thigh of Jupiter. They also place here the nation of the Astacani, whose country abounds in the vine, the laurel, the box-tree, and all the fruits which are produced in Greece. As to those wonderful and almost fabulous stories which are related about the fertility of the soil, and the various kinds of fruits and trees, as well as wild beasts, and birds, and other sorts of animals, they shall be mentioned each in its proper place, in a future portion of this work. I

shall also very shortly have to make some further mention of the four Satrapies, it being at present my wish to hasten to a description of the island of Taprobane.

But first there are some other islands of which we must make mention. Patala, as we have already stated, lies at the mouth of the Indus: it is of a triangular figure, and is two hundred and twenty miles in breadth. Beyond the mouth of the Indus are the islands of Chryse and Argyre, abounding in metals, I believe; but as to what some persons have stated, that their soil consists of gold and silver, I am not so willing to give a ready credence to that. After passing these islands we come to Crocala, twenty miles in breadth, and then, at twelve miles' distance from it, Bibraga, abounding in oysters and other bell-fish. At eight miles' distance from Bibraga we find Toralliba, and many others of no note.

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CHAP. 24. (22.)

TAPROBANE.

Taprobane, under the name of the "land of the Antich- thones," was long looked upon as another world: the age and the arms of Alexander the Great were the first to give satisfactory proof that it is an island. Onesicritus, the commander of his fleet, has informed us that the elephants of this island are larger, and better adapted for warfare than those of India; and from Megasthenes we learn that it is divided by a river, that the inhabitants have the name of Paleogoni, and that their country is more productive of gold and pearls of great size than even India. Eratosthenes has also given the dimensions of this island, as being seven thousand stadia in length, and five thousand in breadth: he states also that there are no cities, but villages to the number of seven hundred. It begins at the Eastern sea, and lies extended opposite to India, east and west. This island was in former times supposed to be twenty days' sail from the country of the Prasii, but in later times, whereas the navigation was formerly confined to vessels constructed of papyrus with the tackle peculiar to the Nile, the distance has been estimated at no more than seven days' sail, in reference to the speed which can be attained by vessels of our construction. The sea that lies between the island and the mainland is full of shallows, not more than six paces in depth; but in certain channels it is of such extraordinary depth, that no anchor has ever found a bottom. For this reason it is that the vessels are constructed with prows at either end; so that there may be no necessity for tacking while navigating these channels, which are extremely narrow. The tonnage of these vessels is three thousand amphoræ. In traversing their seas, the people of Taprobane take no observations of the stars, and indeed the Greater Bear is not visible to them; but they carry birds out to sea, which they let go from time to time, and so follow their course as they make for the land. They devote only four months in the year to the pursuits of navigation, and are particularly careful not to trust themselves on the sea during the next hundred days after our summer solstice, for in those seas it is at that time the

middle of winter.

Thus much we learn from the ancient writers; it has fallen to our lot, however, to obtain a still more accurate knowledge of these people; for during the reign of the Emperor Claudius, an embassy came from even this distant island to Rome. The circumstances under which this took place were as follow: Annius Plocamus had farmed from the treasury the revenues arising from the Red Sea. A certain freedman of his, while sailing around Arabia, was carried away by a gale from the north beyond the coast of Carmania. In the course of fifteen days he had drifted to Hippuros, a port of Taprobane, where he was most kindly and hospitably received by the king; and having, after a study of six months, become well acquainted with the language, was enabled to answer all his enquiries relative to the Romans and their emperor. But of all that he heard, the king was more particularly struck with surprise at our rigid notions of justice, on ascertaining that among the money found on the captive, the denarii were all of equal weight, although the different figures on them plainly showed that they had been struck in the reigns of several emperors. By this circumstance in especial, the king was prompted to form an alliance with the Romans, and accordingly sent to Rome an embassy, consisting of four persons, the chief of whom was Itachias.

From these persons we learned that in Taprobane there are five hundred towns, and that there is a harbour that lies facing the south, and adjoining the city of Palæsimundus, the most famous city in the isle, the king's place of residence, and containing a population of two hundred thousand. They also informed us that in the interior there is a lake called Megisba, three hundred and seventy-five miles in circumference, and containing islands which are fertile, though for pasturage only. In this lake they informed us two rivers take their rise, one of which, called Palesimundus, flows into the harbournear the city of that name, by three channels, the narrowest of which is five stadia in width, the largest fifteen; while the other, Cydara by name, takes a direction northward, towards the Indian coast. We learned also that the nearest point of the Indian coast is a promontory known as Coliacum, distant from the island four days' sail, and that midway between them lies the island of the Sun. They stated also

that those seas are of a deep green tint; besides which, there are numerous trees growing at the bottom, so much so, that the rudders of the vessels frequently break off portions of their foliage. They were much astonished at the constellations which are visible to us, the Greater Bear and the Pleiades, as though they had now beheld a new expanse of the heavens; and they declared that in their country the moon can only be seen above the horizon from the eighth to its sixteenth day. They also stated that Canopus, a large bright star, gives light to them by night. But what surprised them more than anything, was that the shadow of their bodies was thrown towards our hemisphere and not theirs, and that the sun arose on the left hand and set on the right, and not in the opposite direction. They also informed us that the side of their island which lies opposite to India is ten thousand stadia in length, and runs in a south-easterly direction — that beyond the Emodian Mountains they look towards the Serve, whose acquaintance they had also made in the pursuits of commerce; that the father of Rachias had frequently visited their country, and that the Seræ always came to meet them on their arrival. These people, they said, exceeded the ordinary human height, had flaxen hair, and blue eyes, and made an uncouth sort of noise by way of talking, having no language of their own for the pur- pose of communicating their thoughts. The rest of their information was of a similar nature to that communicated by our merchants. It was to the effect that the merchandize on sale was left by them upon the opposite bank of a river on their coast, and it was then removed by the natives, if they thought proper to deal on terms of exchange. On no grounds ought luxury with greater reason to be detested by us, than if we only transport our thoughts to these scenes, and then reflect, what are its demands, to what distant spots it sends in order to satisfy them, and for how mean and how unworthy an end!

But yet Taprobane even, isolated as it is by nature from the rest of the world, is not exempt from our vices. Gold and silver are held in esteem even there. They have a marble which resembles tortoise-shell in appearance; this, as well as their pearls and precious stones, is highly valued; all our luxuries in fact, those even of the most exquisite nature, are there carried to the very highest pitch. They asserted that their wealth is much greater than ours, but admitted that

we know better than they how to obtain real enjoyment from opulence.

In this island no slavery exists; they do not prolong their sleep to day-break, nor indeed during any part of the day; their buildings are only of a moderate height from the ground; the price of corn is always the same; they have no courts of law and no litigation. Hercules is the deity whom they worship; SABTUL and their king is chosen by the people, an aged man always, distinguished for his mild and clement disposition, and without children. If after he has been elected king, he happens to become the father of children, his abdication is the consequence; this is done that there may be no danger of the sovereign power becoming hereditary. Thirty advisers are provided for him by the people, and it is only by the advice of the majority of them that any man is condemned to capital punishment. Even then, the person so condemned has a right of appealing to the people, in which case a jury consisting of seventy persons is appointed. Should these acquit the accused, the thirty counsellors are no longer held in any estimation, but are visited with the greatest disgrace. The king wears the costume of Father Liber, while the rest of the people dress like the natives of Arabia. The king, if he is found guilty of any offence, is condemned to death; but no one slays him; all turn their backs upon him, and refuse to hold any communication or even discourse with him. Their festivals are celebrated with the chase, the most valued sports being the pursuit of the tiger and the elephant. The lands are carefully tilled; the vine is not cultivated there, but of other fruits there is great abundance. They take great delight in fishing, and especially in catching turtles; beneath the shells of which whole families find an abode, of such vast size are they to be found. These people look upon a hundred years as a comparatively short life. Thus much have we learned respecting Taprobane.

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CHAP. 25.

THE ARIANI AND THE ADJOINING NATIONS.

We will now proceed to give some further particulars relative to the four Satrapies, of which we have postponed further mention till the present occasion.

(23). After passing the nations in the vicinity of the Indus, we come to the mountain districts. The territory of Capisene formerly had a city, called Capisa, which was destroyed by Cyrus. Arachosia has a river and a city of the same name; the city was built by Semiramis; by some writers it is called Cophen. The river Erymanthus flows past Parabeste, which belongs to the Arachosii. Writers make the Dexendrusi come next, forming the boundary of the Arachotæ on the southern side, and of the Paropanisadæ on the north. The city of Cartana lies at the foot of Caucasus; in later times it has been called Tetragonis. This region lies over against that of the Bactri, who come next, and whose chief city is Alexandria, so called from the name of its founder. We then come to the Syndraci, the Dangalæ the Parapinæ, the Catuces, and the Mazi; and then at the foot of Caucasus, to the Cadrusi, whose town was built by Alexander.

Below all these countries, is the line of coast which we come to after leaving the Indus. Ariana is a region parched by the sun and surrounded by deserts; still, however, as the face of the country is every here and there diversified with well-shaded spots, it finds communities grouped together to cultivate it, and more especially around the two rivers, known as the Tonberos and the Arosapes. There is also the town of Artacoana, and the river Arius, which flows past Alexandria, a city founded by Alexander; this place is thirty stadia in extent. Much more beautiful than it, as well as of much greater antiquity, is Artacabane, fortified a second time by Antiochus, and fifty stadia in breadth. We then come to the nation of the Dorisdorsigi, and the rivers Phar- naracotis, and Ophradus; and then to Prophthasia, a city of the Zaraspades, the Drangæ, the Evergetæ, the Zarangæ, and the Gedrusi; the towns of Pucolis,

Lyphorta, the desert of the Methorgi, the river Manais, the nation of the Acutri, the river Eorum, the nation of the Orbi, the Pomanus, a navigable river in the territories of the Pandares, the Apirus in the country of the Suari, with a good harbour at its mouth, the city of Condigramma, and the river Cophes; into which last flow the navigable streams of the Saddaros, the Parospus, and the Sodanus. Some writers will also have it that Daritis forms part of Ariana, and give the length of them both as nineteen hundred and fifty miles, and the breadth one half of that of India. Others again have spread the Gedrusi and the Pasires over an extent of one hundred and thirty-eight miles, and place next to them the Ichthyophagi Oritæ, a people who speak a language peculiar to themselves, and not the Indian dialect, extending over a space of two hundred miles. Alexander forbade the whole of the Ichthyophagi to live any longer on fish. Next after these the writers have placed extensive deserts, and then Carmania, Persia, and Arabia.

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CHAP. 26.

VOYAGES TO INDIA.

But before we enter into any details respecting these countries, it will be as well to mention what Oncsicritus has stated, who commanded the fleet of Alexander, and sailed from India into the heart of Persia, and what has been more recently related by Juba; after which I shall speak of the route along these seas which has been discovered in later years, and is followed at the present day. The journal of the voyage of Onesicritus and Nearchus has neither the names of the stations, nor yet the distances set down in it; and first of all, it is not sufficiently explained where Xylenepolis was, and near what river, a place founded by Alexander, and from which, upon setting out, they took their departure. Still, however, the following places are mentioned by them, which are worthy of our notice. The town of Arbis, founded by Nearchus on the occasion of this voyage; the river Nabrus, navigable for vessels, and opposite to it an island, at a distance of seventy stadia; Alexandria, built by Leonnatus by order of Alexander in the territories of this people; Argenus, with a very convenient harbour; the river Tonberos, a navigable stream, around whose banks are the Pasiræ; then come the Ichthyophagi, who extend over so large a tract of coast that it took thirty days to sail past their territory; and an island known by the names of the "Island of the Sun" and the "Bed of the Nymphs," the earth of which is red, and in which every animal instantly dies; the cause of which, however, has not been ascertained. Next to these is the nation of the Ori, and then the Hyctanis, a river of Carmania, with an excellent harbour at its mouth, and producing gold; at this spot the writers state that for the first time they caught sight of the Great Bear. The star Arcturus too, they tell us, was not to be seen here every night, and never, when it was seen, during the whole of it. Up to this spot extended the empire of the Achæmenidæ, and in these districts are to be found mines of copper, iron, arsenic, and red lead.

They next came to the Promontory of Carmania, from which the distance across to the opposite coast, where the Macæ, a nation of

Arabia, dwell, is fifty miles; and then to three islands, of which that of Oracla is alone inhabited, being the only one supplied with fresh water; it is distant from the mainland twenty-five miles; quite in the Gulf, and facing Persia, there are four other islands. About these islands sea-serpents were seen swimming towards them, twenty cubits in length, which struck the fleet with great alarm. They then came to the island of Athothradus, and those called the Gauratæ, upon which dwells the nation of the Gyani; the river Hyperis, which discharges itself midway into the Persian Gulf, and is navigable for merchant ships; the river Sitiogagus, from which to Pasargadæ is seven days' sail; a navigable river known as the Phristimus, and an island without a name; and then the river Granis, navigable for vessels of small burden, and flowing through Susiane; the Deximontani, a people who manufacture bitumen, dwell on its right bank. The river Zarotis comes next, difficult of entrance at its mouth, except by those who are well acquainted with it; and then two small islands; after which the fleet sailed through shallows which looked very much like a marsh, but were rendered navigable by certain channels which had been cut there. They then arrived at the mouth of the Euphrates, and from thence passed into a lake which is formed by the rivers Eulæus and Tigris, in the vicinity of Charax, after which they arrived at Susa, on the river Tigris. Here, after a voyage of three months, they found Alexander celebra- ting a festival, seven months after he had left them at Patale. Such was the voyage performed by the fleet of Alexander.

In later times it has been considered a well-ascertained fact that the voyage from Syagrus, the Promontory of Arabia, to Patale, reckoned at thirteen hundred and thirty-five miles, can be performed most advantageously with the aid of a westerly wind, which is there known by the name of Hippalus.

The age that followed pointed out a shorter route, and a safer one, to those who might happen to sail from the same promontory for Sigerus, a port of India; and for a long time this route was followed, until at last a still shorter cut was discovered by a merchant, and the thirst for gain brought India even still nearer to us. At the present day voyages are made to India every year: and companies of archers are carried on board the vessels, as those seas are greatly infested with

pirates.

It will not be amiss too, on the present occasion, to set forth the whole of the route from Egypt, which has been stated to us of late, upon information on which reliance may be placed, and is here published for the first time. The subject is one well worthy of our notice, seeing that in no year does India drain our empire of less than five hundred and fifty millions of sesterces, giving back her own wares in exchange, which are sold among us at fully one hundred times their prime cost.

Two miles distant from Alexandria is the town of Juliopolis. The distance thence to Coptos, up the Nile, is three hundred and eight miles; the voyage is performed, when the Etesian winds are blowing, in twelve days. From Coptos the journey is made with the aid of camels, stations being arranged at intervals for the supply of fresh water. The first of these stations is called Hydreuma, and is distant twenty-two miles; the second is situate on a mountain, at a distance of one day's journey from the last; the third is at a second Hydreuma, distant from Coptos ninety-five miles; the fourth is on a mountain; the next to that is at another Hydreuma, that of Apollo, and is distant from Coptos one hundred and eighty-four miles; after which, there is another on a mountain. There is then another station at a place called the New Hydreuma, distant from Coptos two hundred and thirty miles: and next to it there is another, called the Old Hydreuma, or the Troglodytic, where a detachment is always on guard, with a caravansary that affords lodging for two thousand persons. This last is distant from the New Hydreuma seven miles. After leaving it we come to the city of Berenice, situate upon a harbour of the Red Sea, and distant from Coptos two hundred and fifty-seven miles. The greater part of this distance is generally travelled by night, on account of the extreme heat, the day being spent at the stations; in consequence of which it takes twelve days to perform the whole journey from Coptos to Berenice.

Passengers generally set sail at midsummer, before the rising of the Dog-star, or else immediately after, and in about thirty days arrive at Ocelis in Arabia, or else at Cane, in the region which bears frankincense. There is also a third port of Arabia, Muza by name; it is not, however, used by persons on their passage to India, as only

those touch at it who deal in incense and the perfumes of Arabia. More in the interior there is a city; the residence of the king there is called Sapphar, and there is another city known by the name of Save. To those who are bound for India, Ocelis is the best place for embareation. If the wind, called Hippalus, happens to be blowing, it is possible to arrive in forty days at the nearest mart of India, Muziris by name. This, however, is not a very desirable place for disembarcation, on account of the pirates which frequent its vicinity, where they occupy a place called Nitrias; nor, in fact, is it very rich in articles of merchandize. Besides, the road-stead for shipping is a considerable distance from the shore, and the cargoes have to be conveyed in boats, either for loading or discharging. At the moment that I am writing these pages, the name of the king of this place is Cælobothras. Another port, and a much more convenient one, is that which lies in the territory of the people called Neacyndi, Barace by name. Here king Pandion used to reign, dwelling at a considerable distance from the mart in the interior, at a city known as Modiera. The district from which pepper is carried down to Barace in boats hollowed out of a single tree, is known as Cottonara. None of these names of nations, ports, and cities are to be found in any of the former writers, from which circumstance it would appear that the localities have since changed their names. Travellers set sail from India on their return to Europe, at the beginning of the Egyptian month Tybis, which is our December, or at all events before the sixth day of the Egyptian month Mechir, the same as our ides of January: if they do this, they can go and return in the same year. They set sail from India with a south-east wind, and upon entering the Red Sea, catch the south-west or south. We will now return to our main subject.

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CHAP. 27.

CARMANIA.

Nearchus states in his writings that the coast of Carmania extends a distance of twelve hundred and fifty miles. From its frontier to the river Sabis is one hundred miles. At this spot begins the cultivation of the vine; which with the tillage of the fields, extends as far as the river Ananis, a distance of twenty-five miles. This region is known by the name of Armuzia. The cities of Carmania are Zetis and Alexandria.

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CHAP. 28.

THE PERSIAN AND THE ARABIAN GULFS.

The sea then makes a two-fold indentations in the land upon these coasts, under the name of Rubrum or "Red," given to it by our countrymen; while the Greeks have called it Erythrum, from king Erythras, or, according to some writers, from its red colour, which they think is produced by the reflection of the sun's rays; others again are of opinion that it arises from the sand and the complexion of the soil, others from some peculiarity in the nature of the water. (24.) Be this as it may, this body of water is divided into two gulfs. The one which lies to the east is called the Persian Gulf, and is two thousand five hundred miles in circumference, according to Eratosthenes. Opposite to it lies Arabia, the length of which is fifteen hundred miles. On the other side again, Arabia is bounded by the Arabian Gulf. The sea as it enters this gulf is called the Azanian Sea. The Persian Gulf, at the entrance, is only five miles wide; some writers make it four. From the entrance to the very bottom of the gulf, in a straight line, has been ascertained to be nearly eleven hundred and twenty-five miles: in outline it strongly resembles the human head. Onesicritus and Nearchus have stated in their works that from the river Indus to the Persian Gulf, and from thence to Babylon, situate in the marshes of the Euphrates, is a distance of seventeen hundred miles.

In the angle of Carmania are the Chelonophagi, who cover their cabins with the shells of turtles, and live upon their flesh; these people inhabit the next promontory that is seen after leaving the river Arbis; with the exception of the head, they are covered all over with long hair, and are clothed in the skins of fishes.

(25.) Beyond their district, in the direction of India, is said to be the desert island of Caicandrus, fifty miles out at sea; near to which, with a strait flowing between them, is Stoidis, celebrated for its valuable pearls. After passing the promontory are the Armozei, joining up to the Carmani; some writers, however, place between them the Arbii, extending along the shore a distance of four hundred

and twenty-one miles. Here is a place called Portus Macedonum, and the Altars of Alexander, situate on a promontory, besides the rivers Saganos, Daras, and Salsa. Beyond the last river we come to the promontory of Themisteas, and the island of Aphrodisias, which is peopled. Here Persis begins, at the river Oratis, which separates it from Elymais. Opposite to the coast of Persis, are the islands of Psilos, Cassandra, and Aracia, the last sacred to Neptune, and containing a mountain of great height. Persis itself, looking towards the west, has a line of coast five hundred and fifty miles in length; it is a country opulent even to luxury, but has long since changed its name for that of "Parthia." I shall now devote a few words to the Parthian empire.

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CHAP. 29.

THE PARTHIAN EMPIRE.

The kingdoms of Parthia are eighteen in all: such being the divisions of its provinces, which lie, as we have already stated, along the Red Sea to the south, and the Hyrcanian to the north. Of this number the eleven, called the Higher provinces, begin at the frontiers of Armenia and the shores of the Caspian, and extend to the Scythians, whose mode of life is similar in every respect. The other seven kingdoms of Parthia bear the name of the Lower provinces. As to the Parthi themselves, Parthia always lay at the foot of the mountains so often mentioned, which overhang all these nations. On the east it is bounded by the Arii, on the south by Carmania and the Ariani, on the west by the Pratitæ, a people of the Medi, and on the north by the Hyrcani: it is surrounded by deserts on every side. The more distant of the Parthi are called Nomades; on this side of them there are deserts. On the west are the cities of Issatis and Calliope, already mentioned, on the north-east Europus, on the south-east Maria; in the middle there are Hecatompylos, Arsace, and Nisiæa, a fine district of Parthiene, in which is Alexandropolis, so called from its founder. (26.) It is requisite in this place to trace the localities of the Medi also, and to describe in succession the features of the country as far as the Persian Sea, in order that the account which follows may be the better understood. Media lies crosswise to the west, and so presenting itself obliquely to Parthia, closes the entrance of both kingdoms into which it is divided. It has, then, on the east, the Caspii and the Parthi; on the south, Sittacene, Susiane, and Persis; on the west, Adsiabene; and on the north, Armenia. The Persæ have always inhabited the shores of the Red Sea, for which reason it has received the name of the Persian Gulf. This maritime region of Persis has the name of Ciribo; on the side on which it runs up to that of the Medi, there is a place known by the name of Climax Megale, where the mountains are ascended by a steep flight of stairs, and so afford a narrow passage which leads to Persepolis, the former capital of the kingdom, destroyed by Alexander. It has also, at its extreme frontier,

Laodicea, founded by Antiochus. To the east of this place is the fortress of Passagarda, held by the Magi, at which spot is the tomb of Cyrus; also Ecbatana, a city of theirs, the inhabitants of which were removed by Darius to the mountains. Between the Parthi and the Ariani projects the territory of the Parætaceni. By these nations and the river Euphrates are the Lower kingdoms of Parthia bounded; of the others we shall speak after Mesopotamia, which we shall now describe, with the exception of that angle of it and the peoples of Arabia, which have been already mentioned in a former book.

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CHAP. 30.

MESOPOTAMIA.

The whole of Mesopotamia formerly belonged to the Assyrians, being covered with nothing but villages, with the exception of Babylonia and Ninus. The Macedonians formed these communities into cities, being prompted thereto by the extraordinary fertility of the soil. Besides the cities already mentioned, it contains those of Seleucia, Laodicea, Artemita; and in Arabia, the peoples known as the Orei and the Mardani, besides Antiochia, founded by Nicanor, the governor of Mesopotamia, and called Arabis. Joining up to these in the interior is an Arabian people, called the Eldamani, and above them, upon the river Pallaconta, the town of Bura, and the Arabian peoples known as the Salmani and the Masei. Up to the Gordyæi join the Aloni, through whose territory runs the river Zerbis, which falls into the Tigris; next are the Azones, the Silici, a mountain tribe, and the Orontes, to the west of whom lies the town of Gaugamela, as also Suë, situate upon the rocks. Beyond these are the Silici, surnamed Classitæ, through whose district runs the river Lycus on its passage from Armenia, the Absithris running south-east, the town of Accobis, and then in the plains the towns of Diospage, Polytelia, Stratonice, and Anthermis. In the vicinity of the Euphrates is Nicephorion, of which we have already stated that Alexander, struck with the favourable situation of the spot, ordered it to be built. We have also similarly made mention of Apamea on the Zeugma. Leaving that city and going eastward, we come to Caphrena, a fortified town, formerly seventy stadia in extent, and called the "Court of the Satraps." It was to this place that the tribute was conveyed; now it is reduced to a mere fortress. Thæbata is still in the same state as formerly: after which comes Oruros, which under Pompeius Magnus formed the extreme limit of the Roman Empire, distant from Zeugma two hundred and fifty miles. There are writers who say that the Euphrates was drawn off by an artificial channel by the governor Gobares, at the point where we have stated that it branches off, in order that it might not commit damage in the city of Babylonia, in consequence

of the extreme rapidity of its course. The Assyrians universally call this river by the name of Narmalcha, which signifies the "royal river." At the point where its waters divide, there was in former times a very large city, called Agranis, which the Persæ have de- stroyed.

Babylon, the capital of the nations of Chaldæa, long enjoyed the greatest celebrity of all cities throughout the whole world: and it is from this place that the remaining parts of Mesopotamia and Assyria received the name of Babylonia. The circuit of its walls, which were two hundred feet in height, was sixty miles. These walls were also fifty feet in breadth, reckoning to every foot three fingers' breadth beyond the ordinary measure of our foot. The river Euphrates flowed through the city, with quays of marvellous workmanship erected on either side. The temple there of Jupiter Belus is still in existence; he was the first inventor of the science of Astronomy. In all other respects it has been reduced to a desert, having been drained of its population in consequence of its vicinity to Seleucia, founded for that purpose by Nicator, at a distance of ninety miles, on the confluence of the Tigris and the canal that leads from the Euphrates. Seleucia, however, still bears the surname of Babylonia: it is a free and independent city, and retains the features of the Macedonian manners. It is said that the population of this city amounts to six hundred thousand, and that the outline of its walls resembles an eagle with expanded wings: its territory, they say, is the most fertile in all the East. The Parthi again, in its turn, founded Ctesiphon, for the purpose of drawing away the population of Seleucia, at a distance of nearly three miles, and in the district of Chalonitis; Ctesiphon is now the capital of all the Parthian kingdoms. Finding, however, that this city did not answer the intended purpose, king Vologesus has of late years founded another city in its vicinity, Vologesocerta by name. Besides the above, there are still the following towns in Mesopotamia: Hipparenum, rendered famous, like Babylon, by the learning of the Chaldæi, and situate near the river Narraga, which falls into the Narroga, from which a city so called has taken its name. The Persæ destroyed the walls of Hipparenum. Orchenus also, a third place of learning of the Chaldæi, is situate in the same district, towards the south; after which come the Notitæ, the Orothophanitæ, and the Grecichartæ. From Nearchus and Onesicritus we learn that

the distance by water from the Persian Sea to Babylon, up the Euphrates, is four hundred and twelve miles; other authors, however, who have written since their time, say that the distance to Seleucia is four hundred and forty miles: and Juba says that the distance from Babylon to Charax is one hundred and seventy-five. Some writers state that the Euphrates continues to flow with an undivided channel for a distance of eighty-seven miles beyond Babylon, before its waters are diverted from their channel for the purposes of irrigation; and that the whole length of its course is not less than twelve hundred miles. The circumstance that so many different authors have treated of this subject, accounts for all these variations, seeing that even the Persian writers themselves do not agree as to what is the length of their *schœni* and *para- sangœ,* each assigning to them a different length.

When the Euphrates ceases, by running in its channel, to afford protections to those who dwell on its banks, which it does when it approaches the confines of Charax, the country is immediately infested by the Attali, a predatory people of Arabia, beyond whom are found the Scenite. The banks along this river are occupied by the Nomades of Arabia, as far as the deserts of Syria, from which, as we have already stated, it takes a turn to the south, and leaves the solitary deserts of Palmyra. Seleucia is distant, by way of the Euphrates, from the beginning of Mesopotamia, eleven hundred and twenty- five; from the Red Sea, by way of the Tigris, two hundred and twenty; and from Zeugma, seven hundred and twenty-three, miles. Zeugma is distant from Seleucia in Syria, on the shores of our sea, one hundred and seventy-five miles. Such is the extent of the land that lies in these parts between the two seas. The length of the kingdom of Parthia is nine hundred and eighteen miles.

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CHAP. 31.

THE TIGRIS.

There is, besides the above, another town in Mesopotamia, on the banks of the Tigris and near its confluence with the Euphrates, the name of which is Digba. (27.) But it will be as well now to give some particulars respecting the Tigris itself. This river rises in the region of Greater Armenia, from a very remarkable source, situate on a plain. The name of the spot is Elegosine, and the stream, as soon as it begins to flow, though with a slow current, has the name of Diglito. When its course becomes more rapid, it assumes the name of Tigris, given to it on account of its swiftness, that word signifying an arrow in the Median language. It then flows into Lake Arethusa, the waters of which are able to support all weighty substances thrown into them, and exhale nitrous vapours. This lake produces only one kind of fish, which, however, never enter the current of the river in its passage through the lake: and in a similar manner, the fish of the Tigris will never swim out of its stream into the waters of the lake. Distinguishable from the lake, both by the rapidity and the colour of its waters, the tide of the river is hurried along; after it has passed through and arrived at Mount Taurus, it disappears in a cavern of that mountain, and passing beneath it, bursts forth on the other side; the spot bears the name of Zoroande. That the waters on either side of the mountain are the same, is evident from the fact, that bodies thrown in on the one side will reappear on the other. It then passes through another lake, called Thospites, and once more burying itself in the earth, reappears, after running a distance of twenty-two miles, in the vicinity of Nymphæum. Claudius Cæsar informs us that, in the district of Arrene it flows so near to the river Arsanias, that when their waters swell they meet and flow together, but without, however, intermingling. For those of the Arsani, as he says, being lighter, float on the surface of the Tigris for a distance of nearly four miles, after which they separate, and the Arsanias flows into the Euphrates. The Tigris, after flowing through Armenia and receiving the well-known rivers Parthenias and Nicephorion, separates the Arabian Orei from

the Adiabeni, and then forms by its course, as previously mentioned, the country of Mesopotamia. After traversing the mountains of the Gordyæi, it passes round Apamea, a town of Mesene, one hundred and twenty-five miles on this side of Babylonian Seleucia, and then divides into two channels, one of which runs southward, and flowing through Mesene, runs towards Seleucia, while the other takes a turn to the north and passes through the plains of the Cauchæ, at the back of the district of Mesene. When the waters have reunited, the river assumes the name of Pasitigris. After this, it receives the Choaspes, which comes from Media; and then, as we have already stated, flowing between Seleucia and Ctesiphon, discharges itself into the Chaldæan Lakes, which it supplies for a distance of seventy miles. Escaping from them by a vast channel, it passes the city of Charax to the right, and empties itself into the Persian Sea, being ten miles in width at the mouth. Between the mouths of the two rivers Tigris and the Euphrates, the distance was formerly twenty-five, or, according to some writers, seven miles only, both of them being navigable to the sea. But the Orcheni and others who dwell on its banks, have long since dammed up the waters of the Euphrates for the purposes of irrigation, and it can only discharge itself into the sea by the aid of the Tigris.

The country on the banks of the Tigris is called Parapotamia; we have already made mention of Mesene, one of its districts. Dabithac is a town there, adjoining to which is the district of Chalonitis, with the city of Ctesiphon, famous, not only for its palm-groves, but for its olives, fruits, and other shrubs. Mount Zagrus reaches as far as this district, and extends from Armenia between the Medi and the Adiabeni, above Parætacene and Persis. Chalonitis is distant from Persis three hundred and eighty miles; some writers say that by the shortest route it is the same distance from Assyria and the Caspian Sea.

Between these peoples and Mesene is Sittacene, which is also called Arbelitis and Palæstine. Its city of Sittace is of Greek origin; this and Sabdata lie to the east, and on the west is Antiochia, between the two rivers Tigris and Tornadotus, as also Apamea, to which Antiochus gave this name, being that of his mother. The Tigris surrounds this city, which is also traversed by the waters of the

Archoüs.

Below this district is Susiane, in which is the city of Susa, the ancient residence of the kings of Persia, built by Darius, the son of Hystaspes; it is distant from Seleucia Babylonia four hundred and fifty miles, and the same from Ecbatana of the Medi, by way of Mount Carbantus. Upon the northern channel of the river Tigris is the town of Babytace, distant from Susa one hundred and thirty-five miles. Here, for the only place in all the world, is gold held in abhorrence; the people collect it together and bury it in the earth, that it may be of use to no one. On the east of Susiane are the Oxii, a predatory people, and forty independent savage tribes of the Mizæi. Above these are the Mardi and the Saitæ, subject to Parthia: they extend above the district of Elymais, which we have already mentioned as joining up to the coast of Persis. Susa is distant two hundred and fifty miles from the Persian Sea. Near the spot where the fleet of Alexander came up the Pasitigris to Susa, there is a village situate on the Chaldæan Lake, Aple by name, from which to Susa is a distance of sixty miles and a half. Adjoining to the people of Susiane, on the east, are the Cossiei; and above them, to the north, is Mesabatene, lying at the foot of Mount Cambalidus, a branch of the Caucasian chain: from this point the country of the Bactri is most accessible.

Susiane is separated from Elymais by the river Eulæus, which rises in Media, and, after concealing itself in the earth for a short distance, rises again and flows through Mesabatene. It then flows round the citadel of Susa and the temple of Diana, which is held in the highest veneration by all these nations; the river itself being the object of many pompous ceremonials; the kings, indeed, will drink of no other water, and for that reason carry it with them on their journies to any considerable distance. This river receives the waters of the Hedypnos, which passes Asylus, in Persis, and those of the Aduna, which rises in Susiane. Magoa is a town situate near it, and distant from Charax fifteen miles; some writers place this town at the very extremity of Susiane, and close to the deserts.

Below the Eulæus is Elymais, upon the coast adjoining to Persis, and extending from the river Orates to Charax, a distance of two hundred and forty miles. Its towns are Seleucia and Socrate, upon

Mount Casyrus. The shore which lies in front of this district is, as we have already stated, rendered inaccessible by mud, the rivers Brixa and Ortacea bringing down vast quantities of slime from the interior, — Elymais itself being so marshy that it is impossible to reach Persis that way, unless by going completely round: it is also greatly infested with serpents, which are brought down by the waters of these rivers. That part of it which is the most inaccessible of all, bears the name of Characene, from Charax, the frontier city of the kingdoms of Arabia. Of this place we will now make mention, after first stating the opinions of M. Agrippa in relation to this subject. That author informs us that Media, Parthia, and Persis, are bounded on the east by the Indus, on the west by the Tigris, on the north by Taurus and Caucasus, and on the south by the Red Sea; that the length of these countries is thirteen hundred and twenty miles, and the breadth eight hundred and forty; and that, in addition to these, there is Mesopotamia, which, taken by itself, is bounded on the east by the Tigris, on the west by the Euphrates, on the north by the chain of Taurus, and on the south by the Persian Sea, being eight hundred miles in length, and three hundred and sixty in breadth.

Charax is a city situate at the furthest extremity of the Arabian Gulf, at which begins the more prominent portion of Arabia Felix: it is built on an artificial elevation, having the Tigris on the right, and the Eulæus on the left, and lies on a piece of ground three miles in extent, just between the confluence of those streams. It was first founded by Alexander the Great, with colonists from the royal city of Durine, which was then destroyed, and such of his soldiers as were invalided and left behind. By his order it was to be called Alexandria, and a borough called Pella, from his native place, was to be peopled solely by Macedonians; the city, however, was destroyed by inundations of the rivers. Antiochus, the fifth king of Syria, afterwards rebuilt this place and called it by his own name; and on its being again destroyed, Pasines, the son of Saggonadacus, and king of the neighbouring Arabians, whom Juba has incorrectly described as a satrap of king Antiochus, restored it, and raised embankments for its protection, calling it after himself. These embankments extended in length a distance of nearly three miles, in breadth a little less. It stood at first at a distance of ten stadia from the shore, and even had a

harbour of its own. But according to Juba, it is fifty miles from the sea; and at the present day, the ambassadors from Arabia, and our own merchants who have visited the place, say that it stands at a distance of one hundred and twenty miles from the sea-shore. Indeed, in no part of the world have alluvial deposits been formed more rapidly by the rivers, and to a greater extent than here; and it is only a matter of surprise that the tides, which run to a considerable distance beyond this city, do not carry them back again. At this place was born Dionysius, the most recent author of a description of the world; he was sent by the late emperor Augustus to gather all necessary information in the East, when his eldest son was about to set out for Armenia to take the command against the Parthians and Arabians.

The fact has not escaped me, nor indeed have I forgotten, that at the beginning of this work I have remarked that each author appeared to be most accurate in the description of his own country; still, while I am speaking of these parts of the world, I prefer to follow the discoveries made by the Roman arms, and the description given by king Juba, in his work dedicated to Caius Cæsar above-mentioned, on the subject of the same expedition against Arabia.

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CHAP. 32. (28.)

ARABIA.

Arabia, inferior to no country throughout the whole world, is of immense extent, running downwards, as we have previously stated, from Mount Amanus, over against Cilicia and Commagene; many of the Arabian nations having been removed to those countries by Tigranes the Great, while others again have migrated of their own accord to the shores of our sea and the coast of Egypt, as we have already mentioned. The Nubei have even penetrated as far as Mount Libanus in the middle of Syria; in their turn they are bounded by the Ramisi, these by the Taranei, and these again by the Patami.

As for Arabia itself, it is a peninsula, running out between the Red and the Persian Seas; and it is by a kind of design, apparently on the part of nature, that it is surrounded by the sea in such a manner as to resemble very much the form and size of Italy, there being no difference either in the climate of the two countries, as they lie in the same latitudes. This, too, renders it equally fertile with the countries of Italy. We have already mentioned its peoples, which extend from our sea as far as the deserts of Palmyrene, and we shall now proceed to a description of the remainder. The Scenitæ, as we have already stated, border upon the Nomades and the tribes that ravage the territories of Chaldæa, being themselves of wandering habits, and receiving their name from the tents which constitute their dwellings; these are made of goats' hair, and they pitch them wherever they please. Next after them are the Nabatæi, who have a city called Petra, which lies in a deep valley, somewhat less than two miles in width, and surrounded by inaccessible mountains, between which a river flows: it is distant from the city of Gaza, on our shores, six hundred miles, and from the Persian Gulf one hundred and thirty-five. At this place two roads meet, the one leading from Syria to Palmyra, and the other from Gaza. On leaving Petra we come to the Omani, who dwell as far as Charax, with their once famous cities which were built by Semiramis, Besannisa and Soractia by name; at the present day they are wildernesses. We next come to a city situate on the banks of the

Pasitigris, Fora by name, and subject to the king of Charax: to this place people resort on their road from Petra, and sail thence to Charax, twelve miles distant, with the tide. If you are proceeding by water from the Parthian territories, you come to a village known as Teredon; and below the confluence of the Euphrates and Tigris, you have the Chaldæi dwelling on the left side of the river, and the Nomadic tribes of the Scenitæ on the right. Some writers also make mention of two other cities situate at long intervals, as you sail along the Tigris, Barbatia, and then Thumata, distant from Petra, they say, ten days' sail; our merchants report that these places are subject to the king of Charax. The same writers also state, that Apamea is situate where the overflow of the Euphrates unites with the Tigris; and that when the Parthians meditate an incursion, the inhabitants dam up the river by embankments, and so inundate their country.

We will now proceed to describe the coast after leaving Charax, which was first explored by order of king Epiphanes. We first come to the place where the mouth of the Euphrates formerly existed, the river Salsus, and the Promontory of Chaldone, from which spot, the sea along the coast, for an extent of fifty miles, bears more the aspect of a series of whirlpools than of ordinary sea; the river Achenus, and then a desert tract for a space of one hundred miles, until we come to the island of Ichara; the gulf of Capeus, on the shores of which dwell the Gaulopes and the Chateni, and then the gulf of Gerra. Here we find the city of Gerra, five miles in circumference, with towers built of square blocks of salt. Fifty miles from the coast, lying in the interior, is the region of At- tene, and opposite to Gerra is the island of Tylos, as many miles distant from the shore; it is famous for the vast number of its pearls, and has a town of the same name; in its vicinity there is a smaller island, distant from a promontory on the larger one twelve miles and a half. They say that beyond this large islands may be seen, upon which no one has ever landed: the circumference of the smaller island is one hundred and twelve miles and a half; and it is more than that distance from the Persian coast, being accessible by only one narrow channel. We then come to the island of Asclie, and the nations of the Nocheti, the Zurazi, the Borgodi, the Catharrei, the Nomades, and then the river Cynos. Beyond this, the navigation is impracticable on that side, according

to Juba, on account of the rocks; and he has omitted all mention of Batrasave, a town of the Omani, and of the city of Omana, which former writers have made out to be a famous port of Carmania; as also of Homna and Attana, towns which at the present day, our merchants say, are by far the most famous ones in the Persian Sea. Passing the river Cynos, there is a mountain, Juba says, that bears marks of the action of fire; also, the nation of the Epimaranitæ, then a nation of Ichthyophagi, and then a desert island, and the nation of the Bathymi. We then come to the Eblitæan Mountains, the island of Omoënus, the port of Mochorbe, the islands of Etaxalos and Inchobrice, and the nation of the Cadæi. There are many islands also that have no name, but the better known ones are Isura, Rhinnea, and another still nearer the shore, upon which there are some stone pillars with an inscription in unknown characters. There are also the port of Gobœa, the desert islands called Bragæ, the nation of the Thaludæi, the region of Dabanegoris, Mount Orsa, with a harbour, the gulf of Duatus, with numerous islands, Mount Tricoryphos, the region of Cardaleon, and the islands called Solanades, Cachinna, and that of the Ichthyophagi. We then find the Clari, the shore of Mamæum, on which there are gold mines, the region of Canauna, the nations of the Apitami and the Casani, the island of Devade, the fountain of Coralis, the Carphati, the islands of Calaëu and Amnamethus, and the nation of the Darræ. Also, the island of Chelonitis, numerous islands of Ichthyophagi, the deserts of Odanda, Basa, many islands of the Sabæi, the rivers Thanar and Amnume, the islands of Dorice, and the fountains of Daulotos and Dora. We find also the islands of Pteros, Labatanis, Coboris, and Sambrachate, with a town of the same name on the mainland. Lying to the south are a great number of islands, the largest of which is Camari; also the river Musecros, and the port of Laupas. We then come to the Sabæi, a nation of Scenitæ, with numerous islands, and the city of Acila, which is their mart, and from which persons embark for India. We next come to the region of Amithos- cutta. Damnia, the Greater and the Lesser Mizi, and the Drimati. The promontory of the Naumachæi, over against Carmania, is distant from it fifty miles. A wonderful circumstance is said to have happened here; Numenius, who was made governor of Mesena by king Antiochus, while fighting against the Persians, defeated them

at sea, and at low water, by land, with an army of cavalry, on the same day; in memory of which event he erected a twofold trophy on the same spot, in honour of Jupiter and Neptune.

Opposite to this place, in the main sea, lies the island of Ogyris, famous for being the burial-place of king Erythras; it is distant from the mainland one hundred and twenty miles, being one hundred and twelve in circumference. No less famous is another island, called Dioscoridu, and lying in the Azanian Sea; it is distant two hundred and eighty miles from the extreme point of the Promontory of Syagrus.

The remaining places and nations on the mainland, lying still to the south, are the Ausaritæ, to whose country it is seven days' journey among the mountains, the nations of the Larendani and the Catabani, and the Gebanitæ, who occupy a great number of towns, the largest of which are Nagia, and Thomna with sixty-five temples, a number which fully bespeaks its size. We then come to a promontory, from which to the mainland of the Troglodytæ it is fifty miles, and then the Thoani, the Actæi, the Chatramotitæ, the Tonabei, the Antidalei, the Lexianæ, the Agræi, the Cerbani, and the Sabæi, the best known of all the tribes of Arabia, on account of their frankincense; these nations extend from sea to sea. The towns which belong to them on the Red Sea are Marane, Marma, Corolia, and Sabatha; and in the interior, Nascus, Cardava, Carnus, and Thomala, from which they bring down their spices for exportation. One portion of this nation is the Atramitæ, whose capital, Sabota, has sixty temples within its walls. But the royal city of all these nations is Mariaba; it lies upon a bay, ninety-four miles in extent, and filled with islands that produce perfumes. Lying in the interior, and joining up to the Atramitæ, are the Mitæi; are the Minæ; the Elamitæ dwell on the sea-shore, in a city from which they take their name. Next to these are the Chaculatæ; then the town of Sibi, by the Greeks called Apate; the Arsi, the Codani, the Vadei, who dwell in a large town, the Barasasæi, the Lechieni, and the island of Sygaros, into the interior of which no dogs are admitted, and so being exposed on the sea shore, they wander about there and are left to die. We then come to a gulf which runs far into the interior, upon which are situate the Lænitæ, who have given to it their name; also their royal city of

Agra, and upon the gulf that of Læana, or as some call it Ælana; indeed, by some of our writers this has been called the Ælanitic Gulf, and by others again, the Ælenitic; Artemidorus calls it the Alenitic, and Juba the Lænitic. The circumference of Arabia, measured from Charax to Læana, is said to be four thousand six hundred and sixty-six miles, but Juba thinks that it is somewhat less than four thousand. Its widest part is at the north, between the cities of Heroopolis and Charax. We will now mention the remaining places and peoples of the interior of Arabia.

Up to the Nabatæi the ancients joined the Thimanei; at present they have next to them the Taveni, and then the Suelleni, the Arraeeni, and the Areni, whose town is the centre of all the commerce of these parts. Next come the Hemnatæ, the Aualitæ, the towns of Domata and Hegra, the Tamudæi, with the town of Badanatha, the Carrei, with the town of Cariati, the Achoali, with the town of Foth, and the Minæi, who derive their origin, it is supposed, from Minos, king of Crete, and of whom the Carmæi are a tribe. Next comes a town, fourteen miles distant, called Marippa, and belonging to the Palamaces, a place by no means to be overlooked, and then Carnon. The Rhadamæi also — these too are supposed to derive their origin from Rhadamanthus, the brother of Minos — the Homeritæ, with their city of Masala, the Hamirei, the Gedranitæ, the Amphyræ, the Ilisanitæ, the Bachilitæ, the Samnæi, the Amitei, with the towns of Nessa and Cennesseris, the Zamareni, with the towns of Sagiatta and Canthace, the Bacascami, the town of Riphearma, the name by which they call barley, the Autei, the Ethravi, the Cyrei and the Mathatræi, the Helmodenes, with the town of Ebode, the Agacturi, dwelling in the mountains, with a town twenty miles distant, in which is a fountain called Ænuscabales, which signifies "the town of the camels." Ampelome also, a Milesian colony, the town of Athrida, the Calingii, whose city is called Mariva, and signifies "the lord of all men;" the towns of Palon and Murannimal, near a river by which it is thought that the Euphrates discharges itself, the nations of the Agrei and the Ammonii, the town of Athenæ, the Caunaravi, a name which signifies "most rich in herds," the Coranitæ, the Œsani, and the Choani. Here were also formerly the Greek towns of Arethusa, Larisa, and Chalcis, which have been

destroyed in various wars.

Ælius Gallus, a member of the Equestrian order, is the sole person who has hitherto carried the Roman arms into these lands, for Caius Cæsar, the son of Augustus, only had a distant view of Arabia. In his expedition, Gallus destroyed the following towns, the names of which are not given by the authors who had written before his time, Negrana, Nestum, Nesca, Masugum, Caminacum, Labecia, and Mariva above- mentioned, six miles in circumference, as also Caripeta, the furthest point of his expedition. He brought back with him the following discoveries — that the Nomades live upon milk and the flesh of wild beasts, and that the other nations, like the Indians, extract a sort of wine from the palm-tree, and oil from sesame. He says that the most numerous of these tribes are the Homeritæ and the Minæi, that their lands are fruitful in palms and shrubs, and that their chief wealth is centred in their flocks. We also learn from the same source that the Cerbani and the Agræi excel in arms, but more particularly the Chatramotitæ; that the territories of the Carrei are the most extensive and most fertile; but that the Sabæi are the richest of all in the great abundance of their spice-bearing groves, their mines of gold, their streams for irrigation, and their ample produce of honey and wax. Of their perfumes we shall have to treat more at large in the Book devoted to that subject. The Arabs either wear the mitra, or else go with their hair unshorn, while the beard is shaved, except upon the upper lip: some tribes, however, leave even the beard unshaved. A singular thing too, one half of these almost innumerable tribes live by the pursuits of commerce, the other half by rapine: take them all in all, they are the richest nations in the world, seeing that such vast wealth flows in upon them from both the Roman and the Parthian Empires; for they sell the produce of the sea or of their forests, while they purchase nothing whatever in return.

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CHAP. 33.

THE GULFS OF THE RED SEA.

We will now trace the rest of the coast that lies opposite to that of Arabia. Timosthenes has estimated the length of the whole gulf at four days' sail, and the breadth at two, making the Straits to be seven miles and a half in width. Eratosthenes says that the length of the shore from the mouth of the gulf is thirteen hundred miles on each side, while Artemidorus states that the length on the Arabian side is seventeen hundred and fifty miles, (29.) and that along the Troglodytic coast, to Ptolemais, the distance is eleven hundred and thirty-seven and a half. Agrippa, however, maintains that there is no difference whatever in the length of the two sides, and makes it seventeen hundred and twenty-two miles. Most writers mention the length as being four hundred and seventy-five miles, and make the Straits to face the southeast, being twelve miles wide according to some, fifteen according to others.

The localities of this region are as follow: On passing the Ælanitic Gulf there is another gulf, by the Arabians called Sœa, upon which is situate the city of Heroön. The town of Cambysu also stood here formerly, between the Neli and the Marchades, Cambyses having established there the invalids of his army. We then come to the nation of the Tyri, and the port of the Danei, from which place an attempt has been made to form a navigable canal to the river Nile, at the spot where it enters the Delta previously mentioned, the distance between the river and the Red Sea being sixty-two miles. This was contemplated first of all by Sesostris, king of Egypt, afterwards by Darius, king of the Persians, and still later by Ptolemy II., who also made a canal, one hundred feet in width and forty deep, extending a distance of thirty-seven miles and a half, as far as the Bitter Springs. He was deterred from proceeding any further with this work by apprehensions of an inundation, upon finding that the Red Sea was three cubits higher than the land in the interior of Egypt. Some writers, however, do not allege this as the cause, but say that his reason was, a fear lest, in consequence of introducing the sea, the

water of the Nile might be spoilt, that being the only source from which the Egyptians obtain water for drinking. Be this as it may, the whole of the journey from the Egyptian Sea is usually performed by land one of the three following ways: — Either from Pelusium across the sands, in doing which the only method of finding the way is by means of reeds fixed in the earth, the wind immediately effacing all traces of footsteps: by the route which begins two miles beyond Mount Casius, and at a distance of sixty miles enters the road from Pelusium, adjoining to which road the Arabian tribe of the Autei dwell; or else by a third route, which leads from Gerrum, and which they call Adipsos, passing through the same Arabians, and shorter by nearly sixty miles, but running over rugged mountains and through a district destitute of water. All these roads lead to Arsinoë, a city founded in honour of his sister's name, upon the Gulf of Carandra, by Ptolemy Philadelphus, who was the first to explore Troglodytice, and called the river which flows before Arsinoë by the name of Ptolemæus. After this comes the little town of Enum, by some writers mentioned as Philotera; next to which are the Abasæi, a nation sprung from intermarriages with the Troglodytæ, then some wild Arabian tribes, the islands of Sapirine and Scytala, and after these, deserts as far as Myoshormon, where we find the fountain of Tatnos, Mount Æas, the island of Iambe, and numerous harbours. Berenice also, is here situate, so called after the name of the mother of Philadelphus, and to which there is a road from Coptos, as we have previously stated; then the Arabian Autei, and the Zebadei.

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CHAP. 34.

TROGLODYTICE.

Troglodytice comes next, by the ancients called Midoë, and by some Michoë; here is Mount Pentedactylos, some islands called Stenæ Deiræ, the Halonnesi, a group of islands not less in number, Cardamine, and Topazos, which last has given its name to the precious stone so called. The gulf is full of islands; those known as Mareu are supplied with fresh water, those called Erenos, are without it; these were ruled by governors appointed by the kings. In the interior are the Candei, also called Ophiophagi, a people in the habit of eating serpents; there is no region in existence more productive of them.

Juba, who appears to have investigated all these matters with the greatest diligence, has omitted, in his description of these regions — unless, indeed, it be an error in the copying — another place called Berenice and surnamed Panchrysos, as also a third surnamed Epidires, and remarkable for the peculiarity of its site; for it lies on a long projecting neck of land, at the spot where the Straits at the mouth of the Red Sea separate the coast of Africa from Arabia by a distance of seven miles only: here too is the island of Cytis, which also produces the topaz.

Beyond this are forests, in which is Ptolemais, built by Philadelphus for the chase of the elephant, and thence called Epitheras, situate near Lake Monoleus. This is the same region that has been already mentioned by us in the Second Book, and in which, during forty-five days before the summer solstice and for as many after, there is no shadow at the sixth hour, and during the other hours of the day it falls to the south; while at other times it falls to the north; whereas at the Berenice of which we first made mention, on the day of the summer solstice the shadow totally disappears at the sixth hour, but no other unusual phænomenon is observed. That place is situate at a distance of six hundred and two miles from Ptolemais, which has thus become the subject of a remarkable theory, and has promoted the exercise of a spirit of the most profound investigation;

for it was at this spot that the extent of the earth was first ascertained, it being the fact that Erastosthenes, beginning at this place by the accurate calculation of the length of the shadow, was enabled to determine with exactness the dimensions of the earth.

After passing this place we come to the Azanian Sea, a promontory by some writers called Hispalus, Lake Mandalum, and the island of Colocasitis, with many others lying out in the main sea, upon which multitudes of turtles are found. We then come to the town of Suche, the island of Daphnidis, and the town of the Adulitæ, a place founded by Egyptian runaway slaves. This is the principal mart for the Troglodyte, as also for the people of Æthiopia: it is distant from Ptolemais five days' sail. To this place they bring ivory in large quantities, horns of the rhinoceros, hides of the hippopotamus, tortoise-shell, sphingiæ, and slaves. Beyond the Æthiopian Aroteræ are the islands known by the name of Aliæu, as also those of Bacchias, Antibacchias, and Stratioton. After passing these, on the coast of Æthiopia, there is a gulf which remains unexplored still; a circumstance the more to be wondered at, seeing that merchants have pursued their investigations to a greater distance than this. We then come to a promontory, upon which there is a spring called Cucios, much resorted to by mariners. Beyond it is the Port of Isis, distant ten days' rowing from the town of the Adulitæ: myrrh is brought to this port by the Troglodytæ. The two islands before the harbour are called Pseudepylæ, and those in it, the same in number, are known as Pylæ; upon one of these there are some stone columns inscribed with unknown characters. Beyond these is the Gulf of Abalites, the island of Diodorus, and other desert islands; also, on the mainland, a succession of deserts, and then the town of Gaza, and the promontory and port of Mossylum, to the latter of which cinnamon is brought for exportation: it was thus far that Sesostris led his army.

Some writers place even beyond this, upon the shore, one town of Ethiopia, called Baricaza. Juba will have it that at the Promontory of Mossylum the Atlantic Sea begins, and that with a north-west wind we may sail past his native country, the Mauritanias, and arrive at Gades. We ought not on this occasion to curtail any portion of the opinions so expressed by him. He says that after we pass the

promontory of the Indians, known as Lepteacra, and by others called Drepanum, the distance, in a straight line, beyond the island of Exusta and Malichu, is fifteen hundred miles; from thence to a place called Sceneos two hundred and twenty-five; and from thence to the island of Adanu one hundred and fifty miles; so that the dis- tance to the open sea is altogether eighteen hundred and seventy-five miles. All the other writers, however, are of opinion that, in consequence of the intensity of the sun's heat, this sea is not navigable; added to which, commerce is greatly exposed to the depredations of a piratical tribe of Arabians called Ascitæ, who dwell upon the islands: placing two inflated skins of oxen beneath a raft of wood, they ply their piratical vocation with the aid of. poisoned arrows. We learn also from the same author that some nations of the Troglodytae have the name of Therothoæ, being so called from their skill in hunting. They are remarkable for their swiftness, he says, just as the Ichthyophagi are, who can swim like the animals whose element is the sea. He speaks also of the Bangeni, the Gangoræ, the Chalybes, the Xoxinæ, the Sirechæ, the Daremæ, and the Domazames. Juba states, too, that the inhabitants who dwell on the banks of the Nile from Syene as far as Meroë, are not a people of Æthiopia, but Arabians; and that the city of the Sun, which we have mentioned as situate not far from Memphis, in our description of Egypt, was founded by Arabians. There are some writers who take away the further bank of the Nile from Æthiopia, and unite it to Africa; and they people its sides with tribes attracted thither by its water. We shall leave these matters, however, to the option of each, to form his opinion on them, and shall now proceed to mention the towns on each side in the order in which they are given.

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CHAP. 35.

ETHIOPIA.

On leaving Syene, and taking first the Arabian side, we find the nation of the Catadupi, then the Syenitæ, and the town of Tacompsos, by some called Thatice, as also Aramasos, Sesamos, Sanduma, Masindomacam, Arabeta and Boggia, Leupitorga, Tantarene, Mecindita, Noa, Gloploa, Gystate, Megada, Lea, Renni, Nups, Direa, Patiga, Bacata, Dumana, Rhadata, at which place a golden cat was worshipped as a god, Boron, in the interior, and Mallos, near Meroë; this is the account given by Bion.

Juba, however, gives another account; he says that there is a city on Mount Megatichos, which lies between Egypt and Ethiopia, by the Arabians known as Myrson, after which come Tacompsos, Aramus, Sesamos, Pide, Mamuda, Orambis, situate near a stream of bitumen, Amodita, Prosda, Parenta, Mama, Tesatta, Gallas, Zoton, Graucome, Emeus, the Pidibotæ, the Hebdomecontacometæ, Nomades, who dwell in tents, Cyste, Macadagale, Proaprimis, Nups, Detrelis, Patis, the Ganbreves, the Magasnei, Segasmala, Crandala, Denna, Cadeuma, Thena, Batta, Alana, Mascoa, the Scamini, Hora, situate on an island, and then Abala, Androgalis, Sesecre, the Malli, and Agole.

On the African side we find mentioned, either what is another place with the same name of Tacompsos, or else a part of the one before-mentioned, and after it Moggore, Sæa, Edos, Plenariæ, Pinnis, Magassa, Buma, Linthuma, Spintum, Sydop, the Censi, Pindicitora, Acug, Orsum, Sansa, Maumarum, Urbim, the town of Molum, by the Greeks called Hypaton, Pagoarca, Zmanes, at which point elephants begin to be found, the Mambli, Berressa, and Acetuma; there was formerly a town also called Epis, over against Meroë, which had, however, been destroyed before Bion wrote.

These are the names of places given as far as Meroë: but at the present day hardly any of them on either side of the river are in existence; at all events, the prætorian troops that were sent by the Emperor Nero under the command of a tribune, for the purposes of

enquiry, when, among his other wars, he was contemplating an expedition against Æthiopia, brought back word that they had met with nothing but deserts on their route. The Roman arms also penetrated into these regions in the time of the late Emperor Augustus, under the command of P. Petronius, a man of Equestrian rank, and prefect of Egypt. That general took the following cities, the only ones we now find mentioned there, in the following order; Pselcis, Primis, Abuncis, Phthuris, Cambusis, Atteva, and Stadasis, where the river Nile, as it thunders down the precipices, has quite deprived the in- habitants of the power of hearing: he also sacked the town of Napata. The extreme distance to which he penetrated beyond Syene was nine hundred and seventy miles; but still. it was not the Roman arms that rendered these regions a desert. Æthiopia, in its turn gaining the mastery, and then again reduced to servitude, was at last worn out by its con- tinual wars with Egypt, having been a famous and powerful country even at the time of the Trojan war, when Memnon was its king; it is also very evident from the fabulous stories about Andromeda, that it ruled over Syria in the time of king Cepheus, and that its sway extended as far as the shores of our sea.

In a similar manner, also, there have been conflicting accounts as to the extent of this country: first by Dalion, who travelled a considerable distance beyond Meroë, and after him by Aristocreon and Basilis, as well as the younger Simonides, who made a stay of five years at Meroë, when he wrote his account of Æthiopia. Timosthenes, however, the commander of the fleets of Philadelphus, without giving any other estimate as to the distance, says that Meroë is sixty days' journey from Syene; while Eratosthenes states that the distance is six hundred and twenty-five miles, and Artemidorus six hundred. Sebosus says that from the extreme point of Egypt, the distance to Meroë is sixteen hundred and seventy-five miles, while the other writers last mentioned make it twelve hundred and fifty. All these differences, however, have since been settled; for the persons sent by Nero for the purposes of discovery have reported that the distance from Syene to Meroë is eight hundred and seventy-one miles, the following being the items. From Syene to Hiera Sycaminos they make to be fifty-four miles, from thence to Tama seventy-two, to the country of the Evonymitæ, the first region of

Æthiopia, one hundred and twenty, to Acina fifty-four, to Pittara twenty-five, and to Tergedus one hundred and six. They state also that the island of Gagaudes lies at an equal distance from Syene and Meroë, and that it is at this place that the bird called the parrot was first seen; while at another island called Articula, the animal known as the sphingium was first discovered by them, and after passing Tergedus, the cynocephalus. The distance from thence to Napata is eighty miles, that little town being the only one of all of them that now survives. From thence to the island of Meroë the distance is three hundred and sixty miles. They also state that the grass in the vicinity of Meroë becomes of a greener and fresher colour, and that there is some slight appearance of forests, as also traces of the rhinoceros and elephant. They reported also that the city of Meroë stands at a distance of seventy miles from the first entrance of the island of Meroë, and that close to it is another island, Tadu by name, which forms a harbour facing those who enter the right hand channel of the river. The buildings in the city, they said, were but few in number, and they stated that a female, whose name was Candace, ruled over the district, that name having passed from queen to queen for many years. They related also that there was a temple of Jupiter Hammon there, held in great veneration, besides smaller shrines erected in honour of him throughout all the country. In addition to these particulars, they were informed that in the days of the Æthiopian dominion, the island of Meroe enjoyed great renown, and that, according to tradition, it was in the habit of maintaining two hundred thousand armed men, and four thousand artisans. The kings of Æthiopia are said even at the present day to be forty-five in number.

(30.) The whole of this country has successively had the names of Ætheria, Atlantia, and last of all, Æthiopia, from Æthiops, the son of Vulcan. It is not at all surprising that towards the extremity of this region the men and animals assume a monstrous form, when we consider the changeableness and volubility of fire, the heat of which is the great agent in imparting various forms and shapes to bodies. Indeed, it is reported that in the interior, on the eastern side, there is a people that have no noses, the whole face presenting a plane surface; that others again are destitute of the upper lip, and others are without

tongues. Others again, have the mouth grown together, and being destitute of nostrils, breathe through one passage only, imbibing their drink through it by means of the hollow stalk of the oat, which there grows spontaneously and supplies them with its grain for food. Some of these nations have to employ gestures by nodding the head and moving the limbs, instead of speech. Others again were unacquainted with the use of fire before the time of Ptolemy Lathyrus, king of Egypt. Some writers have also stated that there is a nation of Pygmies, which dwells among the marshes in which the river Nile takes its rise; while on the coast of, Æthiopia, where we paused, there is a range of mountains, of a red colour, which have the appearance of being always burning.

All the country, after we pass Meroë, is bounded by the Troglodytæ and the Red Sea, it being three days' journey from Napata to the shores of that sea; throughout the whole of this district the rain water is carefully preserved at several places, while the country that lies between is extremely productive of gold. The parts beyond this are inhabited by the Adabuli, a nation of Æthiopia; and here, over against Meroë, are the Megabarri, by some writers called the Adiabari; they occupy the city of Apollo; some of them, however, are Nomades, living on the flesh of elephants. Opposite to them, on the African side, dwell the Macrobii, and then again, beyond the Megabarri, there are the Memnones and the Dabeli, and, at a distance of twenty days' journey, the Critensi. Beyond these are the Dochi, and then the Gymnetes, who always go naked; and after them the Andetæ, the Mothitæ, the Mesaches, and the Ipsodoræ, who are of a black tint, but stain the body all over with a kind of red earth. On the African side again there are the Medimni, and then a nation of Nomades, who live on the milk of the cynocephalus, and then the Aladi and the Syrbotæ, which last are said to be eight cubits in height.

Aristocreon informs us that on the Libyan side, at a distance of five days' journey from Meroë, is the town of Tolles, and then at a further distance of twelve days' journey, Esar, a town founded by the Egyptians who fled from Psammetichus; he states also that they dwelt there for a period of three hundred years, and that opposite, on the Arabian side, there is a town of theirs called Daron. The town,

however, which he calls Esar, is by Bion called Sape, who says that the name means "the strangers:" their capital being Sembobitis, situate on an island, and a third place of theirs, Sinat in Arabia. Between the mountains and the river Nile are the Simbarri, tile Palugges, and, on the mountains themselves, the Asachæ, who are divided into numerous peoples; they are said to be distant five days' journey from the sea, and to procure their subsistence by the chase of the elephant. An island in the Nile, which belongs to the Semberritæ, is governed by a queen; beyond it are the Æthiopian Nubei, at a distance of eight days' journey: their town is Tenupsis, situate on the Nile. There are the Sesambri also, a people among whom all the quadrupeds are without ears, the very elephants even. On the African side are the Tonobari, the Ptoenphæ, a people who have a dog for their king, and divine from his movements what are his commands; the Auruspi, who have a town at a considerable distance from the Nile, and then the Archisarmi, the Phaliges, the Marigerri, and the Casmari.

Bion makes mention also of some other towns situate on islands, the whole distance being twenty days' journey from Sembobitis to Meroë; a town in an adjoining island, under the queen of the Semberritæ, with another called Asara, and another, in a second island, called Darde. The name of a third island is Medoë, upon which is the town of Asel, and a fourth is called Garodes, with a town upon it of the same name. Passing thence along the banks of the Nile, are the towns of Navi, Modunda, Andatis, Secundum, Colligat, Secande, Navectabe, Cumi, Agrospi, Ægipa, Candrogari, Araba, and Summara.

Beyond is the region of Sirbitum, at which the mountains terminate, and which by some writers is said to contain the maritime Æthiopians, the Nisacæthæ, and the Nisyti, a word which signifies "men with three or four eyes," — not that the people really have that conformation, but because they are remarkable for the unerring aim of their arrows. On that side of the Nile which extends along the borders of the Southern Ocean beyond the Greater Syrtes, Dalion says that the people, who use rain-water only, are called the Cisori, and that the other nations are the Longompori, distant five days' journey from the Œcalices, the Usibalci, the Isbeli, the Perusii, the

Ballii, and the Cispii, the rest being deserts, and inhabited by the tribes of fable only. In a more westerly direction are the Nigroæ, whose king has only one eye, and that in the forehead, the Agriophagi, who live principally on the flesh of panthers and lions, the Pamphagi, who will eat anything, the Anthropophagi, who live on human flesh, the Cynamolgi, a people with the heads of dogs, the Artabatitæ, who have four feet, and wander about after the manner of will beasts; and, after them, the Hesperiæ and the Perorsi, whom we have already spoken of as dwelling on the confines of Mauritania. Some tribes, too, of the Æthiopians subsist on nothing but locusts, which are smoke-dried and salted as their provision for the year; these people do not live beyond their fortieth year.

M. Agrippa was of opinion that the length of the whole country of the Æthiopians, including the Red Sea, was two thousand one hundred and seventy miles, and its breadth, including Upper Egypt, twelve hundred and ninety-seven. Some authors again have made the following divisions of its length; from Meroë to Sirbitum eleven days' sail, from Sirbitum to the Dabelli fifteen days', and from them to the Æthiopian Ocean six days' journey. It is agreed by most authors, that the distance altogether, from the ocean to Meroë, is six hundred and twenty-five miles, and from Meroë to Syene, that which we have already mentioned. Æthiopia lies from south-east to south-west. Situate as it is, in a southern hemisphere, forests of ebony are to be seen of the brightest verdure; and in the midst of these regions there is a mountain of immense height, which overhangs the sea, and emits a perpetual flame. By the Greeks this mountain is called Theon Ochema, and at a distance of four days' sail from it is a promontory, known as Hesperu Ceras, upon the confines of Africa, and close to the Hesperiæ, an Æthiopian nation. There are some writers who affirm that in these regions there are hills of a moderate height, which afford a pleasant shade from the groves with which they are clad, and are the haunts of Ægipans and Satyrs.

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CHAP. 36. (31.)

ISLANDS OF THE ÆTHIOPIAN SEA.

We learn from Ephorus, as well as Eudoxus and Timosthenes, that there are great numbers of islands scattered all over this sea; Clitarchus says that king Alexander was informed of an island so rich that the inhabitants gave a talent of gold for a horse, and of another upon which there was found a sacred mountain, shaded with a grove, the trees of which emitted odours of wondrous sweetness; this last was situate over against the Persian Gulf. Cerne is the name of an island situate opposite to Æthiopia, the size of which has not been ascertained, nor yet its distance from the main land: it is said that its inhabitants are exclusively Æthiopians. Ephorus states that those who sail from the Red Sea into the Æthiopian Ocean cannot get beyond the Columnæ there, some little islands so called. Polybius says that Cerne is situate at the extremity of Mauritania, over against Mount Atlas, and at a distance of eight stadia from the land; while Cornelius Nepos states that it lies very nearly in the same meridian as Carthage, at a distance from the mainland of ten miles, and that it is not more than two miles in circumference. It is said also that there is another island situate over against Mount Atlas, being itself known by the name of Atlantis. Five days' sail beyond it there are deserts, as far as the Æthiopian Hesperiæ and the promontory, which we have mentioned as being called Hesperu Ceras, a point at which the face of the land first takes a turn towards the west and the Atlantic Sea. Facing this promontory are also said to be the islands called the Gorgades, the former abodes of the Gorgons, two days' sail from the mainland, according to Xenophon of Lampsacus. Hanno, a general of the Carthaginians, penetrated as far as these regions, and brought back an account that the bodies of the women were covered with hair, but that the men, through their swiftness of foot, made their escape; in proof of which singularity in their skin, and as evidence of a fact so miraculous, he placed the skins of two of these females in the temple of Juno, which were to be seen there until the capture of Carthage. Beyond these even, are said to be the two islands of the

Hesperides; but so uncertain are all the accounts relative to this subject, that Statius Sebosus says that it is forty days' sail, past the coast of the Atlas range, from the islands of the Gorgons to those of the Hesperides, and one day's sail from these to the Hesperu Ceras. Nor have we any more certain information relative to the islands of Mauritania. We only know, as a fact well-ascertained, that some few were discovered by Juba over against the country of the Autololes, upon which he established a manufactory of Gætulian purple.

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CHAP. 37. (32.)

THE FORTUNATE ISLANDS.

There are some authors who think that beyond these are the Fortunate Islands, and some others; the number of which Sebosus gives, as well as the distances, informing us that Junonia is an island seven hundred and fifty miles distant from Gades. He states also that Pluvialia and Capraria are the same distance from Junonia, to the west; and that in Pluvi- alia the only fresh water to be obtained is rain water. He then states that at a distance of two hundred and fifty miles from these, opposite the left of Mauritania, and situate in the direction of the sun at the eighth hour, are the Fortunate Islands, one of which, from its undulating surface, has the name of Invallis, and another that of Planasia, from the peculiarity of its appearance. He states also that the circumference of Invallis is three hundred miles, and that trees grow to a height of one hundred and fourteen feet.

Relative to the Fortunate Islands, Juba has ascertained the following facts: that they are situate to the south in nearly a due westerly direction, and at a distance from the Purple Islands of six hundred and twenty-five miles, the sailing being made for two hundred and fifty miles due west, and then three hundred and seventy-five towards the east. He states that the first is called Ombrios, and that it presents no traces of buildings whatever; that among the mountains there is a lake, and some trees, which bear a strong resemblance to giant fennel, and from which water is extracted; that drawn from those that are black is of a bitter taste, but that produced by the white ones is agreeable and good for drinking. He states also that a second island has the name of Junonia, but that it contains nothing beyond a small temple of stone: also that in its vicinity there is another, but smaller, island of the same name, and then another called Capraria, which is infested by multitudes of huge lizards. According to the same author, in sight of these islands is Ninguaria, which has received that name from its perpetual snows; this island abounds also in fogs. The one next to it is Canaria; it contains vast multitudes of dogs of very large size, two of which

were brought home to Juba: there are some traces of buildings to be seen here. While all these islands abound in fruit and birds of every kind, this one produces in great numbers the date palm which bears the caryota, also pine nuts. Honey too abounds here, and in the rivers papyrus, and the fish called silurus, are found. These islands, however, are greatly annoyed by the putrefying bodies of monsters, which are constantly thrown up by the sea.

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CHAP. 38.

THE COMPARATIVE DISTANCES OF PLACES ON THE FACE OF THE EARTH.

Having now fully described the earth, both without as well as within, it seems only proper that we should succinctly state the length and breadth of its various seas.

(33.) Polybius has stated, that in a straight line from the Straits of Gades to the mouth of the Mæotis, it is a distance of three thousand four hundred and thirty-seven miles and a half, and that, starting from the same point, the distance in a straight line to Sicily is twelve hundred and fifty miles, from thence to Crete three hundred and seventy-five, to Rhodes one hundred and eighty-seven and a half, to the Chelidonian Islands the same distance, to Cyprus two hundred and twenty-five, and from thence to Seleucia Pieria, in Syria, one hundred and fifteen miles: the sum of all which distances amounts to two thousand three hundred and forty miles. Agrippa estimates this same distance, in a straight line from the Straits of Gades to the Gulf of Issus, at three thousand three hundred and forty miles; in which computation, however, I am not certain that there is not some error in the figures, seeing that the same author has stated that the distance from the Straits of Sicily to Alexandria is thirteen hundred and fifty miles. Taking the whole length of the sea-line throughout the gulfs above-men- tioned, and beginning at the same point, he makes it ten thousand and fifty-eight miles; to which number Artemidorus has added seven hundred and fifty-six: the same author, including in his calculation the shores of the Mæotis, makes the whole distance seventeen thousand three hundred and ninety miles. Such is the measurement given by men who have penetrated into distant countries, unaided by force of arms, and have, with a boldness that exhibits itself in the times of peace even, challenged, as it were, Fortune herself.

I shall now proceed to compare the dimensions of the various parts of the earth, however great the difficulties which may arise from the discrepancy of the accounts given by various authors: the

most convenient method, however, will be that of adding the breadth to the length. Following this mode of reckoning, the dimensions of Europe will be eight thousand two hundred and ninety-four miles; of Africa, to adopt a mean between all the various accounts given by authors, the length is three thousand seven hundred and ninety-four miles, while the breadth, so far as it is inhabited, in no part exceeds two hundred and fifty miles. But, as Agrippa, including its deserts, makes it from Cyrenaica, a part of it, to the country of the Garamantes, so far as was then known, a further distance of nine hundred and ten miles, the entire length, added together, will make a distance of four thousand six hundred and eight miles. The length of Asia is generally admitted to be six thousand three hundred and seventy-five miles, and the breadth, which ought, properly, to be reckoned from the Æthiopian Sea to Alexandria, near the river Nile, so as to run through Meroë and Syene, is eighteen hundred and seventy-five. It appears then that Europe is greater than Asia, by a little less than one half of Asia, and greater than Africa by as much again of Africa and one-sixth. If all these sums are added together, it will be clearly seen that Europe is one-third, and a little more than one-eighth part of one-third, Asia one-fourth and one-four- teenth part of one-fourth, and Africa, one-fifth and one-sixtieth part of one-fifth of the whole earth.

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CHAP. 39.

DIVISION OF THE EARTH INTO PARALLELS AND SHADOWS OF EQUAL LENGTH.

To the above we shall add even another instance of ingenious discovery by the Greeks, and indeed of the most minute skilfulness; that so nothing may be wanting to our investigation of the geographical divisions of the earth, and the various countries thereof which have been pointed out; that it may be the better understood, too, what affinity, or relationship as it were, exists between one region and another, in respect to the length of their days and nights, and in which of them the shadows are of equal length, and the distance from the pole is the same. I shall therefore give these particulars as well, and shall state the divisions of the whole earth in accordance with the various sections of the heavens. The lines or segments which divide the world are many in number; by our people they are known as "circuli" or circles, by the Greeks they are called "paralleli" or parallels.

(34.) The first begins at that part of India which looks towards the south, and extends to Arabia and those who dwell upon the borders of the Red Sea. It embraces the Gedrosi, the Carmanii, the Persæ, the Elymæi, Parthyene, Aria, Susiane, Mesopotamia, Seleucia surnamed Babylonia, Arabia as far as Petra, Cœle Syria, Pelusium, the lower parts of Egypt called the Chora of Alexandria, the maritime parts of Africa, all the cities of Cyrenaica, Thapsus, Adrumetum, Clupea, Carthage, Utica, the two Hippo's, Numidia, the two Mauritanias, the Atlantic Sea, and the Pillars of Hercules. Within the meridian of this parallel, on the middle day of the equinox, the pin of the dial, usually called the gnomon, if seven feet in length, throws a shadow at mid-day no more than four feet long: the longest day and night are fourteen equinoctial hours respectively, the shortest being only ten.

The next circle or parallel begins with the western parts of India, and runs through the middle of Parthia, through Persepolis, the nearer parts of Persis, the nearer Arabia, Judæa, and the people who live near Mount Libanus, and it embraces Babylon, Idumæa,

Samaria, Hierosolyma, Ascalon, Joppa, Cæsarea in Phoenicia, Ptolemais, Sidon, Tyre, Berytus, Botrys, Tripolis, Byblus, Antiochia, Laodicea, Seleucia, the maritime parts of Cilicia, the southern parts of Cyprus, Crete, Lilybæum in Sicily, and the northern parts of Africa and Numidia. In these regions, at the time of the equinox, a gnomon of thirty-five feet in length gives only a shadow twenty-four feet long; and the longest day and night are respectively fourteen equinoctial hours, and one-fifth of an hour, in length.

The third circle or parallel begins at the part of India which lies in the vicinity of Mount Imaiis, and runs through the Caspian Gates and the nearer parts of Media, Cataonia, (appadocia, Taurus, Amanus, Issus, the Passes of Cilicia, Soli, Tarsus, Cyprus, Pisidia, Side in Pamphylia, Lycaonia, Patara in Lycia, Xanthus, Caunus, Rhodes, Cos, Halicarnassus, Cnidos, Doris, Chios, Delos, the middle of the Cyclades, Gythium, Malea, Argos, Laconia, Elis, Olympia, Messenia in Peloponnesus, Syracuse, Catina, the middle of Sicily, the southern parts of Sardinia, Carteia, and Gades. A gnomon, one hundred inches in length, throws a shadow seventy-seven inches long; the length of the longest day is fourteen equinoctial hours and a half, plus one thirtieth of an hour.

Under the fourth circle or parallel lie those parts of India which are on the other side of the Imaiis, the southern parts of Cappadocia, Galatia, Mysia, Sardis, Smyrna, Sipylus, Mount Tmolus, Lydia, Caria, Ionia, Tralles, Colophon, Ephesus, Miletus, Chios, Samos, the Icarian Sea, the northern part of the Cyclades, Athens, Megara, Corinth, Sicyon, Achaia, Patræ, the Isthmus, Epirus, the northern parts of Sicily, the eastern parts of Gallia Narbonensis, and the sea-coast of Spain, from New Carthage westward. In these districts a gnomon of twenty-one feet throws a shadow of sixteen feet in length; the longest day contains fourteen equinoctial hours and two-thirds of an hour.

Under the fifth zone are included, from the entrance to the Caspian Sea, the Bactri, Iberia, Armenia, Mysia, Phrygia, the Hellespont, Troas, Tenedos, Abydos, Scepsis, Ilium, Mount Ida, Cyzicus, Lampsacus, Sinope, Amisus, Heraclea in Pontus, Paphlagonia, Lemnos, Imbros, Thasos, Cassandria, Thessaly, Macedonia, Larissa, Amphipolis, Thessalonica, Pella, Edessa,

Berœa, Pharsalia, Carystus, Eubœa in Bœotia, Chalcis, Delphi, Acarnania, Ætolia, Apollonia, Brudisium, Tarentum, Thurii, Locri, Rhegium, the Lucani, Neapolis, Puteoli, the Tuscan Sea, Corsica, the Balearic Islands, and the middle of Spain. A gnomon, seven feet in length, in these countries gives a shadow of six feet, and the length of the day is fifteen equinoctial hours.

The sixth division, in which Rome is included, embraces the Caspian nations, Caucasus, the northern parts of Armenia, Apollonia on the Rhyndacus, Nicomedia, Nicæa, Chalcedon, Byzantium, Lysimachia, the Chersonnesus, the Gulf of Melas, Abdera, Samothracia, Maronea, Ænus, Bessica, Thracia, Mædica, Pæonia, the Illyrii, Dyrrhachium, Canusium, the extreme parts of Apulia, Campania, Etruria, Pisæ, Luna, Luca, Genua, Liguria, Antipolis, Massilia, Narbo, Tarraco, the middle parts of Hispania Tarraconensis, and thence through Lusitania. A gnomon of nine feet here throws a shadow eight feet long; the greatest length of the day is fifteen equinoctial hours, plus one-ninth part of an hour, or, according to Nigidius, one-fifth.

The seventh division begins on the other side of the Caspian Sea, and the line runs above Callatis, and through the Bosporus, the Borysthenes, Tomi, the back part of Thrace, the Triballi, the remainder of Illyricum, the Adriatic Sea, Aquileia, Altinum, Venetia, Vicetia, Patavium, Verona, Cremona, Ravenna, Ancona, Picenum, the Marsi, the Peligni, the Sabini, Umbria, Ariminum, Bononia, Placentia, Mediolanum, all the districts at the foot of the Apennines, and, beyond the Alps, Gallia Aquitanica, Vienna, the Pyrenæan range, and Celtiberia. A gnomon thirty-five feet in length here throws a shadow of thirty-six feet, except in some parts of Venetia, where the shadow just equals the length of the gnomon; the longest day is fifteen equinoctial hours, plus three-fifths of an hour.

Thus far we have set forth the results of observations made by the ancients. The remaining part of the earth has been divided, through the careful researches of those of more recent times, by three additional parallels. The first runs from the Tanais through the Mæotis and the country of the Sarmatæ, as far as the Borysthenes, and so through the Daci and part of Germany, and the Gallic provinces, as far as the shores of the ocean, the longest day being

sixteen hours.

The second parallel runs through the country of the Hyperborei and the island of Britannia, the longest day being seventeen hours in length.

The last of all is the Scythian parallel, which runs from the Riphæan range to Thule, in which, as we have already stated, the year is divided into days and nights alternately, of six months' duration. The same authors have also placed before the first parallel, which we have here given, two other parallels or circles; the first running through the island of Meroë and the city of Ptolemais which was built on the Red Sea for the chase of the elephant; where the longest day is twelve hours and a half in length; and the second passing through Syene in Egypt, in which the longest day is thirteen hours in length. The same authors have also added half an hour to each of the parallels, till they come to the last.

Thus far on the Geography of the earth.

SUMMARY. — Towns mentioned, eleven hundred and ninety-four. Nations, five hundred and seventy-six. Noted rivers, one hundred and fifteen. Famous mountains, thirty-eight. Islands, one hundred and eight. Peoples or towns no longer in existence, ninety-five. Remarkable events, narratives, and observations, two thousand two hundred and fourteen.

ROMAN AUTHORS QUOTED. — M.Agrippa, M. Varro, Varro Atacinus, Cornelius Nepos, Hyginus, L. Vetus, Mela Pomponius, Domitius Corbulo, Licinius Mucianus, Claudius Cæsar, Arruntius, Sebosus, Fabricius Tuscus, T. Livius, Seneca, Nigidius.

FOREIGN AUTHORS QUOTED. — King Juba, Hecatæus, Hellenicus, Damastes, Eudoxus, Dicæarchus, Bæton, Timosthenes, Patrocles, Demodamas, Clitarchus, Eratosthenes, Alexander the Great, Ephorus, Hipparchus, Panætius, Callimachus, Artemidorus, Apol- lodorus, Agathocles, Polybius, Eumachus, Timæus Siculus, Alexander Polyhistor, Isidorus, Amometus, Metrodorus, Posidonius, Onesicritus, Nearchus, Megasthenes, Diognetus, Aristocreon, Bion, Dalion, the Younger Simonides, Basilis, Xenophon of Lampsacus.

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BOOK VII. MAN, HIS BIRTH, HIS ORGANIZATION, AND THE INVENTION OF THE ARTS.

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CHAP. 1.

MAN.

SUCH then is the present state of the world, and of the countries, nations, more remarkable seas, islands, and cities which it contains. The nature of the animated beings which exist upon it, is hardly in any degree less worthy of our contemplation than its other features; if, indeed, the human mind is able to embrace the whole of so diversified a subject. Our first attention is justly due to Man, for whose sake all other things appear to have been produced by Nature; though, on the other hand, with so great and so severe penalties for the enjoyment of her bounteous gifts, that it is far from easy to determine, whether she has proved to him a kind parent, or a merciless step-mother.

In the first place, she obliges him alone, of all animated beings, to clothe himself with the spoils of the others; while, to all the rest, she has given various kinds of coverings, such as shells, crusts, spines, hides, furs, bristles, hair, down, feathers, scales, and fleeces. The very trunks of the trees even, she has protected against the effects of heat and cold by a bark, which is, in some cases, twofold. Man alone, at the very moment of his birth cast naked upon the laked earth, does she abandon to cries, to lamentations, and, a thing that is the case with no other animal whatever, to tears: this, too, from the very moment that he enters upon existence. But as for laughter, why, by Hercules! — to laugh, if but for an instant only, has never been granted to man before the fortieth day from his birth, and then it is looked upon as a miracle of precocity. Introduced thus to the light, man has fetters and swathings instantly put upon all his limbs, a thing that falls to the lot of none of the brutes even that are born among us. Born to such singular good fortune, there lies the animal, which is destined to command all the others, lies, fast bound hand and foot, and weeping aloud! such being the penalty which he has to pay on beginning life, and that for the sole fault of having been born. Alas! for the folly of those who can think after such a beginning as this, that they have been born for the display of vanity!

The earliest presage of future strength, the earliest bounty of time, confers upon him nought but the resemblance to a quadruped. How soon does man gain the power of walking? How soon does he gain the faculty of speech? How soon is his mouth fitted for mastication? How long are the pulsations of the crown of his head to proclaim him the weakest of all ani- mated beings? And then, the diseases to which he is subject, the numerous remedies which he is obliged to devise against his maladies, and those thwarted every now and then by new forms and features of disease. While other animals have an instinctive knowledge of their natural powers; some, of their swiftness of pace, some of their rapidity of flight, and some again of their power of swimming; man is the only one that knows nothing, that can learn nothing without being taught; he can neither speak, nor walk, nor eat, and, in short, he can do nothing, at the prompting of nature only, but weep. For this it is, that many have been of opinion, that it were better not to have been born, or if born, to have been annihilated at the earliest possible moment.

To man alone, of all animated beings, has it been given, to grieve, to him alone to be guilty of luxury and excess; and that in modes innumerable, and in every part of his body. Man is the only being that is a prey to ambition, to avarice, to an immoderate desire of life, to superstition, — he is the only one that troubles himself about his burial, and even what is to become of him after death. By none is life held on a tenure more frail; none are more influenced by unbridled desires for all things; none are sensible of fears more bewildering; none are actuated by rage more frantic and violent. Other animals, in fine, live at peace with those of their own kind; we only see them unite to make a stand against those of a different species. The fierceness of the lion is not expended in fighting with its own kind; the sting of the serpent is not aimed at the serpent; and the monsters of the sea even, and the fishes, vent their rage only on those of a different species. But with man, — by Hercules! most of *his* misfortunes are occasioned by man.

(1.) We have already given a general description of the human race in our account of the different nations. Nor, indeed, do I now propose to treat of their manners and customs, which are of infinite variety and almost as numerous as the various groups themselves,

into which mankind is divided; but yet there are some things, which, I think, ought not to be omitted; and more particularly, in relation to those peoples which dwell at a considerable distance from the sea; among which, I have no doubt, that some facts will appear of an astounding nature, and, indeed, incredible to many. Who, for instance, could ever believe in the existence of the Æthiopians, who had not first seen them? Indeed what is there that does not appear marvellous, when it comes to our knowledge for the first time? How many things, too, are looked upon as quite impossible, until they have been actually effected? But it is the fact, that every moment of our existence we are distrusting the power and the majesty of Nature, if the mind, instead of grasping her in her entirety, considers her only in detail. Not to speak of peacocks, the spotted skins of tigers and panthers, and the rich colours of so many animals, a trifling thing apparently to speak of, but of inestimable importance, when we give it due consideration, is the existence of so many languages among the various nations, so many modes of speech, so great a variety of expressions; that to another, a man who is of a different country, is almost the same as no man at all. And then, too, the human features and countenance, although composed of but some ten parts or little more, are so fashioned, that among so many thousands of men, there are no two in existence who cannot be distinguished from one another, a result which no art could possibly have produced, when confined to so limited a number of combinations. In most points, however, of this nature, I shall not be content to pledge my own credit only, but shall confirm it in preference by referring to my authorities, which shall be given on all subjects of a nature to inspire doubt. My readers, however, must make no objection to following the Greeks, who have proved them- selves the most careful observers, as well as of the longest standing.

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CHAP. 2.

THE WONDERFUL FORMS OF DIFFERENT NATIONS.

We have already stated, that there are certain tribes of the Scythians, and, indeed, many other nations, which feed upon human flesh. This fact itself might, perhaps, appear incredible, did we not recollect, that in the very centre of the earth, in Italy and Sicily, nations formerly existed with these monstrous propensities, the Cyclopes, and the Læstrygones, for example; and that, very recently, on the other side of the Alps, it was the custom to offer human sacrifices, after the manner of those nations; and the difference is but small between sacrificing human beings and eating them.

In the vicinity also of those who dwell in the northern re- gions, and not far from the spot from which the north wind arises, and the place which is called its cave, and is known by the name of Geskleithron, the Arimaspi are said to exist, whom I have previously mentioned, a nation remarkable for having but one eye, and that placed in the middle of the forehead. This race is said to carry on a perpetual warfare with the Griffins, a kind of monster, with wings, as they are commonly represented, for the gold which they dig out of the mines, and which these wild beasts retain and keep watch over with a singular degree of cupidity, while the Arimaspi are equally desirous to get possession of it. Many authors have stated to this effect, among the most illustrious of whom are Herodotus and Aristeas of Proconnesus.

Beyond the other Scythian Anthropophagi, there is a country called Abarimon, situate in a certain great valley of Mount Imaus, the inhabitants of which are a savage race, whose feet are turned backwards, relatively to their legs: they possess wonderful velocity, and wander about indiscriminately with the wild beasts. We learn from Bæton, whose duty it was to take the measurements of the routes of Alexander the Great, that this people cannot breathe in any climate except their own, for which reason it is impossible to take them before any of the neighbouring kings; nor could any of them be brought before Alexander himself.

The Anthropophagi, whom we have previously mentioned as dwelling ten days' journey beyond the Borysthenes, according to the account of Isigonus of Nicæa, were in the habit of drinking out of human skulls, and placing the scalps, with the hair attached, upon their breasts, like so many napkins. The same author relates, that there is, in Albania, a certain race of men, whose eyes are of a sea-green colour, and who have white hair from their earliest childhood, and that these people see better in the night than in the day. He states also that the Sauromatæ, who dwell ten days' journey beyond the Borysthenes, only take food every other day.

Crates of Pergamus relates, that there formerly existed in the vicinity of Parium, in the Hellespont, a race of men whom he calls Ophiogenes, and that by their touch they were able to cure those who had been stung by serpents, extracting the poison by the mere imposition of the hand. Varro tells us, that there are still a few individuals in that district, whose saliva effectually cures the stings of serpents. The same, too, was the case with the tribe of the Psylli, in Africa, according to the account of Agatharchides; these people received their name from Psyllus, one of their kings, whose tomb is in existence, in the district of the Greater Syrtes. In the bodies of these people there was by nature a certain kind of poison, which was fatal to serpents, and the odour of which overpowered them with torpor: with them it was a custom to expose children immediately after their birth to the fiercest serpents, and in this manner to make proof of the fidelity of their wives, the serpents not being repelled by such children as were the offspring of adultery. This nation, however, was almost entirely extirpated by the slaughter made of them by the Nasamones, who now occupy their territory. This race, however, still survives in a few persons who are descendants of those who either took to flight or else were absent on the oc- casion of the battle. The Marsi, in Italy, are still in possession of the same power, for which, it is said, they are indebted to their origin from the son of Circe, from whom they acquired it as a natural quality. But the fact is, that all men possess in their bodies a poison which acts upon serpents, and the human saliva, it is said, makes them take to flight, as though they had been touched with boiling water. The same substance, it is said, destroys them the moment it enters their throat, and more particularly

so, if it should happen to be the saliva of a man who is fasting.

Above the Nasamones, and the Machlytæ, who border upon them, are found, as we learn from Calliphanes, the nation of the Androgyni, a people who unite the two sexes in the same individual, and alternately perform the functions of each. Aristotle also states, that their right breast is that of a male, the left that of a female.

Isigonus and Nymphodorus inform us that there are in Africa certain families of enchanters, who, by means of their charms, in the form of commendations, can cause cattle to perish, trees to wither, and infants to die. Isigonus adds, that there are among the Triballi and the Illyrii, some persons of this description, who also have the power of fascination with the eyes, and can even kill those on whom they fix their gaze for any length of time, more especially if their look denotes anger; the age of puberty is said to be particularly obnoxious to the malign influence of such persons.

A still more remarkable circumstance is, the fact that these persons have two pupils in each eye. Apollonides says, that there are certain females of this description in Scythia, who are known as Bythiæ, and Phylarchus states that a tribe of the Thibii in Pontus, and many other persons as well, have a double pupil in one eye, and in the other the figure of a horse. He also remarks, that the bodies of these persons will not sink in water, even though weighed down by their garments. Damon gives an account of a race of people, not very much unlike them, the Pharnaces of Æthiopia, whose perspiration is productive of consumption to the body of every person that it touches. Cicero also, one of our own writers, makes the remark, that the glances of all women who have a double pupil is noxious.

To this extent, then, has nature, when she produced in man, in common with the wild beasts, a taste for human flesh, thought fit to produce poisons as well in every part of his body, and in the eyes even of some persons, taking care that there should be no evil influence in existence, which was not to be found in the human body. Not far from the city of Rome, in the territory of the Falisci, a few families are found, who are known by the name of Hirpi. These people perform a yearly sacrifice to Apollo, on Mount Soracte, on which occasion they walk over a burning pile of wood, without being scorched even. On this account, by virtue of a decree of the senate,

they are always exempted from military service, and from all other public duties.

Some individuals, again, are born with certain parts of the body endowed with properties of a marvellous nature. Such was the case with King Pyrrhus, the great toe of whose right foot cured diseases of the spleen, merely by touching the patient. We are also informed, that this toe could not be re- duced to ashes together with the other portions of his body; upon which it was placed in a coffer, and preserved in a temple.

India, and the region of Æthiopia more especially, abounds in wonders. In India the largest of animals are produced; their dogs, for example, are much bigger than those of any other country. The trees, too, are said to be of such vast height, that it is impossible to send an arrow over them. This is the result of the singular fertility of the soil, the equable temperature of the atmosphere, and the abundance of water; which, if we are to believe what is said, are such, that a single fig-tree is capable of affording shelter to a whole troop of horse. The reeds here are also of such enormous length, that each portion of them, between the joints, forms a tube, of which a boat is made that is capable of holding three men. It is a well-known fact, that many of the people here are more than five cubits in height. These people never expectorate, are subject to no pains, either in the head, the teeth, or the eyes, and rarely in any other parts of the body; so well is the heat of the sun calculated to strengthen the constitution. Their philosophers, who are called Gymnosophists, remain in one posture, with their eyes immovably fixed upon the sun, from its rising to its setting, and, during the whole of the day, they are accustomed to stand in the burning sands on one foot, first one and then the other. According to the ac- count of Megasthenes, dwelling upon a mountain called Nulo, there is a race of men who have their feet turned backwards, with eight toes on each foot.

On many of the mountains again, there is a tribe of men who have the heads of dogs, and clothe themselves with the skins of wild beasts. Instead of speaking, they bark; and, furnished with claws, they live by hunting and catching birds. According to the story, as given by Ctesias, the number of these people is more than a hundred and twenty thousand: and the same author tells us, that there is a

certain race in India, of which the females are pregnant once only in the course of their lives, and that the hair of the children becomes white the instant they are born. He speaks also of another race of men, who are known as Monocoli, who have only one leg, but are able to leap with surprising agility. The same people are also called Sciapodæ,: because they are in the habit of lying on their backs, during the time of the extreme heat, and protect themselves from the sun by the shade of their feet. These people, he says, dwell not very far from the Troglodytæ; to the west of whom again there is a tribe who are without necks, and have eyes in their shoulders.,

Among the mountainous districts of the eastern parts of India, in what is called the country of the Catharcludi, we find the Satyr, an animal of extraordinary swiftness. These go sometimes on four feet, and sometimes walk erect; they have also the features of a human being. On account of their swiftness, these creatures are never to be caught, except when they are either aged or sickly. Tauron gives the name of Choromandæ to a nation which dwell in the woods and have no proper voice. These people screech in a frightful manner; their bodies are covered with hair, their eyes are of a sea-green colour, and their teeth like those of the dog. Eudoxus tells us, that in the southern parts of India, the men have feet a cubit in length; while those of the women are so remarkably small, that they are called Struthopodes.

Megasthenes places among the Nomades of India, a people who are called Scyritæ. These have merely holes in their faces instead of nostrils, and flexible feet, like the body of the serpent. At the very extremity of India, on the eastern side, near the source of the river Ganges, there is the nation of the Astomi, a people who have no mouths; their bodies are rough and hairy, and they cover themselves with a down plucked from the leaves of trees. These people subsist only by breathing and by the odours which they inhale through the nostrils. They support themselves upon neither meat nor drink; when they go upon a long journey they only carry with them various odoriferous roots and flowers, and wild apples, that they may not be without something to smell at. But an odour, which is a little more powerful than usual, easily destroys them.

Beyond these people, and at the very extremity of the mountains, the Trispithami and the Pygmies are said to exist; two races which

are but three spans in height, that is to say, twenty-seven inches only. They enjoy a salubrious atmosphere, and a perpetual spring, being sheltered by the mountains from the northern blasts; it is these people that Homer has mentioned as being waged war upon by cranes. It is said, that they are in the habit of going down every spring to the sea-shore, in a large body, seated on the backs of rams and goats, and armed with arrows, and there destroy the eggs and the young of those birds; that this expedition occupies them for the space of three months, and that otherwise it would be impossible for them to withstand the increasing multitudes of the cranes. Their cabins, it is said, are built of mud, mixed with feathers and egg-shells. Aristotle, indeed, says, that they dwell in caves; but, in all other respects, he gives the same details as other writers.

Isigonus informs us, that the Cyrni, a people of India, live to their four hundredth year; and he is of opinion that the same is the case also with the Æthiopian Macrobii, the Seræ, and the inhabitants of Mount Athos. In the case of these last, it is supposed to be owing to the flesh of vipers, which they use as food; in consequence of which, they are free also from all noxious animals, both in their hair and their garments.

According to Onesicritus, in those parts of India where there is no shadow, the bodies of men attain a height of five cubits and two palms, and their life is prolonged to one hundred and thirty years; they die without any symptoms of old age, and just as if they were in the middle period of life. Crates of Pergamus calls the Indians, whose age exceeds one hundred years, by the name of Gymnetæ; but not a few authors style them Macrobii. Ctesias mentions a tribe of them, known by the name of Pandore, whose locality is in the valleys, and who live to their two hundredth year; their hair is white in youth, and becomes black in old age. On the other hand, there are some people joining up to the country of the Macrobii, who never live beyond their fortieth year, and their females have children once only during their lives. This circumstance is also mentioned by Agatharchides, who states, in addition, that they live on locusts, and are very swift of foot. Clitarchus and Megasthenes give these people the name of Mandi, and enumerate as many as three hundred villages which belong to them. Their women are capable of bearing children

in the seventh year of their age, and become old at forty.

Artemidorus states that in the island of Taprobane, life is prolonged to an extreme length, while, at the same time, the body is exempt from weakness. According to Durisis, some of the Indians have connection with beasts, and from this union a mixture of half man, half beast, is produced. Among the Calingæ, a nation also of India, the women conceive at five years of age, and do not live beyond their eighth year. In other places again, there are men born with long hairy tails, and of remarkable swiftness of foot; while there are others that have ears so large as to cover the whole body.

The Oritæ are divided from the Indians by the river Arabis; they are acquainted with no food whatever except fish, which they are in the habit of tearing to pieces with their nails, and drying in the sun. Crates of Pergamus states, that the Troglodytæ, who dwell beyond Æthiopia, are able to outrun the horse; and that a tribe of the Æthiopians, who are known as the Syrbotæ, exceed eight cubits in height.

There is a tribe of Æthiopian Nomades dwelling on the banks of the river Astragus, towards the north, and about twenty days' journey from the ocean. These people are called Menismini; they live on the milk of the animal which we call cynocephalus, and rear large flocks of these creatures, taking care to kill the males, except such as they may preserve for the purpose of breeding. In the deserts of Africa, men are frequently seen to all appearance, and then vanish in an instant. Nature, in her ingenuity, has created all these marvels in the human race, with others of a similar nature, as so many amusements to herself, though they appear miraculous to us. But who is there that can enumerate all the things that she brings to pass each day, I may almost say each hour? As a striking evidence of her power, let it be sufficient for me to have cited whole nations in the list of her prodigies. Let us now proceed to mention some other particulars connected with Man, the truth of which is universally admitted.

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CHAP. 3.

MARVELLOUS BIRTHS.

(3.) That three children are sometimes produced at one birth, is a well-known fact; the case, for instance, of the Horatii and the Curiatii. Where a greater number of children than this is produced at one birth, it is looked upon as portentous, except, indeed, in Egypt, where the water of the river Nile, which is used for drink, is a promoter of fecundity. Very recently, towards the close of the reign of the Emperor Augustus, now deified, a certain woman of the lower orders, at Ostia, whose name was Fausta, brought into the world, at one birth, two male children and two females, a presage, no doubt, of the famine which shortly after took place. We find it stated, also, that in Peloponnesus, a woman was delivered of five children at a birth four successive times, and that the greater part of all these children survived. Trogus informs us, that in Egypt, as many as seven children are occasionally produced at one birth.

Individuals are occasionally born, who belong to both sexes; such persons we call by the name of hermaphrodites; they were formerly called Androgyni, and were looked upon as monsters, but at the present day they are employed for sensual purposes.

Pompeius Magnus, among the decorations of his theatre, erected certain statues of remarkable persons, which had been executed with the greatest care by artists of the very highest reputation. Among others, we here read an inscription to the following effect: "Eutychis, of Tralles, was borne to the funeral pile by twenty of her children, having had thirty in all." Also, Alcippe was delivered of an elephant — but then that must be looked upon as a prodigy; as in the case, too, where, at the commencement of the Marsian war, a female slave was delivered of a serpent. Among these monstrous births, also, there are beings produced which unite in one body the forms of several creatures. For instance, Claudius Cæsar informs us, in his writings, that a Hippocentaur was born in Thessaly, but died on the same day: and indeed I have seen one myself, which in the reign of that emperor was brought to him from Egypt, preserved in honey. We

have a case, also, of a child at Saguntum, which returned immediately into its mother's womb, the same year in which that place was destroyed by Hannibal.

(4) The change of females into males is undoubtedly no fable. We find it stated in the Annals, that, in the consulship of P. Licinius Crassus and C. Cassius Longinus, a girl, who was living at Casinum with her parents, was changed into a boy; and that, by the command of the Aruspices, he was con- veyed away to a desert island. Licinius Mucianus informs us, that he once saw at Argos a person whose name was then Arescon, though he had been formerly called Arescusa: that this person had been married to a man, but that, shortly after, a beard and marks of virility made their appearance, upon which he took to himself a wife. He had also seen a boy at Smyrna, to whom the very same thing had happened. I myself saw in Africa one L. Cossicius, a citizen of Thysdris, who had been changed into a man the very day on which he was married to a husband. When women are delivered of twins, it rarely happens but that either the mother herself, or one, at least, of the twins perishes. If, however, the twins should happen to be of different sexes, it is less probable that both of them will survive. Female children are matured more quickly than males, and become old sooner. Of the two, male children most frequently are known to move in the womb; they mostly lie on the right side of the body, females on the left.

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CHAP. 4. (5.)

THE GENERATION OF MAN; UNUSUAL DURATION OF PREGNANCY; INSTANCES OF IT FROM SEVEN TO TWELVE MONTHS.

In other animals the period of gestation and of birth is fixed and definite, while man, on the other hand, is born at all seasons of the year, and without any certain period of gestation; for one child is born at the seventh month, another at the eighth, and so on, even to the beginning of the tenth and eleventh. Those children which are born before the seventh month are never known to survive; unless, indeed, they hap- pen to have been conceived the day before or the day after the full moon, or at the change of the moon. In Egypt it is not an uncommon thing for children to be born at the eighth month; and in Italy, too, children that are born at this period live just as long as others, notwithstanding the opinions of the ancients to the contrary. There are great variations in this respect, which occur in numerous ways. Vestilia, for instance, who was the wife of C. Herdicius, and was afterwards married, first, to Pomponius, and then to Orfitus, very eminent citizens, after having brought forth four children, always at the seventh month, had Suillius Rufus at the eleventh month, and then Corbulo at the seventh, both of whom became consuls; after which, at the eighth month, she had Cæsonia, who became the wife of the Emperor Caius. As for children who are born at the eighth month, the greatest difficulty with them is to get them over the first forty days. Pregnant women, on the other hand, are in the greatest danger during the fourth and the eighth month, and abortions during these periods are fatal. Masurius informs us, that L. Papirius, the prætor. on one occasion, when the next but one in succession was urging his suit at law, decided against him, in favour of the heir, although his mother declared that her period of gestation had lasted thirteen months — upon the ground that it did not appear that there was any fixed and definite period of gestation.

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CHAP. 5. (6.)

INDICATIONS OF THE SEX OF THE CHILD DURING THE PREGNANCY OF THE MOTHER.

On the tenth day after conception, pains are felt in the head, vertigo, and dimness of the sight; these signs, together with loathing of food and rising of the stomach, indicate the formation of the future human being. If it is a male that is conceived, the colour of the pregnant woman is more healthy, and the birth less painful: the child moves in the womb upon the fortieth day. In the conception of a child of the other sex, all the symptoms are totally different: the mother experiences an almost insupportable weight, there is a slight swelling of the legs and the groin, and the first movement of the child is not felt until the ninetieth day. But, whatever the sex of the child, the mother is sensible of the greatest languor at the time when the hair of the fœtus first begins to grow, and at the full moon; at which latter time it is that children newly born are exposed to the greatest danger. In addition to this, the mode of walking, and indeed everything that can be mentioned, is of consequence in the case of a woman who is pregnant. Thus, for instance, women who have used too much salted meat will bring forth children without nails: parturition, too, is more difficult, if they do not hold their breath. It is fatal, too, to yawn during labour; and abortion ensues, if the female should happen to sneeze just after the sexual congress. (7.) It is a subject for pity, and even for a feeling of shame, when one reflects that the origin of the most vain of all animated beings is thus frail: so much so, indeed, that very often the smell even of a lamp just extinguished is a cause of abortion. From such beginnings as these springs the tyrant, from such the murderous dispositions of men. Thou man, who placest thy confidence in the strength of thy body, thou, who dost embrace the gifts of Fortune, and look upon thyself, not only as her fosterling, but even as her own born child, thou, whose mind is ever thirsting for blood, thou who, puffed up with some success or other, dost think thyself a god — by how trifling a thing might thy life have been cut short! Even this very day, something still less even may have the

same effect, the puncture, for instance, of the tiny sting of the serpent; or even, as befell the poet Anacreon, the swallowing of the stone of a raisin, or of a single hair in a draught of milk, by which the prætor and senator, Fabius, was choked, and so met his death. He only, in fact, will be able to form a just estimate of the value of life, who will always bear in mind the extreme frailty of its tenure.

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CHAP. 6. (8.)

MONSTROUS BIRTHS.

It is contrary to nature for children to come into the world with the feet first, for which reason such children are called Agrippæ, meaning that they are born with difficulty. In this manner, M. Agrippa is said to have been born; the only instance, almost, of good fortune, out of the number of all those who have come into the world under these circumstances. And yet, even he may be considered to have paid the penalty of the unfavourable omen produced by the unnatural mode of his birth, in the unfortunate weakness of his legs, the misfortunes of his youth, a life spent in the very midst of arms and slaughter, and ever exposed to the approaches of death; in his children, too, who have all proved a very curse to the earth, and more especially, the two Agrippinas, who were the mothers respectively of Caius and of Domitius Nero, so many firebrands hurled among the human race. In addition to all this, we may add the shortness of his life, he being cut off in his fifty-first year, the distress which he experienced from the adulteries of his wife, and the grievous tyranny to which he was subjected by his father-in-law. Agrippina, too, the mother of Nero, who was lately Emperor, and who proved himself, throughout the whole of his reign, the enemy of the human race, has left it recorded in writing, that he was born with his feet first. It is in the due order of nature that man should enter the world with the head first, and be carried to the tomb in a contrary fashion.

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CHAP. 7. (9.)

OF THOSE WHO HAVE BEEN CUT OUT OF THE WOMB.

Those children, whose birth has cost the mother her life, are evidently born under more favourable auspices; for such was the case with the first Scipio Africanus; the first, too, of the Cæsars was so named, from his having been removed by an incision in his mother's womb. For a similar reason, too, the Cæsones were called by that name. Manilius, also, who entered Carthage with his army, was born in a similar manner.

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CHAP. 8. (10.)

WHO WERE CALLED VOPISCI.

A child used to be called Vopiscus, who, when twins had been conceived, had been retained in the womb and born alive, the other having perished by abortion. There are, too, some very remarkable instances of this kind, although they are singularly rare and uncommon.

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CHAP. 9. (11.)

THE CONCEPTION AND GENERATION OF MAN.

Few animals, except the female of the human species, receive the male when pregnant. In only one or two species, and no more, does superfœtation ever take place. Cases are to be found stated in the journals of physicians, and of others who have paid particular attention to the subject, in which twelve embryos have been removed at a single abortion. When, however, but a very short time has intervened between two conceptions, the embryos both of them proceed to maturity; as was seen to be the case with Hercules and his brother Iphicles. This was the case also with the woman who brought forth two children at a birth, one of whom bore a resemblance to her husband, and the other to her paramour. So too, with a female slave in Proconnesus, who was delivered of two children at one birth, one of whom bore a strong resemblance to her master, and the other to her master's steward, with both of whom she had had connection on the same day; with another woman who was delivered of two children at a birth, the one after the usual period of gestation, the other an em- bryo only five months old: and again, with another female, who, having been delivered of one child at the end of seven months, in due course, two months afterwards, brought forth twins.

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CHAP. 10.

STRIKING INSTANCES OF RESEMBLANCE.

It is universally known that well-formed parents often produce defective children; and on the other hand, defective parents children who are well formed, or else imperfect in the same part of the body as the parents. It is a well-known fact also, that marks, moles, and even scars, are reproduced in members of the same family in successive generations. The mark which the Daci make on their arms for the purpose of denoting their origin, is known to last even to the fourth generation.

(12.) We have heard it stated that three members of the family of the Lepidi have been born, though not in an uninterrupted succession, with one of the eyes covered with a membrane. We observe, too, that some children strongly resemble their grandfather, and that of twins one child is like the father, while the other resembles the mother; and have known cases where a child that was born a year after another, resembled him as exactly as though they had been twins. Some women have children like themselves, some like their husband, while others again bear children who resemble neither the one nor the other. In some cases the female children resemble the father, and the males the mother. The case of Nicæus, the celebrated wrestler of Byzantium, is a well-known and undoubted instance. His mother was the produce of an act of adultery, committed with a male of Æthiopia; and although she herself differed in no way from the ordinary complexion of other females, he was born with all the swarthy complexion of his Æthiopian grandfather.

These strong features of resemblance proceed, no doubt, from the imagination of the parents, over which we may reasonably believe that many casual circumstances have a very powerful influence; such, for instance, as the action of the eyes, the ears, or the memory, or impressions received at the moment of conception. A thought even, momentarily passing through the mind of either of the parents, may be supposed to produce a resemblance to one of them separately, or else to the two combined. Hence it is that the varieties

are much more numerous in the appearance of man than in that of other animals; seeing that, in the former, the rapidity of the ideas, the quickness of the perception, and the varied powers of the intellect, tend to impress upon the features peculiar and diversified marks; while in the case of the other animals, the mind is immovable, and just the same in each and all individuals of the same species. A man named Artemon, one of the common people, bore so strong a resemblance to Antiochus, the king of Syria, that his queen Laodice, after her husband Antiochus was slain, acted the farce of getting this man to recommend her as the successor to the crown. Vibius, a member of the plebeian order, and Publieius as well, a freedman who had formerly been a slave, so strongly resembled Pompeius Magnus in appearance as to be scarcely distinguishable from him; they both had that ingenuous countenance of his, and that fine forehead, which so strongly bespoke his noble descent. It was a similar degree of resemblance to this, that caused the surname of his cook, Menogenes, to be given to the father of Pompeius Magnus, he having already obtained that of Strabo, on account of the cast in his eye, a defect which he had contracted through imitating a similar one in his slave. Scipio, too, had the name of Serapion given him, after the vile slave of a pig-jobber: and after him, another Scipio of the same family was surnamed Salvitto, after a mime of that name. In the same way, too, Spinther and Pamphilus, who were respectively actors of only second and third rate parts, gave their names to Lentulus and Metellus, who were at that time colleagues in the consulship; so that, by a very curious but disagreeable coincidence, the likenesses of the two consuls were to be seen at the same moment on the stage.

On the other hand again, L. Plancus, the orator, bestowed his surname on the actor Rubrius: the player, Burbuleius, again, gave his name to the elder Curio, and the player, Menogenes, to Messala, the censor. There was a certain fisherman, too, a native of Sicily, who bore a strong resemblance to the proconsul, Sura, not only in his features, but in the mode even of opening his mouth, and the spasmodic contraction of his tongue, and his hurried and indistinct utterance when speaking. Cassius Severus, the celebrated orator, had it thrown in his teeth how strongly he resembled Armentarius, the gladiator. Toranius, a slave-dealer, sold to Antony, while he was one

of the Triumvirs, two boys of remarkable beauty, as being twins, so strong was their resemblance; whereas, in reality, one of them was born in Asia, and the other beyond the Alps. The fraud, however, having been soon afterwards discovered through the difference in the language of the youths, Antony, who was greatly exasperated, violently upbraided the dealer, and, among other things, complained that he had fixed the price at so high a sum as two hundred thousand sesterces. The crafty slave-merchant, however, made answer that that was the very reason for his having set so high a price upon them; for, as he said, there would have been nothing particularly striking in the resemblance of the boys, if they had been born of the same mother, whereas, children found to be so exactly like each other, though natives of different countries, ought to be deemed above all price; an answer which produced such a reasonable feeling of surprise and admiration in the mind of the proscriber, that he who was but just before frantic under the injury he had received, was led to set a higher value on no part whatever of all the property in his possession.

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CHAP. 11. (13.)

WHAT MEN ARE SUITED FOR GENERATION. INSTANCES OF VERY NUMEROUS OFFSPRING.

There exists a kind of peculiar antipathy between the bodies of certain persons, which, though barren with respect to each other, are not so when united to others; such, for instance, was the case with Augustus and Livia. Certain individuals, again, both men and women, produce only females, others males; and, still more frequently, children of the two sexes alternately; the mother of the Gracchi, for instance, who had twelve children, and Agrippina, the mother of Germanicus, who had nine. Some women, again, are barren in their youth, while to others it is given to bring forth once only during their lives. Some women never go to their full time, or if, by dint of great care and the aid of medicine, they do give birth to a living child, it is mostly a girl. Among other instances of rare occurrence, is the case of Augustus, now deified, who, in the year in which he departed this life, witnessed the birth of M. Silanus, the grandson of his granddaughter: having obtained the government of Asia, after his consulship, he was poisoned by Nero, on his accession to the throne.

Q. Metellus Macedonicus, leaving six children, left eleven grandsons also, with daughters-in-law and sons-in-law, twenty-seven individuals in all, who addressed him by the name and title of father. In the records of the times of the Emperor Augustus, now deified, we find it stated that, in his twelfth consulship, Lucius Sylla being his colleague, on the third day before the ides of April, C. Crispinus Hilarus, a man of a respectable family of the plebeian order, living at Fæsulæ, came to the Capitol, to offer sacrifice, attended by eight children (of whom two were daughters), twenty-eight grandsons, nineteen great-grandsons, and eight granddaughters, who all followed him in a lengthened train.

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CHAP. 12. (14.)

AT WHAT AGE GENERATION CEASES.

Women cease to bear children at their fiftieth year, and, with the greater part of them, the monthly discharge ceases at the age of forty. But with respect to the male sex, it is a well-known fact, that King Masinissa, when he was past his eighty-sixth year, had a son born to him, whom he named Metimanus, and that Cato the Censor, after he had completed his eightieth year, had a son by the daughter of his client, Salonius: a circumstance from which, while the descendants of his other sons were surnamed Liciniani, those of this son were called Saloniani, of whom Cato of Utica was one. It is equally well known, too, that L. Volusius Saturninus, who lately died while prefect of the city, had a son when he was past his seventy-second year, by Cornelia, a member of the family of the Scipios, Volusius Saturninus, who was afterwards consul. Among the lower classes of the people, we not uncommonly meet with men who become the fathers of children after the age of seventy-five.

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CHAP. 13. (15.)

REMARKABLE CIRCUMSTANCES CONNECTED WITH THE MENSTRUAL DISCHARGE.

Among the whole range of animated beings, the human fe- male is the only one that has the monthly discharge, and in whose womb are found what we term “moles.” These moles consist of a shapeless mass of flesh, devoid of all life, and capable of resisting either the edge or the point of the knife; they are movable in the body, and obstruct the menstrual discharge; sometimes, too, they are productive of fatal consequences to the woman, in the same manner as a real fœtus; while, at other times, they remain in the body until old age; in some cases, again, they are discharged, in consequence of an increased action of the bowels. Something of a very similar nature is produced in the body of the male, which is called a “schirrus;” this was the case with Oppius Capito, a man of prætorian rank.

It would indeed be a difficult matter to find anything which is productive of more marvellous effects than the menstrual discharge. On the approach of a woman in this state, must will become sour, seeds which are touched by her become sterile, grafts wither away, garden plants are parched up, and the fruit will fall from the tree beneath which she sits. Her very look, even, will dim the brightness of mirrors, blunt the edge of steel, and take away the polish from ivory. A swarm of bees, if looked upon by her, will die immediately; brass and iron will instantly become rusty, and emit an offensive odour; while dogs which may have tasted of the matter so discharged are seized with madness, and their bite is venomous and incurable.

In addition to this, the bitumen which is found at certain periods of the year, floating on the lake of Judæa, known as Asphaltites, a substance which is peculiarly tenacious, and adheres to everything that it touches, can only be divided into separate pieces by means of a thread which has been dipped in this virulent matter. It is said that the ant, even an insect so extremely minute, is sensible of its presence, and rejects the grains which it has been carrying, and will not return to them again.

This discharge, which is productive of such great and singular effects, occurs in women every thirty days, and in a greater degree every three months. In some individuals it occurs oftener than once a month, and in others, again, it never takes place. Women of this nature, however, are not capable of bearing children, because it is of this substance that the infant is formed. The seed of the male, acting as a sort of leaven, causes it to unite and assume a form, and in due time it acquires life, and assumes a bodily shape. The consequence is, that if the flow continues during pregnancy, the child will be weak, or else will not live; or if it does, it will be full of gross humours, Nigidius says.

(16.) The same author is also of opinion, that the milk of a woman who is giving suck will not become impure, if she should happen to become pregnant again by the same man.

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CHAP. 14.

THE THEORY OF GENERATION.

Conception is generally said to take place the most readily, either at the beginning or the end of the menstrual discharge. It is said, too, that it is a certain sign of fecundity in a woman, when her saliva becomes impregnated with any medicament which has been rubbed upon her eye-lids.

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CHAP. 15.

SOME ACCOUNT OF THE TEETH, AND SOME FACTS CONCERNING INFANTS.

It is a matter beyond doubt, that in young children the front teeth are produced at the seventh month, and, nearly always, those in the upper jaw the first. These are shed in the seventh year, and are then replaced by others. Some infants are even born with teeth: such was the case with Manius Curius, who, from this circumstance, received the name of Dentatus; and also with Cn. Papirius Carbo, both of them distinguished men. When this phenomenon happened in the case of a female, it was looked upon in the time of the kings as an omen of some inauspicious event. At the birth of Valeria, under such circumstances as these, it was the answer of the soothsayers, that any city to which she might happen to be carried, would be destroyed; she was sent to Suessa Pometia, at that time a very flourishing place, but the prediction was ultimately verified by its destruction. Some female children are born with the sexual organs closed, a thing of very unfa- vourable omen; of which Cornelia, the mother of the Gracchi, is an instance. Some persons are born with a continuous bone in the mouth, in place of teeth; this was the case with the upper jaw of the son of Prusias, the king of Bithynia.

The teeth are the only parts of the body which resist the action of fire, and are not consumed along with the rest of it. Still, however, though they are able thus to resist flame, they become corroded by a morbid state of the saliva. The teeth are whitened by certain medicinal agents. They are worn down by use, and fail in some persons long before any other part of the body. They are necessary, not only for the mastication of the food, but for many other purposes as well. It is the office of the front teeth to regulate the voice and the speech; by a certain arrangement, they receive, as if in concert, the stroke communicated by the tongue, while by their structure in such regular order, and their size, they cut short, moderate, or soften the utterance of the words. When they are lost, the articulation becomes altogether confused and indistinct.

In addition to this, it is generally supposed that we may form prognostics from the teeth. The number of teeth allotted to all men, with the exception of the nation of the Turduli, is thirty-two; those persons who have a greater number, are thought to be destined to be long-lived. Women have fewer teeth than men. Those females who happen to have two canine teeth on the right side of the upper jaw, have promise of being the favourites of fortune, as was the case with Agrippina, the mother of Domitius Nero: when they are on the left side, it is just the contrary. It is the custom of most nations not to burn the bodies of children who die before they have cut their teeth. We shall have more to say on this subject when we give an account of the different parts of the body.

We find it stated that Zoroaster was the only human being who ever laughed on the same day on which he was born. We hear, too, that his brain pulsated so strongly that it repelled the hand when laid upon it, a presage of his future wisdom.

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CHAP. 16.

EXAMPLES OF UNUSUAL SIZE.

It is a well-known fact, that, at the age of three years, the body of each person is half the height that it will ever attain. Taking it all in all, it is observed that in the human race, the stature is almost daily becoming less and less, and that sons are rarely taller than their parents, the fertility of the seed being dried up by the heat of that conflagration to which the world is fast approaching. A mountain of the island of Crete having been burst asunder by the action of an earthquake, a body was found there standing upright, forty-six cubits in height; by some persons it is supposed to have been that of Orion; while others again are of opinion that it was that of Otus. It is generally believed, from what is stated in ancient records, that the body of Orestes, which was disinterred by command of an oracle, was seven cubits in height. It is now nearly one thousand years ago, that that divine poet Homer was unceasingly complaining, that men were of less stature in his day than they had formerly been. Our Annals do not inform us what was the height of Nævius Pollio; but we learn from them that he nearly lost his life from the rush of the people to see him, and that he was looked upon as a prodigy. The tallest man that has been seen in our times, was one Gabbaras by name, who was brought from Arabia by the Emperor Claudius; his height was nine feet and as many inches. In the reign of Augustus, there were two persons, Posio and Secundilla by name, who were half a foot taller than him; their bodies have been preserved as objects of curiosity in the museum of the Sallustian family.

In the reign of the same emperor, there was a man also, remarkable for his extremely diminutive stature, being only two feet and a palm in height; his name was Conopas, and he was a great pet with Julia, the grand-daughter of Augustus. There was a female also, of the same size, Andromeda by name, a freed-woman of Julia Augusta. We learn from Varro, that Manius Maximus and M. Tullius, members of our equestrian order, were only two cubits in height; and I have myself seen them, preserved in their coffins. It is

far from an unknown fact, that children are occasionally born a foot and a half in height, and sometimes a little more; such children, however, have finished their span of existence by the time they are three years old.

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CHAP. 7.

CHILDREN REMARKABLE FOR THEIR PRECOCITY.

We find it stated by the historians, that the son of Euthymenes of Salamis had grown to be three cubits in height, at the age of three years; that he was slow of gait and dull of comprehension; that at that age he had attained puberty even, and his voice had become strong, like that of a man. We hear, also, that he died suddenly of convulsions of the limbs, at the completion of his third year. myself, not very long ago, was witness to exactly similar appearances, with the exception of the state of puberty, in a son of Cornelius Tacitus, a member of the equestrian order, and procurator of Belgic Gaul. The Greeks call such children as these, εχτραπέλοι; we have no name for them in Latin.

(17.) It has been observed, that the height of a man from the crown of the head to the sole of the foot, is equal to the distance between the tips of the middle fingers of the two hands when extended in a straight line; the right side of the body, too, is generally stronger than the left; though in some, the strength of the two sides is equal; while in others again, the left side is the strongest. This, however, is never found to be the case in women.

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CHAP. 18.

SOME REMARKABLE PROPERTIES OF THE BODY.

Males are heavier than females, and the bodies of all animals are heavier when they are dead than when alive; they also weigh more when asleep than when awake. The dead bodies of men float upon the back, those of women with the face downwards; as if, even after death, nature were desirous of sparing their modesty.

(18.) We find it stated, that there are some men whose bones are solid, and devoid of marrow, and that one mark of such persons is the fact that they are never thirsty, and emit no perspiration. At the same time, we know that by the exercise of a resolute determination, any one may resist the feeling of thirst; a fact which was especially exemplified in the case of Julius Viator, a Roman of equestrian rank, but by birth one of the Vocontii, a nation on terms of alliance with us. Having, in his youth, been attacked by dropsy, and forbidden the use of liquids by his physicians, use with him became a second nature, and so, in his old age, he never took any drink at all. Other persons also, have, by the exercise of a strong determination, laid similar restraints upon themselves.

(19.) It is said that Crassus, the grandfather of Crassus, who was slain by the Parthians, was never known to laugh; from which circumstance he obtained the name of Agelastus. There are other persons again, who have never been seen to weep. Socrates, who was so famous for his wisdom, always appeared with the same countenance, and was never known to appear either more gay or more sad than ordinary. This even tenor of the mind, however, sometimes degenerates into a sort of harshness, and a rigorous and inflexible sternness of nature, entirely effacing all the human affections. The Greeks, among whom there have been many persons of this description, are in the habit of calling them ἀπαθεῖς. A very remarkable thing, too, is the fact, that among these persons are to be found some of the greatest masters of philosophy. Diogenes the Cynic, for instance, Pyrrho, Heraclitus, and Timon, which last allowed himself to be so entirely carried away by this spirit, as to

become a hater of all mankind. Less important peculiarities of nature, again, are to be observed in many persons; Antonia, for instance, the wife of Drusus, was never known to expectorate; and Pomponius, the poet, a man of consular rank, was never troubled with eructation. Those rare instances of men, whose bones are naturally solid and without marrow, are known to us as men “of horn.”

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CHAP. 19. (20.)

INSTANCES OF EXTRAORDINARY STRENGTH.

Varro, speaking of persons remarkable for their strength, gives us an account of Tributanus, a celebrated gladiator, and skilled in the use of the Samnite arms; he was a man of meagre person, but possessed of extraordinary strength. Varro makes mention of his son also, who served in the army of Pompeius Magnus. He says, that in all parts of his body, even in the arms and hands, there was a network of sinews, extending across and across. The latter of these men, having been challenged by an enemy, with a single finger of the right hand, and that unarmed, vanquished him, and then seized and dragged him to the camp. Vinnius Valens, who served as a centurion in the prætorian guard of Augustus, was in the habit of holding up waggons laden with casks, until they were emptied; and of stopping a carriage with one hand, and holding it back, against all the efforts of the horses to drag it forward. He performed other wonderful feats also, an account of which may still be seen inscribed on his monument. Varro, also, gives the following statement: "Fusius, who used to be called the ' bumpkin Hercules,' was in the habit of carrying his own mule; while Salvius was able to mount a ladder, with a weight of two hundred pounds attached to his feet, the same to his hands, and two hundred pounds on each shoulder." I myself once saw, — a most marvellous display of strength, — a man of the name of Athanatus walk across the stage, wearing a leaden breast-plate of five hundred pounds weight, while shod with buskins of the same weight. When Milo, the wrestler, had once taken his stand, there was not a person who could move him from his position; and when he grasped an apple in his hand, no one could so much as open one of his fingers.

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CHAP. 20.

INSTANCES OF REMARKABLE AGILITY.

It was considered a very great thing for Philippides to run one thousand one hundred and sixty stadia, the distance between Athens and Lacedæmon, in two days, until Amystis, the Lacedæmonian courier, and Philonides, the courier of Alexander the Great, ran from Sicyon to Elis in one day, a distance of thirteen hundred and five stadia. In our own times, too, we are fully aware that there are men in the Circus, who are able to keep on running for a distance of one hundred and sixty miles; and that lately, in the consulship of Fonteius and Vipstanus, there was a child eight years of age, who, between morning and evening, ran a distance of seventy-five miles. We become all the more sensible of these wonderful instances of swiftness, upon reflecting that Tiberius Nero, when he made all possible haste to reach his brother Drusus, who was then sick in Germany, reached him in three stages, travelling day and night on the road; the distance of each stage was two hundred miles.

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CHAP. 21. (21.)

INSTANCES OF ACUTENESS OF SIGHT.

Instances of acuteness of sight are to be found stated, which, indeed, exceed all belief. Cicero informs us, that the Iliad of Homer was written on a piece of parchment so small as to be enclosed in a nut-shell. He makes mention also of a man who could distinguish objects at a distance of one hundred and thirty-five miles. M. Varro says, that the name of this man was Strabo; and that, during the Punic war, from Lilybæum, the promontory of Sicily, he was in the habit of seeing the fleet come out of the harbour of Carthage, and could even count the number of the vessels. Callicrates used to carve ants and other small animals in ivory, so minute in size, that other persons were unable to distinguish their individual parts. Myrmecides also was famous in the same line; this man made, of similar material, a chariot drawn by four horses, which a fly could cover with its wings; as well as a ship which might be covered by the wings of a tiny bee.

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CHAP. 22.(22.)

INSTANCES OF REMARKABLE ACUTENESS OF HEARING.

We have one instance on record of remarkable acuteness of hearing; the noise of the battle, on the occasion when Sybaris was destroyed, was heard, the day on which it took place, at Olympia. But, as to the victory over the Cimbri, and that over Perseus, the news of which was conveyed to Rome by the Castors, they are to be looked upon in the light of visions and presages proceeding immediately from the gods.

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CHAP. 23. (23.)

INSTANCES OF ENDURANCE OF PAIN.

Of patience in enduring pain, that being too frequently the lot of our calamitous fate, we have innumerable instances related. One of the most remarkable instances among the female sex is that of the courtesan Leæna, who, although put to the torture, refused to betray the tyrant-slayers, Harmodius and Aristogiton. Among those of men, we have that of Anaxarchus, who, when put to the torture for a similar reason, bit off his tongue and spit it into the face of the tyrant, thus destroying the only hope of his making any betrayal.

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CHAP. 24. (24.)

MEMORY.

It would be far from easy to pronounce what person has been the most remarkable for the excellence of his memory, that blessing so essential for the enjoyment of life, there having been so many who have been celebrated for it. King Cyrus knew all the soldiers of his army by name: L. Scipio the names of all the Roman people. Cineas, the ambassador of king Pyrrhus, knew by name all the members of the senate and the equestrian order, the day after his arrival at Rome. Mithridates, who was king of twenty-two nations, administered their laws in as many languages, and could harangue each of them, without employing an interpreter. There was in Greece a man named Charmidas, who, when a person asked him for any book in a library, could repeat it by heart, just as though he were reading. Memory, in fine, has been made an art; which was first invented by the lyric poet, Simonides, and perfected by Metrodorus of Scepsis, so as to enable persons to repeat word for word exactly what they have heard. Nothing whatever, in man, is of so frail a nature as the memory; for it is affected by disease, by injuries, and even by fright; being sometimes partially lost, and at other times entirely so. A man, who received a blow from a stone, forgot the names of the letters only; while, on the other hand, another person, who fell from a very high roof, could not so much as recollect his mother, or his relations and neighbours. Another person, in consequence of some disease, forgot his own servants even; and Messala Corvinus, the orator, lost all recollection of his own name. And so it is, that very often the memory appears to attempt, as it were, to make its escape from us, even while the body is at rest and in perfect health. When sleep, too, comes over us, it is cut off altogether; so much so, that the mind, in its vacancy, is at a loss to know where we are.

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CHAP. 25. (25.)

VIGOUR OF MIND

The most remarkable instance, I think, of vigour of mind in any man ever born, was that of Cæsar, the Dictator. I am not at present alluding to his valour and courage, nor yet his exalted genius, which was capable of embracing everything under the face of heaven, but I am speaking of that innate vigour of mind, which was so peculiar to him, and that promptness which seemed to act like a flash of lightning. We find it stated that he was able to write or read, and, at the same time, to dictate and listen. He could dictate to his secretaries four letters at once, and those on the most important business; and, indeed, if he was busy about nothing else, as many as seven. He fought as many as fifty pitched battles, being the only commander who exceeded M. Marcellus, in this respect, he having fought only thirty-nine. In addition, too, to the victories gained by him in the civil wars, one million one hundred and ninety-two thousand men were slain by him in his battles. For my own part, however, I am not going to set it down as a subject for high renown, what was really an outrage committed upon mankind, even though he may have been acting under the strong influence of necessity; and, indeed, he himself confesses as much, in his omission to state the number of persons who perished by the sword in the civil wars.

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CHAP. 26.

CLEMENCY AND GREATNESS OF MIND.

With much more justice we may award credit to Pompeius Magnus, far having taken from the pirates no less than eight hundred and forty-six vessels: though at the same time, over and above the great qualities previously mentioned, we must with equal justice give Cæsar the peculiar credit of a remark- able degree of clemency, a quality, in the exercise of which, even to repentance, he excelled all other individuals whatsoever. The same person has left us one instance of magnanimity, to which there is nothing that can be at all compared. While one, who was an admirer of luxury, might perhaps on this occasion have enumerated the spectacles which he exhibited, the treasures which he lavished away, and the magnificence of his public works, I maintain that it was the great proof, and an incomparable one, of an elevated mind, for him to have burnt with the most scrupulous carefulness the papers of Pompeius, which were taken in his desk at the battle of Pharsalia, and those of Scipio, taken at Thapsus, without so much as reading them.

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CHAP. 27. (26.)

HEROIC EXPLOITS.

But now, as it belongs fully as much to the glorious renown of the Roman Empire, as to the victorious career of a single individual, I shall proceed on this occasion to make mention of all the triumphs and titles of Pompeius Magnus: the splendour of his exploits having equalled not only that of those of Alexander the Great, but even of Hercules, and perhaps of Father Liber even. After having recovered Sicily, where he first commenced his career as a partizan of Sylla, but in behalf of the republic, after having conquered the whole of Africa, and reduced it to subjection, and after having received for his share of the spoil the title of " Great," he was decreed the honours of a triumph; and he, though only of equestrian rank, a thing that had never occurred before, re-entered the city in the triumphal chariot: immediately after which, he hastened to the west, where he left it inscribed on the trophy which he raised upon the Pyrenees, that he had, by his victories, reduced to subjection eight hundred and seventy-six cities, from the Alps to the borders of Farther Spain; at the same time he most magnanimously said not a word about Sertorius. After having put an end to the civil war, which indeed was the primary cause of all the foreign ones, he, though still of only equestrian rank, again entered Rome in the triumphal chariot, having proved himself a general thus often before having been a soldier. After this, he was dispatched to the shores of all the various seas, and then to the East, whence he brought back to his country the following titles of honour, resembling therein those who conquer at the sacred games — for, be it remembered, it is not they that are crowned, but their respective countries. These honours then did he award to the City, in the temple of Minerva, which he consecrated from the spoils that he had gained: "Cneius Pompeius Magnus, Imperator, having brought to an end a war of thirty years' duration, and having defeated, routed, put to the sword, or received the submission of, twelve millions two hundred and seventy-eight thousand men, having sunk or captured eight hundred and forty-six vessels, having

received as allies one thousand five hundred and thirty-eight cities and fortresses, and having conquered all the country from the Mæotis to the Red Sea, dedicates this shrine as a votive offering due to Minerva." Such, in few words, is the sum of his exploits in the East. The following are the introductory words descriptive of the triumph which he obtained, the third day before the calends of October, in the consulship of M. Piso and M. Messala; "After having delivered the sea-coast from the pirates, and restored the seas to the people of Rome, he enjoyed a triumph over Asia, Pontus, Armenia, Paphlagonia, Cappadocia, Cilicia, Syria, the Scythians, Judæa, the Albanians, Iberia, the island of Crete, the Basterni, and, in addition to all these, the kings Mithridates and Tigranes."

The most glorious, however, of all glories, resulting from these exploits, was, as he himself says, in the speech which he made in public relative to his previous career, that Asia, which he received as the boundary of the empire, he left its centre. If any one should wish, on the other hand, in a similar manner, to pass in review the exploits of Cæsar, who has shown himself greater still than Pompeius, why then he must enumerate all the countries in the world, a task, I may say, without an end.

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CHAP. 28. (27.)

UNION IN THE SAME PERSON OF THREE OF THE HIGHEST QUALITIES WITH THE GREATEST PURITY.

Many other men have excelled in different kinds of virtues. Cato, however, who was the first of the Porcian family, is generally thought to have been an example of the three greatest of human endowments, for he was the most talented orator, the most talented general, and the most talented politician; all which merits, if they were not perceptible before him, still shone forth, more refulgently even, in my opinion, in Scipio Æmilianus, who besides was exempted from that hatred on the part of many others under which Cato laboured: in cones- quence of which it was, what must be owned to be a peculiarity in Cato's career, that he had to plead his own cause no less than four and forty times; and yet, though no person was so frequently accused, he was always acquitted.

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CHAP. 29. (28.)

INSTANCES OF EXTREME COURAGE.

A minute enquiry by whom the greatest valour has ever been exhibited, would lead to an endless discussion, more especially if all the fables of the poets are to be taken for granted. Q. Ennius admired T. Cæcilius Denter and his brother to such a degree, that on their account he added a sixteenth book to his Annals. L. Siccius Dentatus, who was tribune of the people in the consulship of Spurius Tarpeius and A. Aterius, not long after the expulsion of the kings, has also very numerous testimonies in his favour. This hero fought one hundred and twenty battles, was eight times victorious in single combat, and was graced with forty-five wounds in the front of the body, without one on the back. The same man also carried off thirty-four spoils, was eighteen times presented with the victor's spear, and received twenty-five pendants, eighty-three torcs, one hundred and sixty bracelets, twenty-six crowns, (of which fourteen were civic, eight golden, three mural, and one obsidional), a fisc of money, ten prisoners, and twenty oxen altogether. He followed in the triumphal processions of nine generals, who mainly owed their victories to his exertions; besides all which, a thing that I look upon as the most important of all his services, he denounced to the people T. Romilius, one of the generals of the army, at the end of his consulship, and had him convicted of having made an improper use of his authority.

The military honours of Manlius Capitolinus would have been no less splendid than his, if they had not been all effaced at the close of his life. Before his seventeenth year, he had gained two spoils, and was the first of equestrian rank who received a mural crown; he also gained six civic crowns, thirty seven donations, and had twenty-three scars on the fore-part of his body. He saved the life of P. Servilius, the master of the horse, receiving wounds on the same occasion in the shoulders and the thigh. Besides all this, unaided, he saved the Capitol, when it was attacked by the Gauls, and through that, the state itself; a thing that would have been the most glorious act of all, if he had not so saved it, in order that he might, as its king, become

its master. But in all matters of this nature, although valour may effect much, fortune does still more.

No person living, in my opinion at least, ever excelled M. Sergius, although his great-grandson, Catiline, tarnished the honours of his name. In his second campaign he lost his right hand; and in two campaigns he was wounded three and twenty times; so much so, that he could scarcely use either his hands or his feet; still, attended by a single slave, he afterwards served in many campaigns, though but an invalided soldier. He was twice taken prisoner by Hannibal, (for it was with no ordinary enemy that he would engage,) and twice did he escape from his captivity, after having been kept, without a single day's intermission, in chains and fetters for twenty months. On four occasions he fought with his left hand alone, two horses being slain under him. He had a right hand made of iron, and attached to the stump, after which he fought a battle, and raised the siege of Cremona, defended Placentia, and took twelve of the enemy's camps in Gaul. All this we learn from an oration of his, which he delivered when, in his prætorship, his colleagues attempted to exclude him from the sacred rites, on the ground of his infirmities. What heaps upon heaps of crowns would he have piled up, if he had only had other enemies! For, in matters of this nature, it is of the first importance to consider upon what times in especial the valour of each man has fallen. What civic crowns did Trebia, what did the Ticinus, what did Lake Thrasymenus afford? What crown was there to be gained at Cannæ, where it was deemed the greatest effort of valour to have escaped from the enemy? Other persons have been conquerors of men, no doubt, but Sergius conquered even Fortune herself.

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CHAP. 30. (29.)

MEN OF REMARKABLE GENIUS.

Among so many different pursuits, and so great a variety of works and objects, who can select the palm of glory for transcendent genius? Unless perchance we should agree in opinion that no more brilliant genius ever existed than the Greek poet Homer, whether it is that we regard the happy subject of his work, or the excellence of its execution. For this reason it was that Alexander the Great — and it is only by judges of such high estate that a sentence, just and unbiassed by envy, can be pronounced in the case of such lofty claims — when he found among the spoils of Darius, the king of Persia, a casket for perfumes, enriched with gold, precious stones, and pearls, covered as he was with the dust of battle, deemed it beneath a warrior to make use of unguents, and, when his friends were pointing out to him its various uses, exclaimed, "Nay, but by Hercules! let the casket be used for preserving the poems of Homer;" that so the most precious work of the human mind might be placed in the keeping of the richest work of art. It was the same conqueror, too, who gave directions that the descendants and house of the poet Pindar should be spared, at the taking of Thebes. He likewise rebuilt the native city of Aristotle, uniting to the extraordinary brilliancy of his exploits this speaking testimony of his kindliness of disposition.

Apollo impeached by name the assassins of the poet Archilochus at Delphi. While the Lacedemonians were besieging Athens, Father Liber ordered the funeral rites to be performed for Sophocles, the very prince of the tragic buskin; repeatedly warning their king, Lysander, in his sleep, to allow of the burial of his favourite. Upon this, the king made enquiry who had lately died in Athens; and understanding without any difficulty from the Athenians to whom the god referred, he allowed the funeral rites to be performed without molestation.

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CHAP. 31. (30.)

MEN WHO HAVE BEEN REMARKABLE FOR WISDOM.

Dionysius the tyrant, who otherwise manifested a natural propensity for cruelty and pride, sent a vessel crowned with garlands to meet Plato, that high-priest of wisdom; and on his disembarcation, received him on the shore, in a chariot drawn by four white horses. Isocrates was able to sell a single oration of his for twenty talents. Æschines, the great Athenian orator, after he had read to the Rhodians the speech which he had made on the accusation of Demosthenes, read the defence made by Demosthenes, through which he had been driven into exile among them. When they expressed their admiration of it, "How much more," said he, "would you have admired it, if you had heard him deliver it him- self;" a striking testimony, indeed, given in adversity, to the merit of an enemy! The Athenians sent their general, Thucydides, into banishment, but recalled him as their historian, admiring his eloquence, though they had punished his want of valour. A strong testimony, too, was given to the merit of Menander, the famous comic poet, by the kings of Egypt and Macedonia, in sending to him a fleet and an embassy; though, what was still more honourable to him, he preferred enjoying the converse of his literary pursuits to the favour of kings.

The nobles too of Rome have given their testimonies in favour of foreigners, even. Cn. Pompeius, after having finished the war against Mithridates, when he went to call at the house of Posidonius, the famous teacher of philosophy, forbade the lictor to knock at the door, as was the usual custom; and he, to whom both the eastern and the western world had yielded submission, ordered the fasces to be lowered before the door of a learned man. Cato the Censor, after he had heard the speech of Carneades, who was one of the embassy sent from Athens, of three men famous for their learning, gave it as his opinion, that the ambassadors ought to be dismissed as soon as possible, because, in consequence of his ingenious method of arguing, it became extremely difficult to distinguish truth from

falsehood. What an extraordinary change too in our modes of thinking! This Cato constantly gave it out as his decided opinion that all Greeks ought to be expelled from Italy, while, on the other hand, his great-grandson, Cato of Utica, upon his return from his military tribuneship, brought back with him a philosopher, and a second one when he returned from his embassy to Cyprus; and it is a very remarkable fact, that the same language which had been proscribed by one of the Cato's, was introduced among us by the other. But let us now give some account of the honours of our own countrymen.

The elder Africanus ordered that the statue of Ennius should be placed in his tomb, and that the illustrious surname, which he had acquired, I may say, as his share of the spoil on the conquest of the third part of the world, should be read over his ashes, along with the name of the poet. The Emperor Augustus, now deified, forbade the works of Virgil to be burnt, in opposition to the modest directions to that effect, which the poet had left in his will: a prohibition which was a greater compliment paid to his merit, than if he himself had recommended his works.

M. Varro is the only person, who, during his lifetime, saw his own statue erected. This was placed in the first public library that was ever built, and which was formed by Asinius Pollio with the spoils of our enemies. The fact of this distinction being conferred upon him by one who was in the first rank, both as an orator and a citizen, and at a time, too, when there was so great a number of men distinguished for their genius, was not less honourable to him, in my opinion, than the naval crown which Pompeius Magnus bestowed upon him in the war against the pirates. The instances that follow among the Romans, if I were to attempt to reckon them, would be found to be innumerable; for it is the fact that this one nation has furnished a greater number of distinguished men in every branch than all the countries of the world taken together.

But what atonement could I offer to thee, Marcus Tullius, were I to be silent respecting thy name? or on what ground am I to pronounce thee as especially pre-eminent? On what, indeed, that can be more convincing than the most abundant testimony that was offered in thy favour by the whole Roman people? Contenting myself with the selection only of such of the great actions of the whole of

your life, as were performed during your consulship. — You speak, and the tribes surrender the Agrarian law, or, in other words, their very subsistence; you advise them to do so, and they pardon Roscius, the author of the law for the regulation of the theatres, and, without any feelings of resentment, allow a mark to be put upon themselves by allotting them an inferior seat; you entreat, and the sons of proscribed men blush at having canvassed for public honours: before your genius, Catiline took to flight, and it was you who proscribed M. Antonius. Hail then to thee, who wast the first of all to receive the title of Father of thy country, who wast the first of all, while wearing the toga, to merit a triumph, and who didst obtain the laurel for oratory. Great father, thou, of eloquence and of Latin literature! as the Dictator Cæsar, once thy enemy, wrote in testimony of thee, thou didst require a laurel superior to every triumph! How far greater and more glorious to have enlarged so immeasurably the boundaries of the Roman genius, than those of its sway!

(31.) Those persons among the Romans, who surpass all others in wisdom, have the surnames of Catus and Corculus given to them. Among the Greeks, Socrates was declared by the oracle of the Pythian Apollo to be superior to all others in wisdom.

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CHAP. 32. (32.)

PRECEPTS THE MOST USEFUL IN LIFE.

Again, men have placed on an equality with those of the oracles the precepts uttered by Chilon, the Lacedæmonian. These have been consecrated at Delphi in letters of gold, and are to the following effect: “That each person ought to know himself, and not to desire to possess too much;” and “That misery is the sure companion of debt and litigation.” He died of joy, on hearing that his son had been victorious in the Olympic games, and all Greece assisted at his funeral rites.

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CHAP. 33. (33.)

DIVINATION.

A spirit of divination, and a certain communion with the gods, of the most exalted nature, was manifested-among women, in the Sibyl, and among men, in Melampodes, the Greek, and in Marcius, the Roman.

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CHAP. 34. (34.)

THE MAN WHO WAS PRONOUNCED TO BE THE MOST EXCELLENT.

Scipio Nasica is the only individual who, since the commencement of the Roman era, has been declared, by a vote of the senate, confirmed by oath, to be the most excellent of men. And yet, the same person, when he was a candidate for office, was twice stigmatized by a repulse of the Roman people. He was not allowed, in fine, to die in his native country, — no, by Hercules! no more than Socrates, who was declared by Apollo to be the wisest of men, was permitted to die outside of a prison.

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CHAP. 35. (35.)

THE MOST CHASTE MATRONS.

Sulpicia, the daughter of Paterculus, and wife of Fulvius Flaccus, has been considered, in the judgment of matrons, to have been the chastest of women. She was selected from one hundred Roman ladies, who had been previously named, to dedicate a statue of Venus, in obedience to the precepts contained in the Sibylline books. Again, Claudia gave strong proof of her piety and virtue, on the occasion of the introduction into Rome of the Mother of the gods.

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CHAP. 36. (36.)

INSTANCES OF THE HIGHEST DEGREE OF AFFECTION.

Infinite is the number of examples of affection which have been known in all parts of the world; but one in particular occurred at Rome, to which no other can possibly be compared. A woman of quite the lower class, and whose name has consequently not come down to us, having lately given birth to a child, obtained permission to visit her mother, who was confined in prison; but was always carefully searched by the gaoler before being admitted, to prevent her from intro- ducing any food. At last, however, she was detected nourishing her mother with the milk of her breast; upon which, in consideration of the marvellous affection of the daughter, the mother was pardoned, and they were both maintained for the rest of their days at the public charge; the spot, too, was consecrated to Piety, a temple to that goddess being built on the site of the prison, in the consulship of C. Quintius and M. Acilius, where the theatre of Marcellus now stands.

The father of the Gracchi, on finding [two] serpents in his house, consulted the soothsayers, and received an answer to the effect, that he would survive if the serpent of the other sex was put to death.—"No," said he, "rather kill the serpent of my own sex, for Cornelia is still young, and may yet bear children." Thus did he shew himself ready, at the same moment, to spare his wife and to benefit the state; and shortly after, his wish was accomplished. M. Lepidus died of regret for his wife, Apuleia, after having been divorced from her. P. Rupilius, who was at the time affected by a slight disease, instantly expired, upon news being brought to him that his brother had failed in obtaining the consulship. P. Catienus Plotinus was so much attached to his patron, that on finding himself named heir to all his property, he threw himself on the funeral pile.

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CHAP. 37. (37.)

NAMES OF MEN WHO HAVE EXCELLED IN THE ARTS, ASTROLOGY, GRAMMAR, AND MEDICINE.

Innumerable are the men who have excelled in the various arts; we may, however, take a cursory survey of them, by citing the names of the principal ones. Berosus excelled in astrology; and on account of his divinations and predictions, a public statue was erected in his honour by the Athenians. Apollodorus, for his skill as a grammarian, had public honours decreed him by the Amphictyonic Council of Greece. Hip- pocrates excelled in medicine; before its arrival, he predicted the plague, which afterwards came from Illyria, and sent his pupils to various cities, to give their assistance. As an acknowledgment of his merit, Greece decreed him the same honours as to Hercules. King Ptolemy rewarded a similar degree of skill in the person of Cleombrotus of Ceos, by a donation of one hundred talents, at the Megalensian games, he having succeeded in saving the life of King Anti- ochus. Critobulus also rendered himself extremely famous, by extracting an arrow from the eye of King Philip with so much skill, that, although the sight was lost, there was no defect to be seen. Asclepiades of Prusa, however, acquired the greatest fame of all — he founded a new sect, treated with disdain the promises of King Mithridates conveyed to him by an embassy, discovered a method of successfully treating diseases by wine, and, breaking in upon the funeral ceremony, saved the life of a man, who was actually placed on the funeral pile. He rendered himself, however, more celebrated than all, by staking his reputation as a physician against Fortune herself, and asserting that he did not wish to be so much as looked upon as a physician, if he should ever happen in any way to fall sick; and he won his wager, for he met his death at an extreme old age, by falling down stairs.

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CHAP. 38.

GEOMETRY AND ARCHITECTURE.

M. Marcellus, too, at the taking of Syracuse, offered a remarkable homage to the sciences of geometry and mechanics, by giving orders that Archimedes was to be the only person who should not be molested; his commands, however, were disregarded, in consequence of the imprudence of one of the soldiers. Chersiphron, also, the Cnossian, was rendered fa- mous by the admirable construction of the temple of Diana at Ephesus; Philon, by the construction of the basin at Athens, which was capable of containing one thousand vessels; Cte- sibius, by the invention of pneumatics and hydraulic machines; and Dinochares, by the plan which he made of the city of Alexandria, founded by Alexander in Egypt. The same monarch, too, by public edict, declared that no one should paint his portrait except Apelles, and that no one should make a marble statue of him except Pyrgoteles, or a bronze one except Lysippus. These arts have all been rendered glorious by many illustrious examples.

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CHAP. 39. (38.)

OF PAINTING; ENGRAVING ON BRONZE, MARBLE, AND IVORY; OF CARVING.

King Attalus gave one hundred talents, at a public auction, for a single picture of Aristides, the Theban painter. Cæsar, the Dictator, purchased two pictures, the Medea and the Ajax of Timomachus, for eighty talents, it being his intention to dedicate them in the temple of Venus Genetrix. King Candaules gave its weight in gold for a large picture by Bularchus, the subject of which was the destruction of the Magnetes. Demetrius, who was surnamed the "taker of cities," refused to set fire to the city of Rhodes, lest he should chance to destroy a picture of Protogenes, which was placed on that side of the walls against which his attack was directed. Praxiteles has been ennobled by his works in marble, and more especially by his Cnidian Venus, which became remarkable from the insane love which it inspired in a certain young man, and the high value set upon it by King Nicomedes, who endeavoured to procure it from the Cnidians, by offering to pay for them a large debt which they owed. The Olympian Jupiter day by day bears testimony to the talents of Phidias, and the Capitoline Jupiter and the Diana of Ephesus to those of Mentor; to which deities, also, were consecrated vases made by this artist.

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CHAP. 40. (39.)

SLAVES FOR WHICH A HIGH PRICE HAS BEEN GIVEN.

The highest price ever given for a man born in slavery, so far as I am able to discover, was that paid for Daphnus, the grammarian, who was sold by Natius of Pisaurum to M. Scaurus, the first man in the state, for seven hundred thousand sesterces. In our day, no doubt, comic actors have fetched a higher price, but then they were purchasing their own freedom. In the time of our ancestors, Roscius, the actor, gained five hundred thousand sesterces annually. Perhaps, too, a person might in the present instance refer to the case of the army commissary in the Armenian war, which was of late years undertaken in favour of Tiridates; which officer, in our own time, received his manumission from Nero for the sum of thirteen million sesterces; but, in this case, the consideration was the profit to be derived from the war, and it was not the value of the man that was paid for. And so, too, when Lutorius Priscus bought of Sejanus, the eunuch, Pæzon, for fifty million sesterces, the price was given, by Hercules! rather to gratify the passion of the purchaser, than in commendation of the beauty of the slave. Universal sorrow and consternation then reigning, the public were too much pre-occupied with it to put a stop to a bargain of so scandalous a nature.

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CHAP. 41. (40.)

SUPREME HAPPINESS.

Of all nations of the earth, the Romans have, without doubt, excelled every other in the display of valour. The human judgment cannot, however, possibly decide what man has enjoyed the highest degree of happiness, seeing that every one defines a state of prosperity in a way different from another, and entirely in conformity with his own notions. If we wish to form a true judgment and come to a decision, casting aside all the allurements and illusions of fortune, we are bound to say that no mortal is happy. Fortune has dealt well, and, indeed, indulgently, to him who feels that he has a right to say that he is not unhappy. For if there is nothing else, at all events, there is the fear lest fortune should fail at last; which fear itself, when it has once fastened upon us, our happiness is no longer unalloyed. And then, too, is it not the case that there is no mortal who is always wise? Would that there were many to be found, who could feel a conviction that this is false, and that it had not been enunciated by an oracle itself, as it were! Mortals, vain as they are, and ingenious in deceiving themselves, calculate in the same way as the Thracians, who, according to their experience of each day, deposit in an urn a black or a white pebble; at the close of their life, these pebbles are separated, and from the relative number of each kind, they form their conclusions. But really, may not that very day that has been complimented with a white pebble, have contained in itself the germ of some misfortune? How many a man has got into trouble by the very power which has been bestowed upon him? How many have been brought to ruin and plunged into the deepest misery by their own blessings? or rather, by what have been looked upon too fondly as blessings, for the hour during which they were in the full enjoyment of them. But most true it is, that it is the day after, that is the judge of the day before; and after all, it is only the last day that is to set its stamp on the whole; the consequence is, that we can put our trust in none of them. And then, too, is it not the fact that the blessings of life would not be equal to its evils, even though they

were equal in number? For what pleasure is there that can compensate for the slightest grief? Alas! what a vain and unreasonable task we impose upon ourselves! We trouble ourselves with counting the *number* of days, when it is their *weight* that ought to be taken into consideration.

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CHAP. 42. (41.)

RARE INSTANCES OF GOOD FORTUNE CONTINUING IN THE SAME FAMILY.

During the whole course of ages, we find only one woman, and that, Lampido, the Lacedæmonian, who was the daughter of a king, the wife of a king, and the mother of a king. Berenice was the only woman who was daughter, sister, and mother of conquerors in the Olympian games, The family of the Curios has been the only one to produce three orators in succession; that of the Fabii alone has given three chiefs of the senate in succession, Fabius Ambustus, his son Fabius Rullianus, and his grandson Quintus Fabius Gurges.

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CHAP. 43. (42.)

REMARKABLE EXAMPLE OF VICISSITUDES.

As to examples of the vicissitudes of Fortune, they are innumerable. For what great pleasures has she ever given us, which have not taken their rise in misfortunes? And what extraordinary misfortunes have not taken their first rise in great pleasures? (43.) It was fortune that preserved the Senator, M. Fidustius, who had been proscribed by Sylla, for a period of thirty-six years. And yet he was proscribed a second time; for he survived Sylla, even to the days of Antony, and, as it appears, was proscribed by him, for no other reason but because he had been proscribed before.

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CHAP. 44.

REMARKABLE EXAMPLES OF HONOURS.

Fortune has determined that P. Ventidius alone should enjoy the honour of a triumph over the Parthians, and yet the same individual, when he was a child, she led in the triumphal procession of Cneius Pompeius, the conqueror of Asculum. Indeed, Masurius says, that he had been twice led in triumph; and according to Cicero, he used to let out mules for the bakers of the camp. Most writers, indeed, admit that his younger days were passed in the greatest poverty, and that he wore the hob-nailed shoes of the common soldier. Balbus Cornelius, also, the elder, was elected to the consulate; but he had previously been accused, and the judges had been charged to discuss the point whether he could or not lawfully be scourged with rods; he being the first foreigner, — born even on the very shores of the ocean, — who obtained that honour, which our ancestors denied even to the people of Latium. Among other remarkable instances, also, we have that of L. Fulvius, the consul of the rebellious Tusculani, who, immediately upon his coming over to the Romans, obtained from them the same honour. He is the only individual who, in the same year in which he had been its enemy, enjoyed the honour of a triumph in Rome, and that too, over the people whose consul he had previously been. Down to the present time, L. Sylla is the only man who has claimed to himself the surname of "Happy;" a name which he derived, forsooth, from the bloodshed of the citizens and the oppression of his country! But what claim had he on which to found his title to this happiness? Was it the power which he had of proscribing and massacreing so many thousands of his fellow-citizens? Oh interpretation most disgraceful, and which must stamp him as "Unhappy" to all future time! Were not the men who perished in those times, of the two, to be looked upon as the more fortunate — seeing that with them we sympathize, while there is no one who does not detest Sylla? And then, besides, was not the close of his life more horrible than the sufferings which had been experienced by any of those who had been proscribed by him? his very flesh eating into itself, and so

engendering his own punishment. And this, although he may have thought proper to gloss it over by that last dream of his, in the very midst of which he may be said, in some measure, to have died; and in which, as he pretended, he was told that his glory alone had risen superior to all envy; though at the same time, he confessed that it was still wanting to his supreme happiness, that he had not dedicated the Capitol.

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CHAP. 45.

TEN VERY FORTUNATE CIRCUMSTANCES WHICH HAVE HAPPENED TO THE SAME PERSON.

Q. Metellus, in the funeral oration which he made in praise of his father, L. Metellus, who had been pontiff, twice consul, dictator, master of the horse, one of the quindecemvirs for dividing the lands, and the first who had elephants in his triumphal procession, the same having been taken in the first Punic war, has left it written to the effect that his father had attained the ten greatest and best things, in the search after which wise men have spent all their lives. For, as he states, he was anxious to become the first warrior, the best orator, the bravest general, that the most important of all business should be entrusted to his charge, that he should enjoy the very highest honours, that he should possess consummate wisdom, that he should be regarded as the most distinguished senator, that he should by honourable means acquire a large fortune, that he should leave behind him many children, and that he should be the most illustrious person in the state. To refute this assertion, would be tedious and indeed unnecessary, seeing that it is contradicted more than sufficiently by the single fact, that Metellus passed his old age, deprived of his sight, which he had lost in a fire, while rescuing the Palladium from the temple of Vesta; a glorious action, no doubt, although the result was unhappy: on which account it is, that although he ought not to be called unfortunate, still he cannot be called fortunate. The Roman people, however, granted him a privilege which no one else had ever obtained since the foundation of the city, that of being conveyed to the senate- house in a chariot whenever he went to the senate: a great distinction, no doubt, but bought at the price of his sight.

(44.) The son also, of the same Q. Metellus, who has given the above account of his father, is considered himself to have been one of the rarest instances of human felicity. For, in ad- dition to the very considerable honours which he obtained, and the surname which he acquired from the conquest of Macedonia, he was carried to the

funeral pile by his four sons, one of whom had been prætor, three of them consuls, two had obtained triumphs, and one had been censor; each of which honours falls to the lot of a very few only. And yet, in the very full-blown pride of his dignity, as he was returning from the Campus Martius at mid-day, when the Forum and the Capitol are deserted, he was seized by the tribune, Caius Atinius Labeo, surnamed Macerion, whom, during his censorship, he had ejected from the senate, and was dragged by him to the Tarpeian rock, for the purpose of being precipitated there from. The numerous band, however, who called him by the name of father, flew to his assistance, though tardily, and only just, as it were, at the very last moment, to attend his funeral obsequies, seeing that he could not lawfully offer resistance, or repel force by force in the sacred case of a tribune; and he was just on the very point of perishing, the victim of his virtues and the strictness of his censorship, when he was saved by the intervention of another tribune, — only obtained with the greatest difficulty, — and so rescued from the very jaws of death. He afterwards had to subsist on the bounty of others, his property having been consecrated by the very man whom he had degraded; and who, as if that had not satiated his vengeance, still farther wreaked his malice upon him, by throwing a rope around his neck, and twisting it with such extreme violence that the blood flowed from out of his ears. And for my part, too, I should look upon it as in the number of his misfortunes, to have been the enemy of the second Africanus; indeed, Macedonicus, in this instance, bears testimony against himself; for he said to his sons, "Go, my children, render the last duties to Scipio; you will never witness the funeral of a greater citizen than him;" and this speech he made to his sons, one of whom had already acquired the surname of Balearicus, and another of Diadematus, he himself at the time bearing that of Macedonicus.

Now, if we take into account the above injury alone, can any one justly pronounce that man happy, whose life was thus endangered by the caprice of an enemy, and that enemy, besides, not an Africanus? What victories over enemies could possibly be counterbalanced by such a price as this? What honours, what triumphs, did not Fortune cancel, in suffering a censor to be dragged through the middle of the city — indeed, that was his only resource for gaining time —

dragged to that Capitol, whither he himself, in his triumph, had forborne to drag in a similar manner even the very captives whom he had taken in his conquests? This crime, too, must be looked upon as all the greater, from its having so nearly deprived Macedonicus of the honours of his funeral, so great and so glorious, in which he was borne to the pile by his triumphant children, he himself thus triumphing, as it were, in his very obsequies. Most assuredly, there is no happiness that can be called unalloyed, when the terror of our life has been interrupted by any outrage, and much more by such an outrage as this. As for the rest, I really am at a loss whether we ought most to commend the manners of the age, or to feel an increased degree of indignation, that, among so many members of the family of the Metelli, such wicked audacity as that of C. Atinius remained unpunished.

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CHAP. 46.

THE MISFORTUNES OF AUGUSTUS.

In the life of the now deified emperor Augustus even, whom the whole world would certainly agree to place in this class, if we carefully examine it in all its features, we shall find remarkable vicissitudes of human fate. There was his rejection from the post of master of the horse, by his uncle, and the preference which was given to Lepidus, and that, too, in opposition to his own requests; the hatred produced by the proscription; his alliance in the Triumvirate with some among the very worst of the citizens, and that, too, with an unequal share of influence, he himself being entirely borne down by the power of Antony; his illness at the battle of Philippi; his flight, and his having to remain three days concealed in a marsh, though suffering from sickness, and, according to the account of Agrippa and Mecænas, labouring under a dropsy; his shipwreck on the coast of Sicily, where he was again under the necessity of concealing himself in a cave; his desperation, which caused him even to beg Proculeius to put him to death, when he was hard-pressed by the enemy in a naval engagement; his alarm about the rising at Perusia; his anxiety at the battle of Actium; the extreme danger he was in from the falling of a tower during the Pannonian war seditions so numerous among his soldiers; so many attacks by dangerous diseases; the suspicions which he entertained respecting the intentions of Marcellus; the disgraceful banishment, as it were, of Agrippa; the many plots against his life; the deaths of his own children, of which he was accused, and his heavy sorrows, caused not merely by their loss; the adultery of his daughter, and the discovery of her parricidal designs; the insulting retreat of his son-in-law, Nero; another adultery, that of his grand-daughter; to which there were added numerous other evils, such as the want of money to pay his soldiers; the revolt of Illyria; the necessity of levying the slaves; the sad deficiency of young men; the pestilence that raged in the City; the famine in Italy; the design which he had formed of putting an end to his life, and the fast of four days, which brought

him within a hair's breadth of death. And then, added to all this, the slaughter of Varus; the base slanders whispered against his authority; the rejection of Posthumous Agrippa, after his adoption, and the regret to which Augustus was a prey after his banishment; the suspicions too respecting Fabius, to the effect that he had betrayed his secrets; and then, last of all, the machinations of his wife and of Tiberius, the thoughts of which occupied his last moments. In fine, this same god, who was raised to heaven, I am at a loss to say whether deservedly or not, died, leaving the son of his own enemy his heir.

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CHAP. 47. (46.)

MEN WHOM THE GODS HAVE PRONOUNCED TO BE THE MOST HAPPY.

In reference to this point, two oracles of Delphi may come under our consideration, which would appear to have been pronounced as though in order to chastise the vanity of man. These oracles were the following: by the first, Pedius was pronounced to be the most happy of men, who had just before fallen in defence of his country. On the second occasion, when it had been consulted by Gyges, at that time the most powerful king in the world, it declared that Aglaiis of Psophis was a more happy man than himself. This Aglaiis was an old man, who lived in a poor petty nook of Arcadia, and cultivated a small farm, though quite sufficient for the supply of his yearly wants; he had never so much as left it, and, as was quite evident from his mode of living, his desires being of the most limited kind, he had experienced but an extremely small share of the miseries of life.

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CHAP. 48. (47.)

THE MAN WHOM THE GODS ORDERED TO BE WORSHIPPED DURING HIS LIFE-TIME; A REMARKABLE FLASH OF LIGHTNING.

While still surviving, and in full possession of his senses, by the command of the same oracle, and with the sanction of Jupiter, the supreme Father of the gods, Euthymus, the pugilist, who had always, with one exception, been victorious in the Olympic games, was deified. He was a native of Locri, in Italy. I find that Callimachus, considering it a more wonderful circumstance than any he had ever known, that the two statues which had been erected to him, one at Locri, and the other at Olympia, were struck by lightning on the same day, ordered sacrifices to be offered up to him, which was accordingly done, both during his life-time, and after his death. Nothing, indeed, has appeared to me so remarkable, as this mark of approval given by the gods.

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CHAP. 49. (48.)

THE GREATEST LENGTH OF LIFE.

Not only the differences of climate, but the multitude of instances named, and the peculiar destiny attached to each of us from the moment of his birth, tend to render one very uncertain in forming any general conclusion respecting the length and duration of human life. Hesiod, who was the first to make mention of this subject, while he states many circumstances about the age of man, which appear to me to be fabulous, gives to the crow nine times the ordinary duration of our life, to the stag four times the length of that of the crow, to the raven three times the length of that of the stag, besides other particulars with reference to the phœnix and the Nymphs of a still more fabulous nature. The poet Anacreon gives one hundred and fifty years to Arganthonius, the king of the Tartessii; ten more to Cinaras, the king of Cyprus, and two hundred to Ægimius . Theopompus gives one hundred and fifty-three years to Epimenides of Cnossus; according to Hellenicus, some of the nation of the Epii, in Ætolia, have completed their two hundredth year; and his account is confirmed by Damastes, who relates that Pictoreus, one of this nation, who was remarkable for his size and strength, lived even to his three hundredth year. Ephorus says that some kings of Arcadia have lived three hundred years; Alexander Cornelius, that there was one Dandon, in Illyricum, who lived five hundred years. Xenophon, in his Periplus, gives to a king of the island of the Lutmii six hundred years, and, as though in that instance he had lied too sparingly, to his son eight hundred. All these statements, however, have originated in a want of acquaintance with the accurate measurement of time. For some nations reckon the summer as one year, and the winter as another; others again, consider each of the four seasons a year; the Arcadians, for instance, whose years were of three months each. Others, such as the Egyptians, calculate by the moon, and hence it is that some individuals among them are said to have lived as many as one thousand years.

Let us proceed, however, to what is admitted to be true. It is pretty

nearly certain, that Arganthonius of Gades reigned eighty years, and he is supposed to have commenced his reign when he was forty. Masinissa, beyond a doubt, reigned sixty years, and Gorgias, the Sicilian, lived one hundred and unwittingly the father of Adonis, by his own daughter Myrrha (or Smyrna), in consequence of the anger of Venus or Aphrodite. He was said to have founded the city of Cinyra in Cyprus. eight. Quintus Fabius Maximus was an augur for sixty- three years. M. Perperna, and more recently, L. Volusius Saturninus, survived all those whose suffrages each had solicited on the occasion of his consulship; Perperna lived ninety-eight years, and left after him only seven of those whose names, when censor, he had enrolled. Connected with this fact, it also suggests itself, and deserves to be remarked, that it has happened only once, that five successive years have ever passed without the death of a senator taking place; this was the case from the occasion on which the censors Flaccus and Albinus performed the lustration, in the year of the City 579, until the time of the succeeding censors.. M. Valerius Corvinus completed one hundred years, forty-six of which intervened between his first and sixth consulship. He occupied the curule chair twenty-one times, a thing that was never the case with any one besides. The pontiff Metellus also attained the same age.

Among women also, Livia, the wife of Rutilius, exceeded her ninety-sixth year; during the reign of Claudius, Statilia, a member of a noble family, died at the age of ninety-nine; Terentia, the wife of Cicero, lived one hundred and three years, and Clodia, the wife of Ofilius, one hundred and fifteen; she had fifteen children.

Lucceia, an actress in the mimes, performed on the stage when one hundred years old, and Galeria Copiola returned to the stage, to perform in the interludes, at the votive games which were celebrated for the health of the deified Augustus, in the consulship of C. Poppæus and Q. Sulpicius. She had made her first appearance when eight years of age, just ninety-one years before that time, when M. Pomponius was ædile of the people, in the consulship of C. Marius and Cn. Carbo. When Pompeius Magnus dedicated his great theatre, he brought her upon the stage, as being quite a wonder, considering her old age. Asconius Pedianus informs us, that Sammula also lived one hundred and ten years. I consider it less wonderful that

Stephanio, who was the first to dance on the stage in comedy descriptive of Roman manners, should have danced at the two secular games, those celebrated by the deified Augustus, and by Claudius Cæsar, in his fourth consulship, considering that the interval that elapsed between them was no more than sixty-three years; indeed, he lived a considerable time after the last period. We are informed by Mutianus, that, on the peak of Mount Tmolus, which is called Tempsis, the people live one hundred and fifty years, and that T. Fullonius, of Bononia, was set down as of the same age, in the registration which took place under the censorship of Claudius Cæsar; and this appeared to be confirmed by comparing the present with former registrations, as well as many other proofs that he had been alive at certain periods — for that prince greatly interested himself in ascertaining the exact truth of the matter.

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CHAP. 50. (49.)

THE VARIETY OF DESTINIES AT THE BIRTH OF MAN.

The present conjuncture would appear to demand from me some opinion upon the science of the stars. Epigenes used to maintain that human life could not be possibly prolonged to one hundred and twelve years, and Berosus that it could exceed one hundred and seventeen. The system is still in existence which Petosiris and Necepsos transmitted to us, and called by them "tartemorion," from the division of the signs into four portions; from which it would appear, that life, in the region of Italy, may possibly be extended to one hundred and twenty-four years They maintain that, reckoning from the commencement of an ascending sign, no life can possibly exceed a period of ninety degrees from that point; which periods they call by the name of "anaphoræ;" they say also, that these anaphoræ may be intercepted by meeting with malign stars or their rays even, or those of the sun. To theirs the school of Æsculapius succeeded, which admits that the allotted duration of life is regulated by the stars, but that it is quite uncertain what is the greatest extent of the period. These say that long life is uncommon, because a very great number of persons are born at critical moments in the hours of the lunar days; for example, in the seventh and the fifteenth hours, both by day and night; these individuals are subject to the malign influence of that ascending scale of the years which is termed the "climacteric," and never hardly, when born under these circumstances, exceed the fifty-fourth year.

First of all, however, it must strike us that the variations which have taken place in this science prove its uncertainty; and to this consideration may be added the experience of the very last census, which was made four years ago, under the direction of the Emperors Vespasian, father and son. I shall not search through the registers; I shall only cite some instances in the middle district that lies between the Apennines and the river Padus. At Parma, three persons declared themselves to be one hundred and twenty years of age; at Brixellum, one was one hundred and twenty-five; at Parma, two were one

hundred and thirty; at Placentia, one was one hundred and thirty; at Faventia, one woman was one hundred and thirty-two; at Bononia, L. Terentius, the son of Marcus, and at Ariminum, M. Aponius, were one hundred and forty, and Tertulla, one hundred and thirty-seven. In the hills which lie around Placentia is the town of Veleiacium, in which six persons gave in their ages as one hundred and ten years, and four one hundred and twenty, while one person, M. Mucius, the son of Marcus, surnamed Felix, and of the Galerian tribe, was aged one hundred and forty. Not, however, to dwell upon what is generally admitted, in the eighth region of Italy, there appeared by the register, to be fifty-four persons of one hundred years of age, fourteen of one hundred and ten, two of one hundred and twenty-five, four of one hundred and thirty, the same number of one hundred and thirty-five to one hundred and thirty-seven, and three of one hundred and forty.

Again, we have another illustration of the uncertain tenure of human life. Homer informs us that Hector and Polydamas were born on the same night, and yet how different was their fate! M. Cælius Rufus and C. Licinius Calvus were born on the same day, the fifth before the calends of June, in the consulship of C. Marius and Cn. Carbo; they both of them lived to be orators, it is true, but how different their destiny! The same thing, too, happens every day, and in every part of the world, with respect to men that are born in the self-same hour; masters and slaves, kings and beggars, come into the world at the same moment.

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CHAP. 51. (50.)

VARIOUS INSTANCES OF DISEASES.

P. Cornelius Rufus, who was consul with M. Curio, lost his sight while he was asleep and dreaming that that accident had befallen him. On the other hand, Jason, of Pheræ, when he was labouring under an abscess and had been given up by the physicians, determined to end his life in battle, where he received a wound in the chest, and found, at the hands of the enemy, a remedy for his disease. Q. Fabius Maximus, the consul, having engaged in battle with the Allobroges and the Arverni, at the river Isara, on the sixth day before the ides of August, and having slain there one hundred and thirty thousand of the enemy, found himself cured, during the engage. ment, of a quartan fever.

This gift of life, which is bestowed upon us by nature, is extremely uncertain and frail, whatever portion of it may be allotted to us. The measure is, indeed, but scanty and brief, even when it is the largest, if we only reflect upon the extent of eternity. And then, besides, if we take into account our sleep during the night, we can only be properly said to live half the period of our life; seeing that just one half of it is passed, either in a state resembling death, or else of bodily suffering, if we are unable to sleep. Added to this, we ought not to reckon the years of infancy, during which we are not sensible of our existence, nor yet the years of old age, which is prolonged only for the punishment of those who arrive at it. There are so many kinds of dangers, so many diseases, so many apprehensions, so many cares, we so often invoke death, that really there is nothing that is so often the object of our wishes. Nature has, in reality, bestowed no greater blessing on man than the shortness of life. The senses become dull, the limbs torpid, the sight, the hearing, the legs, the teeth, and the organs of digestion, all of them die before us, and yet we reckon this state as a part of our life. The solitary instance of Xenophilus, the musician, who lived one hundred and five years without any infirmity of body, must be regarded then as a kind of miracle; for, by Hercules! all other men are subject, at certain fixed periods, to

recurring and deadly attacks by heat or cold, in every part of the body, a thing that is not the case with other animals; and these attacks, too, return not only at regular hours, but on certain days and certain nights — sometimes the third day, sometimes the fourth, sometimes every day throughout the year.

And then, too, there is another kind of fatal disease, that which is produced by over-exertion of the mental faculties. Nature has appointed certain laws as well for our maladies; quartan fevers never commence at the winter solstice, nor yet during the winter months; some diseases never attack us after the sixtieth year; some again disappear at the age of puberty, especially in females; while aged persons are but seldom affected by the plague. There are some diseases which attack whole nations; others prevail among classes; some among slaves, others among the higher ranks, and others among other classes of society. It has been remarked, in reference to this subject, that the plague always takes a course from the south towards the west, and scarcely ever in an opposite direction; it never appears in the winter, or lasts longer than three months.

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CHAP. 52. (51.)

DEATH.

And now to speak of the premonitory signs of death. Among these are laughter, in madness in cases of delirium, the patient carefully folding the fringe or the plaits of the bed- clothes; insensibility to the attempts of those who would rouse them from sleep; and involuntary discharges from the body, which it is not necessary here to particularize; but the most unequivocal signs of all, are certain appearances of the eyes and the nose, a lying posture with the face continually upwards, an irregular and feeble motion of the pulse, and the other symptoms, which have been observed by that prince of physicians, Hippocrates. At the same time that there are innumerable signs of death, there are none of health and safety; so much so, that Cato the Censor, when speaking to his son in relation to those who appear to be in good health, declared, as though it had been the enunciation of some oracle, that precocity in youth is a sign of an early death.

The number of diseases is infinite. Pherecydes of Scyros died from vast numbers of worms issuing from his body. Some persons are distressed by a perpetual fever; such was the case with C. Mæcenas; during the last three years of his life, he could never get a single moment's sleep. Antipater of Sidon, the poet, was attacked with fever every year, and that only on his birthday; he died of it at, an advanced age.

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CHAP. 53. (52.)

PERSONS WHO HAVE COME TO LIFE AGAIN AFTER BEING LAID OUT FOR BURIAL.

Aviola, a man of consular rank, came to life again when on the funeral pile; but, by reason of the violence of the flames, no assistance could be rendered him, in consequence of which he was burnt alive. The same thing is said to have happened to L. Lamia, a man of prætorian rank. Messala, Rufus, and many other authors, inform us, that C. Ælius Tubero, who had filled the office of prætor, was also rescued from the funeral pile. Such then is the condition of us mortals: to these and the like vicissitudes of fortune are we born; so much so, that we cannot be sure of any thing, no, not even that a person is dead. With reference to the soul of man, we find, among other instances, that the soul of Hermotinus of Clazomenæ was in the habit of leaving his body, and wandering into distant countries, whence it brought back numerous accounts of various things, which could not have been obtained by any one but a person who was present. The body, in the meantime, was left apparently lifeless. At last, however, his enemies, the Cantharidæ, as they were called, burned the body, so that the soul, on its return, was deprived of its sheath, as it were. It is stated also, that in Pro- connesus, the soul of Aristeas was seen to fly out of his mouth, under the form of a raven; a most fabulous story, however, which may be well ranked with the one that follows. It is told of Epimenides of Cnossus, that when he was a boy, being fatigued by heat and walking, he fell asleep in a cave, where he slept for fifty-seven years; and that when he awoke, as though it had been on the following day, he was much astonished at the changes which he saw in the appearance of every thing around him: after this, old age, it is said, came upon him in an equal number of days with the years he had slept, but his life was prolonged to his hundred and fifty-seventh year. The female sex appear more especially disposed to this morbid state, on account of the misplacement of the womb; when this is once corrected, they immediately come to themselves again. The volume of Heraclides on

this subject, which is highly esteemed among the Greeks, contains the account of a female, who was restored to life, after having appeared to be dead for seven days.

Varro informs us, that when he was one of the "viginti. viri," or twenty commissioners, appointed to superintend the division of the lands at Capua, a man who had been carried to the funeral pile, returned on foot from the Forum to his own house, and that the very same thing happened also at Aquinum. He states also, that Corfidius, who had married his maternal aunt, came to life again, after the funeral had been all arranged, and that he afterwards attended the funeral of the person who had so arranged his own. He gives in addition some other marvellous relations, the whole of which it may be as well to set forth; he says that there were two brothers, members of the equestrian order, and named Corfidius: it so happened that the elder of these was seen to breathe his last to all appearance, and on opening his will, it was found that he had named his brother his heir, who accordingly ordered his funeral. In the meanwhile, however, he who had been thought to be dead, clapping his hands, summoned the servants, and told them that he was just come from his brother's house, who had placed his daughter in his charge; in addition to which, he had mentioned to him the place where he had secretly buried some gold, and had requested that the funeral preparations which had been made, might be employed for himself. While he was stating to this effect, the servants of his brother came in the greatest haste, and informed them that he was dead: the gold too, was found in the place just as he had stated. But throughout the whole of our lives we are perpetually hearing of such predictions as these; they are not, however, worth collecting, seeing that they are almost always false, as we shall illustrate by the following remarkable instance.

In the Sicilian war, Gabienus, the bravest of all Cæsar's naval commanders, was taken prisoner by Sextus Pompeius, who ordered his throat to be cut; after which, his head almost severed from his body, he lay the whole of the day upon the seashore. Towards evening, with groans and entreaties, he begged the crowds of people who had assembled, that they would prevail upon Pompeius to come to him, or else send one of his most confidential friends, as he had just returned from the shades below, and had some important news to

communicate. Pompeius accordingly sent several of his friends, to whom Gabienus stated that the good cause and virtuous partisans of Pompeius were well pleasing to the infernal deities, and that the event would shortly prove such as he wished: that he had been ordered to announce to this effect, and that, as a proof of its truthfulness, he himself should expire the very moment he had fulfilled his commission; and his death actually did take place.

We have instances also of men who have been seen after their burial; but, for the present, we are treating of the operations of nature, and not of miracles.

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CHAP. 54. (53.)

INSTANCES OF SUDDEN DEATH.

Among the things that are looked upon as more especially singular, though of frequent occurrence, is sudden death, a thing that, in fact, is the greatest happiness of life, and, as we will shew, only a natural occurrence. Verrius has given many instances of it; we will limit ourselves by only making a selection. Besides Chilo, who has been already mentioned, Sophocles, and Dionysius, the tyrant of Sicily, both of them, died of joy, on learning that they had obtained the prize for tragedy. After the defeat at Cannæ, a mother died of joy, on seeing that her son had returned in safety, she having heard a false report of his death. Diodorus, the professor of logic, died of mortification, because he could not immediately answer some question which had been put to him by Stilpo, by way of joke.

Two of the Cæsars, one of whom was at the time prætor, and the other had previously discharged that office, and was the father of the Dictator Cæsar, died without any apparent cause, in the morning, while putting on their shoes; the former at Pisæ, the latter at Rome. Quintus Fabius Maximus died during his consulship, on the day before the calends of January, and in his place C. Rebilus got himself elected consul for only a few hours. The same thing happened also to the senator, C. Volcatius Gurges; these were all of them so well, and in such perfect health, that they were actually preparing to go from home. Q. Æmilius Lepidus, just as he was leaving his house, struck his great toe against the threshold of his chamber door. C. Aufustius, having gone from home, was proceeding to the senate-house, when he stumbled in the Comitium, and expired. Their ambassador, who had just been pleading the cause of the Rhodians in the senate, to the admiration of every one, suddenly expired at the door of the senate-house, just as he was about to retire. Cn. Bæbius Tamphilus, who had been prætor also, expired while he was enquiring of a boy what time it was: Aulus Pompeius died just after saluting the gods in the Capitol; and M. Juventius Thalna, the consul, while he was sacrificing. C. Servilius Pansa expired at the second hour of the day,

while he was standing in the Forum, near a shop there, and leaning on the arm of his brother, Publius Pansa: the judge Bæbius, while he was giving an order for an enlargement of bail: M. Terentius Corax, while he was making an entry in his note-book in the Forum: only last year too, a member of the equestrian order at Rome, while whispering in the ear of a man of consular rank, before the ivory Apollo, in the Forum of Augustus; and, what is more singular than all, C. Julius, the physician, while he was applying, with his probe, some ointment to the eye of a patient. Aulus Manlius Torquatus, a man of consular rank, died in the act of reaching a cake at dinner; L. Tuscius Valla, the physician, while he was taking a draught of honeyed wine; Ap. Saufeius, while, on his return from the bath, after drinking some honeyed wine and water, he was swallowing an egg: P. Quinctius Scapula, while he was dining with Aquilius Gallus: Decimus Saufeius, the scribe, while he was breakfasting at his house. Corn. Gallus, who had filled the office of Prætor, and Titus Haterius, a man of equestrian rank, died in the venereal act; and, a thing that was especially remarked by those of our day, two members of the equestrian order expired in the embraces of the same actor of pantomimes, Mysticus by name, who was remarkable for his singular beauty.

But the most perfect state, to all appearance, of security from death, was that of which we have an account given by the ancients, in the case of M. Ofilius Hilarus. He was an actor, and after having been very greatly applauded by the people, was giving, on his birthday, an entertainment. During dinner he called for a cup of warm drink; at the same time, looking at the masque which he had worn during the day, he placed upon it the chaplet, which he had taken from his own head; and in that position he remained rigidly fixed, without moving, no one being aware of what had taken place, until the person who was reclining next to him reminded him that the drink was getting cold; upon which he was found to be dead.

These are instances of persons dying a happy death; but, on the other hand, there are innumerable cases also of unfortunate ends. L. Domitius, a member of a most illustrious family, having been conquered at Massilia by Cæsar, and taken prisoner by him at Corfinium, being weary of life, took poison; but, immediately after,

he used every possible exertion to prolong his life. We find it stated in our Annals, that Felix, a charioteer of the red party, being placed on the funeral pile, some one of the number of his admirers threw himself upon the pile; a most silly piece of conduct. Lest, however, this circumstance might be attributed to the great excellence of the dead man in his art, and so redound to his glory, the other parties all declared that he had been overpowered by the strength of the perfumes. Not long ago, M. Lepidus, a man of very noble birth, who died, as I have stated above, of chagrin caused by his divorce, was hurled from the funeral pile by the violence of the flames, and in consequence of the heat, could not be replaced upon it; in consequence of which, his naked body was burnt with some other pieces of brushwood, in the vicinity of the pile.

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CHAP. 55. (54.)

BURIAL.

The burning of the body after death, among the Romans, is not a very ancient usage; for formerly, they interred it. After it had been ascertained, however, in the foreign wars, that bodies which had been buried were sometimes disinterred, the custom of burning them was adopted. Many families, how- ever, still observed the ancient rites, as, for example, the Cor- nelian family, no member of which had his body burnt before Sylla, the Dictator; who directed this to be done, because, having previously disinterred the dead body of Caius Marius, he was afraid that others might retaliate on his own. The term “sepultus” applies to any mode whatever of disposing of the dead body; while, on the other hand, the word “humatus” is applicable solely when it is deposited in the earth.

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CHAP. 56. (55.)

THE MANES, OR DEPARTED SPIRITS OF THE SOUL.

After burial come the different quiddities as to the existence of the Manes. All men, after their last day, return to what they were before the first; and after death there is no more sensation left in the body or in the soul than there was before birth. But this same vanity of ours extends even to the future, and lyingly fashions to itself an existence even in the very moments which belong to death itself: at one time it has conferred upon us the immortality of the soul; at another transmigration; and at another it has given sensation to the shades below, and paid divine honours to the departed spirit, thus making a kind of deity of him who has but just ceased to be a man. As if, indeed, the mode of breathing with man was in any way different from that of other animals, and as if there were not many other animals to be found whose life is longer than that of man, and yet for whom no one ever presaged anything of a like immortality. For what is the actual substance of the soul, when taken by itself? Of what material does it consist? Where is the seat of its thoughts? How is it to see, or hear, or how to touch? And then, of what use is it, or what can it avail, if it has not these faculties? Where, too, is its residence, and what vast multitudes of these souls and spirits must there be after the lapse of so many ages? But all these are the mere figments of childish ravings, and of that mortality which is so anxious never to cease to exist. It is a similar piece of vanity, too, to preserve the dead bodies of men; just like the promise that he shall come to life again, which was made by Democritus; who, however, never has come to life again himself. Out upon it! What downright madness is it to suppose that life is to recommence after death! or indeed, what repose are we ever to enjoy when we have been once born, if the soul is to retain its consciousness in heaven, and the shades of the dead in the infernal regions? This pleasing delusion, and this credulity, quite cancel that chief good of human nature, death, and, as it were, double the misery of him who is about to die, by anxiety as to what is to happen to him after it. And, indeed, if life really is a good, to whom

can it be so to have once lived?

How much more easy, then, and how much more devoid of all doubts, is it for each of us to put his trust in himself, and guided by our knowledge of what our state has been before birth, to assume that that after death will be the same.

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CHAP. 57. (56.)

THE INVENTORS OF VARIOUS THINGS.

Before we quit the consideration of the nature of man, it appears only proper to point out those persons who have been the authors of different inventions. Father Liber was the first to establish the practice of buying and selling; he also invented the diadem, the emblem of royalty, and the triumphal procession. Ceres introduced corn, the acorn having been previously used by man for food; it was she, also, who introduced into Attica the art of grinding corn and of making bread, and other similar arts into Sicily; and it was from these circumstances that she came to be regarded as a divinity. She was the first also to establish laws; though, according to some, it was Rhadamanthus. I have always been of opinion, that letters were of Assyrian origin, but other writers, Gellius, for instance, suppose that they were invented in Egypt by Mercury: others, again, will have it that they were discovered by the Syrians; and that Cadmus brought from Phœnicia sixteen letters into Greece. To these, Palamedes, it is said, at the time of the Trojan war, added these four, θ, ξ, φ, and χ. Simonides, the lyric poet, afterwards added a like number, ζ, η, ψ, and ω; the sounds denoted by all of which are now received into our alphabet.

Aristotle, on the other hand, is rather of opinion, that there were originally eighteen letters, α β γ δ ε ζ ι κ λ μ ν ο π ρ ς τ υ φ, and that two, θ namely and χ, were introduced by Epicharmus, and not by Palamedes. Aristides says, that a certain person of the name of Menos, in Egypt, invented letters fifteen years before the reign of Phoroneus, the most ancient of all the kings of Greece, and this he attempts to prove by the monuments there. On the other hand, Epigenes, a writer of very great authority, informs us that the Babylonians have a series of observations on the stars, for a period of seven hundred and twenty thousand years, inscribed on baked bricks. Berosus and Critodemus, who make the period the shortest, give it as four hundred and ninety thousand years. From this statement, it would appear that letters have been in use from all eternity. The

Pelasgi were the first to introduce them into Latium.

The brothers Euryalus and Hyperbius, were the first who constructed brick-kilns and houses at Athens; before which, caves in the ground served for houses. Gellius is inclined to think that Toxius, the son of Cælus, was the first inventor of mortar, it having been suggested to him by the nest of the swallow. Cecrops gave to a town the name of Cecropia, after himself; this is now the citadel of Athens. Some persons will have it, that Argos had been founded before this period by King Phoroneus; others, again, that Sicyon had been previously built; while the Egyptians declare that their own city, Diospolis, had been in existence long before them. Cinyra, the son of Agriopas, invented tiles and discovered copper-mines, both of them in the island of Cyprus; he also invented the tongs, the hammer, the lever, and the anvil. Wells were invented by Danaus, who came from Egypt into that part of Greece which had been previously known as Argos Dipsion.

The first stone-quarries were opened by Cadmus at Thebes, or else, according to Theophrastus, in Phœnicia. Walls were first built by Thrason; according to Aristotle, towers were first erected by the Cyclopes, but according to Theophrastus, by the Tirynthii. The Egyptians invented weaving; the Lydians of Sardis the art of dyeing wool. Closter, the son of Arachne, invented the spindle for spinning wool; Arachne herself, linen cloth and nets; Nicias of Megara, the art of fulling cloth; and Tychius, the Bœotian, the art of making shoes. The Egyptians will have it that the medical art was first discovered among them, while others attribute it to Arabus, the son of Babylonis and Apollo; botany and pharmacy are ascribed to Chiron, the son of Saturn and Philyra.

Aristotle supposes that Scythes, the Lydian, was the first to fuse and temper copper, while Theophrastus ascribes the art to Delas, the Phrygian. Some persons ascribe the working of copper to the Chalybes, others to the Cyclopes. Hesiod says, that iron was discovered in Crete, by the Idæan Dactyli. Erichthonius, the Athenian, or, as some people say, Æacus, discovered silver. Gold mines, and the mode of fusing that metal, were discovered by Cadmus, the Phœnician, at the mountain of Pangæus, or, according to other accounts, by Thoas or Eaclis, in Panchaia; or else by Sol, the

son of Oceanus, whom Gellius mentions as having been the first who employed honey in medicine. Midacritus was the first who brought tin from the island called Cassiteris. The Cyclopes invented the art of working iron. Choræbus, the Athenian, was the first who made earthen vessels; but Anacharsis, the Scthian, or, according to others, Hyperbius, the Corinthian, first invented the potter's wheel. Dædalus was the first person who worked in wood; it was he who invented the saw, the axe, the plummet, the gimlet, glue, and isinglass; the square, the level, the turner's lathe, and the key, were invented by Theodorus, of Samos. Measures and weights were invented by Phidon, of Argos, or, according to Gellius, by Palamedes. Pyrodes, the son of Cilix, was the first to strike fire from the flint, and Prometheus taught us how to preserve it, in the stalk of giant-fennel.

The Phrygians first taught us the use of the chariot with four wheels; the Carthaginians the arts of merchandize, and Eumolpus, the Athenian, the cultivation of the vine, and of trees in general. Staphylus, the son of Silenus, was the first to mix water with wine; olive-oil and the oil-press, as also honey, we owe to Aristæus, the Athenian; the use of oxen and the plough to Buzyges, the Athenian, or, according to other accounts, to Triptolemus.

The Egyptians were the first who established a monarchical government, and the Athenians, after the time of Theseus, a democracy. Phalaris, of Agrigentum, was the first tyrant that existed; the Lacedæmonians were the introducers of slavery; and the first capital punishment inflicted was ordered by the Areiopagus. The first battles were fought by the Africans against the Egyptians, with clubs, which they are in the habit of calling phalange. Prœtus and Acrisius were the first to use shields, in their contests with each other; or, as some say, Chalcus, the son of Athamas. Midias, the Messenian, invented the coat of mail, and the Lacedæmonians the helmet, the sword, and the spear. Greaves and crests were first used by the Carians; Scythes, the son of Jupiter, it is said, invented the bow and arrows, though some say that arrows were invented by Perses, the son of Perseus. Lances were invented by the Ætolians; the javelin, with the thong attached, by Ætolus, the son of Mars; the spear of the light infantry by Tyrrhenus; the dart by Penthesilea, the Amazon; the axe by Pisæus; the hunting-spear, and the scorpion to hurl missiles,

by the Cretans; the catapulta, the balista, and the sling, by the Syrophœnicians. Pisæus, the Tyrrhenian, was the first to invent the brazen trumpet, and Artemon, of Clazomenæ, the use of the testudo. The batter- ing-horse, for the destruction of walls, which is at the present day styled the "ram," was invented by Epeus, at Troy. Bellerophon was the first who mounted the horse; bridles and saddles for the horse were invented by Pelethronius. The Thessalians, who are called. Centauri, and who dwell along Mount Pelion, were the first to fight on horse — Back. The people of Phrygia were the first who used chariots with two horses; Erichthonius first used four. Palamedes, during the Trojan war, was the first who marshalled an army, and invented watchwords, signals, and the use of sentinels. Sinon, at the same period, invented the art of correspondence by signals. Lycaon was the first to think of making a truce, and Theseus a treaty of alliance.

The art of divination by means of birds we owe to Car, from whom Caria derives its name; Orpheus extended it to other animals. Delphus taught us the art of divining by the inspection of entrails; Amphiaraüs divination by fire; and Tiresias, the Theban, presages from the entrails of birds. We owe to Amphictyon the interpretation of portents and of dreams, and to Atlas, the son of Libya, the art of astrology, or else, according to other accounts, to the Egyptians or the Assyrians. Anaximander, the Milesian, invented the astronomical sphere; and Æolus, the son of Hellen, gave us the theory of the winds.

Amphion was the inventor of music; Pan, the son of Mercury, the music of the reed, and the flute with the single pipe; Midas, the Phrygian, the transverse flute; and Marsyas, of the same country, the double-pipe. Amphion invented the Lydian measures in music; Thamyris the Thracian, the Dorian, and Marsyas the Phrygian, the Phrygian style. Amphion, or, according to some accounts, Orpheus, and according to others, Linus, invented the lyre. Terpander, adding three to the former four, increased the number of strings to seven; Simonides added an eighth, and Timotheus a ninth. Thamyris was the first who played on the lyre, without the accompaniment of the voice; and Amphion, or, as some say, Linus, was the first who accompanied it with the voice. Terpander was the first who

composed songs expressly for the lyre; and Ardalus, the Trœzenian, was the first who taught us how to combine the voice with the music of the pipe. The Curetes taught us the dance in armour, and Pyrrhus, the Pyrrhic dance, both of them in Crete.

We are indebted to the Pythian oracle for the first heroic verse. A very considerable question has arisen, as to what was the origin of poetry; it is well known to have existed before the Trojan war. Pherecydes of Scyros, in the time of King Cyrus, was the first to write in prose, and Cadmus, the Milesian, was the first historian.

Lycaon first instituted gymnastic games, in Arcadia; Acastus funereal games, at Iolcos; and, after him, Theseus instituted them at the Isthmus. Hercules first instituted the athletic contests at Olympia. Pythus invented the game of ball. Painting was invented in Egypt by Gyges, the Lydian, or, according to Aristotle, in Greece, by Euchir, a kinsman of Dædalus; according to Theophrastus, again, it was invented by Polygnotus, the Athenian.

Danaüis was the first who passed over in a ship from Egypt to Greece. Before his time, they used to sail on rafts, which had been invented by King Erythras, to pass from one island to another in the Red Sea. There are some writers to be found, who are of opinion that they were first thought of by the Mysians and the Trojans, for the purpose of crossing the Hellespont into Thrace. Even at the present day, they are made in the British ocean, of wicker-work covered with hides; on the Nile they are made of papyrus, rushes, and reeds.

We learn from Philostephanus, that Jason was the first person who sailed in a long vessel; Hegesias says it was Paralus, Ctesias, Semiramis, and Archemachus, Ægeon. According to Damastes, the Erythræi were the first to construct vessels with two banks of oars; according to Thucydides, Aminocles, the Corinthian, first constructed them with three banks of oars; according to Aristotle, the Carthaginians, those with four banks; according to Mnesigiton, the people of Salamis, those with five banks; and, according to Xenagoras, the Syracusans, those with six; those above six, as far as ten, Mnesigiton says were first constructed by Alexander the Great. From Philostephanus, we learn that Ptolemy Soter made them as high as twelve banks; Demetrius, the son of Antigonus, with fifteen; Ptolemy Philadelphus, with thirty; and Ptolemy Philopater, who was

surnamed Tryphon, with forty. Hippus, the Tyrian, was the first who invented merchant-ships; the Cyrenians, the pinnace; the Phœnicians, the passage — Boat; the Rhodians, the skiff; and the Cyprians, the cutter.

We are indebted to the Phœnicians for the first observation of the stars in navigation; the Copæ invented the oar, and the Platæans gave it its broad blade. Icarus was the person who invented sails, and Dædalus the mast and yards; the Samians, or else Pericles, the Athenian, transports for horses, and the Thracians, long covered vessels, — Before which time they used to fight only from the prow or the stern. Pisæus, the Tyrrhenian, added the beak to ships; Eupalamus, the anchor; Anacharsis, that with two flukes; Pericles, the Athenian, grappling-irons, and hooks like hands; and Tiphys, the helm and rudder. Minos was the first who waged war by means of ships; Hyperbius, the son of Mars, the first who killed an animal; and Prometheus, the first who slew the ox.

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CHAP. 58. (57.)

THE THINGS ABOUT WHICH MANKIND FIRST OF ALL AGREED. THE ANCIENT LETTERS.

There was at the very earliest period a tacit consent among all nations to adopt the letters now used by the Ionians. (58.) That the ancient Greek letters were almost the same with the modern Latin, is proved by the ancient Delphic inscription on copper, which is now in the Palatine library, having been dedicated by the emperors to Minerva; this inscription is as follows:

ναυσικρατης ανεθετο τηι διος κορηι. ["Nausicrates offered this to the daughter of Zeus."]

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CHAP. 59. (59.)

WHEN BARBERS WERE FIRST EMPLOYED.

The next point upon which all nations appear to have agreed, was the employment of barbers. The Romans, however, were more tardy in the adoption of their services. According to Varro, they were introduced into Italy from Sicily, in the year of Rome 454, having been brought over by P. Titinius Mena: before which time the Romans did not cut the hair. The younger Africanus was the first who adopted the custom of shaving every day. The late Emperor Augustus always made use of razors.

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CHAP. 60.

WHEN THE FIRST TIME-PIECES WERE MADE.

(60.) The third point of universal agreement was the division of time, a subject which afterwards appealed to the reasoning faculties. We have already stated, in the Second Book, when and by whom this art was first invented in Greece; the same was also introduced at Rome, but at a later period. In the Twelve Tables, the rising and setting of the sun are the only things that are mentioned relative to time. Some years afterwards, the hour of midday was added, the summoner of the consuls proclaiming it aloud, as soon as, from the senate-house, he caught sight of the sun between the Rostra and the Græcostasis; he also proclaimed the last hour, when the sun had gone down from the Mænian column to the prison. This, however, could only be done in clear weather, but it was continued until the first Punic war. The first sun-dial is said to have been erected among the Romans twelve years before the war with Pyrrhus, by L. Papirius Cursor, at the temple of Quirinus, on which occasion he dedicated it in pursuance of a vow which had been made by his father. This is the account given by Fabius Vestalis; but he makes no mention of either the construction of the dial or the artist, nor does he inform us from what place it was brought, or in whose works he found this statement made.

M. Varro says that the first sun-dial, erected for the use of the public, was fixed upon a column near the Rostra, in the time of the first Punic war, by the consul M. Valerius Messala, and that it was brought from the capture of Catina, in Sicily: this being thirty years after the date assigned to the dial of Papirius, and the year of Rome 491. The lines in this dial did not exactly agree with the hours; it served, however, as the regulator of the Roman time ninety-nine years, until Q. Marcius Philippus, who was censor with L. Paulus, placed one near it, which was more carefully arranged: an act which was most gratefully acknowledged, as one of the very best of his censorship. The hours, however, still remained a matter of uncertainty, whenever the weather happened to be cloudy, until the

ensuing lustrum; at which time Scipio Nasica, the colleague of Lænas, by means of a clepsydra, was the first to divide the hours of the day and the night into equal parts: and this time-piece he placed under cover and dedicated, in the year of Rome 595; for so long a period had the Romans remained without any exact division of the day. We will now return to the history of the other animals, and first to that of the terrestrial.

SUMMARY. — Remarkable events, narratives, and observations, seven hundred and forty-seven.

ROMAN AUTHORS QUOTED. — Verrius Flaccus, Cneius Gellius, Licinius Mutianus, Massurius Sabinius, Agrippina, the wife of Claudius, M. Cicero, Asinius Pollio, M. Varro, Messala Rufus, Cornelius Nepos, Virgil, Livy, Cordus, Melis- sus, Sebosus, Cornelius Celsus, Maximus Valerius, Trogus, Nigidius Figulus, Pomponius Atticus, Pedianus Asconius, Fabianus, Cato the Censor, the Register of the Triumphs,Fabius Vestalis.

FOREIGN AUTHORS QUOTED. — Herodotus, Aristeas, Bæton, Isigonus, Crates, Agatharchides, Calliphanes, Aristotle, Nymphodorus, Apollonides, Phylarchus, Damon, Megasthenes, Ctesias, Tauron, Eudoxus, Onesicritus, Clitarchus, Duris, Artemidorus, Hippocrates the physician, Asclepiades the physician, Hesiod, Anacreon, Theopompus, Hellanicus, Damastes, Ephorus, Epigenes, Berosus, Petosiris, Necepsos, Alexander Polyhistor, Xenophon, Callimachus, Democritus, Diyllus the historian, Strabo, who wrote against the Euremata of Ephorus, Heraclides Ponticus, Aclepiades, who wrote the Tragodoumena, Philostephanus, Hegesias, Archima- chus, Thucydides, Mnesigiton, Xenagoras, Metrodorus of Scepsos, Anticlides, Critodemus.

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BOOK VIII. THE NATURE OF THE TERRESTRIAL ANIMALS.

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CHAP. 1. (1.)

ELEPHANTS; THEIR CAPACITY.

LET US now pass on to the other animals, and first of all to the land animals. The elephant is the largest of them all, and in intelligence approaches the nearest to man. It understands the language of its country, it obeys commands, and it remembers all the duties which it has been taught. It is sensible alike of the pleasures of love and glory, and, to a degree that is rare among men even, possesses notions of honesty, prudence, and equity; it has a religious respect also for the stars, and a veneration for the sun and the moon. It is said by some authors, that, at the first appearance of the new moon, herds of these animals come down from the forests of Mauritania to a river, the name of which is Amilos; and that they there purify themselves in solemn form by sprinkling their bodies with water; after which, having thus saluted the heavenly body, they return to the woods, carrying before them the young ones which are fatigued. They are supposed to have a notion, too, of the differences of religion; and when about to cross the sea, they cannot be prevailed upon to go on board the ship, until their keeper has promised upon oath that they shall return home again. They have been seen, too, when worn out by disease, (for even these vast masses are liable to disease,) lying on their back, and throwing the grass up into the air, as if deputing the earth to intercede for them with its prayers. As a proof of their extreme docility, they pay homage to the king, fall upon their knees, and offer him the crown. Those of smaller growth, which the Indians call bastards, are employed by them in ploughing.

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CHAP. 2. (2.)

WHEN ELEPHANTS WERE FIRST PUT INTO HARNESS.

The first harnessed elephants that were seen at Rome, were in the triumph of Pompeius Magnus over Africa, when they drew his chariot; a thing that is said to have been done long before, at the triumph of Father Liber on the conquest of India. Procilius says, that those which were used at the triumph of Pompeius, were unable to go in harness through the gate of the city. In the exhibition of gladiators which was given by Germanicus, the elephants performed a sort of dance with their uncouth and irregular movements. It was a common thing to see them throw arrows with such strength, that the wind was unable to turn them from their course, to imitate among themselves the combats of the gladiators, and to frolic through the steps of the Pyrrhic dance. After this, too, they walked upon the tight-rope, and four of them would carry a litter in which lay a fifth, which represented a woman lying-in. They afterwards took their place; and so nicely did they manage their steps, that they did not so much as touch any of those who were drinking there.

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CHAP. 3. (3.)

THE DOCILITY OF THE ELEPHANT.

It is a well-known fact, that one of these animals, who was slower than usual in learning what was taught him, and had been frequently chastised with blows, was found conning over his lesson in the night-time. It is a most surprising thing also, that the elephant is able not only to walk up the tight-rope backwards; but to come down it as well, with the head foremost. Mutianus, who was three times consul, informs us that one of these animals had been taught to trace the Greek letters, and that he used to write in that language the following words: “I have myself written these words, and have dedicated the Celtic spoils.” Mutianus states also, that he himself was witness to the fact, that when some elephants were being landed at Puteoli and were compelled to leave the ship, being terrified at the length of the platform, which extended from the vessel to the shore, they walked backwards, in order to deceive themselves by forming a false estimate of the distance.

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CHAP. 4.

WONDERFUL THINGS WHICH HAVE BEEN DONE BY THE ELEPHANT.

These animals are well aware that the only spoil that we are anxious to procure of them is the part which forms their weapon of defence, by Juba, called their horns, but by Herodotus, a much older writer, as well as by general usage and more appropriately, their teeth. Hence it is that, when their tusks have fallen off, either by accident or from old age, they bury them in the earth. These tusks form the only real ivory, and, even in these, the part which is covered by the flesh is merely common bone, and of no value whatever; though, indeed, of late, in consequence of the insufficient supply of ivory, they have begun to cut the bones as well into thin plates. Large teeth, in fact, are now rarely found, except in India, the demands of luxury having exhausted all those in our part of the world. The youthfulness of the animal is ascertained by the whiteness of the teeth These animals take the greatest care of their teeth; they pay especial attention to the point of one of them, that it may not be found blunt when wanted for combat; the other they employ for various purposes, such as digging up roots and pushing forward heavy weights. When they are surrounded by the hunters, they place those in front which have the smallest teeth, that the enemy may think that the spoil is not worth the combat; and afterwards, when they are weary of resistance, they break off their teeth, by dashing them against a tree, and in this manner pay their ransom.

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CHAP. 5. (4.)

THE INSTINCT OF WILD ANIMALS IN PERCEIVING DANGER.

It is a wonderful thing, that most animals are aware why it is that they are sought after, and what it is, that, under all circumstances, they have to guard against. When an elephant happens to meet a man in the desert, who is merely wandering about, the animal, it is said, shows himself both merciful and kind, and even points out the way. But the very same animal, if he meets with the traces of a man, before he meets the man himself, trembles in every limb, for fear of an ambush, stops short and scents the wind, looks around him, and snorts aloud with rage; and then, without trampling upon the object, digs it up, and passes it to the next one, who again passes it to the one that follows, and so on from one to the other, till it comes to the very last. The herd then faces about, returns, and ranges itself in order of battle; so strongly does the odour, in all cases, attach itself to the human footstep, even though, as is most frequently the case, the foot itself is not naked. In the same way, too, the tigress, which is the dread of the other wild beasts, and which sees, without alarm, the traces even of the elephant itself, is said at once, upon seeing the footsteps of man, to carry off her whelps. How has the animal acquired this knowledge? And where has it seen him before, of whom it stands in such dread? Doubt there can be none, that forests such as it haunts are but little frequented by man! It is not to be wondered at, if they are astonished at the print of a footstep before unknown; but how should they know that there is anything that they ought to dread? And, what is still more, why should they dread even the very sight of man, seeing that they are so far supe- rior to him in strength, size, and swiftness? No doubt, such is the law of Nature, such is the influence of her power-the most savage and the very largest of wild beasts have never seen that which they have reason to fear, and yet instantly have an instinctive feeling of dread, when the moment has come for them to fear.

(5.) Elephants always move in herds. The oldest takes the lead, and the next in age brings up the rear. When they are crossing a river,

they first send over the smallest, for fear lest the weight of the larger ones may increase the depth of the channel, by working away the bed of the river. We learn from Antipater, that King Antiochus had two elephants, which he employed in his wars, and to which he had given the names of celebrated men; and that they were aware too of this mark of distinction. Cato, in his Annals, while he has passed over in silence the names of the generals, has given that of an elephant called Surus, which fought with the greatest valour in the Carthaginian army, and had lost one of its tusks. When Antiochus was sounding the ford of a river, an elephant named Ajax, which on other occasions had always led the van, refused to enter the stream; upon which proclamation was made, that the first rank should belong to the one which should take the lead in passing over. One called Patroclus hazarded the attempt, and as a reward, the king presented it with some silver pendants, a kind of ornament with which these animals are particularly delighted, and assigned it all the other marks of command. Upon this, the elephant that had been degraded refused to take its food, and so preferred death to ignominy. Indeed their sense of shame is wonderful, and when one of them has been conquered, it flies at the voice of the conqueror, and presents him with earth and vervain.

These animals are sensible to feelings of modesty; they never couple but in secret: the male after it has attained its fifth year, the female after the age of ten. It is said, that their intercourse takes place only every second year, and for five days only, and no more; on the sixth day they plunge into a river, before doing which they will not rejoin the herd. Adulterous intercourse is unknown to them, and they have none of those deadly combats for the possession of the female, which take place among the other animals. Nor is this because they are uninfluenced by the passion of love. One in Egypt, we are told, fell in love with a woman, who was a seller of garlands; and let no one suppose that he made a vulgar choice, for she was the especial object of the love of Aristophanes, who held the very highest rank as a grammarian. Another became attached to the youth Menander, a native of Syracuse, in the army of Ptolemy; whenever it did not see him, it would manifest the regret which it experienced, by refusing its food. Juba gives an account also of a female who dealt in

perfumes, to whom one of these creatures formed an attachment. All these animals manifested their attachment by their signs of joy at the sight of the person, by their awkward caresses, and by keeping for them and throwing into their bosom the pieces of money which the public had given them. Nor, indeed, ought we to be surprised, that an animal which possesses memory should be sensible of affection: for the same author relates, that an elephant recognized, after the lapse of many years, an old man who had been its keeper in his youth. They would seem also to have an instinctive feeling of justice. King Bocchus once fastened thirty elephants to the stake, with the determination of wreaking his vengeance on them, by means of thirty others; but though men kept sallying forth among them to goad them on, he could not, with all his endeavours, force them to become the ministers of the cruelty of others.

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CHAP. 6. (6.)

WHEN ELEPHANTS WERE FIRST SEEN IN ITALY.

Elephants were seen in Italy, for the first time, in the war with King Pyrrhus, in the year of the City 472; they were called “Lucanian oxen,” because they were first seen in Lucania. Seven years after this period, they appeared at Rome in a triumph. In the year 502 a great number of them were brought to Rome, which had been taken by the pontiff Metellus, in his victory gained in Sicily over the Carthaginians; they were one hundred and forty-two in number, or, as some say, one hundred and forty, and were conveyed to our shores upon rafts, which were constructed on rows of hogsheads joined together. Verrius informs us, that they fought in the Circus, and that they were slain with javelins, for want of some better method of disposing of them; as the people neither liked to keep them nor yet to give them to the kings. L. Piso tells us only that they were brought into the Circus; and for the purpose of increasing the feeling of contempt towards them, they were driven all round the area of that place by workmen, who had nothing but spears blunted at the point. The authors who are of opinion that they were not killed, do not, however, inform us how they were afterwards disposed of.

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CHAP. 7. (7.)

THE COMBATS OF ELEPHANTS.

There is a famous combat mentioned of a Roman with an elephant, when Hannibal compelled our prisoners to fight against each other. The one who had survived all the others he placed before an elephant, and promised him his life if he should slay it; upon which the man advanced alone into the arena, and, to the great regret of the Carthaginians, succeeded in doing so. Hannibal, however, thinking that the news of this victory might cause a feeling of contempt for these animals, sent some horsemen to kill the man on his way home. In our battles with Pyrrhus it was found, on making trial, that it was extremely easy to cut off the trunks of these animals. Fenestella informs us, that they fought at Rome in the Circus for the first time during the curule ædileship of Claudius Pulcher, in the consulship of M. Antonius and A. Postumius, in the year of the City 655; and that twenty years afterwards, during the curule ædileship of the Luculli, they were set to fight against bulls. In the second consulship of Pompeius, at the dedication of the temple of Venus Victrix, twenty elephants, or, as some say, seventeen, fought in the Circus against a number of Gætulians, who attacked them with javelins. One of these animals fought in a most astonishing manner; being pierced through the feet, it dragged itself on its knees towards the troop, and seizing their bucklers, tossed them aloft into the air: and as they came to the ground they greatly amused the spectators, for they whirled round and round in the air, just as if they had been thrown up with a certain degree of skill, and not by the frantic fury of a wild beast. Another very wonderful circumstauce happened; an elephant was killed by a single blow. The weapon pierced the animal below the eye, and entered the vital part of the head. The elephants attempted, too, by their united efforts, to break down the enclosure, not without great confusion among the people who surrounded the iron gratings. It was in consequence of this circumstance, that Cæsar, the Dictator, when he was afterwards about to exhibit a similar spectacle, had the arena surrounded with trenches of water, which were lately filled up by the

Emperor Nero, when he added the seats for the equestrian order. When, however, the elephants in the exhibition given by Pompeius had lost all hopes of escaping, they implored the compassion of the multitude by attitudes which surpass all description, and with a kind of lamentation bewailed their unhappy fate. So greatly were the people affected by the scene, that, forgetting the general altogether, and the munificence which had been at such pains to do them honour, the whole assembly rose up in tears, and showered curses on Pompeius, of which he soon afterwards became the victim. They fought also in the third consulship of the Dic- tator Cæsar, twenty of them against five hundred foot soldiers. On another occasion twenty elephants, carrying towers, and each defended by sixty men, were opposed to the same number of foot soldiers as before, and an equal number of horsemen. Afterwards, under the Emperors Claudius and Nero, the last exploit that the gladiators performed was fighting singlehanded with elephants.

The elephant is said to display such a merciful disposition towards animals that are weaker than itself, that, when it finds itself in a flock of sheep, it will remove with its trunk those that are in the way, lest it should unintentionally trample upon them. They will never do any mischief except when provoked, and they are of a disposition so sociable, that they always move about in herds, no animal being less fond of a solitary life. When surrounded by a troop of horsemen, they place in the centre of the herd those that are weak, weary, or wounded, and then take the front rank each in its turn, just as though they acted under command and in accordance with discipline. When taken captive, they are very speedily tamed, by being fed on the juices of barley.

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CHAP. 8. (8.)

THE WAY IN WHICH ELEPHANTS ARE CAUGHT.

In India they are caught by the keeper guiding one of the tame elephants towards a wild one which he has found alone or has separated from the herd; upon which he beats it, and when it is fatigued mounts and manages it just the same way as the other. In Africa they take them in pit-falls; but as soon as an elephant gets into one, the others immediately collect boughs of trees and pile up heaps of earth, so as to form a mound, and then endeavour with all their might to drag it out. It was formerly the practice to tame them by driving the herds with horsemen into a narrow defile, artificially made in such a way as to deceive them by its length; and when thus enclosed by means of steep banks and trenches, they were rendered tame by the effects of hunger; as a proof of which, they would quietly take a branch that was extended to them by one of the men. At the present day, when we take them for the sake of their tusks, we throw darts at their feet, which are in general the most tender part of their body. The Troglodytæ, who inhabit the confines of Æthiopia, and who live entirely on the flesh of elephants procured by the chase, climb the trees which lie near the paths through which these animals usually pass. Here they keep a watch, and look out for the one which comes last in the train; leaping down upon its haunches, they seize its tail with the left hand, and fix their feet firmly upon the left thigh. Hanging down in this manner, the man, with his right hand, hamstrings the animal on one side, with a very sharp hatchet. The elephant's pace being retarded by the wound, he cuts the tendons of the other ham, and then makes his escape; all of which is done with the very greatest celerity. Others, again, employ a much safer, though less certain method; they fix in the ground, at considerable intervals, very large bows upon the stretch; these are kept steady by young men remarkable for their strength, while others, exerting themselves with equal efforts, bend them, and so wound the animals as they pass by, and afterwards trace them by their blood. The female elephant is much more timid by nature than the male.

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CHAP. 9. (9.)

THE METHOD BY WHICH THEY ARE TAMED.

Elephants of furious temper are tamed by hunger and blows, while other elephants are placed near to keep them quiet, when the violent fit is upon them, by means of chains. Besides this, they are more particularly violent when in heat, at which time they will level to the ground the huts of the Indians with their tusks. It is on this account that they are prevented from coupling, and the females are kept in herds separate from the males, just the same way as with other cattle. Elephants, when tamed, are employed in war, and carry into the ranks of the enemy towers filled with armed men; and on them, in a very great measure, depends the ultimate result of the battles that are fought in the East. They tread under foot whole companies, and crush the men in their armour. The very least sound, however, of the grunting of the hog terrifies them: when wounded and panic-stricken, they invariably fall back, and become no less formidable for the destruction which they deal to their own side, than to their opponents. The African elephant is afraid of the Indian, and does not dare so much as look at it, for the latter is of much greater bulk.

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CHAP. 10. (10.)

THE BIRTH OF THE ELEPHANT, AND OTHER PARTICULARS RESPECTING IT.

The vulgar notion is, that the elephant goes with young ten years; but, according to Aristotle, it is two years only. He says also that the female only bears once, and then a single young one; that they live two hundred years, and some of them as much as three hundred. The adult age of the elephant begins at the sixtieth year. They are especially fond of water, and wander much about streams, and this although they are unable to swim, in consequence of their bulk. They are particularly sensitive to cold, and that, indeed, is their greatest enemy. They are subject also to flatulency, and to looseness of the bowels, but to no other kind of disease. I find it stated, that on making them drink oil, any weapons which may happen to stick in their body will fall out; while, on the contrary, perspiration makes them the more readily adhere. If they eat earth it is poison to them, unless indeed they have gradually become accustomed by repeatedly doing so. They also devour stones as well; but the trunks of trees are their most favourite food. They throw down, with a blow from their forehead, palms of exceeding height, and when lying on the ground, strip them of their fruit. They eat with the mouth, but they breathe, drink, and smell with [the proboscis], which is not unaptly termed their "hand." They have the greatest aversion to the mouse of all animals, and quite loathe their food, as it lies in the manger, if they perceive that it has been touched by one of those animals. They experience the greatest torture if they happen to swallow, while drinking, a horseleech, an animal which people are beginning, I find, to call almost universally a "blood-sucker." The leech fastens upon the wind-pipe, and produces intolerable pain.

The skin of the back is extremely hard, that of the belly is softer. They are not covered with any kind of bristles, nor yet does the tail even furnish them with any protection from the annoyance of flies; for vast as these animals are, they suffer greatly from them. Their skin is reticulated, and invites these insects by the odour it exhales.

Accordingly, when a swarm of them has settled on the skin, while extended and smooth, the elephant suddenly contracts it; and, in this way, the flies are crushed between the folds which are thus closed. This power serves them in place of tail, mane, and hair.

Their teeth are very highly prized, and from them we obtain the most costly materials for forming the statues of the gods. Luxury has discovered even another recommendation in this animal, having found a particularly delicate flavour in the cartilaginous part of the trunk, for no other reason, in my belief, than because it fancies itself to be eating ivory. Tusks of enormous size are constantly to be seen in the temples; but, in the extreme parts of Africa, on the confines of Æthiopia, they are employed as door-posts for houses; and Polybius informs us, on the authority of the petty king Gulussa, that they are also employed as stakes in making fences for the folds of cattle.

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CHAP. 11. (11.)

IN WHAT COUNTRIES THE ELEPHANT IS FOUND; THE ANTIPATHY OF THE ELEPHANT AND THE DRAGON.

Africa produces elephants, beyond the deserts of the Syrtes, and in Mauritania; they are found also in the. countries of the Æthiopians and the Troglodytæ as mentioned above. But it is India that produces the largest, as well as the dragon, which is perpetually at war with the elephant, and is itself of so enormous a size, as easily to envelope the elephants with its folds, and encircle them in its coils. The contest is equally fatal to both; the elephant, vanquished, falls to the earth, and by its weight, crushes the dragon which is entwined around it.

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CHAP. 12. (12.)

THE SAGACITY OF THESE ANIMALS.

The sagacity which every animal exhibits in its own behalf is wonderful, but in these it is remarkably so. The dragon has much difficulty in climbing up to so great a height, and therefore, watching the road, which bears marks of their footsteps when going to feed, it darts down upon them from a lofty tree. The elephant knows that it is quite unable to struggle against the folds of the serpent, and so seeks for trees or rocks against which to rub itself. The dragon is on its guard against this, and tries to prevent it, by first of all confining the legs of the elephant with the folds of its tail; while the elephant, on the other hand, endeavours to disengage itself with its trunk. The dragon, however, thrusts its head into its nostrils, and thus, at the same moment, stops the breath and wounds the most tender parts. When it is met unexpectedly, the dragon raises itself up, faces its opponent, and flies more especially at the eyes; this is the reason why elephants are so often found blind, and worn to a skeleton with hunger and misery. What other cause can one assign for such mighty strifes as these, except that Nature is desirous, as it were, to make an exhibition for herself, in pitting such opponents against each other?

There is another story, too, told in relation to these combats — the blood of the elephant, it is said, is remarkably cold; for which reason, in the parching heats of summer, it is sought by the dragon with remarkable avidity. It lies, therefore, coiled up and concealed in the rivers, in wait for the elephants, when they come to drink; upon which it darts out, fastens itself around the trunk, and then fixes its teeth behind the ear, that being the only place which the elephant cannot protect with the trunk. The dragons, it is said, are of such vast size, that they can swallow the whole of the blood; consequently, the elephant, being thus drained of its blood, falls to the earth exhausted; while the dragon, intoxicated with the draught, is crushed beneath it, and so shares its fate.

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CHAP. 13. (13.)

DRAGONS.

Æthiopia produces dragons, not so large as those of India, but still, twenty cubits in length. The only thing that surprises me is, how Juba came to believe that they have crests. The Æthiopians are known as the Asachæi, among whom they most abound; and we are told, that on those coasts four or five of them are found twisted and interlaced together like so many osiers in a hurdle, and thus setting sail, with their heads erect, they are borne along upon the waves, to find better sources of nourishment in Arabia.

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CHAP. 14. (14.)

SERPENTS OF REMARKABLE SIZE.

Megasthenes informs us, that in India, serpents grow to such an immense size, as to swallow stags and bulls; while Metrodorus says, that about the river Rhyndacus, in Pontus, they seize and swallow the birds that are flying above them, however high and however rapid their flight. It is a well-known fact, that during the Punic war, at the river Bagrada, a serpent one hundred and twenty feet in length was taken by the Roman army under Regulus, being besieged, like a fortress, by means of balistæ and other engines of war. Its skin and jaws were preserved in a temple at Rome, down to the time of the Numantine war. The serpents which in Italy are known by the name of boa, render these accounts far from incredible, for they grow to such a vast size, that a child was found entire in the stomach of one of them, which was killed on the Vaticanian Hill during the reign of the Emperor Claudius. These are nourished, in the first instance, with the milk of the cow, and from this they take their name. As to the other animals, which have been of late repeatedly brought to Italy from all parts of the world, it is quite unnecessary to give any minute account of their form.

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CHAP. 15. (15.)

THE ANIMALS OF SCYTHIA; THE BISON.

Scythia produces but very few animals, in consequence of the scarcity of shrubs. Germany, which lies close adjoining it, has not many animals, though it has some very fine kinds of wild oxen: the bison, which has a mane, and the urus, possessed of remarkable strength and swiftness. To these, the vulgar, in their ignorance, have given the name of bubalus whereas, that animal is really produced in Africa, and rather bears a resemblance to the calf and the stag.

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CHAP. 16.

THE ANIMALS OF THE NORTH; THE ELK, THE ACHLIS, AND THE BONASUS.

The North, too, produces herds of wild horses, as Africa and Asia do of wild asses; there is, also, the elk, which strongly resembles our steers, except that it is distinguished by the length of the ears and of the neck. There is also the achlis, which is produced in the island of Scandinavia; it has never been seen in this city, although we have had descriptions of it from many persons; it is not unlike the elk, but has no joints in the hind leg. Hence, it never lies down, but reclines against a tree while it sleeps; it can only be taken by previously cutting into the tree, and thus laying a trap for it, as otherwise, it would escape through its swiftness. Its upper lip is so extremely large, for which reason it is obliged to go backwards when grazing; otherwise, by moving onwards, the lip would get doubled up. In Pæonia, it is said, there is a wild animal known as the bonasus; it has the mane of the horse, but is, in other respects, like the bull, with horns, however, so much bent inwards upon each other, as to be of no use for the purposes of combat. It has therefore to depend upon its flight, and, while in the act of flying, it sends forth its excrements, sometimes to a distance of even three jugera; the contact of which burns those who pursue the animal, just like a kind of fire.

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CHAP. 17.

LIONS; HOW THEY ARE PRODUCED.

It is a remarkable fact, that pards, panthers, lions, and other animals of this kind, walk with the points of their nails concealed in a sheath in the body, lest they should be broken or blunted; and that, when they run, their hooked claws are turned backwards, and are never extended, except in the act of seizing their prey.

(16.) The noble appearance of the lion is more especially to be seen in that species which has the neck and shoulders covered with a mane, which is always acquired at the proper age by those produced from a lion; while, on the other hand, those that are the offspring of the pard, are always without this distinction. The female also has no mane. The sexual passions of these animals are very violent, and render the male quite furious. This is especially the case in Africa, where, in consequence of the great scarcity of water, the wild beasts assemble in great numbers on the banks of a few rivers. This is also the reason why so many curious varieties of animals are produced there, the males and females of various species coupling promiscuously with each other. Hence arose the saying, which was common in Greece even, that "Africa is always producing something new." The lion recognizes, by the peculiar odour of the pard, when the lioness has been unfaithful to him, and avenges himself with the greatest fury. Hence it is, that the female, when she has been guilty of a lapse, washes herself, or else follows the lion at a considerable distance. I find that it was a common belief, that the lioness is able to bear young no more than once, because, while delivering herself, she tears her womb with her claws. Aristotle, however, gives a different account; a man of whom I think that I ought here to make some further mention, seeing that upon these subjects, I intend, in a great measure, to make him my guide. Alexander the Great, being inflamed with a strong desire to become acquainted with the natures of animals, entrusted the prosecution of this design to Aristotle, a man who held the highest rank in every branch of learning; for which purpose he placed under his command some thousands of men in

every region of Asia and Greece, and comprising all those who followed the business of hunting, fowling, or fishing, or who had the care of parks, herds of cattle, the breeding of bees, fish-ponds, and aviaries, in order that no creature that was known to exist might escape his notice. By means of the information which he obtained from these persons, he was enabled to compose some fifty volumes, which are deservedly esteemed, on the subject of animals; of these I purpose to give an epitome, together with other facts with which Aristotle was unacquainted; and I beg the kind indulgence of my readers in their estimate of this work of mine, as by my aid they hastily travel through all the works of nature, and through the midst of subjects with which that most famous of all kings so ardently desired to be acquainted.

Aristotle then informs us, that the lioness, at the first birth, produces five whelps, and one less every succeeding year, until, after having produced one only, she ceases to bear. The young ones, when first born, are shapeless and extremely small in flesh, being no larger than a weasel; for six months they are scarcely able to walk, and until they are two months old, they cannot move. Lions, he says, are found in Europe, but only between the rivers Achelous and Nestus; being much superior in strength to those which are produced in Africa or Syria.

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CHAP. 18.

THE DIFFERENT SPECIES OF LIONS.

There are two species of lions; in the one the body is shorter and more compact, and the mane more crisp and curly; these are more timid than those with a longer body and straight hair, which, in fact, have no fear of wounds. The males raise the leg like the dog, when they pass their urine; which has a most disagreeable odour, the same being the case too with their breath. They seldom drink, and only take food every other day; when they have gorged themselves, they will sometimes go without food for three days. They swallow their food whole, without mastication, so far as they are able; and when they have taken more than the stomach can possibly receive, they extract part of it by thrusting their claws into the throat; the same too, if, when full, they have occasion to take to flight. That they are very long-lived is proved by the fact, that many of them are found without teeth. Polybius, the companion of Æmilianus, tells us, that when they become aged they will attack men, as they have no longer sufficient strength for the pursuit of wild beasts. It is then that they lay siege to the cities of Africa; and for this reason it was, that he, as well as Scipio, had seen some of them hung upon a cross; it being supposed that others, through dread of a similar punishment, might be deterred from committing the like outrages.

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CHAP. 19.

THE PECULIAR CHARACTER OF THE LION.

The lion is the only one of all the wild beasts that shows mercy to the suppliant; after it has conquered, it will spare, and when enraged, it will vent its fury rather upon men than women, and never upon children, unless when greatly pressed by hunger. It is the belief in Libya, that it fully understands the entreaties which are addressed to it. At all events, I have heard it asserted as a fact, that a female slave, who was returning from Gætulia, was attacked by a number of lions in the forests; upon which she summoned sufficient courage to address them, and said that she was a woman, a fugitive, helpless creature, that she implored the compassion of the most generous of animals, the one that has the command of all the others, and that she was a prey unworthy of their high repute — and by these means effectually soothed their ferocity. There are various opinions on this point, as to whether it is through some peculiar disposition of the animal, or merely by accident, that their fury is thus soothed by addressing them. As to what is alleged, too, about serpents, that they can be drawn from their holes by singing, and thus be made to yield themselves up to death, the truth or falsity of it has not by any means been satisfactorily ascertained.

The tail of the lion gives indication of the state of his feelings, just as the ears do in the horse; for these are the distinguishing signs which Nature has given to each of the most generous of animals. Hence it is that, when pleased, the tail is without motion, and the animal fawns upon those who caress him; a thing, however, that very rarely happens, for his most frequent state is that of rage. He begins by beating the earth with his tail; and as he becomes more furious, he lashes his sides, as if trying to excite himself. His greatest strength is situate in the breast. From every wound that he makes, whether it is with his claws or his teeth, a black blood issues. When his hunger is satisfied, he becomes harmless. The generous disposition of the lion is more especially manifested in time of danger; not only at the moment when, despising all weapons, he long defends himself solely

by the terror which he inspires, and protests, as it were, that he is compelled thus to defend himself, but when he rises at last, not as though constrained by danger, but as if enraged by the mad folly of his adversaries. This, however, is a still more noble feature of his courage — however numerous the dogs and hunters may be that press upon him, as he makes his retreat he comes to a stand every now and then upon the level plain, while he is still in view, and scowls contemptuously upon them: but as soon as ever he has entered the thickets and dense forests, he scours away at the swiftest possible pace, as though aware that the place itself will shelter his shame. When in pursuit, the lion advances with a leap, but he does not do so when in flight. When wounded, he discovers, with wonderful sagacity, the person who struck the blow, and will find him out, however great may have been the multitude of his pursuers. If a person has thrown a dart at him, but has failed to inflict a wound, the animal seizes him, whirls him round and throws him to the ground, but without wounding him. When the lioness is defending her whelps, it is said that she fixes her eyes steadily on the ground, that she may not be frightened at the spears of the hunters. In all other respects, these animals are equally free from deceit and suspicion. They never look at an object obliquely, and they dislike being looked at themselves in such a manner. It is generally believed, that, when the lion is dying, he bites at the earth, and sheds tears at his fate. Powerful, however, and fierce as this animal is, he is terrified by the motion of wheels or of an empty chariot, and still more on seeing the crest or hearing the crowing of a cock; but most of all, is he afraid of fire. The only malady to which the lion is subject, is loss of appetite; this, however, is cured by putting insults upon him, by means of the pranks of monkeys placed about him, a thing which rouses his anger; immediately he tastes their blood, he is relieved.

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CHAP. 20.

WHO IT WAS THAT FIRST INTRODUCED COMBATS OF LIONS AT ROME, AND WHO HAS BROUGHT TOGETHER THE GREATEST NUMBER OF LIONS FOR THAT PURPOSE.

Q. Scævola, the son of P. Scævola, when he was curule ædile, was the first to exhibit at Rome a combat of a number of lions; and L. Sylla, who was afterwards Dictator, during his prætorship, gave the spectacle of a fight of one hundred lions with manes. After him, Pompeius Magnus exhibited six hundred lions in the Circus, three hundred and fifteen of which had manes; Cæsar, the Dictator, exhibited four hundred.

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CHAP. 21.

WONDERFUL FEATS PERFORMED BY LIONS.

It was formerly a very difficult matter to catch the lion, and it was mostly done by means of pit-falls. In the reign, however, of the Emperor Claudius, accident disclosed a method which appears almost disgraceful to the name of such an animal; a Gætulian shepherd stopped a lion, that was rushing furiously upon him, by merely throwing his cloak over the animal; a circumstance which afterwards afforded an exhibition in the arena of the Circus, when the frantic fury of the animal was paralyzed in a manner almost incredible by a light covering being thrown over its head, so much so, that it was put into chains without the least resistance; we must conclude, therefore, that all its strength lies in its eyes. This circumstance renders what was done by Lysimachus less wonderful, who strangled a lion, with which he had been shut up by command of Alexander.

Antony subjected lions to the yoke, and was the first at Rome to harness them to his chariot; and this during the civil war, after the battle on the plains of Pharsalia; not, indeed, without a kind of ominous presage, a prodigy that foretold at the time how that generous spirits were about to be subdued. But to have himself drawn along in this manner, in company with the actress Cytheris, was a thing that surpassed even the most monstrous spectacles that were to be seen at that calamitous period. It is said that Hanno, one of the most illustrious of the Carthaginians, was the first who ventured to touch the lion with the hand, and to exhibit it in a tame state. It was on this account that he was banished; for it was supposed, that a man so talented and so ingenious would have it in his power to persuade the people to anything, and it was looked upon as unsafe to trust the liberties of the country to one who had so eminently triumphed over even ferocity itself. There are some fortuitous occurrences cited also, which have given occasion to these animals to display their natural clemency. Mentor, a native of Syracuse, was met in Syria by a lion, who rolled before him in a

suppliant manner; though smitten with fear and desirous to escape, the wild beast on every side opposed his flight, and licked his feet with a fawning air. Upon this, Mentor observed on the paw of the lion a swelling and a wound; from which, after extracting a splinter, he relieved the creature's pain. There is a picture at Syracuse, which bears witness to the truth of this transaction.

In the same manner, too, Elpis, a native of Samos, on landing from a vessel on the coast of Africa, observed a lion near the beach, opening his mouth in a threatening manner; upon which he climbed a tree, in the hope of escaping, while, at the same time, he invoked the aid of Father Liber; for it is the appropriate time for invocations when there is no room left for hope. The wild beast did not pursue him as he fled, although he might easily have done so; but, lying down at the foot of the tree, by the open mouth which had caused so much terror, tried to excite his compassion. A bone, while he was devouring his food with too great avidity, had stuck fast between his teeth, and he was perishing with hunger; such being the punishment inflicted upon him by his own weapons, every now and then he would look up and supplicate him, as it were, with mute entreaties. Elpis, not wishing to risk trusting himself to so formidable a beast, remained stationary for some time, more at last from astonishment than from fear. At length, however, he descended from the tree and extracted the bone, the lion in the meanwhile extending his head, and aiding in the operation as far as it was necessary for him to do. The story goes on to say, that as long as the vessel remained off that coast, the lion showed his sense of gratitude by bringing whatever he had chanced to procure in the chase. In memory of this circumstance, Elpis consecrated a temple at Samos to Father Liber, which the Greeks, from the circumstance above related, called "the temple χεχηνὸτος διονύσου," or "of the open-mouthed Bacchus." Can we wonder, after this, that the wild beasts should be able to recognize the footsteps of man, when of him alone of all animals they even hope for aid? For why should they not have recourse to others for assistance? Or how is it that they know that the hand of man has power to heal them? Unless, perhaps, it is that the violence of pain can force wild beasts even to risk every thing to obtain relief.

(17.) Demetrius, the natural philosopher, relates an equally

remarkable instance, in relation to a panther. The animal was lying in the middle of the road, waiting for some one to pass that way, when he was suddenly perceived by the father of one Philinus, an ardent lover of wisdom. Seized with fear, he immediately began to retreat; while the beast rolled itself before him, evidently with the desire of caressing him, at the same time manifesting signs of grief, which could not be misunderstood in a panther even. The animal had young ones, which had happened to fall into a pit at some distance from the place. The first dictates of compassion banished all fear, and the next prompted him to assist the animal. He accordingly followed her, as she gently drew him on by fixing her claws in his garment; and as soon as he discovered what was the cause of her grief and the price of his own safety, he took the whelps out of the pit, and they followed her to the end of the desert; whither he was escorted by her, frisking with joy and gladness, in order that she might more appropriately testify how grateful she was, and how little she had given him in return; a mode of acting which is but rarely found, among men even.

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CHAP. 22.

A MAN RECOGNIZED AND SAVED BY A DRAGON.

Facts such as these induce us to give some credit to what Democritus relates, who says that a man, called Thoas, was preserved in Arcadia by a dragon. When a boy, he had become much attached to it, and had reared it very tenderly; but his father, being alarmed at the nature and monstrous size of the reptile, had taken and left it in the desert. Thoas being here attacked by some robbers who lay in ambush, he was delivered from them by the dragon, which recognized his voice and came to his assistance. But as to what has been said respecting infants that have been exposed and nourished by the milk of wild beasts, as in the case of the founders of our city by a wolf, I am disposed to attribute such cases as these rather to the greatness of the destinies which have to be fulfilled, than to any peculiarity in the nature of the animals themselves.

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CHAP. 23.

PANTHERS.

The panther and the tiger are nearly the only animals that are remarkable for a skin distinguished by the variety of its spots; whereas others have them of a single colour, appropriate to each species. The lions of Syria alone are black. The spots of the panther are like small eyes, upon a white ground. It is said that all quadrupeds are attracted in a most wonderful manner by their odour, while they are terrified by the fierceness of their aspect; for which reason the creature conceals its head, and then seizes upon the animals that are attracted to it by the sweetness of the odour. It is said by some, that the panther has, on the shoulder, a spot which bears the form of the moon; and that, like it, it regularly increases to full, and then diminishes to a crescent. At present, we apply the general names of varia and pard, (which last belongs to the males), to all the numerous species of this animal, which is very common in Africa and Syria. Some writers distinguish the panther, as being remarkable for its whiteness: but as yet I have not observed any other difference between them.

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CHAP. 24.

THE DECREE OF THE SENATE, AND LAWS RESPECTING AFRICAN ANIMALS; WHO FIRST BROUGHT THEM TO ROME, AND WHO BROUGHT THE GREATEST NUMBER OF THEM.

There was an ancient decree of the senate, which prohibited animals being imported from Africa into Italy; but Cn. Aufidius, the tribune of the people, procured a law repealing this, which allowed of their being brought over for the games of the Circus. Scaurus, in his ædileship, was the first who sent over the parti-coloured kind, one hundred and fifty in the whole; after which, Pompeius Magnus sent four hundred and ten, and the late Emperor Augustus four hundred and twenty.

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CHAP. 25.

TIGERS: WHEN FIRST SEEN AT ROME; THEIR NATURE.

The same emperor was the first person who exhibited at Rome a tame tiger on the stage. This was in the consulship of Q. Tubero and Fabius Maximus, at the dedication of the theatre of Marcellus, on the fourth day before the nones of May: the late Emperor Claudius exhibited four at one time.

(18.) Hyrcania and India produce the tiger, an animal of tremendous swiftness, a quality which is more especially tested when we deprive it of all its whelps, which are always very numerous. They are seized by the hunter, who lies in wait for them, being provided with the fleetest horse he can possibly obtain, and which he frequently changes for a fresh one. As soon as the female finds her lair empty-for the male takes no care whatever of his offspring-headlong she darts forth, and traces them by the smell. Her approach is made known by her cries, upon which the hunter throws down one of the whelps; this she snatches up with her teeth, and more swift, even, under the weight, returns to her lair, and then again sets out in pursuit; and this she continues to do, until the hunter has reached his vessel, while the animal vainly vents her fury upon the shore.

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CHAP. 26.

CAMELS: THE DIFFERENT KINDS.

Camels are found feeding in herds in the East. Of these there are two different kinds, those of Bactria and those of Arabia; the former kind having two humps on the back, and the latter only one; they have also another hump under the breast, by means of which they support themselves when reclining. Both of these species, like the ox, have no teeth in the upper jaw. They are all of them employed as beasts of burthen, in carrying loads on the back, and they answer the purpose of cavalry in battle. Their speed is the same with that of the horse, but their power of holding out in this respect is proportioned in each to its natural strength: it will never go beyond its accustomed distance, nor will it receive more than its usual load. The camel has a natural antipathy to the horse. It can endure thirst for four days even, and when it has the opportunity of obtaining water, it drinks, as it were, both for past and future thirst, having first taken care to trouble the water by trampling in it; without doing which, it would find no pleasure in drinking. They live fifty years, some indeed as much as one hundred. These animals, too, are liable to fits of frenzy. A peculiar mode of castrating them, and the females, even, when required for the purposes of war, has been discovered; it renders them more courageous, by the destruction of all sexual feelings.

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CHAP. 27.

THE CAMELEOPARD; WHEN IT WAS FIRST SEEN AT ROME.

There are two others animals, which have some resemblance to the camel. One of these is called, by the Æthiopians, the nabun. It has a neck like that of the horse, feet and legs like those of the ox, a head like that of the camel, and is covered with white spots upon a red ground; from which peculiarities it has been called the cameleopard. It was first seen at Rome in the Circensian games held by Cæsar, the Dictator. Since that time too, it has been occasionally seen. It is more remarkable for the singularity of its appearance than for its fierceness; for which reason it has obtained the name of the wild sheep.

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CHAP. 28. (19.)

THE CHAMA, AND THE CEPUS.

It was at the games of Pompeius Magnus that the chama was first exhibited; an animal called rufius by the Gauls; having the figure of a wolf, with the spots of the pard. There were also exhibited some animals from Æthiopia, which they called by the Greek name, χήποι, the hinder extremities of which resembled the human feet and legs, while the fore-feet were like hands. These animals have not been seen at Rome since that time.

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CHAP. 29. (20.)

THE RHINOCEROS.

At the same games the rhinoceros was also exhibited, an animal which has a single horn projecting from the nose; it has been frequently seen since then. This too is another natural-born enemy of the elephant. It prepares itself for the combat by sharpening its horn against the rocks; and in fighting directs it chiefly against the belly of its adversary, which it knows to be the softest part. The two animals are of equal length, but the legs of the rhinoceros are much the shorter: its skin is the colour of box-wood.

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CHAP. 30. (21.)

THE LYNX, THE SPHINX, THE CROCOTTA, AND THE MONKEY.

Æthiopia produces the lynx in abundance, and the sphinx, which has brown hair and two mammæ on the breast, as well as many monstrous kinds of a similar nature; horses with wings, and armed with horns, which are called pegasi; the crocotta, an animal which looks as though it had been produced by the union of the wolf and the dog, for it can break any thing with its teeth, and instantly on swallowing it digest it with the stomach; monkeys, too, with black heads, the hair of the ass, and a voice quite unlike that of any other animal. There are oxen, too, like those of India, some with one horn, and others with three; the leucrocotta, a wild beast of extraordinary swiftness, the size of the wild ass, with the legs of a stag, the neck, tail, and breast of a lion, the head of a badger, a cloven hoof, the mouth slit up as far as the ears, and one continuous bone instead of teeth; it is said, too, that this animal can imitate the human voice. Among the same people, there is also found an animal called eale; it is the size of the river-horse, has the tail of the elephant, and is of a black or tawny colour. It has also the jaws of the wild boar, and horns that are moveable, and more than a cubit in length, so that, in fighting, it can employ them alternately, and vary their position by presenting them directly or obliquely, according as necessity may dictate. But the wild bulls which this country produces are the fiercest of all; they are larger than our domestic bull, and exceed all the others in swiftness; are of a tawny colour, with azure eyes, and the hair turned the contrary way; while the jaws open as far as the ears, and the horns are as moveable as those of the eale. The hide of this animal is as hard as flint, and effectually resists all wounds. These creatures pursue all the other wild beasts, while they themselves can only be taken in pitfalls, where they always perish from excess of rage. Ctesias informs us, that among these same Æthiopians, there is an animal found, which he calls the mantichora; it has a triple row of teeth, which fit into each other like those of a comb, the face and ears of a man, and azure eyes, is of the colour of

blood, has the body of the lion, and a tail ending in a sting, like that of the scorpion. Its voice resembles the union of the sound of the flute and the trumpet; it is of excessive swiftness, and is particularly fond of human flesh.

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CHAP. 31.

THE TERRESTRIAL ANIMALS OF INDIA.

There are in India oxen also with solid hoofs and a single horn; and a wild beast called the axis, which has a skin like that of a fawn, but with numerous spots on it, and whiter; this animal is looked upon as sacred to Bacchus. The Orsæan Indians hunt down a kind of ape, which has the body white all over; as well as a very fierce animal called the monoceros, which has the head of the stag, the feet of the elephant, and the tail of the boar, while the rest of the body is like that of the horse; it makes a deep lowing noise, and has a single black horn, which projects from the middle of its forehead, two cubits in length. This animal, it is said, cannot be taken alive.

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CHAP. 32.

THE ANIMALS OF ÆTHIOPIA; A WILD BEAST WHICH KILLS WITH ITS EYE.

Among the Hesperian Æthiopians is the fountain of Nigris, by many, supposed to be the head of the Nile. I have already mentioned the arguments by which this opinion is supported. Near this fountain, there is found a wild beast, which is called the catoblepas; an animal of moderate size, and in other respects sluggish in the movement of the rest of its limbs; its head is remarkably heavy, and it only carries it with the greatest difficulty, being always bent down towards the earth. Were it not for this circumstance, it would prove the destruction of the human race; for all who behold its eyes, fall dead upon the spot.

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CHAP. 33.

THE SERPENTS CALLED BASILISKS.

There is the same power also in the serpent called the basilisk. It is produced in the province of Cyrene, being not more than twelve fingers in length. It has a white spot on the head, strongly resembling a sort of a diadem. When it hisses, all the other serpents fly from it: and it does not advance its body, like the others, by a succession of folds, but moves along upright and erect upon the middle. It destroys all shrubs, not only by its contact, but those even that it has breathed upon; it burns up all the grass too, and breaks the stones, so tremendous is its noxious influence. It was formerly a general belief that if a man on horseback killed one of these animals with a spear, the poison would run up the weapon and kill, not only the rider, but the horse as well. To this dreadful monster the effluvium of the weasel is fatal, a thing that has been tried with success, for kings have often desired to see its body when killed; so true is it that it has pleased Nature that there should be nothing without its antidote. The animal is thrown into the hole of the basilisk, which is easily known from the soil around it being infected. The weasel destroys the basilisk by its odour, but dies itself in this struggle of nature against its own self.

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CHAP. 34. (22.)

WOLVES; THE ORIGIN OF THE STORY OF VERSIPELLIS.

In Italy also it is believed that there is a noxious influence in the eye of a wolf; it is supposed that it will instantly take away the voice of a man, if it is the first to see him. Africa and Egypt produce wolves of a sluggish and stunted nature; those of the colder climates are fierce and savage. That men have been turned into wolves, and again restored to their original form, we must confidently look upon as untrue, unless, indeed, we are ready to believe all the tales, which, for so many ages, have been found to be fabulous. But, as the belief of it has become so firmly fixed in the minds of the common people, as to have caused the term "Versipellis" to be used as a common form of imprecation, I will here point out its origin. Euanthes, a Grecian author of no mean reputation, informs us that the Arcadians assert that a member of the family of one Anthus is chosen by lot, and then taken to a certain lake in that district, where, after suspending his clothes on an oak, he swims across the water and goes away into the desert, where he is changed into a wolf and associates with other animals of the same species for a space of nine years. If he has kept himself from beholding a man during the whole of that time, he returns to the same lake, and, after swimming across it, resumes his original form, only with the addition of nine years in age to his former appearance. To this Fabius adds, that he takes his former clothes as well. It is really wonderful to what a length the credulity of the Greeks will go! There is no falsehood, if ever so barefaced, to which some of them cannot be found to bear testimony.

So too, Agriopas, who wrote the Olympionics, informs us that Demænetus, the Parrhasian, during a sacrifice of human victims, which the Arcadians were offering up to the Lycæan Jupiter, tasted the entrails of a boy who had been slaughtered; upon which he was turned into a wolf, but, ten years afterwards, was restored to his original shape and his calling of an athlete, and returned victorious in the pugilistic contests at the Olympic games.

It is also commonly supposed, that the tail of this animal contains

a small lock of hair, which possesses an amatory power; and that when the creature is caught, this hair is shed by it, but has no virtue whatever, unless it is procured from the animal while alive. It is said that these animals couple for no more than twelve days in the year; and that when pressed by hunger they will eat earth. Among the points of augury, to have our progress cut short to the right by a wolf, if at the time its mouth is full, is the best of omens. There is a species, which is known as the stag-wolf, such as we have already said were brought from Gaul and exhibited in the Circus by Pompeius Magnus. It is said, that however hungry this animal may chance to be, if it only turns its head while eating, it immediately becomes oblivious of the food that is before it, and takes its departure to seek it elsewhere.

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CHAP. 35. (23.)

DIFFERENT KINDS OF SERPENTS.

With reference to serpents, it is generally known, that they assume the colour of the soil in which they conceal themselves. The different species of them are innumerable. The cerastes has little horns, often four in number, projecting from the body, by the movement of which it attracts birds, while the rest of its body lies concealed. The amphisbæna has two heads, that is to say, it has a second one at the tail, as though one mouth were too little for the discharge of all its venom. Some serpents have scales, some a mottled skin, and they are all possessed of a deadly poison. The jaculus darts from the branches of trees; and it is not only to our feet that the serpent is formidable, for these fly through the air even, just as though they were hurled from an engine. The neck of the asp puffs out, and there is no remedy whatever against its sting, except the instant excision of the affected part. This reptile, which is thus deadly, is possessed of this one sense, or rather affection; the male and the female are generally found together, and the one cannot live without the other; hence it is that, if one of them happens to be killed, the other takes incredible pains to avenge its death. It follows the slayer of its mate, and will single him out among ever such a large number of people, by a sort of instinctive knowledge; with this object it overcomes all difficulties, travels any distance, and is only to be avoided by the intervention of rivers or an accelerated flight. It is really difficult to decide, whether Nature has altogether been more liberal of good or of evil. First of all, however, she has given to this pest but weak powers of sight, and has placed the eyes, not in the front of the head, so that it may see straight before it, but in the temples, so that it is more frequently put in motion by the approach of the footstep than through the sight. (24.) The ichneumon, too, is its enemy to the very death.

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CHAP. 36.

THE ICHNEUMON.

This hostility is the especial glory of this animal, which is also produced in Egypt. It plunges itself repeatedly into the mud, and then dries itself in the sun: as soon as, by these means, it has armed itself with a sufficient number of coatings, it proceeds to the combat. Raising its tail, and turning its back to the serpent, it receives its stings, which are inflicted to no purpose, until at last, turning its head sideways, and viewing its enemy, it seizes it by the throat. Not content, however, with this victory, it conquers another creature also, which is no less dangerous.

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CHAP. 37. (25.)

THE CROCODILE.

The Nile produces the crocodile also, a destructive quadruped, and equally dangerous on land and in the water. This is the only land animal that does not enjoy the use of its tongue, and the only one that has the upper jaw moveable, and is capable of biting with it; and terrible is its bite, for the rows of its teeth fit into each other, like those of a comb. Its length mostly exceeds eighteen cubits. It produces eggs about the size of those of the goose, and, by a kind of instinctive foresight, always deposits them beyond the limit to which the river Nile rises, when at its greatest height. There is no animal that arrives at so great a bulk as this, from so small a beginning. It is armed also with claws, and has a skin, that is proof against all blows. It passes the day on land, and the night in the water, in both instances on account of the warmth. When it has glutted itself with fish, it goes to sleep on the banks of the river, a portion of the food always remaining in its mouth; upon which, a little bird, which in Egypt is known as the trochilus, and, in Italy, as the king of the birds, for the purpose of obtaining food, invites the crocodile to open its jaws; then, hopping to and fro, it first cleans the outside of its mouth, next the teeth, and then the inside, while the animal opens its jaws as wide as possible, in consequence of the pleasure which it experiences from the titillation. It is at these moments that the ichneumon, seeing it fast asleep in consequence of the agreeable sensation thus produced, darts down its throat like an arrow, and eats away its intestines.

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CHAP. 38.

THE SCINCUS.

Like the crocodile, but smaller even than the ichneumon, is the scincus, which is also produced in the Nile, and the flesh of which is the most effectual antidote against poisons, and acts as a powerful aphrodisiac upon the male sex. But so great a pest was the crocodile to prove, that Nature was not content with giving it one enemy only; the dolphins, therefore, which enter the Nile, have the back armed with a spine, which is edged like a knife, as if for this very purpose; and although these animals are much inferior in strength, they contrive to destroy the crocodile by artifice, which on the other hand attempts to drive them from their prey, and would reign alone in its river as its peculiar domain. For all animals have an especial instinct in this respect, and are able to know not only what is for their own advantage, but also what is to the disadvantage of their enemies; they fully understand the use of their own weapons, they know their opportunity, and the weak parts of those with which they have to contend.

The skin of the belly of the crocodile is soft and thin, aware of this, the dolphins plunge into the water, as if in great alarm, and diving beneath its belly, tear it open with their spines. There is a race of men also, who are peculiarly hostile to this animal; they are known as the Tentyritæ, from an island in the Nile which they inhabit. These men are of small stature, but of wonderful presence of mind, though for this particular object only. The crocodile is a terrible animal to those who fly from it, while at the same time it will fly from those who pursue it; these, however, are the only people who dare to attack it. They even swim in the river after it, and mount its back like so many horsemen; and just as the animal turns up its head for the purpose of biting them, they insert a club into its mouth, holding which at each end, with the two hands, it acts like a bit, and, by these means they drive the captured animal on shore. They also terrify the crocodile so much by their voice alone even, as to force it to disgorge the bodies which it has lately swallowed, for the purpose

of burial. This island, therefore, is the only place near which the crocodile never swims; indeed, it is repelled by the odour of this race of men, just as serpents are by that of the Psylli. The sight of this animal is said to be dull when it is in the water, but, when out of the water, piercing in the extreme; it always passes the four winter months in a cave, without taking food. Some persons say, that this is the only animal that continues to increase in size as long as it lives; it is very long-lived.

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CHAP. 39.

THE HIPPOPOTAMUS.

The Nile produces the hippopotamus, another wild beast, of a still greater size. It has the cloven hoof of the ox; the back, the mane, and the neighing of the horse; and the turned-up snout, the tail, and the hooked teeth of the wild boar, but not so dangerous. The hide is impenetrable, except when it has been soaked with water; and it is used for making shields and helmets. This animal lays waste the standing corn, and determines beforehand what part it shall ravage on the following day; it is said also, that it enters the field backwards, to prevent any ambush being laid for it on its return.

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CHAP. 40. (26.)

WHO FIRST EXHIBITED THE HIPPOPOTAMUS AND THE CROCODILE AT ROME.

M. Scaurus was the first who exhibited this animal at Rome, together with five crocodiles, at the games which he gave in his ædileship, in a piece of water which had been temporarily prepared for the purpose. The hippopotamus has even been our instructor in one of the operations of medicine. When the animal has become too bulky by continued over-feeding, it goes down to the banks of the river, and examines the reeds which have been newly cut; as soon as it has found a stump that is very sharp, it presses its body against it, and so wounds one of the veins in the thigh; and, by the flow of blood thus produced, the body, which would otherwise have fallen into a morbid state, is relieved; after which, it covers up the wound with mud.

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CHAP. 41. (27.)

THE MEDICINAL REMEDIES WHICH HAVE BEEN BORROWED FROM ANIMALS.

The bird also, which is called the ibis, a native of the same country of Egypt, has shewn us some things of a similar nature. By means of its hooked beak, it laves the body through that part, by which it is especially necessary for health that the residuous food should be discharged. Nor, indeed, are these the only inventions which have been borrowed from animals, to prove of use to man. The power of the herb dittany, in extracting arrows, was first disclosed to us by stags that had been struck by that weapon; the weapon being discharged on their feeding upon this plant. The same animals, too, when they happen to have been wounded by the phalangium, a species of spider, or by any insect of a similar nature, cure themselves by eating crabs. One of the very best remedies for the bite of the serpent, is the plant with which lizards treat their wounds when injured in fighting with each other. The swallow has shown us that the chelidonia is very serviceable to the sight, by the fact of its employing it for the cure of its young, when their eyes are affected. The tortoise recruits its powers of effectually resisting serpents, by eating the plant which is known as cunile bubula; and the weasel feeds on rue, when it fights with the serpent in the pursuit of mice. The stork cures itself of its diseases with wild marjoram, and the wild boar with ivy, as also by eating crabs, and more particularly those that have been thrown up by the sea. The snake, when the membrane which covers its body has been contracted by the cold of winter, throws it off in the spring by the aid of the juices of fennel, and thus becomes sleek and youthful in appearance. First of all, it disengages the head, and it then takes no less than a day and a night in working itself out, and divesting itself of the membrane in which it has been enclosed. The same animal, too, on finding its sight weakened during its winter retreat, anoints and refreshes its eyes by rubbing itself on the plant called fennel or marathrum; but if any of the scales are slow in coming off, it rubs itself against the thorns of

the juniper. The dragon relieves the nausea which affects it in spring, with the juices of the lettuce. The barbarous nations go to hunt the panther, provided with meat that has been rubbed with aconite, which is a poison. Immediately on eating it, compression of the throat overtakes them, from which circumstance it is, that the plant has received the name of pardalianches. The animal, however, has found an antidote against this poison in human excrements; besides which, it is so eager to get at them, that the shepherds purposely suspend them in a vessel, placed so high, that the animal cannot reach them even by leaping, when it endeavours to get at them; accordingly, it continues to leap until it has quite exhausted itself, and at last expires: otherwise, it is so tenacious of life, that it will con- tinue to fight long after its intestines have been dragged out of its body.

When an elephant has happened to devour a chameleon, which is of the same colour with the herbage, it counteracts this poison by means of the wild olive. Bears, when they have eaten of the fruit of the mandrake, lick up numbers of ants. The stag counteracts the effect of poisonous plants by eating the artichoke. Wood-pigeons, jackdaws, blackbirds, and partridges, purge themselves once a year by eating bay leaves; pigeons, turtle-doves, and poultry, with wall-pellitory, or helxine; ducks, geese, and other aquatic birds, with the plant sideritis or vervain; cranes, and birds of a similar nature, with the bulrush. The raven, when it has killed a chameleon, a contest in which even the conqueror suffers, counteracts the poison by means of laurel.

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CHAP. 42. (28.)

PROGNOSTICS OF DANGER DERIVED FROM ANIMALS.

There are a thousand other facts of this kind: and the same Nature has also bestowed upon many animals as well, the faculty of observing the heavens, and of presaging the winds, rains, and tempests, each in its own peculiar way. It would be an endless labour to enumerate them all; just as much as it would be to point out the relation of each to man. For, in fact, they warn us of danger, not only by their fibres and their entrails, to which a large portion of mankind attach the greatest faith, but by other kinds of warnings as well. When a building is about to fall down, all the mice desert it beforehand, and the spiders with their webs are the first to drop. Divination from birds has been made a science among the Romans, and the college of its priests is looked upon as peculiarly sacred. In Thrace, when all parts are covered with ice, the foxes are consulted, an animal which, in other respects, is baneful from its craftiness. It has been observed, that this animal applies its ear to the ice, for the purpose of testing its thickness; hence it is, that the inhabitants will never cross frozen rivers and lakes until the foxes have passed over them and returned.

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CHAP. 43. (29.)

NATIONS THAT HAVE BEEN EXTERMINATED BY ANIMALS.

We have accounts, too, no less remarkable, in reference even to the most contemptible of animals. M. Varro informs us, that a town in Spain was undermined by rabbits, and one in Thessaly, by mice; that the inhabitants of a district in Gaul were driven from their country by frogs, and a place in Africa by locusts; that the inhabitants of Gyarus, one of the Cyclades, were driven away by mice; and the Amunclæ, in Italy, by serpents. There is a vast desert tract on this side of the Æthiopian Cynamolgi, the inhabitants of which were exterminated by scorpions and venomous ants. and Theophrastus informs us, that the people of Rhœteum were driven away by scolopendræ. But we must now return to the other kinds of wild beasts.

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CHAP. 44. (30.)

THE HYÆNA.

It is the vulgar notion, that the hyæna possesses in itself both sexes, being a male during one year, and a female the next, and that it becomes pregnant without the co-operation of the male; Aristotle, however, denies this. The neck, with the mane, runs continuously into the back — Bone, so that the animal cannot bend this part without turning round the whole body. Many other wonderful things are also related of this animal; and strangest of all, that it imitates the human voice among the stalls of the shepherds; and while there, learns the name of some one of them, and then calls him away, and devours him. It is said also, that it can imitate a man vomiting, and that, in this way, it attracts the dogs, and then falls upon them. It is the only animal that digs up graves, in order to obtain the bodies of the dead. The female is rarely caught: its eyes, it is said, are of a thousand various colours and changes of shade. It is said also, that on coming in contact with its shadow, dogs will lose their voice, and that, by certain magical influences, it can render any animal immoveable, round which it has walked three times.

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CHAP. 45.

THE COROCOTTA; THE MANTICHORA.

By the union of the hyena with the Æthiopian lioness, the corocotta is produced, which has the same faculty of imitating the voices of men and cattle. Its gaze is always fixed and immoveable; it has no gums in either of its jaws, and the teeth are one continuous piece of bone; they are enclosed in a sort of box as it were, that they may not be blunted by rubbing against each other. Juba informs us, that the mantichora of Æthiopia can also imitate the human speech.

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CHAP. 46.

WILD ASSES.

Great numbers of hyænas are produced in Africa, which also gives birth to multitudes of wild asses. In this species each male rules over a herd of females. Fearing rivals in their lust, they carefully watch the pregnant females, and castrate the young males with their teeth, as soon as they are born. The pregnant females, on the other hand, seek concealment, and endeavour to bring forth in secret, being desirous to increase their opportunities of sexual indulgence.

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CHAP. 47.

BEAVERS, AMPHIBIOUS ANIMALS; OTHERS.

The beavers of the Euxine, when they are closely pressed by danger, themselves cut off the same part, as they know that it is for this that they are pursued. This substance is called castoreum by the physicians. In addition to this, the bite of this animal is terrible; with its teeth it can cut down trees on the banks of rivers, just as though with a knife. If they seize a man by any part of his body, they will never loose their hold until his bones are broken and crackle under their teeth. The tail is like that of a fish; in the other parts of the body they resemble the otter; they are both of them aquatic animals, and both have hair softer than down.

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CHAP. 48. (31.)

BRAMBLE-FROGS.

Bramble-frogs, also, which live both on land and in water, are replete with various medicinal substances, which they are said to discharge each day, and to take in again with their food, of which they only retain the poisonous parts.

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CHAP. 49.

THE SEA-CALF; BEAVERS; LIZARDS.

The sea-calf, too, lives equally in the sea and on land, being possessed of the same degree of intelligence as the beaver. It vomits forth its gall, which is useful for many purposes in medicine; also the rennet, which serves as a remedy in epilepsy; for it is well aware that it is hunted for these sub- stances. Theophrastus informs us, that lizards also cast their skins like the serpent, and instantly devour them, thus depriving us of a powerful remedy for epilepsy; he says, too, that the bite of the lizard is fatal in Greece, but harmless in Italy.

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CHAP. 50. (32.)

STAGS.

Stags, although the most mild of all animals, have still their own feelings of malignancy; when hard pressed by the hounds, of their own accord they fly for refuge to man; and when the females bring forth, they are less anxious to avoid the paths which bear traces of human footsteps, than solitary spots which offer a retreat to wild beasts. They become pregnant after the rising of the constellation Arcturus; they bring forth after a gestation of eight months, and sometimes produce two young ones. They separate after conception, but the males, upon being thus abandoned, become maddened with the fury of their passion; they dig up the earth, and their muzzles become quite black, until they have been washed by the rain. The females, before they bring forth, purge themselves by means of a certain herb, which is called seselis, by the use of which parturition is rendered more easy. After delivery, they take a mixture of the two plants called seselis and aros, and then return to the fawn; they seem desirous, for some reason or other, that their first milk, after parturition, should be impregnated with the juice of these plants. They then exercise the young ones in running, and teach them how to take to flight, leading them to precipices, and showing them how to leap. The sexual passion of the male having been now satisfied, he repairs to the pasture lands with the greatest eagerness. When they feel themselves becoming too fat, they seek some retired spot, thus acknowledging the inconvenience arising from their bulk. Besides this, they continually pause in their flight, stand still and look back, and then again resume their flight when the enemy approaches. This pause is occasioned by the intense pain which they feel in the intestines, a part which is so weak, that a very slight blow will cause them to break within. The barking of a dog instantly puts them to flight, and they always run with the wind, in order that no trace of them may be left. They are soothed by the shepherd's pipe and his song; when their ears are erect, their sense of hearing is very acute, but when dropped, they become deaf. In other respects the stag is a

simple animal, which regards every thing as wonderful, and with a stupid astonishment; so much so, indeed, that if a horse or cow happens to approach it, it will not see the hunter, who may be close at hand, or, if it does see him, it only gazes upon his bow and arrow. Stags cross the sea in herds, swimming in a long line, the head of each resting on the haunches of the one that precedes it, each in its turn falling back to the rear. This has been particularly remarked when they pass over from Cilicia to the island of Cyprus. Though they do not see the land, they still are able to direct themselves by the smell. The males have horns, and are the only animals that shed them every year, at a stated time in the spring; at which period they seek out with the greatest care the most retired places, and after losing them, remain concealed, as though aware that they are unarmed. Still, however, they envy us the good that these might do us; for it is said the right horn, which possesses, as it were, certain medicinal properties, can never be found, a circumstance the more astonishing, from the fact that they change their horns every year, even when kept in parks; it is generally thought that they bury their horns in the ground. The odour of either horn, when burnt, drives away serpents and detects epilepsy. They also bear the marks of their age on the horns, every year, up to the sixth, a fresh antler being added; after which period the horns are renewed in the same state, so that by means of them their age cannot be ascertained. Their old age, however, is indicated by their teeth, for then they have only a few, or none at all; and we then no longer perceive, at the base of their horns, antlers projecting from the front of the forehead, as is usually the case with the animal when young.

When this animal is castrated it does not shed its horns, nor are they reproduced. When the horns begin to be reproduced, two projections are to be seen, much resembling, at first, dry skin; they grow with tender shoots, having upon them a soft down like that on the head of a reed. So long as they are without horns, they go to feed during the night. As the horns grow, they harden by the heat of the sun, and the animal, from time to time, tries their strength upon the trees; when satisfied with their strength, it leaves its retreat.

Stags, too, have been occasionally caught with ivy green and growing on their horns, the plant having taken root on them, as it

would on any piece of wood, while the animal was rubbing them against the trees. The stag is sometimes found white, as is said to have been the case with the hind of Q. Sertorius, which he persuaded the nations of Spain to look upon as having the gift of prophecy. The stag, too, fights with the serpent: it traces out the serpent's hole, and draws it forth by the breath of its lostrils, and hence it is that the smell of burnt stags' horn has the remarkable power of driving away serpents. The very best remedy for the bite of a serpent is the rennet of a fawn that has been killed in the womb of its mother.

The stag is generally admitted to be very long lived; some were captured at the end of one hundred years with the golden collars which Alexander the Great had put upon them, and which were quite concealed by the folds of the skin, in consequence of the accumulation of fat. This animal is not subject to fever, and, indeed, it is a preservative against that complaint. We know that of late some women of princely rank have been in the habit of eating the flesh of the stag every morning, and that they have arrived at an extreme old age, free from all fevers. It is, however, generally supposed that the animal must be killed by a single wound to make sure of it possessing this virtue.

(33.) Of the same species is an animal, which only differs from the stag in having a beard and long hair about the shoulders: it is called tragelaphus, and is produced nowhere except on the banks of the Phasis.

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CHAP. 51.

THE CHAMELEON.

Africa is almost the only country that does not produce the stag, but then it produces the chameleon, although it is much more commonly met with in India. Its figure and size are that of a lizard, only that its legs are straight and longer. Its sides unite under its belly, as in fishes, and its spine projects in a similar manner. Its muzzle is not unlike the snout of a small hog, so far as in so small an animal it can be. Its tail is very long, and becomes smaller towards the end, coiling up in folds like that of the viper. It has hooked claws, and a slow movement like that of the tortoise; its body is rough like that of the crocodile; its eyes are deep sunk in the orbits, placed very near each other, very large, and of the same colour as the body. It never closes them, and when the animal looks round, it does so, not by the motion of the pupil, but of the white of the eye. It always holds the head upright and the mouth open, and is the only animal which receives nourishment neither by meat nor drink, nor anything else, but from the air alone. Towards the end of the dog-days it is fierce, but at other times quite harmless. The nature of its colour, too, is very remarkable, for it is continually changing; its eyes, its tail, and its whole body always assuming the colour of whatever object is nearest, with the exception of white and red. After death, it becomes of a pale colour. It has a little flesh about the head, the jaws, and the root of the tail, but none whatever on the rest of the body. It has no blood whatever, except in the heart and about the eyes, and its entrails are without a spleen. It conceals itself during the winter months, just like the lizard.

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CHAP. 52.

OTHER ANIMALS WHICH CHANGE COLOUR; THE TARANDUS, THE LYCAON, AND THE THOS.

The tarandrus, too, of the Scythians, changes its colour, but this is the case with none of the animals which are covered with hair, except the lycaon of India, which is said to have a mane on the neck. But with respect to the thos, (which is a species of wolf, differing from the common kind in having a larger body and very short legs, leaping with great activity, living by the chase, and never attacking man); it changes its coat, and not its colour, for it is covered with hair in the winter, and goes bare in summer. The tarandrus is of the size of the ox; its head is larger than that of the stag, and not very unlike it; its horns are branched, its hoofs cloven, and its hair as long as that of the bear. Its proper colour, when it thinks proper to return to it, is like that of the ass. Its hide is of such extreme hardness, that it is used for making breastplates. When it is frightened, this animal reflects the colour of all the trees, shrubs, and flowers, or of the spots in which it is concealed; hence it is that it is so rarely captured. It is wonderful that such various hues should be given to the body, but still more so that it should be given to the hair.

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CHAP. 53. (35.)

THE PORCUPINE.

India and Africa produce the porcupine, the body of which is covered with prickles. It is a species of hedgehog, but the quills of the porcupine are longer, and when it stretches the skin, it discharges them like so many missiles. With these it pierces the mouths of the dogs which are pressing hard upon it, and even sends its darts to some distance further It conceals itself during the winter months, which, indeed, is the nature of many animals, and more especially the bear.

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CHAP. 54. (36.)

BEARS AND THEIR CUBS.

Bears couple in the beginning of winter, and not after the fashion of other quadrupeds; for both animals lie down and embrace each other. The female then retires by herself to a separate den, and there brings forth on the thirtieth day, mostly five young ones. When first born, they are shapeless masses of white flesh, a little larger than mice; their claws alone being prominent. The mother then licks them gradually into proper shape. There is nothing more uncommon than to see a she-bear in the act of parturition. The male remains in his retreat for forty days, the female four months. If they happen to have no den, they construct a retreat with branches and shrubs, which is made impenetrable to the rain and is lined with soft leaves. During the first fourteen days they are overcome by so deep a sleep, that they cannot be aroused by wounds even. They become wonderfully fat, too, while in this lethargic state. This fat is much used in medicine; and it is very useful in preventing the hair from falling off. At the end of these fourteen days they sit up, and find nourishment by sucking their fore-paws. They warm their cubs, when cold, by pressing them to the breast, not unlike the way in which birds brood over their eggs. It is a very astonishing thing, but Theophrastus believes it, that if we preserve the flesh of the bear, the animal being killed in its dormant state, it will increase in bulk, even though it may have been cooked. During this period no signs of food are to be found in the stomach of the animal, and only a very slight quantity of liquid; there are a few drops of blood only near the heart, but none whatever in any other part of the body. They leave their retreat in the spring, the males being remarkably fat: of this circumstance, however, we cannot give any satisfactory explanation, for the sleep, during which they increase so much in bulk, lasts, as we have already stated, only fourteen days. When they come out, they eat a certain plant, which is known as aros, in order to relax the bowels, which would otherwise become in a state of constipation; and they sharpen the edges of their teeth against the young shoots of the trees. Their eye-sight is dull, for

which reason in especial, they seek the combs of bees, in order that from the bees stinging them in the throat and drawing blood, the oppression in the head may be relieved. The head of the bear is extremely weak, whereas, in the lion, it is remarkable for its strength: on which account it is, that when the bear, impelled by any alarm, is about to precipitate itself from a rock, it covers its head with its paws. In the arena of the Circus they are often to be seen killed by a blow on the head with the fist. The people of Spain have a belief, that there is some kind of magical poison in the brain of the bear, and therefore burn the heads of those that have been killed in their public games; for it is averred, that the brain, when mixed with drink, produces in man the rage of the bear. These animals walk on two feet, and climb down trees backwards. They can overcome the bull, by suspending themselves, by all four legs, from its muzzle and horns, thus wearing out its powers by their weight. In no other animal is stupidity found more adroit in devising mischief. It is recorded in our Annals, that on the fourteenth day before the calends of October, in the consulship of M. Piso and M. Messala, Domitius Ahenobarbus, the curule ædile, brought into the Circus one hundred Numidian bears, and as many Æthiopian hunters. I am surprised to find the word Numilian added, seeing that it is well known that there are no bears produced in Africa.

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CHAP. 55. (37.)

THE MICE OF PONTUS AND OF THE ALPS.

The mice of Pontus also conceal themselves during the winter; but only the white ones. I wonder how those authors, who have asserted that the sense of taste in these animals is very acute, found out that such is the fact. The Alpine mice, which are the same size as badgers, also conceal themselves; but they first carry a store of provisions into their retreat. Some writers, indeed, say that the male and female, lying on their backs alternately, hold in their paws a bundle of gnawed herbs, and, the tail of each in its turn being seized by the teeth of the other, in this way, they are dragged into their hole; hence it is, that at this season their hair is found to be rubbed off their backs. There is a similar animal also in Egypt, which sits, in the same way, upon its haunches, and walks on two feet, using the fore feet as hands.

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CHAP. 56.

HEDGEHOGS.

Hedgehogs also lay up food for the winter; rolling themselves on apples as they lie on the ground, they pierce one with their quills, and then take up another in the mouth, and so carry them into the hollows of trees. These animals also, when they conceal themselves in their holes, afford a sure sign that the wind is about to change from north-east to south. When they perceive the approach of the hunter, they draw in the head and feet, and all the lower part of the body, which is covered by a thin and defenceless down only, and then roll themselves up into the form of a ball, so that there is no way of taking hold of them but by their quills. When they are reduced to a state of desperation, they discharge a corrosive urine, which injures their skin and quills, as they are aware that it is for the sake of them that they are hunted. A skilful hunter, therefore, will only pursue them when they have just discharged their urine. In this case the skin retains its value; while in the other case, it becomes spoilt and easily torn, the quills rotting and falling off, even though the animal should escape with its life. For this reason it is that it never moistens itself with this poisonous fluid, except when reduced to the last stage of desperation; for it has a perfect hatred for its own venomous distillation, and so careful is the animal, so determined to wait till the very last moment, that it is generally caught before it has employed this means of defence.

They force it to unroll itself, by sprinkling warm water upon it, and then, suspended by one of its hind legs, it is left to die of hunger; for there is no other mode of destroying it, without doing injury to its skin. This animal is not, as many of us imagine, entirely useless to man. If it were not for the quills which it produces, the soft fleece of the sheep would have been given in vain to mankind; for it is by means of its skin, that our woollen cloth is dressed. From the monopoly of this article, great frauds and great profits have resulted; there is no subject on which the senate has more frequently passed decrees, and there is not one of the Emperors, who has not received

from the provinces complaints respecting it.

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CHAP. 57. (38.)

THE LEONTOPHONUS, AND THE LYNX.

There are also two other animals, whose urine possesses very wonderful properties. We have heard speak of a small animal, to which the name of leontophonus has been given, and which is said to exist only in those countries where the lion is produced; if its flesh is only tasted by the lion, so intensely venomous is its nature, that this lord of the other quadrupeds instantly expires. Hence it is, that the hunters of the lion burn its body to ashes, and sprinkle a piece of flesh with the powder, and so kill the lion by means of the ashes even-so fatal to it is this poison! The lion, therefore, not without good reason hates the leontophonus, and after destroying its sight, kills it without inflicting a bite: the animal, on the other hand, sprinkles the lion with its urine, being well aware that this too is fatal to it.

The urine of the lynx, in the countries where that animal is produced, either becomes crystallized, or else hardens into a precious stone, resembling the carbuncle, and which shines like tire. This is called lyncurium; and hence it is, that many persons believe that this is the way in which amber is produced. The lynx, being well aware of this property, envies us the possession of its urine, and therefore buries it in the earth; by this, however, it becomes solid all the sooner.

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CHAP. 58.

BADGERS AND SQUIRRELS.

The badger, when alarmed, shows its fear by a different kind of artifice; inflating the skin, it distends it to such a degree, as to repel equally the blows of men and the bite of dogs. The squirrel, also, has the power of foreseeing storms, and so, stopping up its hole at the side from which the wind blows, it leaves the other side open; besides which, the tail, which is furnished with longer hair than the rest of the body, serves as a covering for it. It appears, therefore, that some animals lay up a store of food for the winter, while others pass the time in sleep, which serves them instead of food.

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CHAP. 59. (39.)

VIPERS AND SNAILS.

It is said, that the viper is the only one among the serpents that conceals itself in the earth; the others lurking either in the hollows of trees or in holes in the rocks. Provided they are not destroyed by cold, they can live there, without taking food, for a whole year. During the time that they are asleep in their retreat, none of them are venomous.

A similar state of torpor exists also in snails. These animals again become dormant during the summer, adhering very powerfully to stones; and even, when turned up and pulled away from the stones, they will not leave their shells. In the Balearic isles, the snails which are known as the cave-snail, do not leave their holes in the ground, nor do they feed upon any green thing, but adhere to each other like so many grapes. There is another less common species also, which is closed by an operculum that adheres to the shell. These animals always burrow under the earth, and were formerly never found, except in the environs of the Maritime Alps; they have, however, of late been dug up in the territory of Liternum; the most valued, however, of all, are those of the island of Astypalæa.

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CHAP. 60.

LIZARDS.

It is said, that the lizard, the greatest enemy of all to the snail, never prolongs its life beyond six months. The lizards of Arabia are a cubit in length, while those upon Nysa, a mountain of India, are twenty-four feet long, their colour being either yellow, purple, or azure blue.

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CHAP. 61. (40.)

THE QUALITIES OF THE DOG; EXAMPLES OF TS ATTACHMENT TO ITS MASTER; NATIONS WHICH HAVE KEPT DOGS FOR THE PURPOSES OF WAR.

Among the animals, also, that are domesticated with mankind, there are many circumstances that are far from undeserving of being known: among these, there are more particularly that most faithful friend of man, the dog, and the horse. We have an account of a dog that fought against a band of robbers, in defending its master; and although it was pierced with wounds, still it would not leave the body, from which it drove away all birds and beasts. Another dog, again, in Epirus, recognized the murderer of its master, in the midst of an assemblage of people, and, by biting and barking at him, extorted from him a confession of his crime. A king of the Garamantes also was brought back from exile by two hundred dogs, which maintained the combat against all his opponents. The people of Colophon and Castabala kept troops of dogs, for the purposes of war; and these used to fight in the front rank, and never retreat; they were the most faithful of auxiliaries, and yet required no pay. After the defeat of the Cimbri, their dogs defended their moveable houses, which were carried upon waggons. Jason, the Lycian, having been slain, his dog refused to take food, and died of famine. A dog, to which Darius gives the name of Hyrcanus, upon the funeral pile of King Lysimachus being lighted, threw itself into the flames, and the dog of King Hiero did the same. Philistus also gives a similar account of Pyrrhus, the dog of the tyrant Gelon: and it is said, also, that the dog of Nicomedes, king of Bithynia, tore Consingis, the wife of that king, in consequence of her wanton behaviour, when toying with her husband.

Among ourselves, Volcatius, a man of rank, who instructed Cascellius in the civil law, as he was riding on his Asturian jennet, towards evening, from his country-house, was attacked by a robber, and was only saved by his dog. The senator Cælius, too, while lying sick at Placentia, was surprised by armed men, but received not a

wound from them until they had first killed his dog. But a more extraordinary fact than all, is what took place in our own times, and is testified by the public register of the Roman people. In the consulship of Appius Junius and P. Silius, when Titius Sabinus was put to death, together with his slaves, for the affair of Nero, the son of Germanicus, it was found impossible to drive away a dog which belonged to one of them from the prison; nor could it be forced away from the body, which had been cast down the Gemitorian steps; but there it stood howling, in the presence of vast multitudes of people; and when some one threw a piece of bread to it, the animal carried it to the mouth of its master. Afterwards, when the body was thrown into the Tiber, the dog swam into the river, and endeavoured to raise it out of the water; quite a throng of people being collected to witness this instance of an animal's fidelity.

Dogs are the only animals that are sure to know their masters; and if they suddenly meet him as a stranger, they will instantly recognize him. They are the only animals that will answer to their names, and recognize the voices of the family. They recollect a road along which they have passed, however long it may be. Next to man, there is no living creature whose memory is so retentive. By sitting down on the ground, we may arrest their most impetuous attack, even when prompted by the most violent rage.

In daily life we have discovered many other valuable qualities in this animal; but its intelligence and sagacity are more especially shown in the chase. It discovers and traces out the tracks of the animal, leading by the leash the sportsman who accompanies it straight up to the prey; and as soon as ever it has perceived it, how silent it is, and how secret but significant is the indication which it gives, first by the tail and afterwards by the nose! Hence it is, that even when worn out with old age, blind, and feeble, they are carried by the huntsman in his arms, being still able to point out the coverts where the game is concealed, by snuffing with their muzzles at the wind. The Indians raise a breed between the dog and the tiger, and for this purpose tie up the females in the forests when in heat. The first two litters they look upon as too savage to be reared, but they bring up the third.

The Gauls do the same with the wolf and the dog; and their packs

of hounds have, each of them, one of these dogs, which acts as their guide and leader. This dog they follow in the chase, and him they carefully obey; for these animals have even a notion of subordination among themselves. It is asserted that the dogs keep running when they drink at the Nile, for fear of becoming a prey to the voracity of the crocodile. When Alexander the Great was on his Indian expedition, he was presented by the king of Albania with a dog of unusual size; being greatly delighted with its noble appearance, he ordered bears, and after them wild boars, and then deer, to be let loose before it; but the dog lay down, and regarded them with a kind of immoveable contempt. The noble spirit of the general became irritated by the sluggishness thus manifested by an animal of such vast bulk, and he ordered it to be killed. The report of this reached the king, who accordingly sent another dog, and at the same time sent word that its powers were to be tried, not upon small animals, but upon the lion or the elephant; adding, that he had had originally but two, and that if this one were put to death, the race would be extinct. Alexander, without delay, procured a lion, which in his presence was instantly torn to pieces. He then ordered an elephant to be brought, and never was he more delighted with any spectacle; for the dog, bristling up its hair all over the body, began by thundering forth a loud barking, and then attacked the animal, leaping at it first on one side and then on the other, attacking it in the most skilful manner, and then again retreating at the opportune moment, until at last the elephant, being rendered quite giddy by turning round and round, fell to the earth, and made it quite reecho with his fall.

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CHAP. 62.

THE GENERATION OF THE DOG.

This animal brings forth twice in the year; it is capable of bearing young when a year old, and gestation continues for sixty days. The young ones are born blind, and the greater the supply of nourishment from the mother's milk, the more slowly do they acquire their sight; still, however, this never takes place later than the twentieth day, or earlier than the seventh. It is said by some writers, that if only one is born, it is able to see on the ninth day; and that if there are two, they begin to see on the tenth, every additional one causing the power of seeing to come a day later. It is said, too, that the females which are produced by the mother in her first litter, are subject to the night-mare. The best dog of the litter is the one which is last in obtaining its sight, or else the one which the mother carries first into her bed.

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CHAP. 63.

REMEDIES AGAINST CANINE MADNESS.

Canine madness is fatal to man during the heat of Sirius, and, as we have already said, it proves so in consequence of those who are bitten having a deadly horror of water. For this reason, during the thirty days that this star exerts its influence, we try to prevent the disease by mixing dung from the poultry-yard with the dog's food; or else, if they are already attacked by the disease, by giving them hellebore.

(41.) We have a single remedy against the bite, which has been but lately discovered, by a kind of oracle, as it were — the root of the wild rose, which is called cynorrhodos, or dogrose. Columella informs us, that if, on the fortieth day after the birth of the pup, the last bone of the tail is bitten off, the sinew will follow with it; after which, the tail will not grow, and the dog will never become rabid. It is mentioned, among the other prodigies, and this I take to be one indeed, that a dog once spoke; and that when Tarquin was expelled from the kingdom, a serpent barked.

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CHAP. 64. (42.)

THE NATURE OF THE HORSE.

King Alexander had also a very remarkable horse; it was called Bucephalus, either on account of the fierceness of its aspect, or because it had the figure of a bull's head marked on its shoulder. It is said, that he was struck with its beauty when he was only a boy, and that it was purchased from the stud of Philonicus, the Pharsalian, for thirteen talents. When it was equipped with the royal trappings, it would suffer no one except Alexander to mount it, although at other times it would allow any one to do so. A memorable circumstance connected with it in battle is recorded of this horse; it is said that when it was wounded in the attack upon Thebes, it would not allow Alexander to mount any other horse. Many other circumstances, also, of a similar nature, occurred respecting it; so that when it died, the king duly performed its obsequies, and built around its tomb a city, which he named after it.

It is said, also, that Cæsar, the Dictator, had a horse, which would allow no one to mount but himself, and that its forefeet were like those of a man; indeed it is thus represented in the statue before the temple of Venus Genetrix. The late Emperor Augustus also erected a tomb to his horse; on which occasion Germanicus Cæsar wrote a poem, which still exists. There are at Agrigentum many tombs of horses, in the form of pyramids. Juha informs us, that Semiramis was so greatly enamoured of a horse, as to have had connection with it. The Scythian horsemen make loud boasts of the fame of their cavalry. On one occasion, one of their chiefs having been slain in single combat, when the conqueror came to take the spoils of the enemy, he was set upon by the horse of his opponent, and trampled on and bitten to death. Another horse, upon the bandage being removed from his eyes, found that he had covered his mother, upon which he threw himself down a precipice, and was killed. We learn, also, that for a similar cause, a groom was torn to pieces, in the territory of Reate. For these animals have a knowledge of the ties of consanguinity, and in a stud a mare will attend to its sister of the

preceding year, even more carefully than its mother.

Their docility, too, is so great, that we find it stated that the whole of the cavalry of the Sybarite army were accustomed to perform a kind of dance to the sound of musical instruments. These animals also foresee battles; they lament over their masters when they have lost them, and sometimes shed tears of regret for them. When King Nicomedes was slain, his horse put an end to its life by fasting. Phylarchus relates, that Centaretus, the Galatian, after he had slain Antiochus in battle, took possesion of his horse, and mounted it in triumph; upon which the animal, inflamed with indignation, regardless of the rein and become quite ungovernable, threw itself headlong down a precipice, and they both perished together. Philistus relates, that Dionysius having left his horse stuck fast in a morass, the animal, as soon as it disengaged itself, followed the steps of its master, with a swarm of bees, which had settled on its mane; and that it was in consequence of this portent, that Dionysius gained possession of the kingdom.

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CHAP. 65.

THE DISPOSITION OF THE HORSE; REMARKABLE FACTS CONCERNING CHARIOT HORSES.

These animals possess an intelligence which exceeds all description. Those who have to use the javelin are well aware how the horse, by its exertions and the supple movements of its body, aids the rider in any difficulty he may have in throwing his weapon. They will even present to their master the weapons collected on the ground. The horses too, that are yoked to the chariots in the Circus, beyond a doubt, display remarkable proofs how sensible they are to encouragement and to glory. In the Secular games, which were celebrated in the Circus, under the Emperor Claudius, when the charioteer Corax, who belonged to the white party, was thrown from his place at the starting-post, his horses took the lead and kept it, opposing the other chariots, overturning them, and doing every thing against the other competitors that could have been done, had they been guided by the most skilful charioteer; and while we quite blushed to behold the skill of man excelled by that of the horse, they arrived at the goal, after going over the whole of the prescribed course. Our ancestors considered it as a still more remarkable portent, that when a charioteer had been thrown from his place, in the plebeian games of the Circus, the horses ran to the Capitol, just as if he had been standing in the car, and went three times round the temple there. But what is the greatest prodigy of all, is the fact that the horses of Ratumenna came from Veii to Rome, with the palm branch and chaplet, he himself having fallen from his chariot, after having gained the victory; from which circumstance the Ratumennian gate derived its name.

When the Sarmatæ are about to undertake a long journey, they prepare their horses for it, by making them fast the day before, during which they give them but little to drink; by these means they are enabled to travel on horseback, without stopping, for one hundred and fifty miles. Some horses are known to live fifty years; but the females are not so long-lived. These last come to their full growth at

the fifth year, the males a year later. The poet Virgil has very beautifully described the points which ought more especially to be looked for, as constituting the perfection of a horse; I myself have also treated of the same subject, in my work on the Use of the Javelin by Cavalry, and I find that pretty nearly all writers are agreed respecting them. The points requisite for the Circus are somewhat different, however; and while horses are put in training for other purposes at only two years old, they are not admitted to the contests of the Circus before their fifth year.

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CHAP. 66.

THE GENERATION OF THE HORSE.

The female of this animal carries her young for eleven months, and brings forth in the twelfth. The connection takes place at the vernal equinox, and generally in both sexes, at the age of two years; but the colt is much stronger when the parents are three years old. The males are capable of cover- ing up to the thirty-third year, and it is not till after the twentieth that they are taken for this purpose from the Circus. At Opus, it is said, a horse served as a stallion until his fortieth year; though he required some assistance in raising the fore part of the body. There are few animals, however, in which the generative powers are so limited, for which reason it is only admitted to the female at certain intervals; indeed it cannot cover as many as fifteen times in the course of one year. The sexual passion of the mare is extinguished by cropping her mane; she is capable of bearing every year up to the fortieth. We have an account of a horse having lived to its seventy-fifth year. The mare brings forth standing upright, and is attached, beyond all other animals, to her offspring. The horse is born with a poisonous substance on its forehead, known as hippomanes, and used in love philtres; it is the size of a fig, and of a black colour; the mother devours it immediately on the birth of the foal, and until she has done so, she will not suckle it. When this substance can be rescued from the mother, it has the property of rendering the animal quite frantic by the smell. If a foal has lost its mother, the other mares in the herd that have young, will take charge of the orphan. It is said that the young of this animal cannot touch the earth with the mouth for the first three days after its birth. The more spirited a horse is, the deeper does it plunge its nose into the water while drinking. The Scythians prefer mares for the purposes of war, because they can pass their urine without stopping in their career.

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CHAP. 67.

MARES IMPREGNATED BY THE WIND.

It is well known that in Lusitania, in the vicinity of the town of Olisipo and the river Tagus, the mares, by turning their faces towards the west wind as it blows, become impregnated by its breezes, and that the foals which are conceived in this way are remarkable for their extreme fleetness; but they never live beyond three years. Gallicia and Asturia are also countries of Spain; they produce a species of horse known to us as thieldones, and when smaller, asturcones; they have a peculiar and not common pace of their own, which is very easy, and arises from the two legs of the same side being moved together; it is by studying the nature of this step that our horses have been taught the movement which we call ambling. Horses have very nearly the same diseases as men; besides which, they are subject to an irregular action of the bladder, as, indeed, is the case with all beasts of burden.

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CHAP. 68. (45.)

THE ASS, ITS GENERATION.

M. Varro informs us that Quintus Axius, the senator, paid for an ass the sum of four hundred thousand sesterces; I am not sure whether this did not exceed the price ever given for any other animal. It is certainly a species of animal singularly useful for labour and ploughing, but more especially for the production of mules. In these animals also, the country in which they are born is taken into consideration; in Greece, those from Arcadia are the most valued; and in Italy, those of Reate. The ass is an animal which is unable to endure cold, for which reason it is that it is never produced in Pontus; nor is it allowed to cover at the vernal equinox, like other cattle, but at the summer solstice. The males are less proper for covering, when out of work. The earliest age at which the females are ever capable of bearing is the thirtieth month, but the usual time begins at the age of three years. The number to which it gives birth is the same as the mare, which it also resembles, in the length of its gestation, and in its mode of bringing forth; but the female will discharge the generative fluid from the womb, being unable to retain it, unless by blows she is forced to run immediately after being covered. They seldom bring forth two at one birth. When the she-ass is about to bring forth, she shuns the light and seeks darkness, in order to escape the observation of man. Asses are capable of breeding throughout the whole of their life, which extends to thirty years. Their attachment to their young is great in the extreme, but their aversion to water is still greater. They will pass through fire to get at their foals, while the very same animal, if the small- est stream intervenes, will tremble, and not dare so much as to wet even its feet. Nor yet in their pastures will they ever drink at any but the usual watering-place, and they make it their care to find some dry path by which to get at it. They will not pass over a bridge either, when the water can be seen between the planks beneath. Wonderful to relate, too, if their watering-places are changed, though they should be ever so thirsty, they will not drink without being either beaten or caressed. They ought always to have

plenty of room for sleeping; for they are very subject to various diseases in their sleep, when they repeatedly throw out their feet, and would immediately lame themselves by coming in contact with any hard substance; so that it is necessary that they should be provided with an empty space. The profit which is derived from these animals exceeds that arising from the richest estate. It is a well-known fact, that in Celtiberia there are some sheasses which have produced to their owners as much as four hundred thousand sesterces. In the rearing of she-mules it is said to be particularly necessary to attend to the colour of the hair of the ears and the eyelids, for, although the rest of the body be all of one colour, the mule that is produced will have all the colours that are found in those parts. Mæcenas was the first person who had the young of the ass served up at his table; they were in those times much preferred to the onager or wild ass; but, since his time, the taste has gone out of fashion. An ass, after witnessing the death of another ass, survives it but a very short time only.

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CHAP. 69. (44.)

THE NATURE OF MULES, AND OF OTHER BEASTS OF BURDEN.

From the union of the male ass and the mare a mule is pro- duced in the thirteenth month, an animal remarkable for its strength in laborious work. We are told that, for this purpose, the mare ought not to be less than four years old, nor more than ten. It is said also that these two species will repulse each other, unless the male has been brought up, in its infancy, upon the milk of the other species; for which reason they take the foals away from the mare, in the dark, and substitute for them the male colts of the ass. A mule may also be produced from a horse and a female ass; but it can never be properly broken in, and is incorrigibly sluggish, being in all respects as slow as an old animal. If a mare has conceived by a horse, and is afterwards covered by an ass, the first conception is abortive; but this is not the case when the horse comes after the ass. It has been observed, that the female is in the best state for receiving the male in the seventh day after parturition, and that the males are best adapted for the purpose when they are fatigued. A female ass, which has not conceived before shedding what are called the milk-teeth, is considered to be barren; which is also looked upon as the case when a she-ass does not become pregnant after the first covering. The male which is produced from a horse and a female ass, was called by the ancients “hinnulus,” and that from an ass and a mare “mulus.” It has been observed that the animal which is thus produced by the union of the two species is of a third species, and does not resemble either of the parents; and that all animals produced in this way, of whatever kind they may be, are incapable of reproduction; she-mules are therefore barren. It is said, indeed, in our Annals, that they have frequently brought forth; but such cases must be looked upon only as prodigies. Theophrastus says that they commonly bring forth in Cappadocia; but that the animal of that country is of a peculiar species. The mule is prevented from kicking by frequently giving it wine to drink. It is said in the works of many of the Greek writers, that from the union of a mule with a mare, the dwarf mule is

produced, which they call “ginnus.” From the union of the mare and the wild ass, when it has been domesticated, a mule is produced which is remarkably swift in running, and has extremely hard feet, and a thin body, while it has a spirit that is quite indomitable. The very best stallion of all, however, for this purpose, is one produced from a union of the wild ass and the female domesticated ass. The best wild asses are those of Phrygia and Lycaonia. Africa glories in the wild foals which she produces, as excelling all others in flavour; these are called “lalisiones.” It appears from some Athenian records, that a mule once lived to the age of eighty years. The people were greatly delighted with this animal, because on one occasion, when, on the building of a temple in the citadel, it had been left behind on account of its age, it persisted in promoting the work by accompanying and assisting them; in consequence of which a decree was passed, that the dealers in corn were not to drive it away from their sieves.

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CHAP. 70. (45.)

OXEN; THEIR GENERATION.

We find it stated, that the oxen of India are of the height of camels, and that the extremity of their horns are four feet asunder. In our part of the world the most valuable oxen are those of Epirus, owing, it is said, to the attention paid to their breed by King Pyrrhus. This perfection was acquired by not permitting them to breed until after their fourth year. By these means he brought them to a very large size, and descendants of this breed are still to be seen at the present day. But in our times, we set heifers to breed in their first year, or, at the latest, in their second. Bulls are fit for breeding in their fourth year; one being sufficient, it is said, for ten cows during the whole year. If the bull, after covering, goes to the right side, the produce will be a male; if to the left, a female. Conception takes place after a single union; but if, by any accident, it should not have taken place, the cow seeks the male again, at the end of twenty days. She brings forth in the tenth month; whatever may be produced before that time cannot be reared. Some writers say, that the birth takes place the very day on which the tenth month is completed. This animal but rarely produces twins. The time of covering begins at the rising of the Dolphin, the day before the nones of January, and continues for the space of thirty days. Sometimes it takes place in the autumn; and among those nations which live upon milk, they manage so as to have a supply of it at all times of the year. Bulls never cover more than twice in the same day. The ox is the only animal that walks backwards while it is feeding; among the Garamantes, they feed in no other manner. The females live fifteen years at the longest, and the males twenty; they arrive at their full vigour in their fifth year. It is said that they are made fat by being washed in warm water, or by having the entrails inflated with air by means of a reed, introduced through an incision in the skin. We must not look upon those kinds as having degenerated, the appearance of which is not so favourable. Those that are bred in the Alps, although very small of body, give a great quantity of milk, and are capable of enduring much labour; they

are yoked by the horns, and not by the neck. The oxen of Syria have no dewlap, but they have a hump on the back. Those of Caria also, which is in Asia, are unsightly in appearance, having a hump hanging over the shoulders from the neck; and their horns are moveable; they are said, however, to be excellent workers, though those which are either black or white are condemned as worthless for labour. The horns of the bull are shorter and thinner than those of the ox. Oxen must be broken in when they are three years old; after that time it is too late, and before that time too early. The ox is most easily broken in by yoking it with one that has already been trained. This animal is our especial companion, both in labour generally, and in the operations of agriculture. Our ancestors considered it of so much value, that there is an instance cited of a man being brought before the Roman people, on a day appointed, and condemned, for having killed an ox, in order to humour an impudent concubine of his, who said that she had never tasted tripe; and he was driven into exile, just as though he had killed one of his own peasants.

The bull has a proud air, a stern forehead, shaggy ears, and horns which appear always ready, and challenging to the combat; but it is by his fore feet that he manifests his threatening anger. As his rage increases, he stands, lashing back his tail every now and then, and throwing up the sand against his belly; being the only animal that excites himself by these means. We have seen them fight at the word of command, and shown as a public spectacle; these bulls whirled about and then fell upon their horns, and at once were up again; then, at other times, they would lie upon the ground and let themselves be lifted up; they would even stand in a two-horsed chariot, while moving at a rapid rate, like so many charioteers. The people of Thessaly invented a method of killing bulls, by means of a man on horseback, who would ride up to them, and seize one of the horns, and so twist their neck. Cæsar the Dictator was the first person who exhibited this spectacle at Rome.

Bulls are selected as the very choicest of victims, and are offered up as the most approved sacrifice for appeasing the gods. Of all the animals that have long tails, this is the only one whose tail is not of proportionate length at the moment of birth; and in this animal alone it continues to grow until it reaches its heels. It is on this account,

that in making choice of a calf for a victim, due care is taken that its tail reaches to the pastern joint; if it is shorter than this, the sacrifice is not deemed acceptable to the gods. This fact has also been remarked, that calves, which have been carried to the altar on men's shoulders, are not generally acceptable to the gods; and also, if they are lame, or of a species which is not appropriate, or if they struggle to get away from the altar. It was a not uncommon prodigy among the ancients, for an ox to speak; upon such a fact being announced to the senate, they were in the habit of holding a meeting in the open air.

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CHAP. 71. (46.)

THE EGYPTIAN APIS.

In Egypt an ox is even worshipped as a deity; they call it Apis. It is distinguished by a conspicuous white spot on the right side, in the form of a crescent. There is a knot also under the tongue, which is called "cantharus." This ox is not allowed to live beyond a certain number of years; it is then destroyed by being drowned in the fountain of the priests. They then go, amid general mourning, and seek another ox to replace it; and the mourning is continued, with their heads shaved, until such time as they have found one; it is not long, however, at any time, before they meet with a successor. When one has been found, it is brought by the priests to Memphis. There are two temples appropriated to it, which are called thalami, and to these the people resort to learn the auguries. According as the ox enters the one or the other of these places, the augury is deemed favourable or unfavourable. It gives answers to individuals, by taking food from the hand of those who consult it. It turned away from the hand of Germanicus Cæsar, and not long after he died. In general it lives in secret; but, when it comes forth in public, the multitudes make way for it, and it is attended by a crowd of boys, singing hymns in honour of it; it appears to be sensible of the adoration thus paid to it, and to court it. These crowds, too, suddenly become inspired, and predict future events. Once in the year a female is presented to the ox, which likewise has her appro- priate marks, although different from those on the male; and it is said that she is always killed the very same day that they find her. There is a spot in the Nile, near Memphis, which, from its figure, they call Phiala; here they throw into the water a dish of gold, and another of silver, every year upon the days on which they celebrate the birth of Apis. These days are seven in number, and it is a remarkable thing, that during this time, no one is ever attacked by the crocodile; on the eighth day, however, after the sixth hour, these beasts resume all their former ferocity.

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CHAP. 72. (47.)

SHEEP, AND THEIR PROPAGATION.

Many thanks, too, do we owe to the sheep, both for appeasing the gods, and for giving us the use of its fleece. As oxen cultivate the fields which yield food for man, so to sheep are we indebted for the defence of our bodies. The generative power lasts in both sexes from the second to the ninth year, sometimes to the tenth. The lambs produced at the first birth are but small. The season for coupling, in all of them, is from the setting of Arcturus, that is to say, the third day before the ides of May, to the setting of Aquila, the tenth day before the calends of August. The period of gestation is one hundred and fifty days. The lambs that are produced after this time are feeble; the ancients called those that were born after it, cordi. Many persons prefer the lambs that are born in the winter to those of the spring, because it is of much more consequence that they should have gained strength before the summer solstice than before the winter one; consequently, the sheep is the only animal that is bene- fitted by being born in the middle of winter. It is the nature of the ram to reject the young and prefer the old ones, and he himself is more serviceable when old, and when deprived of his horns. He is also rendered less violent by having one horn pierced towards the ear. If the right testicle is tied up, the ram will generate females, and if the left, males. The noise of thunder produces abortion in sheep, if they are left alone; to prevent such accidents, they are brought together into flocks, that they may be rendered less timid by being in company. When the north-east wind blows, males are said to be conceived; and when the south wind, females. In this kind of animal, the mouth of the ram is especially looked to, for whatever may be the colour of the veins under the tongue, the wool of the young one will be of a similar colour. If these veins are many in number, it will be mottled. Any change, too, in their water or drink, will render them mottled.

There are two principal kinds of sheep, the covered and the colonic, or common sheep; the former is the more tender animal, but the latter is more nice about its pastures, for the covered sheep will

feed on brambles even. The best coverings for sheep are brought from Arabia.

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CHAP. 73. (43.)

THE DIFFERENT KINDS OF WOOL, AND THEIR COLOURS.

The most esteemed wool of all is that of Apulia, and that which in Italy is called Grecian wool, in other countries Italian. The fleeces of Miletus hold the third rank. The Apulian wool is shorter in the hair, and only owes its high character to the cloaks that are made of it. That which comes from the vicinity of Tarentum and Canusium is the most celebrated; and there is a wool from Laodicea, in Asia, of a similar quality. There is no white wool superior to that of the countries bordering on the Padus, nor up to the present day has any wool exceeded the price of one hundred sesterces per pound. The sheep are not shorn in all countries; in some places it is still the custom to pull off the wool. There are various colours of wool; so much so, indeed, that we want terms to express them all. Several kinds, which are called native, are found in Spain; Pollentia, in the vicinity of the Alps, produces black fleeces of the best quality; Asia, as well as Bætica, the red fleeces, which are called Erythræan; those of Canusium are of a tawny colour; and those of Tarentum have their peculiar dark tint. All kinds of wool, when not freed from the grease, possess certain medicinal properties. The wool of Istria is much more like hair than wool, and is not suitable for the fabrication of stuffs that have a long nap; so too is that which Salacia, in Lusitania, finds the most useful for making its chequered cloths. There is a similar wool, too, found about Piscenæ, in the province of Narbonensis, as also in Egypt; a garment, when it has been worn for some time, is often embroidered with this wool, and will last for a considerable time.

The thick, flocky wool has been esteemed for the manufacture of carpets from the very earliest times; it is quite clear, from what we read in Homer, that they were in use in his time. The Gauls embroider them in a different manner from that which is practised by the Parthians. Wool is compressed also for making a felt, which, if soaked in vinegar, is capable of resisting iron even; and, what is still more, after having gone through the last process, wool will even

resist fire; the refuse, too, when taken out of the vat of the scourer, is used for making mattresses, an invention, I fancy, of the Gauls. At all events, it is by Gallic names that we distinguish the different sort of mattresses at the present day; but I am not well able to say at what period wool began to be employed for this purpose. Our ancestors made use of straw for the purpose of sleeping upon, just as they do at present when in camp. The gausapa has been brought into use in my father's memory, and I myself recollect the amphimalla and the long shaggy apron being introduced; but at the present day, the laticlave tunic is beginning to be manufactured, in imitation of the gausapa. Black wool will take no colour. I shall describe the mode of dyeing the other kinds of wool when speaking of the sea-purple, or of the nature of various plants.

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CHAP. 74.

DIFFERENT KINDS OF CLOTHS.

Varro informs us, he himself having been an eye-witness, that in the temple of Sancus, the wool was still preserved on the distaff and spindle of Tanaquil, who was also called Caia Cæ- cilia; and he says that the royal waved toga, formerly worn by Servius Tullius, and now in the temple of Fortune, was made by her. Hence was derived the custom, on the marriage of a young woman, of carrying in the procession a dressed distaff and a spindle, with the thread arranged upon it. Tanaquil was the first who wove the straight tunic, such as our young people wear with the white toga; newly-married women also. Waved garments were at first the most esteemed of all: after which those composed of various colours came into vogue. Fenestella informs us, that togas with a smooth surface, as well as the Phryxian togas, began to be used in the latter part of the reign of Augustus. Thick stuffs, in the preparation of which the poppy was used, are of more ancient date, being mentioned by the poet Lucilius, in his lines on Torquatus. The prætexta had its origin among the Etrurians. I find that the trabea was first worn by the kings; embroidered garments are mentioned by Homer, and in this class originated the triumphal robes. The Phrygians first used the needle for this purpose, and hence this kind of garment obtained the name of Phrygionian. King Attalus, who also lived in Asia, invented the art of embroidering with gold, from which these garments have been called Attalic. Babylon was very famous for making embroidery in different colours, and hence stuffs of this kind have obtained the name of Babylonian. The method of weaving cloth with more than two threads was in- vented at Alexandria; these cloths are called polymita; it was in Gaul that they were first divided into chequers. Metellus Scipio, in the accusation which he brought against Cato, stated that even in his time Babylonian covers for couches were selling for eight hundred thousand sesterces, and these of late, in the time of the Emperor Nero, had risen to four millions. The prætextæ of Servius Tullius, with which the statue of Fortune, dedicated by

him, was covered, lasted until the death of Sejanus; and it is a remarkable fact, that, during a period of five hundred and sixty years, they had never become tattered, or received injury from moths. I myself have seen the fleece upon the living animal dyed purple, scarlet, and violet, — a pound and a half of dye being used for each, — just as though they had been produced by Nature in this form, to meet the demands of luxury.

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CHAP. 75.

THE DIFFERENT SHAPES OF SHEEP; THE MUSMON.

In the sheep, it is considered a proof of its being of a very fair breed, when the legs are short, and the belly is covered with wool; when this part is bare, they used to be called apicæ, and were looked upon as worthless. The tail of the Syrian sheep is a cubit in length, and it is upon that part that most of the wool is found. It is considered too early to castrate lambs before they are five months old. (49.) There is in Spain, and more especially in Corsica, a peculiar kind of animal called the musmon, not very unlike a sheep, but with a fleece which more resembles the hair of the goat than the wool of the sheep. The ancients gave the name of umbri to the breed between this animal and the sheep. The head of the sheep is the weakest part of all, on which account it is obliged, when it feeds, to turn away from the sun. The animals which are covered with wool are the most stupid of all. When they are afraid to enter any place, if one is only dragged into it by the horns, all the rest will follow. The longest duration of their life is ten years; but in Æthiopia it is thirteen. Goats live in that country eleven years, but in other parts of the world mostly eight years only. Both of these animals require to be covered not more than four times to ensure conception.

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CHAP. 76. (50.)

GOATS AND THEIR PROPAGATION.

The goat occasionally brings forth as many as four at a birth; but this is rarely the case. It is pregnant five months, like the sheep. Goats become barren when very fat. There is little advantage to be derived from their bringing forth before their third year, or after the fourth, when they begin to grow old. They are capable of generating in the seventh month, and while they are still sucking. In both sexes those that have no horns are considered the most valuable. A single coupling in the day is not sufficient; the second and the following ones are more effectual. They conceive in the month of November, so as to bring forth in the month of March, when the buds are bursting; this is sometimes the case with them when only one year old, and always with those of the second year; but the produce of those which are three years old is the most valuable. They continue to bring forth for a period of eight years. Cold produces abortion. When their eyes are surcharged, the female discharges the blood from the eye by pricking it with the point of a bulrush, and the male with the thorn of a bramble.

Mutianus relates an instance of the intelligence of this animal, of which he himself was an eye-witness. Two goats, coming from opposite directions, met on a very narrow bridge, which would not admit of either of them turning round, and in consequence of its great length, they could not safely go backwards, there being no sure footing on account of its narrowness, while at the same time an impetuous torrent was rapidly rushing beneath; accordingly, one of the animals lay down flat, while the other walked over it.

Among the males, those are the most esteemed which have flat noses and long hanging ears, the shoulders being covered with very thick shaggy hair; the mark of the most valuable among the females is the having two folds hanging down the body from under the neck. Some of these animals have no horns; but where there are horns, the age of the animal is denoted by the number of knots on them. Those that have no horns give the most milk. According to Archelaus, they

breathe, not through the nose, but the ears, and they are never entirely free from fever, from which circumstance it is, probably, that they are more animated than sheep, more ardent, and have stronger sexual passions. It is said also, that they have the power of seeing by night as well as in the day, for which reason those persons who are called Nyctalopes, recover the power of seeing in the evening, by eating the liver of the he-goat. In Cilicia, and in the vicinity of the Syrtes, the inhabitants shear the goat for the purpose of clothing themselves. It is said that the she-goats in the pastures will never look at each other at sun-set, but lie with their backs towards one another, while at other times of the day they lie facing each other and in family groups. They all have long hair hanging down from the chin, which is called by us aruncus. If any one of the flock is taken hold of and dragged by this hair, all the rest gaze on in stupid astonishment; and the same happens when any one of them has eaten of a certain herb Their bite is very destructive to trees, and they make the olive barren by licking it; for which reason they are not sacrificed to Minerva.

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CHAP. 77. (51.)

THE HOG.

The period for coupling the hog lasts from the return of the west wind to the vernal equinox; the proper age commences in the eighth month, indeed, in some places, in the fourth even, and continues until the eighth year They bring forth twice in the year, the time of gestation being four months; the number at a birth amounts to twenty even, but they cannot rear so large a number. Nigidius informs us, that those which are produced within ten days of the winter solstice are born with teeth. One coupling is sufficient, but it is repeated, on account of their extreme liability to abortion; the remedy for which is not to allow coupling the first time the female is in heat, nor until its ears are flaccid and pendant. The males do not generate after they are three years old. When the females become feeble from old age, they receive the males lying down. It is not looked upon as anything portentous when they eat their young. The young of the hog is considered in a state of purity for sacrifice when five days old, the lamb on the seventh day, and the calf on the thirtieth. Coruncanius asserts, that ruminant animals are not proper for victims until they have two teeth. It has been supposed, that when a pig has lost one eye, it will not live long; otherwise, these animals generally live up to fifteen, or sometimes twenty years. They sometimes become mad; besides which, they are liable to other diseases, especially to quinsy and to scrofula. It is an indication that the hog is diseased, when blood is found at the root of a bristle pulled from its back, and when it holds its head on one side while walking. When the female becomes too fat, she has a deficiency of milk; the first litter is always the least numerous. Animals of this kind delight in rolling in the mud. The tail is curled, and it has also been remarked, that those are a more acceptable offering to the gods, whose tail is turned to the right than those which have it turned to the left. They may be fattened in sixty days, and more especially if they have been kept without food for three days before fattening. The swine is by far the most brutish of all the animals, and it has been said, and not unaptly,

that life has been given them in place of salt. And yet it has been known, that these animals, when carried away by thieves, have recognized the voice of their keeper; and when a vessel has been under water through the inclination of one of its sides, they have had the sense to go over to the other side. The leader of the herd will even learn to go to market, and to different houses in the city. In the wild state also, they have the sense to pass their urine in plashy places, that they may destroy all traces of them, and so lighten themselves for flight. The female is spayed, just as is done with the camel; after they have fasted two days, they are suspended by the hind feet, and the orifice of the womb is cut; after this operation, they fatten more quickly.

M. Apicius made the discovery, that we may employ the same artificial method of increasing the size of the liver of the sow, as of that of the goose; it consists in cramming them with dried figs, and when they are fat enough, they are drenched with wine mixed with honey, and immediately killed. There is no animal that affords a greater variety to the palate of the epicure; all the others have their own peculiar flavour, but the flesh of the hog has nearly fifty different flavours. Hence it is, that there are whole pages of regulations made by the cen- sors, forbidding the serving up at banquets of the belly, the kernels, the testicles, the womb, and the cheeks. However, notwithstanding all this, the poet Publius, the author of the Mimes, when he ceased to be a slave, is said to have given no entertainment without serving up the belly of a sow, to which he also gave the name of “sumen.”

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CHAP. 78.

THE WILD BOAR; WHO WAS THE FIRST TO ESTABLISH PARKS FOR WILD ANIMALS.

The flesh of the wild boar is also much esteemed. Cato, the Censor, in his orations, strongly declaimed against the use of the brawn of the wild boar. The animal used to be divided into three portions, the middle part of which was laid by, and is called boar's chine. P. Servilius Rullus was the first Roman who served up a whole boar at a banquet; the father of that Rullus, who, in the consulship of Cicero, proposed the Agrarian law. So recent is the introduction of a thing which is now in daily use. The Annalists have taken notice of such a fact as this, clearly as a hint to us to mend our manners; seeing that now-a-days two or three boars are consumed, not at one entertainment, but as forming the first course only.

(52.) Fulvius Lupinus was the first Roman who formed parks for the reception of these and other wild animals: he first fed them in the territory of Tarquinii: it was not long, however, that imitators were found in L. Lucullus and Q. Hortensius. The wild sow brings forth once only in the year. The males are very fierce during the rutting time; they fight with each other, having first hardened their sides by rubbing them against the trees, and covered themselves with mud. The females, as is the case with animals of every kind, become more fierce just after they have brought forth. The wild boar is not capable of generating before the first year. The wild boar of India has two curved teeth, projecting from beneath the muzzle, a cubit in length; and the same number projecting from the forehead, like the horns of the young bull. The hair of these animals, in a wild state, is the eclour of copper, the others are black. No species whatever of the swine is found in Arabia.

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CHAP. 79. (53.)

ANIMALS IN A HALF-WILD STATE.

In no species is the union with the wild animal so easy as in that of the swine; the produce of such unions was called by the ancients hybrid, or half savage; which appellation has also been transferred to the human race, as it was to C. Antonius, the colleague of Cicero in his consulship. Not only, however, with respect to the hog, but all other animals as well, wherever there is a tame species, there is a corresponding wild one as well; a fact which is equally true with reference to man himself, as is proved by the many races of wild men of which we have already spoken. There is no kind of animal, however, that is divided into a greater number of varieties than the goat. There are the capræa, the rupicapra or rock-goat, and the ibex, an animal of wonderful swiftness, although its head is loaded with immense horns, which bear a strong resemblance to the sheath of a sword. By means of these horns the animal balances itself, when it darts along the rocks, as though it had been hurled from a sling; more especially when it wishes to leap from one eminence to another. There are the oryges also, which are said to be the only animals that have the hair the contrary way, the points being turned towards the head. There are the dama also, the pygargus, and the strepsiceros, besides many others which strongly resemble them. The first mentioned of these animals, however, dwell in the Alps; all the others are sent to us from the parts beyond sea.

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CHAP. 80. (54.)

APES.

The different kinds of apes, which approach the nearest to the human figure, are distinguished from each other by the tail. Their shrewdness is quite wonderful. It is said that, imitating the hunters, they will besmear themselves with bird-lime, and put their feet into the shoes, which, as so many snares, have been prepared for them. Mucianus says, that they have even played at chess, having, by practice, learned to distinguish the different pieces, which are made of wax. He says that the species which have tails become quite melancholy when the moon is on the wane, and that they leap for joy at the time of the new moon, and adore it. Other quadrupeds also are terrified at the eclipses of the heavenly bodies. All the species of apes manifest remarkable affection for their offspring. Females, which have been domesticated, and have had young ones, carry them about and shew them to all comers, shew great delight when they are caressed, and appear to understand the kindness thus shewn them. Hence it is, that they very often stifle their young with their embraces. The dog's-headed ape is of a much fiercer nature, as is the case with the satyr. The callitriche has almost a totally different aspect; it has a beard on the face, and a tail, which in the first part of it is very bushy. It is said that this animal cannot live except in the climate of Æthiopia, which is its native place.

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CHAP. 81. (55.)

THE DIFFERENT SPECIES OF HARES.

There are also numerous species of hares. Those in the Alps are white, and it is believed that, during the winter, they live upon snow for food; at all events, every year, as the snow melts, they acquire a reddish colour; it is, moreover, an animal which is capable of existing in the most severe climates. There is also a species of hare, in Spain, which is called the rabbit; it is extremely prolific, and produces famine in the Balearic islands, by destroying the harvests. The young ones, either when cut from out of the body of the mother, or taken from the breast, without having the entrails removed, are considered a most delicate food; they are then called laurices. It is a well-known fact, that the inhabitants of the Balearic islands begged of the late Emperor Augustus the aid of a number of soldiers, to prevent the too rapid increase of these animals. The ferret is greatly esteemed for its skill in catching them. It is thrown into the burrows, with their numerous outlets, which the rabbits form, and from which circumstance they derive their name, and as it drives them out, they are taken above. Archelaus informs us, that in the hare, the number of cavernous receptacles in the body for the excrements always equals that of its years; but still the numbers are sometimes found to differ. He says also, that the same individual possesses the characteristics of the two sexes, and that it becomes pregnant just as well without the aid of the male. It is a kind provision of Nature, in making animals which are both harmless and good for food, thus prolific. The hare, which is preyed upon by all other animals, is the only one, except the dasypus, which is capable of superfœtation; while the mother is suckling one of her young, she has another in the womb covered with hair, another without any covering at all, and another which is just beginning to be formed. Attempts have been made to form a kind of stuff of the hair of these animals; but it is not so soft as when attached to the skin, and, in consequence of the shortness of the hairs, soon falls to pieces.

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CHAP. 82. (56.)

ANIMALS WHICH ARE TAMED IN PART ONLY.

Hares are seldom tamed, and yet they cannot properly be called wild animals; indeed, there are many species of them which are neither tame nor wild, but of a sort of intermediate nature; of the same kind there are among the winged animals, swallows and bees, and among the sea animals, the dolphin.

(57.) Many persons have placed that inhabitant of our houses, the mouse, in this class also; an animal which is not to be despised, for the portents which it has afforded, even in relation to public events. By gnawing the silver shields at Lanuvium, mice prognosticated the Marsian war; and the death of our general, Carbo, at Clusium, by gnawing the latchets with which he fastened his shoes. There are many species of this animal in the territory of Cyrenaica; some of them with a wide, others with a projecting, forehead, and some again with bristling hair, like the hedgehog. We are informed by Theophrastus, that after the mice had driven the inhabitants of Gyara from their island, they even gnawed the iron; which they also do, by a kind of natural instinct, in the iron forges among the Chalybes. In gold mines, too, their stomachs are opened for this purpose, and some of the metal is always to be found there, which they have pilfered, so great a delight do they take in stealing! We learn from our Annals, also, that at the siege of Casilinum, by Hannibal, a mouse was sold for two hundred denarii, and that the person who sold it perished with hunger, while the purchaser survived. To be visited by white mice is considered as indicative of a fortunate event; but our Annals are full of instances in which the singing of a mouse has interrupted the auspices. Nigidius informs us, that the field-mouse conceals itself during winter: this is also said to be the case with the dormouse, which the regulations of the censors, and of M. Scaurus, the chief of the senate, when he was consul, have banished from our tables, no lebs than shell-fish and birds, which are brought from a foreign country. The dormouse is also a half-wild animal, and the same person made warrens for them in large casks, who first

formed parks for wild boars. In relation to this subject, it has been remarked that dormice will not mate, unless they happen to be natives of the same forest; and that if those are put together that are brought from different rivers or mountains, they will fight and destroy each other. These animals nourish their parents, when worn out with old age, with a singular degree of affection. This old age of theirs is put an end to by their winter's rest, when they conceal themselves and sleep; they are young again by the summer. The field-mouse also enjoys a similar repose.

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CHAP. 83. (58.)

PLACES IN WHICH CERTAIN ANIMALS ARE NOT TO BE FOUND.

It is a remarkable fact, that nature has not only assigned different countries to different animals, but that even in the same country, it has denied certain species to peculiar localities. In Italy the dormouse is found in one part only, the Messian forest. In Lycia the gazelle never passes beyond the mountains which border upon Syria; nor does the wild ass in that vicinity pass over those which divide Cappadocia from Cilicia. On the banks of the Hellespont, the stags never pass into a strange territory, and about Arginussa they never go beyond Mount Elaphus; those upon that mountain, too, have cloven ears. In the island of Poroselene, the weasels will not so much as cross a certain road. In Bœotia, the moles, which were introduced at Lebadea, fly from the very soil of that country, while in the neighbourhood, at Orchomenus, the very same animals tear up all the fields. We have seen coverlets for beds made of the skins of these creatures, so that our sense of religion does not prevent us from employing these ominous animals for the purposes of luxury. When hares have been brought to Ithaca, they die as soon as ever they touch the shore, and the same is the case with rabbits, on the shores of the island of Ebusus; while they abound in the vicinity, Spain namely, and the Balearic isles. In Cyrene, the frogs were formerly dumb, and this species still exists, although croaking ones were carried over there from the continent. At the present day, even, the frogs in the island of Seriphos are dumb; but when they are carried to other places, they croak; the same thing is also said to have taken place at Sicandrus, a lake of Thessaly. In Italy, the bite of the shrew-mouse is venomous; an animal which is not to be found in any region beyond the Apennines. In whatever country it exists, it always dies immediately if it goes across the rut made by a wheel. Upon Olympus, a mountain of Macedonia, there are no wolves, nor yet in the isle of Crete. In this island there are neither foxes, nor bears, nor, indeed, any kind of baneful animal, with the exception of the phalangium, a species of spider, of which I shall speak in its

appropriate place. It is a thing still more remarkable, that in this island there are no stags, except in the district of Cydon; the same is the case with the wild boar, the woodcock, and the hedgehog. In Africa, there are neither wild boars, stags, deer, nor bears.

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CHAP. 84. (59.)

ANIMALS WHICH INJURE STRANGERS ONLY, AS ALSO ANIMALS WHICH INJURE THE NATIVES OF THE COUNTRY ONLY, AND WHERE THEY ARE FOUND.

Besides this, there are certain animals, which are harmless to the natives of the country, but destroy strangers; such are the little serpents at Tirynthus, which are said to spring from out of the earth. In Syria, also, and especially on the banks of the Euphrates, the serpents never attack the Syrians when they are asleep, and even if they happen to bite a native who treads upon them, their venom is not felt; but to persons of any other country they are extremely hostile, and fiercely attack them, causing a death attended with great torture. On this account, the Syrians never kill them. On the contrary, on Latmos, a mountain of Caria, as Aristotle tells us, strangers are not injured by the scorpions, while the natives are killed by them. But I must now give an account of other animals as well, and of the productions of the earth.

SUMMARY. — Remarkable events, narratives, and observations, seven hundred and eighty-seven.

ROMAN AUTHORS QUOTED. — Mucianus, Procilius, Verrius Flaccus, L. Piso, Cornelius Valerianus, Cato the Censor, Fenestclla, Trogus, the Register of the Triumphs, Columella, Virgil, Varro, Lucilius, Metellus Scipio, Cornelius Cel- sus, Nigidius, Trebius Niger, Pomponius Mela, Mamilius Sura.

FOREIGN AUTHORS QUOTED. — King Juba, Polybius, Herodotus, Antipater, Aristotle, Demetrius the physician, Democritus, Theophrastus, Euanthes, Agriopas, who wrote the "Olympionicæ," King Hiero, King Attalus Philometor, Ctesias, Duris, Philistus, Archytas, Phylarchus, Amphilochus of Athens, Anaxapolis the Thasian, Apollodorus of Lemnos, Aristophanes the Milesian, Antigonus the Cumæan, Agathocles of Chios, Apollonius of Pergamus, Aris- tander of Athens, Bacchius of Miletus, Bion of Soli, Chiæreas the Athenian, Diodorus of Priene, Dion the Colophonian, Epigenes the Rhodian, Euagon of Thasos, Euphronius

of Athens, Hegesias of Maronea, the Menanders of Priene and of Heraclea, Menecrates the poet, Androtion who wrote on Agriculture, Æschrion who wrote on Agriculture, Lysimachus who wrote on Agriculture, Dionysius who translated Mago, Diophanes who made an epitome of the work of Dionysius, King Archelaus, Nicander.

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BOOK IX. THE NATURAL HISTORY OF FISHES.

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CHAP. 1. (1.)

WHY THE LARGEST ANIMALS ARE FOUND IN THE SEA.

WE have now given an account of the animals which we call terrestrial, and which live as it were in a sort of society with man. Among the remaining ones, it is well known that the birds are the smallest; we shall therefore first describe those which inhabit the seas, rivers, and standing waters.

(2.) Among these there are many to be found that exceed in size any of the terrestrial animals even; the evident cause of which is the superabundance of moisture with which they are supplied. Very different is the lot of the winged animals, whose life is passed soaring aloft in the air. But in the seas, spread out as they are far and wide, forming an element at once so delicate and so vivifying, and receiving the generating principles from the regions of the air, as they are ever produced by Nature, many animals are to be found, and indeed, most of those that are of monstrous form; from the fact, no doubt, that these seeds and first principles of being are so utterly conglomerated and so involved, the one with the other, from being whirled to and fro, now by the action of the winds and now by the waves. Hence it is that the vulgar notion may very possibly be true, that whatever is produced in any other department of Nature, is to be found in the sea as well; while, at the same time, many other productions are there to be found which nowhere else exist. That there are to be found in the sea the forms, not only of terrestrial animals, but of inanimate objects even, is easily to be understood by all who will take the trouble to examine the grape-fish, the sword-fish, the sawfish, and the cucumber-fish, which last so strongly resembles the real cucumber both in colour and in smell. We shall find the less reason then to be surprised to find that in so small an object as a shell-fish the head of the horse is to be seen protruding from the shell.

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CHAP. 2. (3.)

THE SEA MONSTERS OF THE INDIAN OCEAN.

But the most numerous and largest of all these animals are those found in the Indian seas; among which there are balænæ, four jugera in extent, and the pristis, two hundred cubits long: here also are found cray-fish four cubits in length, and in the river Ganges there are to be seen eels three hundred feet long. But at sea it is more especially about the time of the solstices that these monsters are to be seen. For then it is that in these regions the whirlwind comes sweeping on, the rains descend, the hurricane comes rushing down, hurled from the mountain heights, while the sea is stirred up from the very bottom, and the monsters are driven from their depths and rolled upwards on the crest of the billow. At other times again, there are such vast multitudes of tunnies met with, that the fleet of Alexander the Great was able to make head against them only by facing them in order of battle, just as it would have done an enemy's fleet. Had the ships not done this, but proceeded in a straggling manner, they could not possibly have made their escape. No noises, no sounds, no blows had any effect on these fish; by nothing short of the clash of battle were they to be terrified, and by nothing less than their utter destruction were they overpowered.

There is a large peninsula in the Red Sea, known by the name of Cadara: as it projects into the deep it forms a vast gulf, which it took the fleet of King Ptolemy twelve whole days and nights to traverse by dint of rowing, for not a breath of wind was to be perceived. In the recesses of this becalmed spot more particularly, the sea-monsters attain so vast a size that they are quite unable to move. The commanders of the fleets of Alexander the Great have related that the Gedrosi, who dwell upon the banks of the river Ara- bis, are in the habit of making the doors of their houses with the jaw-bones of fishes, and raftering the roofs with their bones, many of which were found as much as forty cubits in length. At this place, too, the sea-monsters, just like so many cattle, were in the habit of coming on shore, and, after feeding on the roots of shrubs, they would return;

some of them, which had the heads of horses, asses, and bulls, found a pasture in the crops of grain.

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CHAP. 3. (4.)

THE LARGEST ANIMALS THAT ARE FOUND IN EACH OCEAN.

The largest animals found in the Indian Sea are the pistrix and the balæna; while of the Gallic Ocean the physeter is the most bulky inhabitant, raising itself aloft like some vast column, and as it towers above the sails of ships, belching forth, as it were, a deluge of water. In the ocean of Gades there is a tree, with outspread branches so vast, that it is supposed that it is for that reason it has never yet entered the Straits. There are fish also found there which are called sea-wheels, in consequence of their singular conformation; they are divided by four spokes, the nave being guarded on every side by a couple of eyes.

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CHAP. 4. (5.)

THE FORMS OF THE TRITONS AND NEREIDS. THE FORMS OF SEA ELEPHANTS.

A deputation of persons from Olisipo, that had been sent for the purpose, brought word to the Emperor Tiberius that a triton had been both seen and heard in a certain cavern, blowing a conch-shell, and of the form under which they are usually represented. Nor yet is the figure generally attributed to the nereids at all a fiction; only in them, the portion of the body that resembles the human figure is still rough all over with scales. For one of these creatures was seen upon the same shores, and as it died, its plaintive murmurs were heard even by the inhabitants at a distance. The legatus of Gaul, too, wrote word to the late Emperor Augustus that a considerable number of nereids had been found dead upon the sea-shore. I have, too, some distinguished informants of equestrian rank, who state that they themselves once saw in the ocean of Gades a sea-man, which bore in every part of his body a perfect resemblance to a human being, and that during the night he would climb up into ships; upon which the side of the vessel where he seated himself would instantly sink downward, and if he remained there any considerable time, even go under water.

In the reign of the Emperor Tiberius, a subsidence of the ocean left exposed on the shores of an island which faces the province of Lugdunum as many as three hundred animals or more, all at once, quite marvellous for their varied shapes and enormous size, and no less a number upon the shores of the Santones; among the rest there were elephants and rams, which last, however, had only a white spot to represent horns. Turranius has also left accounts of several nereids, and he speaks of a monster that was thrown up on the shore at Gades, the distance between the two fins at the end of the tail of which was sixteen cubits, and its teeth one hundred and twenty in number; the largest being nine, and the smallest six inches in length.

M. Scaurus, in his ædileship, exhibited at Rome, among other wonderful things, the bones of the monster to which Andromeda was said to have been exposed, and which he had brought from Joppa, a

city of Judæa. These bones exceeded forty feet in length, and the ribs were higher than those of the Indian elephant, while the back-bone was a foot and a half in thickness.

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CHAP. 5. (6.)

THE BALÆNA AND THE ORCA

The balæna penetrates to our seas even. It is said that they are not to be seen in the ocean of Gades before the winter solstice, and that at periodical seasons they retire and conceal themselves in some calm capacious bay, in which they take a delight in bringing forth. This fact, however, is known to the orca, an animal which is peculiarly hostile to the balæna, and the form of which cannot be in any way adequately described, but as an enormous mass of flesh armed with teeth. This animal attacks the balænain its places of retirement, and with its teeth tears its young, or else attacks the females which have just brought forth, and, indeed, while they are still pregnant: and as they rush upon them, it pierces them just as though they had been attacked by the beak of a Liburnian galley. The female balænæ, devoid of all flexibility, without energy to defend themselves, and over-burdened by their own weight, weakened, too, by gestation, or else the pains of recent parturition, are well aware that their only resource is to take to flight in the open sea and to range over the whole face of the ocean; while the orcæ, on the other hand, do all in their power to meet them in their flight, throw themselves in their way, and kill them either cooped up in a narrow passage, or else drive them on a shoal, or dash them to pieces against the rocks. When these battles are witnessed, it appears just as though the sea were infuriate against itself; not a breath of wind is there to be felt in the bay, and yet the waves by their pantings and their repeated blows are heaved aloft in a way which no whirlwind could effect.

An orca has been seen even in the port of Ostia, where it was attacked by the Emperor Claudius. It was while he was constructing the harbour there that this orca came, attracted by some hides which, having been brought from Gaul, had happened to fall overboard there. By feeding upon these for several days it had quite glutted itself, having made for itself a, channel in the shoaly water. Here, however, the sand was thrown up by the action of the wind to such an extent, that the creature found it quite impossible to turn round;

and while in the act of pursuing its prey, it was propelled by the waves towards the shore, so that its back came to be perceived above the level of the water, very much resembling in appearance the keel of a vessel turned bottom upwards. Upon this, Cæsar ordered a great number of nets to be extended at the mouth of the harbour, from shore to shore, while he himself went there with the prætorian cohorts, and so afforded a spectacle to the Roman people; for boats assailed the monster, while the soldiers on board showered lances upon it. I myself saw one of the boats sunk by the water which the animal, as it respired, showered down upon it.

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CHAP. 6.

WHETHER FISHES RESPIRE, AND WHETHER THEY SLEEP.

Balænæ have the mouth in the forehead; and hence it is that, as they swim on the surface of the water, they discharge vast showers of water in the air. (7.) It is universally agreed, however, that they respire, as do a very few other animals in the sea, which have lungs among the internal viscera; for without lungs it is generally supposed that no animal can breathe. Those, too, who are of this opinion are of opinion also that no fishes that have gills are so constituted as to inhale and exhale alternately, nor, in fact, many other kinds of animals even, which are entirely destitute of gills. This, I find, was the opinion of Aristotle, who, by his learned researches on the subject, has induced many others to be of the same way of thinking. I shall not, however, conceal the fact, that I for one do not by any means at once subscribe to this opinion, for it is very possible, if such be the will of Nature, that there may be other organs fitted for the purposes of respiration, and acting in the place of lungs; just as in many animals a different liquid altogether takes the place of blood. And who, in fact, can find any ground for surprise that the breath of life can penetrate the waters of the deep, when he sees that it is even exhaled from them? and when we find, too, that it can even enter the very depths of the earth, an element of so much greater density, a thing that is proved by the case of animals which always live under ground, the mole for instance? There are other weighty reasons as well, which induce me to be of opinion that all aquatic animals respire, conformably to their natural organization; for, in the first place, there has been often remarked in fishes a certain degree of anhelation during the heat of summer, and at other times again, a kind of leisurely gaping, as it were. And then, besides, we have the admission of those who are of the contrary opinion, that fishes do sleep; but what possibility is there of sleeping without respiring as well? And again, we see their breath disengaged in bubbles which rise to the water's surface, and the influence too of the moon makes even the very shells grow in bulk.

But the most convincing reason of all is, the undoubted fact that fishes have the power of hearing and of smelling, two senses for the operation of both of which the air is a necessary vehicle; for by smell we understand nothing else than the air being charged with certain particles. However, let every person form his own opinion on these subjects, just in such way as he may think best.

Neither the balæna nor the dolphin has any gills. Both of these animals respire through vent-holes, which communicate with the lungs; in the balæna they are on the fore- head, and in the dolphin on the back. Sea-calves, too, which we call “phocæ,” breathe and sleep upon dry land — sea- tortoises also, of which we shall have more to say hereafter.

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CHAP. 7. (8.)

DOLPHINS.

The swiftest not only of the sea animals, but of all animals whatever, is the dolphin. He is more rapid in his move- ments than a bird, more instantaneous than the flight of an arrow, and were it not for the fact that his mouth is situate much below his muzzle, almost, indeed, in the middle of the belly, not a fish would be able to escape his pursuit. But Nature, in her prudence, has thrown certain impediments in his way; for unless he turns, and throws himself on his back, he can seize nothing, and it is this circumstance more especially that gives proof of his extraordinary swiftness. For, if pressed by hunger, he will follow a fish, as it flies down, to the very bottom of the water, and then after holding his breath thus long, will dart again to the surface to respire, with the speed of an arrow discharged from a bow; and often, on such occasions, he is known to leap out of the water with such a bound, as to fly right over the sails of a ship.

Dolphins generally go in couples; the females bring forth their young in the tenth month, during the summer season, sometimes two in number. They suckle their young at the teat like the balæna, and even carry them during the weakness of infancy; in addition to which, long after they are grown up, they accompany them, so great is their affection for their progeny. The young ones grow very speedily, and in ten years are supposed to arrive at their full size. The dol- phin lives thirty years; a fact that has been ascertained from cutting marks on the tail, by way of experiment. It conceals itself for thirty days, at about the rising of the Dog-star, and hides itself so effectually, that it is not known whither it goes; a thing that is more surprising still, if it is unable to respire under water. Dolphins are in the habit of darting upon the shore, for some reason or other, it is not known what. They do not die the moment that they touch the dry land, but will die much more speedily if the vent-hole is closed. The tongue, contrary to the nature of aquatic animals in general, is moveable, being short and broad, not much unlike that of the pig. Instead of a voice, they emit a moaning sound similar to that made

by a human being; the back is arched, and the nose turned up. For this reason it is that they all recognize in a most surprising manner the name of Simo, and prefer to be called by that rather than by any other.

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CHAP. 8.

HUMAN BEINGS WHO HAVE BEEN BELOVED BY DOLPHINS.

The dolphin is an animal not only friendly to man, but a lover of music as well; he is charmed by melodious concerts, and more especially by the notes of the water-organ. He does not dread man, as though a stranger to him, but comes to meet ships, leaps and bounds to and fro, vies with them in swiftness, and passes them even when in full sail.

In the reign of the late Emperor Augustus, a dolphin which had been carried to the Lucrine Lake conceived a most wonderful affection for the child of a certain poor man, who was in the habit of going that way from Baiæ to Puteoll to school, and who used to stop there in the middle of the day, call him by his name of Simo, and would often entice him to the banks of the lake with pieces of bread which he carried for the purpose. I should really have felt ashamed to mention this, had not the incident been stated in writing in the works of Mæcenas, Fabianus, Flavius Alfius, and many others. At whatever hour of the day he might happen to be called by the boy, and although hidden and out of sight at the bottom of the water, he would instantly fly to the surface, and after feeding from his hand, would present his back for him to mount, taking care to conceal the spiny projection of his fins in their sheath, as it were; and so, sportively taking him up on his back, he would carry him over a wide expanse of sea to the school at Puteoli, and in a similar manner bring him back again. This happened for several years, until at last the boy happened to fall ill of some malady, and died. The dolphin, however, still came to the spot as usual, with a sorrowful air and manifesting every sign of deep affliction, until at last, a thing of which no one felt the slightest doubt, he died purely of sorrow and regret.

Within these few years also, another at Hippo Diarrhytus, on the coast of Africa, in a similar manner used to receive his food from the hands of various persons, present himself for their caresses, sport about among the swimmers, and carry them on his back. On being rubbed with unguents by Flavianus, the then proconsul of Africa, he

was lulled to sleep, as it appeared, by the sensation of an odour so new to him, and floated about just as though he had been dead. For some months after this, he carefully avoided all intercourse with man, just as though he had received some affront or other; but at the end of that time he returned, and afforded just the same wonderful scenes as before. At last, the vexations that were caused them by having to entertain so many influential men who came to see this sight, compelled the people of Hippo to put the animal to death.

Before this, there was a similar story told of a child at the city of Iasus, for whom a dolphin was long observed to have conceived a most ardent affection, until at last, as the animal was eagerly following him as he was making for the shore, it was carried by the tide on the sands, and there expired. Alexander the Great appointed this boy high priest of Neptune at Babylon, interpreting this extraordinary attachment as a convincing proof of the favour of that divinity.

Hegesidemus has also informed us, that in the same city of lasus there was another boy also, Hermias by name, who in a similar manner used to traverse the sea on a dolphin's back, but that on one occasion a tempest suddenly arising, he lost his life, and was brought back dead; upon which, the dolphin, who thus admitted that he had been the cause of his death, would not return to the sea, but lay down upon the dry land, and there expired.

Theophrastus informs us, that the very same thing happened at Naupactus also; nor, in fact, is there any limit to similar instances. The Amphilochians and the Tarentines have similar stories also about children and dolphins; and all these give an air of credibility to the one that is told of Arion, the famous performer on the lyre. The mariners being on the point of throwing him into the sea, for the purpose of taking possession of the money he had earned, he prevailed upon them to allow him one more song, accompanied with the music of his lyre. The melody attracted numbers of dolphins around the ship, and, upon throwing himself into the sea, he was taken up by one of them, and borne in safety to the shore of the Promontory of Tænarum.

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CHAP. 9.

PLACES WHERE DOLPHINS HELP MEN TO FISH.

There is in the province of Gallia Narbonensis and in the territory of Nemausus a lake known by the name of Latera, where dolphins fish in company with men. At the narrow outlet of this lake, at stated seasons of the year innumerable multitudes of mullets make their way into the sea, taking advantage of the turn of the tide; hence it is that it is quite impossible to employ nets sufficiently strong to bear so vast a weight, even though the fish had not the instinctive shrewdness to watch their opportunity. By a similar instinct the fish immediately make with all speed towards the deep water which is found in a gulf in that vicinity, and hasten to escape from the only spot that is at all convenient for spreading the nets. As soon as ever the fishermen perceive this, all the people — for great multitudes resort thither, being well aware of the proper time, and especially desirous of sharing in the amusement — shout as loud as they can, and summon Simo to the scene of action. The dolphins very quickly understand that they are in requisition, as a north-east wind speedily carries the sound to their retreats, though a south one would somewhat retard it by carrying it in an opposite direction. Even then however, sooner than you could have possibly supposed, there are the dolphins, in all readiness to assist. They are seen approaching in all haste in battle array, and, imme- diately taking up their position when the engagement is about to take place, they cut off all escape to the open sea, and drive the terrified fish into shallow water. The fishermen then throw their nets, holding them up at the sides with forks, though the mullets with inconceivable agility instantly leap over them; while the dolphins, on the other hand, are waiting in readiness to receive them, and content themselves for the present with killing them only, postponing all thoughts of eating till after they have secured the victory. The battle waxes hot apace, and the dolphins, pressing on with the greatest vigour, readily allow themselves to be enclosed in the nets; but in order that the fact of their being thus enclosed may not urge the enemy to find additional means of flight, they glide

along so stealthily among the boats and nets, or else the swimmers, as not to leave them any opening for escape. By leaping, which at other times is their most favourite amusement, not one among them attempts to make its escape, unless, indeed, the nets are purposely lowered for it; and the instant that it has come out it continues the battle, as it were, up to the very ramparts. At last, when the capture is now completed, they devour those among the fish which they have killed; but being well aware that they have given too active an assistance to be repaid with only one day's reward, they take care to wait there till the following day, when they are filled not only with fish, but bread crumbs soaked in wine as well.

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CHAP. 10.

OTHER WONDERFUL THINGS RELATING TO DOLPHINS.

The account which Mucianus gives of a similar mode of fishing in the Iasian Gulf differs from the preceding one, in the fact that there the dolphins make their appearance of their own accord, and do not require to be called: they receive their share from the hands of the people, each boat having its own particular associate among the dolphins; and this, although the fishing is carried on at night-time by the light of torches. If the latter is the meaning, Pliny probably intends to speak only of what some of them are able to do: otherwise it is hard to see of what utility the nets were in the operation.

Dolphins, also, form among themselves a sort of general community. One of them having been captured by a king of Caria and chained up in the harbour, great multitudes of dolphins assembled at the spot, and with signs of sorrow which could not be misunderstood, appealed to the sympathies of the people, until at last the king ordered it to be released. The young dolphins, also, are always attended by a larger one, who acts as a guardian to them; and before now, they have been seen carrying off the body of one which had died, that it might not be devoured by the sea-monsters.

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CHAP. 11. (9.)

THE TURSIO.

There is a fish called the tursio, which bears a strong resemblance to the dolphin; it differs from it, however, in a certain air of sadness, and is wanting in its peculiar vivacity. This animal most resembles the dog-fish, however, in the shape and dangerous powers of the muzzle.

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CHAP. 12. (10.)

TURTLES. THE VARIOUS KINDS OF TURTLES, AND HOW THEY ARE CAUGHT.

The Indian Sea produces turtles of such vast size, that with the shell of a single animal they are able to roof a habit- able cottage; and among the islands of the Red Sea, the navigation is mostly carried on in boats formed of these shells. They are to be caught in many ways; but they are generally taken when they have come up to the surface of the water just before midday, a season at which they experience great delight in floating on the calm surface, with the back entirely out of the water. Here the delightful sensations which attend a free respiration beguile them to such a degree, and render them so utterly regardless of their safety, that their shell becomes dried up by the heat of the sun, so much so, indeed, that they are unable to descend, and, having to float against their will, become an easy prey to the fishermen. It is said also, that they leave the water at night for the purpose of feeding, and eat with such avidity as to quite glut themselves: upon which, they become weary, and the moment that, on their return in the morning, they reach the sea, they fall asleep on the surface of the water. The noise of their snoring betrays them, upon which the fishermen stealthily swim towards the animals, three to each turtle; two of them, in a moment, throw it on its back, while a third slings a noose around it, as it lies face upwards, and then some more men, who are ready on shore, draw it to land.

In the Phoenician Sea they are taken without the slightest difficulty, and, at stated periods of the year, come of their own accord to the river Eleutherus, in immense numbers. The turtle has no teeth, but the edge of the mouth is sharp, the upper part shutting down over the lower just like the lid of a box. In the sea it lives upon shell-fish, and such is the strength of its jaws, that it is able to break stones even; when on shore, it feeds upon herbage. The female turtle lays eggs like those of birds, one hundred in number; these she buries on the dry land, and covering them over with earth, pats it down with her breast, and then having thus rendered it smooth, sits on them

during the night. The young are hatched in the course of a year. Some persons are of opinion that they hatch their eggs by means of the eyes, by merely looking at them, and that the female refuses to have any intercourse with the male until he has placed a wisp of straw upon her back. The Troglodytæ have turtles with horns, which resemble the branches of a lyre; they are large, but moveable, and assist the animal like so many oars while swimming. The name of this fine, but rarely-found turtle, is “chelyon;” for the rocks, from the sharpness of their points, frighten away the Chelonophagi, while the Troglodytæ, whose shores these animals frequent, worship them as sacred. There are some land turtles also, the shells of which, used for the purposes of art, are thence called by the name of “chersinæ; they are found in the deserts of Africa, in the parts where the scorched sands are more especially destitute of water, and subsist, it is believed, upon the moisture of the dews. No other animal is to be found there.

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CHAP. 13.

(1.) — WHO FIRST INVENTED THE ART OF CUTTING TORTOISE-SHELL.

Carvilius Pollio, a man of prodigal habits and ingenious in inventing the refinements of luxury, was the first to cut the shell of the tortoise into laminæ, and to veneer beds and cabinets with it.

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CHAP. 14. (12.)

DISTRIBUTION OF AQUATIC ANIMALS INTO VARIOUS SPECIES.

The integuments of the aquatic animals are many in num- ber. Some are covered with a hide and hair, as the sea-calf and hippopotamus, for instance; others again, with a hide only, as the dolphin; others again, with a shell, as the turtle; others, with a coat as hard as a stone, like the oyster and other shell-fish; others, with a crust, such as the cray-fish; others, with a crust and spines, like the sea-urchin; others, with scales, as fishes in general; others, with a rough skin, as the squatina, the skin of which is used for polishing wood and ivory; others, with a soft skin, like the muræna; and others with none at all, like the polypus.

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CHAP. 15. (13.)

THOSE WHICH ARE COVERED WITH HAIR, OR HAVE NONE, AND HOW THEY BRING FORTH. SEA-CALVES, OR PHOCÆ.

Those aquatic animals which are covered with hair are viviparous, such, for instance, as the pristis, the balæna, and the sea-calf. This last brings forth its young on land, and, like the sheep, produces an after-birth. In coupling, they adhere after the manner of the canine species; the female sometimes produces even more than two, and rears her young at the breast. She does not take them down to the sea until the twelfth day, and after that time makes them become used to it by degrees. These animals are killed with the greatest dif- ficulty, unless the head is cut off at once. They make a noise which sounds like lowing, whence their name of "sea-calf." They are susceptible, however, of training, and with their voice, as well as by gestures, can be taught to salute the public; when called by their name, they answer with a discordant kind of grunt. No animal has a deeper sleep than this; on dry land it creeps along as though on feet, by the aid of what it uses as fins when in the sea. Its skin, even when separated from the body, is said to retain a certain sensitive sympathy with the sea, and at the reflux of the tide, the hair on it always rises upright: in addition to which, it is said that there is in the right fin a certain soporiferous influence, and that, if placed under the head, it induces sleep.

(14.) There are only two animals without hair that are viviparous, the dolphin and the viper.

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CHAP. 16.

HOW MANY KINDS OF FISH THERE ARE.

There are seventy-four species of fishes, exclusive of those that are covered with crusts; the kinds of which are thirty in number. We shall, on another occasion, speak of each individually; but, for the present, we shall treat only of the nature of the more remarkable ones.

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CHAP. 17. (15.)

WHICH OF THE FISHES ARE OF THE LARGEST SIZE.

Tunnies are among the most remarkable for their size; we have found one weighing as much as fifteen talents, the breadth of its tail being five cubits and a palm. In some of the rivers, also, there are fish of no less size, such, for instance, as the silurus of the Nile, the isox of the Rhenus, and the attilus of the Padus, which, naturally of an inactive nature, sometimes grows so fat as to weigh a thousand pounds, and when taken with a hook, attached to a chain, requires a yoke of oxen to draw it on land. An extremely small fish, which is known as the clupea, attaches itself, with a wonderful tenacity, to a certain vein in the throat of the attilus, and destroys it by its bite. The silurus carries devastation with it wherever it goes, attacks every living creature, and often drags beneath the water horses as they swim. It is also remark- able, that in the Mœnus, a river of Germany, a fish that bears a very strong resemblance to the sea-pig, requires to be drawn out of the water by a yoke of oxen; and, in the Danube, it is taken with large hooks of iron. In the Borysthenes, also, there is said to be a fish of enormous size, the flesh of which has no bones or spines in it, and is remarkable for its sweetness.

In the Ganges, a river of India, there is a fish found which they call the platanista; it has the muzzle and the tail of the dolphin, and measures sixteen cubits in length. Statius Sebosus says, a thing that is marvellous in no small degree, that in the same river there are fishes found, called worms; these have two gills, and are sixty cubits in length; they are of an azure colour, and have received their name from their peculiar conformation. These fish, he says, are of such enormous strength, that with their teeth they seize hold of the trunks of elephants that come to drink, and so drag them into the water.

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CHAP. 18.

TUNNIES, CORDYLA, AND PELAMIDES, AND THE VARIOUS PARTS OF THEM THAT ARE SALTED. MELANDRYA, APOLECTI, AND CYBIA.

The male tunny has no ventral fin; these fish enter the Euxine in large bodies from the main sea, in the spring, and will spawn nowhere else. The young ones, which in autumn accompany the females to the open sea, are known as "cordyla." In the spring they are called "pelamides," from πηλὸς, the Greek for "mud," and after they are a year old, "thynni." When this fish is cut up into pieces, the neck, the belly, and the throat, are the most esteemed parts; but they must be eaten only when they are quite fresh, and even then they cause severe fits of flatulence; the other parts; with the flesh entire, are preserved in salt. Those pieces, which bear a resemblance to an oaken board, have thence received the name of "melandrya." The least esteemed among these parts are those which are the nearest to the tail, because they have no fat upon them; while those parts are considered the most delicate, which lie nearest the neck; in other fishes, however, the parts about the tail have the most nutriment in them. The pelamides are cut up into small sections, known as "apolecti;" and these again are divided into cubical pieces, which are thence called "cybia."

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CHAP. 19.

THE AURIAS AND THE SCOMBER.

All kinds of fish grow with remarkable rapidity, and more especially those in the Euxine; the reason of which is the vast number of rivers which discharge their fresh water into it. One fish, the growth of which is quite perceptible, day by day, is known as the amia. This fish, and the pelamides, together with the tunnies, enter the Euxine in shoals, for the purpose of obtaining a sweeter nutriment, each under the command of its own leader; but first of all the scomber ap- pears, which is of a sulphureous tint when in the water, but when out of it resembles other fish in colour. The salt-water preserves of Spain are filled with these last fish, but the tunnies do not consort with them.

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CHAP. 20.

FISHES WHICH ARE NEVER FOUND IN THE EUXINE; THOSE WHICH ENTER IT AND RETURN.

The Euxine, however, is never entered by any animal that is noxious to fish, with the exception of the sea-calf and the small dolphin. On entering, the tunnies range along the shores to the right, and on departing, keep to those on the left; this is supposed to arise from the fact that they have better sight with the right eye, their powers of vision with either being naturally very limited. In the channel of the Thracian Bosporus, by which the Propontis is connected with the Euxine, at the narrowest part of the Straits which separate Europe from Asia, there is, near Chalcedon, on the Asiatic side, a rock of remarkable Whiteness, the whole of which can be seen from the bottom of the sea at the surface. Alarmed at the sudden appearance of this rock, the tunnies always hasten in great numbers, and with headlong impetuosity, towards the promontory of Byzantium, which stands exactly opposite to it, and from this circumstance has received the name of the Golden Horn. Hence it is, that all the fishing is at Byzantium, to the great loss of Chalcedon, although it is only separated from it by a channel a mile in width. They wait, however, for the blowing of the north wind to leave the Euxine with a favourable tide, and are never taken until they have entered the harbour of Byzantium. These fish do not move about in winter; in whatever place they may happen to be surprised by it, there they pass the winter, till the time of the equinox.

Manifesting a wonderful degree of delight, they will often accompany a vessel in full sail, and may be seen from the poop following it for hours, and a distance of several miles. If a fish-spear even is thrown at them ever so many times, they are not in the slightest degree alarmed at it. Some writers call the tunnies which follow ships in this manner, by the name of “pompili.”

Many fishes pass the summer in the Propontis, and do not enter the Euxine; such, for instance, as the sole, while on the other hand, the turbot enters it. The sepia is not found in this sea, although the

lolig is. Among the rock-fish, the sea-thrush and the sea-blackbird are wanting, as also purples, though oysters abound here. All these, however, pass the winter in the Ægean Sea; and of those which enter the Euxine, the only ones that do not return are the trichiæ. — It will be as well to use the Greek names which most of them bear, seeing that to the same species different countries have given different appellations. — These last, however, are the only ones that enter the river Ister, and passing along its subterraneous passages, make their way from it to the Adriatic; and this is the reason why they are to be seen descending into the Euxine Sea, but never in the act of returning from it. The time for taking tunnies is, from the rising of the Vergiliæ to the setting of Arcturus: throughout the rest of the winter season, they lie concealed at the bottom of deep creeks, unless they are induced to come out by the warmth of the weather or the full moon. These fish fatten to such an extraordinary degree as to burst. The longest period of their life is two years.

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CHAP. 21.

WHY FISHES LEAP ABOVE THE SURFACE OF THE WATER.

There is a little animal, in appearance like a scorpion, and of the size of a spider. This creature, by means of its sting, attaches itself below the fin to the tunny and the fish known as the sword-fish and which often exceeds the dolphin in magnitude, and causes it such excruciating pain, that it will often leap on board of a ship even. Fish will also do the same at other times, when in dread of the violence of other fish, and mullets more especially, which are of such extraordinary swiftness, that they will sometimes leap over a ship, if lying cross- wise.

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CHAP. 22. (16.)

THAT AUGURIES ARE DERIVED FROM FISHES.

Auguries are also derived from this department of Nature, and fishes afford presages of coming events. While Augustus was walking on the sea-shore, during the time of the Sicilian war, a fish leapt out of the sea, and fell at his feet. The diviners, who were consulted, stated that this was a proof that those would fall beneath the feet of Cæsar who at that moment were in possession of the seas-it was just at this time that Sextus Pompeius had adopted Neptune as his father, so elated was he with his successes by sea.

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CHAP. 23.

WHAT KINDS OF FISHES HAVE NO MALES.

The females of fishes are larger in size than the males, and in some kinds there are no males at all, as in the erythini and the channi; for all of these that are taken are found to be full of eggs. Nearly all kinds of fish that are covered with scales are gregarious. They are most easily taken before sunrise; for then more particularly their powers of seeing are defective. They sleep during the night; and when the weather is clear, are able to see just as well then as during the day. It is said, also, that it greatly tends to promote their capture to drag the bottom of the water, and that by so doing more are taken at the second haul than at the first. They are especially fond of the taste of oil, and find nutriment in gentle showers of rain. Indeed, the very reeds, even, although they are produced in swamps, will not grow to maturity without the aid of rain: in addition to this, we find that wherever fishes remain constantly in the same water, if it is not renewed they will die.

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CHAP. 24.

FISHES WHICH HAVE A STONE IN THE HEAD; THOSE WHICH KEEP THEMSELVES CONCEALED DURING WINTER; AND THOSE WHICH ARE NOT TAKEN IN WINTER, EXCEPT UPON STATED DAYS.

All fish have a presentiment of a rigorous winter, but more especially those which are supposed to have a stone in the head, the lupus, for instance, the chromis, the sciæ- na, and the phagrus. When the winter has been very severe, many fish are taken in a state of blindness. Hence it is, that during these months they lie concealed in holes, in the same manner as land animals, as we have already mentioned; and more especially the hippurus, and the coracinus, which Archestratus looks upon its head as a delicacy, but thinks so little of the other parts, that they are not, in his opinion, worth carrying away. He was, however, well known to be much too refined in his notions of epicurism. are never taken during the winter, except only on a few stated days, which are always the same. The same with the muræna also, and the orphus, the conger, the perch, and all the rock-fish. It is said that, during the winter, the torpedo, the psetta, and the sole, conceal themselves in the earth, or rather, I should say, in excavations made by them at the bottom of the sea.

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CHAP. 25.

FISHES WHICH CONCEAL THEMSELVES DURING THE SUMMER; THOSE WHICH ARE INFLUENCED BY THE STARS.

Other fishes, again, are unable to bear the heat of summer, and lie concealed during the sixty days of the hottest weather of midsummer; such, for instance, as the glaucus, the asellus, of the fish generally known by the ancients as the sea-perch; and that there is reason for thinking that it was similar to the Perca scriba of Linnæus, having black lines running across the body. Most naturalists are and the dorade. Among the river-fish, the silurus is affected by the rising of the Dog-star, and at other times it is always sent to sleep by thunder. The same is also believed to be the case with the sea-fish called cyprinus. In addition to this, the whole sea is sensible of the rising of this star, a thing which is more especially to be observed in the Bosporus: for there sea-weeds and fish are seen floating on the surface, all of which have been thrown up from the bottom.

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CHAP. 26. (17.)

THE MULLET.

One singular propensity of the mullet has afforded a subject for laughter; when it is frightened, it hides its head, and fancies that the whole of its body is concealed. Their salacious propensities render them so unguarded, that in Phoenicia and in the province of Gallia Narbonensis, at the time of coupling, a male, being taken from out of the preserves, is fastened to a long line, which is passed through his mouth and gills; he is then let go in the sea, after which he is drawn back again by the line, upon which the females will follow him to the very water's edge; and so, on the other hand, the male will follow the female, during the spawning season.

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CHAP. 27.

THE ACIPENSER.

Among the ancients, the acipenser was esteemed the most noble fish of all; it is the only one that has the scales turned towards the head, and in a contrary direction to that in which it swims. At the present day, however, it is held in no esteem, which I am the more surprised at, it being so very rarely found. Some writers call this fish the elops.

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CHAP. 28.

THE LUPUS, ASELLUS.

At a later period, they set the highest value on the lupus and the asellus, as we learn from Cornelius Nepos, and the poet, Laberius, the author of the Mimes. The most approved kinds of the lupus are those which have the name of “lanati,” or “woolly,” in consequence of the extreme whiteness and softness of the flesh. Of the asellus there are two sorts, the callarias, which is the smallest, and the bacchus, which is only taken in deep water, and is hence much preferred to the former. On the other hand, among the varieties of the lupus, those are the most esteemed which are taken in rivers.

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CHAP. 29.

THE SCARUS, THE MUSTELA.

At the present day, the first place is given to the scarus, the only fish that is said to ruminate, and to feed on grass and not on other fish. It is mostly found in the Carpathian Sea, and never of its own accord passes Lectum, a promontory of Troas. Optatus Elipertius, the commander of the fleet under the Emperor Claudius, had this fish brought from that locality, and dispersed in various places off the coast between Ostia and the districts of Campania. During five years, the greatest care was taken that those which were caught should be returned to the sea; but since then they have been always found in great abundance off the shores of Italy, where formerly there were none to be taken. Thus has gluttony introduced these fish, to be a dainty within its reach, and added a new inhabitant to the seas; so that we ought to feel no surprise that foreign birds breed at Rome.

The fish that is next in estimation for the table is the mustela, but that is valued only for its liver. A singular thing to tell of — the lake of Brigantia, in Rhætia, lying in the midst of the Alps, produces them to rival even those of the sea.

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CHAP. 30.

THE VARIOUS KINDS OF MULLETS, AND THE SARGUS THAT ATTENDS THEM.

Of the remaining fish that are held in any degree of esteem, the mullet is the most highly valued, as well as the most abundant of all; it is of only a moderate size, rarely exceeds two pounds in weight, and will never grow beyond that weight in preserves or fish-ponds. These fish are only to be found in the Northern Ocean, exceeding two pounds in weight, and even there in none but the more westerly parts. As for the other kinds, the various species are numerous; some live upon sea-weed, while others feed on the oyster, slime, and the flesh of other fish. The more distinctive mark is a forked beard, that projects beneath the lower lip. The lutarius, or mud-mullet, is held in the lowest esteem of all. This last is always accompanied by another fish, known as the sargus, and where the mullet stirs up the mud, the other finds aliment for its own sustenance. The mullet that is found on the coast is not highly esteemed, and the most esteemed of all have a strong flavour of shell-fish. Fenestella is of opinion, that this fish received its name of mullet [mullus] from its resemblance to the colour of the red or mullet-coloured shoes. The mullet spawns three times a year: at all events, the fry makes its appearance that number of times. The masters in gastronomy inform us, that the mullet, while dying, assumes a variety of colours and a succession of shades, and that the hue of the red scales, growing paler and paler, gradually changes, more especially if it is looked at enclosed in glass. M. Apicius, a man who displayed a remarkable degree of ingenuity in everything relating to luxury, was of opinion, that it was a most excellent plan to let the mullet die in the pickle known as the “garum of the allies” — for we find that even this has found a surname — and he proposed a prize for any one who should invent a new sauce, made from the liver of this fish. I find it much easier to relate this fact, than to state who it was that gained the prize.

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CHAP. 31.

ENORMOUS PRICES OF SOME FISH.

Asinius Celer, a man of consular rank, and remarkable for his prodigal expenditure on this fish, bought one at Rome, during the reign of Caius, at the price of eight thousand sesterces. A reflection upon such a fact as this will at once lead us to turn our thoughts to those who, making loud complaints against luxury, have lamented that a single cook cost more money to buy than a horse; while at the present day a cook is only to be obtained for the same sum that a triumph would cost, and a fish is only to be purchased at what was formerly the price for a cook! indeed, there is hardly any living being held in higher esteem than the man who understands how, in the most scientific fashion, to get rid of his master's property.

(18.) Licinius Mucianus relates, that in the Red Sea there was caught a mullet eighty pounds in weight. What a price would have been paid for it by our epicures, if it had only been found off the shores in the vicinity of our city!

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CHAP. 32.

THAT THE SAME KINDS ARE NOT EVERYWHERE EQUALLY ESTEEMED.

There is this also in the nature of fish, that some are more highly esteemed in one place, and some in another; such, for instance, as the coracinus in Egypt, the zeus, also called the faber, at Gades, the salpa, in the vicinity of Ebusus, which is considered elsewhere an unclean fish, and can nowhere be thoroughly cooked, wherever found, without being first beaten with a stick: in Aquitania, again, the river salmon is preferred to all the fish that swim in the sea.

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CHAP. 33.

GILLS AND SCALES.

Some fishes have numerous gills, others again single ones, others double; it is by means of these that they discharge the water that has entered the mouth. A sign of old age is the hardness of the scales, which are not alike in all. There are two lakes of Italy at the foot of the Alps, called Larius and Verbanus, in which there are to be seen every year, at the rising of the Vergiliæ, fish remarkable for the number of their scales, and the exceeding sharpness of them, strongly resembling hob-nails in appearance; these fish, however, are only to be seen during that month, and no longer.

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CHAP. 34. (19.)

FISHES WHICH HAVE A VOICE . — FISHES WITHOUT GILLS.

Arcadia produces a wonder in its fish called exocœtus, from the fact that it comes ashore to sleep. In the neighbourhood of the river Clitorius, this fish is said to be gifted with powers of speech, and to have no gills; by some writers it is called the adonis.

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CHAP. 35.

FISHES WHICH COME ON LAND. THE PROPER TIME FOR CATCHING FISH.

Those fish, also, which are known by the name of sea-mice, as well as the polyp and the murænæ, are in the habit of coming ashore — Besides which, there is in the rivers of India one kind that does this, and then leaps back again into the water — for they are found to pass over into standing waters and streams. Most fishes have an evident instinct, which teaches them where to spawn in safety; as in such places there are no enemies found to devour their young, while at the same time the waves are much less violent. It will be still more a matter of surprise, to find that they thus have an appreciation of cause and effect, and understand the regular recurrence of periods, when we reflect how few persons there are that know that the most favourable time for taking fish is while the sun is passing through the sign of Pisces.

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CHAP. 36. (20.)

CLASSIFICATION OF FISHES, ACCORDING TO THE SHAPE OF THE BODY.

Some sea-fish are flat, such, for instance, as the rhombus, the sole, and the sea-sparrow; which last only differs from the rhombus in the lateral position of the body. The rhombus lies with the right side upwards, while in the sea-sparrow the left side is uppermost. Some sea-fish, again, are long, as the muræna and the conger.

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CHAP. 37.

THE FINS OF FISH, AND THEIR MODE OF SWIMMING.

Hence it is that there is a difference, also, in the fins of fish, which have been given them to serve in place of feet, none having more than four, some two only, and others none. It is in Lake Fucinus only that there is a fish found that has eight fins for swimming. Those fishes which are long and slimy, have only two at most, such, for instance, as eels and congers: others, again, have none, such as the muræna, which is also without gills. All these fish make their way in the sea by an undulatory motion of the body, just as serpents do on land; on dry land, also, they are able to crawl along, and hence those of this nature are more long-lived than the others. Some of the flat-fish, also, have no fins, the pastinacæ, for instance — for these swim broad-wise — those, also, which are known as the "soft" fish, such as the polypi, for their feet serve them in stead of fins.

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CHAP. 38. (21)

EELS

Eels live eight years; they are able to survive out of water as much as six days, when a north-east wind blows; but when the south wind prevails, not so many. In winter, they cannot live if they are in very shallow water, nor yet if the water is troubled. Hence it is that they are taken more especially about the rising of the Vergiliæ, when the rivers are mostly in a turbid state. These animals seek their food at night; they are the only fish the bodies of which, when dead, do not float upon the surface.

(22.) There is a lake called Benacus, in the territory of Verona, in Italy, through which the river Mincius flows. At the part of it whence this river issues, once a year, and mostly in the month of October, the lake is troubled, evidently by the constellations of autumn, and the eels are heaped together by the waves, and rolled on by them in such astonishing multitudes, that single masses of them, containing more than a thousand in number, are often taken in the chambers which are formed in the bed of the river for that purpose.

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CHAP. 39. (23.)

THE MURÆNA.

The muræna brings forth every month, while all the other fishes spawn only at stated periods: the eggs of this fish increase with the greatest rapidity. It is a vulgar belief that the muræna comes on shore, and is there impregnated by intercourse with serpents. Aristotle calls the male, which impregnates the female, by the name of "zmyrus;" and says that there is a difference between them, the muræna being spotted and weakly, while the zmyrus is all of one colour and hardy, and has teeth which project beyond the mouth. In northern Gaul all the murænæ have on the right jaw seven spots, which bear a resemblance to the constellation of the Septentriones, and are of a gold colour, shining as long as the animal is alive, but disappearing as soon as it is dead. Vedius Pollio, a Roman of equestrian rank, and one of the friends of the late Emperor Augustus, found a method of exercising his cruelty by means of this animal, for he caused such slaves as had been condemned by him, to be thrown into preserves filled with murænæ; not that the land animals would not have fully sufficed for this purpose, but because he could not see a man so aptly torn to pieces all at once by any other kind of animal. It is said that these fish are driven to madness by the taste of vinegar. Their skin is exceedingly thin; while that of the eel, on the other hand, is much thicker. Verrius informs us that formerly the children of the Roman citizens, while wearing the prætexta, were flogged with eel-skins, and that, for this reason, no pecuniary penalty could by law be inflicted upon them.

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CHAP. 40. (24.)

VARIOUS KINDS OF FLAT FISH.

There is another kind of flat fish, which, instead of bones, has cartilage, such, for instance, as the raia, the pastinaca, the squatina, the torpedo, and those which, under their respective Greek names, are known as the ox, the lamia, the eagle, and the frog. In this number, also, the squali ought to be included, although they are not flat fish. Aristotle was the first to call these fish by the one generic name of σελάχη, which he has given them: we, however, have no mode of distinguishing them, unless, indeed, we choose to call them the "cartilaginous" fishes. All these fish are carnivorous, and feed lying on their backs, just as dolphins do, as already noticed; while the other fishes, too, are oviparous, this one kind, with the exception of that known as the sea-frog, is viviparous, like the cetacea.

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CHAP. 41. (25.)

THE ECHENEIS, AND ITS USES IN ENCHANTMENTS.

There is a very small fish that is in the habit of living among the rocks, and is known as the echeneis. It is believed that when this has attached itself to the keel of a ship its pro- gress is impeded, and that it is from this circumstance that it takes its name. For this reason, also, it has a disgraceful repute, as being employed in love philtres, and for the purpose of retarding judgments and legal proceedings — evil properties, which are only compensated by a single merit that it possesses — it is good for staying fluxes of the womb in pregnant women, and preserves the fœtus up to birth: it is never used, however, for food. Aristotle is of opinion that this fish has feet, so strong is the resemblance, by reason of the form and position of the fins.

Mucianus speaks of a murex of larger size than the purple, with a head that is neither rough nor round; and the shell of which is single, and falls in folds on either side. He tells us, also, that some of these creatures once attached themselves to a ship freighted with children of noble birth, who were being sent by Periander for the purpose of being castrated, and that they stopped its course in full sail; and he further says, that the shell-fish which did this service are duly honoured in the temple of Venus, at Cnidos. Trebius Niger says that this fish is a foot in length, and that it can retard the course of vessels, five fingers in thickness; besides which, it has another peculiar property-when preserved in salt, and applied, it is able to draw up gold which has fallen into a well, however deep it may happen to be.

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CHAP. 42. (26.)

FISHES WHICH CHANGE THEIR COLOUR.

The mæna changes its white colour, and in summer becomes swarthy. The phycis also changes its colour, and while at other times it is white, in spring it is parti-coloured. This last is the only fish that builds itself a nest; it makes it of sea-weed, and there deposits its eggs.

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CHAP. 43.

FISHES WHICH FLY ABOVE THE WATER. — THE SEA-SWALLOW. — THE FISH THAT SHINES IN THE NIGHT . — THE HORNED FISH. — THE SEA-DRAGON.

The sea-swallow, being able to fly, bears a strong resemblance to the bird of that name; the sea-kite too, flies as well.

(27.) There is a fish that comes up to the surface of the sea, known, from the following circumstance, as the lantern-fish: thrusting from its mouth a tongue that shines like fire, it emits a most brilliant light on calm nights. Another fish, which, from its horns, has received its name, raises them nearly a foot and a half above the surface of the water. The seadragon, again, if caught and thrown on the sand, works out a hole for itself with its muzzle, with the most wonderful celerity.

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CHAP. 44. (28.)

FISHES WHICH HAVE NO BLOOD. — FISHES KNOWN AS SOFT FISH.

The varieties of fish which we shall now mention are those which have no blood: they are of three kinds — first, those which are known as "soft;" next, those which have thin crusts; and, lastly, those which are enclosed in hard shells. The soft fish are the loligo, the sæpia, the polypus, and others of a similar nature. These last have the head between the feet and the belly, and have, all of them, eight feet: in the sæpia and the loligo two of these feet are very long and rough, and by means of these they lift the food to their mouth, and attach themselves to places in the sea, as though with an anchor; the others act as so many arms, by means of which they seize their prey.

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CHAP. 45. (29.)

THE SÆPIA, THE LOLIGO, THE SCALLOP.

The loligo is also able to dart above the surface of the water, and the scallop does the same, just like an arrow as it were. In the sæpia, the male is parti-coloured, blacker than the female, and more courageous. If the female is struck with a fish-spear, the male comes to her aid; but the female, the instant the male is struck, takes to flight. Both of them, as soon as ever they find themselves in danger of being caught, discharge a kind of ink, which with them is in place of blood, and thus darkening the water, take to flight.

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CHAP. 46.

THE POLYPUS.

There are numerous kinds of polypi. The land polypus is larger than that of the sea; they all of them use their arms as feet and hands; and in coupling they employ the tail, which is forked and sharp. The polypus has a sort of passage in the back, by which it lets in and discharges the water, and which it shifts from side to side, sometimes carrying it on the right, and sometimes on the left. It swims obliquely, with the head on one side, which is of surprising hardness while the animal is alive, being puffed out with air. In addition to this, they have cavities dispersed throughout the claws, by means of which, through suction, they can adhere to objects; which they hold, with the head upwards, so tightly, that they cannot be torn away. They cannot attach themselves, however, to the bottom of the sea, and their retentive powers are weaker in the larger ones. These are the only soft fish that come on dry land, and then only where the surface is rugged: a smooth surface they will not come near. They feed upon the flesh of shell-fish, the shells of which they can easily break in the embrace of their arms: hence it is that their retreat may be easily detected by the pieces of shell which lie before it. Although, in other respects, this is looked upon as a remarkably stupid kind of animal, so much so, that it will swim towards the hand of a man, to a certain extent in its own domestic matters it manifests considerable intelligence. It carries its prey to its home, and after eating all the flesh, throws out the debris, and then pursues such small fish as may chance to swim towards them. It also changes its colour according to the aspect of the place where it is, and more especially when it is alarmed. The notion is entirely unfounded that it gnaws its own arms; for it is from the congers that this mischance befalls it; but it is no other than true that its arms shoot forth again, like the tail in the colotus and the lizard.

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CHAP. 47.

THE NAUTILUS, OR SAILING POLYPUS.

Among the most remarkable curiosities is the animal which has the name of nautilus, or, as some people call it, the pompilos. Lying with the head upwards, it rises to the surface of the water, raising itself little by little, while, by means of a certain conduit in its body, it discharges all the water, and this being got rid of like so much bilge-water as it were, it finds no difficulty in sailing along. Then, extending backwards its two front arms, it stretches out between them a membrane of marvellous thinness, which acts as a sail spread out to the wind, while with the rest of its arms it paddles along below, steering itself with its tail in the middle, which acts as a rudder. Thus does it make its way along the deep, mimicking the appearance of a light Liburnian bark; while, if anything chances to cause it alarm, in an instant it draws in the water, and sinks to the bottom.

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CHAP. 48. (30.)

THE VARIOUS KINDS OF POLYPI; THEIR SHREWDNESS.

Belonging to the genus of polypi is the animal known as the ozæna, being so called from the peculiarly strong smell exhaled by the head; in consequence of which, the mu- rænæ pursue it with the greatest eagerness. The polypi keep themselves concealed for two months in the year; they do not live beyond two years, and always die of consumption, the females even sooner, and mostly after bringing forth. I must not omit here the observations which L. Lucullus, the proconsul of Bætica, made with reference to the polypus, and which Trebius Niger, one of his suite, has published. He says that it is remarkably fond of shell-fish, and that these, the moment that they feel themselves touched by it, close their valves, and cut off the feelers of the polypus, thus making a meal at the expense of the plunderer. Shellfish are destitute of sight, and, indeed, all other sensations but those which warn them of hunger and the approach of danger. Hence it is, that the polypus lies in ambush till the fish opens its shell, immediately upon which, it places within it a small pebble, taking care, at the same time, to keep it from touching the body of the animal, lest, by making some movement, it should chance to eject it. Having made itself thus secure, it attacks its prey, and draws out the flesh, while the other tries to contract itself, but all in vain, in consequence of the separation of the shell, thus effected by the insertion of the wedge. So great is the instinctive shrewdness in animals that are otherwise quite remarkable for their lumpish stupidity.

In addition to the above, the same author states, that there is not an animal in existence, that is more dangerous for its powers of destroying a human being when in the water. Embracing his body, it counteracts his struggles, and draws him under with its feelers and its numerous suckers, when, as often is the case, it happens to make an attack upon a shipwrecked mariner or a child. If, however, the animal is turned over, it loses all its power; for when it is thrown upon the back, the arms open of themselves.

The other particulars, which the same author has given, appear still more closely to border upon the marvellous. At Carteia, in the preserves there, a polypus was in the habit of coming from the sea to the pickling-tubs that were left open, and devouring the fish laid in salt there — for it is quite astonishing how eagerly all sea-animals follow even the very smell of salted condiments, so much so, that it is for this reason, that the fishermen take care to rub the inside of the wicker fish-kipes with them. — At last, by its repeated thefts and immoderate depredations, it drew down upon itself the wrath of the keepers of the works. Palisades were placed before them, but these the polypus managed to get over by the aid of a tree, and it was only caught at last by calling in the assistance of trained dogs, which surrounded it at night, as it was returning to its prey; upon which, the keepers, awakened by the noise, were struck with alarm at the novelty of the sight presented. First of all, the size of the polypus was enormous beyond all conception; and then it was covered all over with dried brine, and exhaled a most dreadful stench. Who could have expected to find a polypus there, or could have recognized it as such under these circumstances? They really thought that they were joining battle with some monster, for at one instant, it would drive off the dogs by its horrible fumes, and lash at them with the extremities of its feelers; while at another, it would strike them with its stronger arms, giving blows with so many clubs, as it were; and it was only with the greatest difficulty that it could be dispatched with the aid of a considerable number of three-pronged fish-spears. The head of this animal was shewn to Lucullus; it was in size as large as a cask of fifteen amphoræ, and had a beard, to use the expressions of Trebius himself, which could hardly be encircled with both arms, full of knots, like those upon a club, and thirty feet in length; the suckers or calicules, as large as an urn, resembled a basin in shape, while the teeth again were of a corresponding largeness: its remains, which were carefully preserved as a curiosity, weighed seven hundred pounds. The same author also informs us, that specimens of the sæpia and the loligo have been thrown up on the same shores of a size fully as large: in our own seas the loligo is sometimes found five cubits in length, and the sæpia, two. These animals do not live beyond two years.

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CHAP. 49.

THE SAILING NAUPLIUS.

Mucianus also relates that he had seen, in the Propontis, another curious resemblance to a ship in full sail. There is a shell-fish, he says, with a keel, just like that of the vessel which we know by the name of acatium, with the poop curving inwards, and a prow with the beak attached. In this shell-fish there lies concealed also an animal known as the nauplius, which bears a strong resemblance to the sæpia, and only adopts the shell-fish as the companion of its pastimes. There are two modes, he says, which it adopts in sailing; when the sea is calm, the voyager hangs down its arms, and strikes the water with a pair of oars as it were; but if, on the other hand, the wind invites, it extends them, employing them by way of a helm, and turning the mouth of the shell to the wind. The pleasure experienced by the shell-fish is that of carrying the other, while the amusement of the nauplius consists in steering; and thus, at the same moment, is an instinctive joy felt by these two creatures, devoid as they are of all sense, unless, indeed, a natural antipathy to man — for it is a well-known fact, that to see them thus sailing along, is a bad omen, and that it is portentous of misfortune to those who witness it.

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CHAP. 50.

SEA-ANIMALS, WHICH ARE ENCLOSED WITH A CRUST; THE CRAY-FISH.

The cray-fish, which belongs to that class of animals which is destitute of blood, is protected by a brittle crust. This creature keeps itself concealed for five months, and the same is the case with crabs, which disappear for the same period. At the beginning of spring, however, they both of them, after the manner of snakes, throw off old age, and renew their coverings. While other animals swim on the water, cray-fish float with a kind of action like creeping. They move onwards, if there is nothing to alarm them, in a straight line, extending on each side their horns, which are rounded at the point by a ball peculiar to them; but, on the other hand, the moment they are alarmed, they straighten these horns, and proceed with a sidelong motion. They also use these horns when fighting with each other. The cray-fish is the only animal that has the flesh in a pulpy state, and not firm and solid, unless it is cooked alive in boiling water.

(31.) The cray-fish frequents rocky places, the crab spots which present a soft surface. In winter they both choose such parts of the shore as are exposed to the heat of the sun, and in summer they withdraw to the shady recesses of deep inlets of the sea. All fish of this kind suffer from the cold of winter, but become fat during autumn and spring, and more particularly during the full moon; for the warmth of that luminary, as it shines in the night, renders the temperature of the weather more moderate.

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CHAP. 51.

THE VARIOUS KINDS OF CRABS; THE PINNOTHERES, THE SEA URCHIN, COCKLES, AND SCALLOPS.

There are various kinds of crabs, known as carabi, astaci, maiæ, paguri, heracleotici, lions, and others of less note. The carabus differs from other crabs, in having a tail: in Phoenicia they are called hippoi, or horses, being of such extraordinary swiftness, that it is impossible to overtake them. Crabs are long-lived, and have eight feet, all of which are bent obliquely. In the female the first foot is double, in the male single; besides which, the animal has two claws with indented pincers. The upper part only of these fore-feet is moveable, the lower being immoveable: the right claw is the largest in them all. Sometimes they assemble together in large bodies; but as they are unable to cross the mouth of the Euxine, they turn back again and go round by land, and the road by which they travel is to be seen all beaten down with their foot-marks.

The smallest crab of any is that known as the pinnotheres, and hence it is peculiarly exposed to danger; its shrewdness, however, is evinced by its concealing itself in the shell of the oyster; and as it grows larger, it removes to those of a larger size.

Crabs, when alarmed, go backwards as swiftly as when moving forwards. They fight with one another like rams, butting at each other with their horns. They have a mode of curing themselves of the bites of serpents. It is said, that while the sun is passing through the sign of Cancer, the dead bodies of the crabs, which are lying thrown up on the shore, are transformed into serpents.

To the same class also belongs the sea-urchin, which has spines in place of feet its mode of moving along is to roll like a ball, hence it is that these animals are often found with their prickles rubbed off. Those among them which have the longest spines of all, are known by the name of echinometræ, while at the same time their body is the very smallest. They are not all of them of the same glassy colour; in the vicinity of Torone they are white, with very short spines. The eggs of all of them are bitter, and are five in number; the mouth is

situate in the middle of the body, and faces the earth. It is said that these creatures foreknow the approach of a storm at sea, and that they take up little stones with which they cover themselves, and so provide a sort of ballast against their volubility, for they are very unwilling by rolling along to wear away their prickles. As soon as seafaring persons observe this, they at once moor their ship with several anchors.

(32.) To the same genus also belong both land and water snails, which thrust the body forth from their abode, and extend or contract two horns, as it were. They are without eyes, and have, therefore, to feel their way, by means of these horns.

(33.) Sea-scallops are considered to belong to the same class, which also conceal themselves during severe frosts and great heats; the onyches, too, which shine in the dark like fire, and in the mouth even while being eaten.

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CHAP. 52.

VARIOUS KINDS OF SHELL-FISH.

Let us now pass on to the murex and various kinds of shellfish, which have a stronger shell, and in which Nature, in her sportive mood, has displayed a great variety-so many are the various hues of their tints, so numerous are their shapes, flat, concave, long, crescent-shaped, rounded into a globe, cut through into a semi-globe, arched in the back, smooth, rough, indented, streaked, the upper part spirally wreathed, the edge projecting in a sharp point, the edge wreathed outwards, or else folding inwards. And then, too, there are the various dis- tinctions of rayed shells, long-haired shells, wavy-haired shells, channelled shells, pectinated shells, imbricated shells, reticulated shells, shells with lines oblique or rectilinear, thick-set shells, expanded shells, tortuous shells, shells the valves or which are united by one small knot, shells which are held together all along one side, shells which are open as if in the very act of applauding, and shells which wind, resembling a conch. The fish of this class, known as the shells of Venus, are able to navigate the surface of the deep, and, presenting to the wind their concave side, catch the breeze, and sail along on the surface of the sea. Scallops are also able to leap and fly above the surface of the water, and they sometimes employ their shell by way of a bark.

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CHAP. 53. (34.)

WHAT NUMEROUS APPLIANCES OF LUXURY ARE FOUND IN THE SEA.

But why mention such trifles as these, when I am sensible that no greater inroads have been made upon our morals, and no more rapid advances have been made by luxury, than those effected through the medium of shell-fish? Of all the elements that exist, the sea is the one that costs the dearest to the belly; seeing that it provides so many kinds of meats, so many dishes, so many exquisite flavours derived from fish, all of which are valued in proportion to the danger undergone by those who have caught them.

(35.) But still, how insignificant is all this when we come to think of our purple, our azure, and our pearls; it was not enough, forsooth, for the spoils of the sea to be thrust down the gullet — But they must be employed as well to adorn the hands, the ears, the head, the whole body, in fact, and that of the men pretty nearly as much as the women. What has the sea to do with our clothes? What is there in com- mon between waves and billows and a sheep's fleece? This one element ought not to receive us, according to ordinary notions, except in a state of nakedness. Let there be ever so strong an alliance between it and the belly, on the score of gluttony, still, what can it possibly have to do with the back? It is not enough, forsooth, that we are fed upon what is acquired by perils, but we must be clothed, too, in a similar way; so true it is, that for all the wants of the body, that which is sought at the expense of human life, is sure to please us the most.

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CHAP. 54.

PEARLS; HOW THEY ARE PRODUCED, AND WHERE.

The first rank then, and the very highest position among all valuables, belongs to the pearl. It is the Indian Ocean that principally sends them to us: and thus have they, amid those monsters so frightful and so huge which we have already described, to cross so many seas, and to traverse such lengthened tracts of land, scorched by the ardent rays of a burning sun: and then, too, by the Indians themselves they have to be sought in certain islands, and those but very few in number. The most productive of pearls is the island of Taprobane, and that of Stoidis, as already mentioned in the description of the world; Perimula, also, a promontory of India. But those are most highly valued which are found in the vicinity of Arabia, in the Persian Gulf, which forms a part of the Red Sea.

The origin and production of the shell-fish is not very different from that of the shell of the oyster. When the genial season of the year exercises its influence on the animal, it is said that, yawning, as it were, it opens its shell, and so receives a kind of dew, by means of which it becomes impregnated; and that at length it gives birth, after many struggles, to the burden of its shell, in the shape of pearls, which vary according to the quality of the dew. If this has been in a perfectly pure state when it flowed into the shell, then the pearl produced is white and brilliant, but if it was turbid, then the pearl is of a clouded colour also; if the sky should happen to have been lowering when it was generated, the pearl will be of a pallid colour; from all which it is quite evident that the quality of the pearl depends much more upon a calm state of the heavens than of the sea, and hence it is that it contracts a cloudy hue, or a limpid appearance, according to the degree of serenity of the sky in the morning.

If, again, the fish is satiated in a reasonable time, then the pearl produced increases rapidly in size. If it should happen to lighten at the time, the animal shuts its shell, and the pearl is diminished in size in proportion to the fast that the animal has to endure: but if, in addition to this, it should thun- der as well, then it becomes alarmed,

and closing the shell in an instant, produces what is known as a physema, or pearl-bubble, filled with air, and bearing a resemblance to a pearl, but in appearance only, as it is quite empty, and devoid of body; these bubbles are formed by the abortion of the shellfish. Those which are produced in a perfectly healthy state consist of numerous layers, so that they may be looked upon, not inappropriately, as similar in conformation to the callosities on the body of an animal; and they should therefore be cleaned by experienced hands. It is wonderful, however, that they should be influenced thus pleasurably by the state of the heavens, seeing that by the action of the sun the pearls are turned of a red colour, and lose all their whiteness, just like the human body. Hence it is that those which keep their whiteness the best are the pelagie, or main-sea pearls, which lie at too great a depth to be reached by the sun's rays; and yet these even turn yellow with age, grow dull and wrinkled, and it is only in their youth that they possess that brilliancy which is so highly esteemed in them. When old, too, the coat grows thick, and they adhere to the shell, from which they can only be separated with the assistance of a file. Those pearls which have one surface flat and the other spherical, opposite to the plane side, are for that reason called tympania, or tambour-pearls. I have seen pearls still adhering to the shell; for which reason the shells were used as boxes for unguents. In addition to these facts, we may remark that the pearl is soft in the water, but that it grows hard the instant it is taken out.

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CHAP. 55.

HOW PEARLS ARE FOUND.

The fish, as soon as ever it perceives the hand, shuts its shell and covers up its treasures, being well aware that it is for them that it is sought; and if it happens to catch the hand, it cuts it off with the sharp edge of the shell. And no punishment is there that could be more justly inflicted. There are other penalties added as well, seeing that the greater part of these pearls are only to be found among rocks and crags, while on the other hand, those which lie out in the main sea are generally accompanied by sea-dogs. And yet, for all this, the women will not banish these gems from their ears! Some writers say, that these animals live in communities, just like swarms of bees, each of them being governed by one remarkable for its size and its venerable old age; while at the same time it is possessed of marvellous skill in taking all due pre- cautions against danger; the divers, they say, take especial care to find these, and when once they are taken, the others stray to and fro, and are easily caught in theirnets. We learn also that as soon as they are taken they are placed under a thick layer of salt in earthen-ware vessels; as the flesh is gradually consumed, certain knots, which form the pearls, are disengaged from their bodies, and fall to the bottom of the vessel.

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CHAP. 56.

THE VARIOUS KINDS OF PEARLS.

There is no doubt that pearls wear with use, and will change their colour, if neglected. All their merit consists in their whiteness, large size, roundness, polish, and weight; qualities which are not easily to be found united in the same; so much so, indeed, that no two pearls are ever found perfectly alike; and it was from this circumstance, no doubt, that our Roman luxury first gave them the name of "unio," or the unique gem: for a similar name is not given them by the Greeks; nor, indeed, among the barbarians by whom they are found are they called anything else but "margaritæ." Even in the very whiteness of the pearl there is a great difference to be observed. Those are of a much clearer water that are found in the Red Sea, while the Indian pearl resembles in tint the scales of the mirror-stone, but exceeds all the others in size. The colour that is most highly prized of all, is that of those which are thence called alum-coloured pearls. Long pearls also have their peculiar value; those are called "elenchi," which are of a long tapering shape, resembling our alabaster boxes in form, and ending in a full bulb. Our ladies quite glory in having these suspended from their fingers, or two or three of them dangling from their ears. For the purpose of ministering to these luxurious tastes, there are various names and wearisome refinements which have been devised by profuseness and prodigality; for after inventing these ear-rings, they have given them the name of "crotalia," or castanet pendants, as though quite delighted even with the rattling of the pearls as they knock against each other; and now, at the present day, the poorer classes are even affecting them, as people are in the habit of saying, that "a pearl worn by a woman in public, is as good as a lictor walking before her." Nay, even more than this, they put them on their feet, and that, not only on the laces of their sandals, but all over the shoes; it is not enough to wear pearls, but they must tread upon them, and walk with them under foot as well.

Pearls used formerly to be found in our sea, but more frequently about the Thracian Bosporus; they were of a red colour, and small,

and enclosed in a shell-fish known by the name of “myes.” In Acarnania there is a shell-fish called “pina,” which produces pearls; and from this it is quite evident that it is not one kind of fish only that produces them. Juba states also, that on the shores of Arabia there is a shellfish which resembles a notched comb, and covered all over with hair like a sea-urchin, and that the pearl lies imbedded in its flesh, in appearance bearing a strong resemblance to a hailstone. No such shell-fish, however, as these are ever brought to Rome. Nor yet are anypearls of value found in Acarnania, being shapeless, rough, and of a marble hue; those are better which are found in the vicinity of Actium; but still they are small, which is the case also with those found on the coast of Mauritania. Alexander Polyhistor and Sudines are of opinion that as they grow old their tints gradually fade.

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CHAP. 57.

REMARKABLE FACTS CONNECTED WITH PEARLS — THEIR NATURE.

It is quite clear that the interior of the pearl is solid, as no fall is able to break it. Pearls are not always found in the middle of the body of the animal, but sometimes in one place, and sometimes another. Indeed, I have seen some which lay at the edge of the shell, just as though in the very act of coming forth, and in some fishes as many as four or five. Up to the present time, very few have been found which exceeded half an ounce in weight, by more than one scruple. It is a well-ascertained fact, that in Britannia pearls are found, though small, and of a bad colour; for the deified Julius Cæsar wished it to be distinctly understood, that the breast-plate which he dedicated to Venus Genetrix, in her temple, was made of British pearls.

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CHAP. 58.

INSTANCES OF THE USE OF PEARLS.

I once saw Lollia Paulina, the wife of the Emperor Caius — it was not at any public festival, or any solemn ceremonial, but only at an ordinary wedding entertainment — covered with emeralds and pearls, which shone in alternate layers upon her head, in her hair, in her wreaths, in her ears, upon her neck, in her bracelets, and on her fingers, and the value of which amounted in all to forty millions of sesterces; indeed she was prepared at once to prove the fact, by showing the receipts and acquittances. Nor were these any presents made by a prodigal potentate, but treasures which had descended to her from her grandfather, and obtained by the spoliation of the provinces. Such are the fruits of plunder and extortion! It was for this reason that M. Lollius was held so infamous all over the East for the presents which he extorted from the kings; the result of which was, that he was denied the friendship of Caius Cæsar, and took poison; and all this was done, I say, that his grand-daughter might be seen, by the glare of lamps, covered all over with jewels to the amount of forty millions of sesterces! Now let a person only picture to himself, on the one hand, what was the value of the habits worn by Curius or Fabricius in their triumphs, let him picture to himself the objects displayed to the public on their triumphal litters, and then, on the other hand, let him think upon this Lollia, this one bit of a woman, the head of an empire, taking her place at table, thus attired; would he not much rather that the conquerors had been torn from their very chariots, than that they had conquered for such a result as this?

Nor, indeed, are these the most supreme evidences of luxury. There were formerly two pearls, the largest that had been ever seen in the whole world: Cleopatra, the last of the queens of Egypt, was in possession of them both, they having come to her by descent from the kings of the East. When Antony had been sated by her, day after day, with the most exquisite banquets, this queenly courtesan, inflated with vanity and disdainful arrogance, affected to treat all this sumptuousness and all these vast preparations with the greatest

contempt; upon which Antony enquired what there was that could possibly be added to such extraordinary magnificence. To this she made answer, that on a single entertainment she would expend ten millions of sesterces. Antony was extremely desirous to learn how that could be done, but looked upon it as a thing quite impossible; and a wager was the result. On the following day, upon which the matter was to be decided, in order that she might not lose the wager, she had an entertainment set before Antony, magnificent in every respect, though no better than his usual repast. Upon this, Antony joked her, and enquired what was the amount expended upon it; to which she made answer that the banquet which he then beheld was only a trifling appendage to the real banquet, and that she alone would consume at the meal to the ascertained value of that amount, she herself would swallow the ten millions of sesterces; and so ordered the second course to be served. In obedience to her instructions, the servants placed before her a single vessel, which was filled with vinegar, a liquid, the sharpness and strength of which is able to dis- solve pearls. At this moment she was wearing in her ears those choicest and most rare and unique productions of Nature; and while Antony was waiting to see what she was going to do, taking one of them from out of her ear, she threw it into the vinegar, and directly it was melted, swallowed it. Lucius Plancus, who had been named umpire in the wager, placed his hand upon the other at the very instant that she was making preparations to dissolve it in a similar manner, and declared that Antony had lost — an omen which, in the result, was fully confirmed. The fame of the second pearl is equal to that which attends its fellow. After the queen, who had thus come off victorious on so important a question, had been seized, it was cut asunder, in order that this, the other half of the entertainment, might serve as pendants for the ears of Venus, in the Pantheon at Rome.

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CHAP. 59.

HOW PEARLS FIRST CAME INTO USE AT ROME.

Antony and Cleopatra, however, will not bear away the palm of prodigality in this respect, and will be stripped of even this boast in the annals of luxury. For before their time, Clodius, the son of the tragic actor Æsopus, had done the same at Rome; having been left by his father heir to his ample wealth and possessions. Let not Antony then be too proud, for all his trumvirate, since he can hardly stand in comparison with an actor; one, too, who had no wager to induce him — a thing which adds to the regal munificence of the act — But was merely desirous of trying, by way of glorification to his palate, what was the taste of pearls. As he found it to be wonderfully pleasing, that he might not be the only one to know it, he had a pearl set before each of his guests for him to swallow. After the surrender of Alexandria, pearls came into common and, indeed, universal use at Rome; but they first began to be used about the time of Sylla, though but of small size and of little value, Fenestella says — in this, however, it is quite evident that he is mistaken, for Ælius Stilo tells us, that it was in the time of the Jugurthine war, that the name of "unio" was first given to pearls of remarkable size.

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CHAP. 60.

THE NATURE OF THE MUREX AND THE PURPLE.

And yet pearls may be looked upon as pretty nearly a possession of everlasting duration — they descend from a man to his heir, and they are alienated from one to another just like any landed estate. But the colours that are extracted from the murex and the purple fade from hour to hour; and yet luxury, which has similarly acted as a mother to them, has set upon them prices almost equal to those of pearls.

(36.) Purples live mostly seven years. Like the murex, they keep themselves in concealment for thirty days, about the time of the rising of the Dog-star; in the spring season they unite in large bodies, and by rubbing against each other, produce a viscous spittle, from which a kind of wax is formed. The murex does the same; but the purple has that exquisite juice which is so greatly sought after for the purpose of dyeing cloth, situate in the middle of the throat. This secretion consists of a tiny drop contained in a white vein, from which the precious liquid used for dyeing is distilled, being of the tint of a rose somewhat inclining to black. The rest of the body is entirely destitute of this juice. It is a great point to take the fish alive; for when it dies, it spits out this juice. From the larger ones it is extracted after taking off the shell; but the small fish are crushed alive, together with the shells, upon which they eject this secretion.

In Asia the best purple is that of Tyre, in Africa that of Meninx and the parts of Gætulia that border on the Ocean, and in Europe that of Laconia. It is for this colour that the fasces and the axes of Rome make way in the crowd; it is this that asserts the majesty of childhood; it is this that distinguishes the senator from the man of equestrian rank; by persons arrayed in this colour are prayers addressed to propitiate the gods; on every garment it sheds a lustre, and in the triumphal vestment it is to be seen mingled with gold. Let us be prepared then to excuse this frantic passion for purple, even though at the same time we are compelled to enquire, why it is that such a high value has been set upon the produce of this shell-fish, seeing that while in the dye the smell of it is offensive, and the colour

itself is harsh, of a greenish hue, and strongly resembling that of the sea when in a tempestuous state?

The tongue of the purple is a finger in length, and by means of this it finds subsistence, by piercing other shellfish, so hard is the point of it. They die in fresh water, and in places where rivers discharge themselves into the sea; otherwise, when taken, they will live as long as fifty days on their saliva. All shell-fish grow very fast, and purples more especially; they come to their full size at the end of a year.

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CHAP. 61.

THE DIFFERENT KINDS OF PURPLES.

Were I at this point to pass on to other subjects, luxury, no doubt would think itself defrauded of its due, and so accuse me of negligence; I must therefore make my way into the very workshops even, so that, just as among articles of food the various kinds and qualities of corn are known, all those who place the enjoyment of life in these luxuries, may have a still better acquaintance with the objects for which they live.

There are two kinds of fish that produce the purple colour; the elements in both are the same, the combinations only are different; the smaller fish is that which is called the "buccinum," from its resemblance to the conch by which the sound of the buccinus or trumpet is produced, and to this circumstance it owes its name: the opening in it is round, with an incision in the margin. The other fish is known as the "purpura," or purple, and has a grooved and projecting muzzle, which being tubulated on one side in the interior, forms a passage for the tongue; besides which, the shell is studded with points up to the very apex, which are mostly seven in number, and disposed in a circle; these are not found on the buccinum, though both of them have as many spirals as they are years old. The buccinum attaches itself only to crags, and is gathered about rocky places.

(37.) Purples also have another name, that of "pelagiæ there are numerous kinds of them, which differ only in their element and place of abode. There is the mud purple, which is nurtured upon putrid mud; and the sea-weed purple, which feeds on sea-weed; both of which are held in the very lowest esteem. A better kind is the reef-purple, which is collected on the reefs or out at sea; still, however, the colour extracted from this is too light and thin. Then, again, there is the variety known as the pebble-purple, so called from the pebbles of the sea, and wonderfully well adapted for dyeing; and, better than any of them, that known by the name of "dialutensis," because of the various natures of the soil on which it feeds. Purples are taken with a

kind of osier kipe of small size, and with large meshes; these are cast into the sea, and in them cockles are put as a bait, that close the shell in an instant, and snap at an object, just as we see mussels do. Though half dead, these animals, as soon as ever they are returned to the sea, come to life again, and open their shells with avidity; upon which the purples seek them, and commence the attack, by protruding their tongues. The cockles, on the other hand, the moment they feel themselves pricked, shut their shells, and hold fast the object that has wounded them: in this way, victims to their greediness, they are drawn up to the surface hanging by the tongue.

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CHAP. 62. (38.)

HOW WOOLS ARE DYED WITH THE JUICES OF THE PURPLE.

The most favourable season for taking these fish is after the rising of the Dog-star, or else before spring; for when they have once discharged their waxy secretion, their juices have no consistency: this, however, is a fact unknown in the dyers' workshops, although it is a point of primary importance. After it is taken, the vein is extracted, which we have previously spoken of, to which it is requisite to add salt, a sextarius about to every hundred pounds of juice. It is sufficient to leave them to steep for a period of three days, and no more, for the fresher they are, the greater virtue there is in the liquor. It is then set to boil in vessels of tin, and every hundred amphoræ ought to be boiled down to five hundred pounds of dye, by the application of a moderate heat; for which purpose the vessel is placed at the end of a long funnel, which communicates with the furnace; while thus boiling, the liquor is skimmed from time to time, and with it the flesh, which necessarily adheres to the veins. About the tenth day, generally, the whole contents of the cauldron are in a liquified state, upon which a fleece, from which the grease has been cleansed, is plunged into it by way of making trial; but until such time as the colour is found to satisfy the wishes of those preparing it, the liquor is still kept on the boil. The tint that inclines to red is looked upon as inferior to that which is of a blackish hue. The wool is left to lie in soak for five hours, and then, after carding it, it is thrown in again, until it has fully imbibed the colour. The juice of the buccinum is considered very inferior if employed by itself, as it is found to discharge its colour; but when used in conjunction with that of the pelagiæ, it blends with it very well, gives a bright lustre to its colour, which is otherwise too dark, and imparts the shining crimson hue of the kermes-Berry, a tint that is particularly valued. By the admixture of their respective virtues these colours are thus heightened or rendered sombre by the aid of one another. The proper proportions for mixing are, for fifty pounds of wool, two hundred pounds of juice of the buccinum and one hundred and eleven of juice

of the pelagiæ. From this combination is produced the admirable tint known as amethyst colour. To produce the Tyrian hue the wool is soaked in the juice of the pelagiæ while the mixture is in an uncooked and raw state; after which its tint is changed by being dipped in the juice of the buccinum. It is considered of the best quality when it has exactly the colour of clotted blood, and is of a blackish hue to the sight, but of a shining appearance when held up to the light; hence it is that we find Homer speaking of “purple blood.”

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CHAP. 63. (39.)

WHEN PURPLE WAS FIRST USED AT ROME: WHEN THE LATICLAVE VESTMENT AND THE PRÆTEXTA WERE FIRST WORN.

I find that, from the very first, purple has been in use at Rome, but that Romulus employed it for the trabea. As to the toga prætexta and the laticlave vestment, it is a fact well ascertained, that Tullus Hostilius was the first king who made use of them, and that after the conquest of the Etruscans. Cornelius Nepos, who died in the reign of the late Emperor Augustus, has left the following remarks: "In the days of my youth," says he, "the violet purple was in favour, a pound of which used to sell at one hundred denarii; and not long after, the Tarentine red was all the fashion. This last was succeeded by the Tyrian dibapha, which could not be bought for even one thousand denarii per pound. P. Lentulus Spinther, the curule ædile, was the first who used the dibapha for the prætexta, and he was greatly censured for it; whereas now-a-days," says he, "who is there that does not have purple hangings to his banqueting-couches, even?"

This Spinther was ædile in the consulship of Cicero, and in the year from the Building of the City, 691. "Dibapha" was the name given to textures that had been doubly dyed, and these were looked upon as a mighty piece of costly extravagance; while now, at the present day, nearly all the purple cloths that are reckoned of any account are dyed in a similar manner.

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CHAP. 64.

FABRICS CALLED CONCHYLIATED.

Fabrics that are called conchyliated are subjected to the same process in all other respects, but without any admixture of the juice of the buccinum; in addition to which, the liquid is mixed with water and human urine in equal parts, one-half only of the proportion of dye being used for the same quantity of wool. From this mixture a full colour is not obtained, but that pale tint, which is so highly esteemed; and the clearer it is, the less of it the wool has imbibed.

(40.) The prices of these dyes vary in proportion to the quantity produced by the various shores; still, however, those who are in the habit of paying enormous prices for them, may as well be informed that on no occasion ought the juice of of the pelagiæ to exceed fifty, and that of the buccinum one hundred sesterces for one hundred pounds.

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CHAP. 65.

THE AMETHYST, THE TYRIAN, THE HYSGINIAN, AND THE CRIMSON TINTS.

But no sooner have we finished with one branch of this subject than we have to begin upon another, for we find that it is made quite a matter of sport to create expense; and not only this, but the sport must be doubled by making new mixtures and combinations, and falsifying over again what was a falsification of the works of Nature already; such, for instance, as staining tortoise-shell, alloying gold with silver for the purpose of making electrum, and then adding copper to the mixture to make Corinthian metal.

(41.) It was not sufficient to have borrowed from a precious stone the name of "amethyst" for a dye, but when we have obtained this colour we must drench it over again with Tyrian tints, so that we may have an upstart name compounded of both, and at the same moment a two-fold display of luxury; for as soon as ever people have succeeded in obtaining the conchyliated colour, they immediately begin to think that it will do better as a state of transition to the Tyrian hues. There can be little doubt that this invention is due to some artist who happened to change his mind, and alter a tint with which he was not pleased: hence a system has taken its rise, and spirits, ever on the rack for creating wonders, have transformed what was originally a blunder into something quite desirable; while, at the same time, a double path has been pointed out to luxury, in thus making one colour carry another, and thereby become, as they say, softer and more mellow. And what is even more than this, human ingenuity has even learned to mingle with these dyes the productions of the earth, and to steep in Tyrian purple fabrics already dyed crimson with the berry of the kermes, in order to produce the hysginian tint. The kermes of Galatia, a red berry which we shall mention when we come to speak of the productions of the earth, is the most esteemed of all, except, perhaps, the one that grows in the vicinity of Emerita, in Lusitania. However, to make an end, once for all, of my description of these precious dyes, I shall remark, that the

colour yielded by this grain when a year old, is of a pallid hue, and that if it is more than four years old, it is quickly discharged: hence we find that its energies are not developed either when it is too young or when old.

I have now abundantly treated of an art, by means of which men, just as much as women, have an idea that their appearance may be set off to the greatest possible advantage.

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CHAP. 66. (42.)

THE PINNA, AND THE PINNOTHERES.

Belonging to the shell-fish tribe there is the pinna also: it is found in slimy spots, always lying upright, and never without a companion, which some writers call the pinnotheres, and others, again, pinnophylax, being a small kind of shrimp, or else a parasitical crab. The pinna, which is destitute of sight, opens its shell, and in so doing exposes its body within to the attacks of the small fish, which immediately rush upon it, and finding that they can do so with impunity, become bolder and bolder, till at last they quite fill the shell. The pinnotheres, looking out for the opportunity, gives notice to the pinna at the critical moment by a gentle bite, upon which the other instantly closes its shell, and so kills whatever it has caught there; after which, it divides the spoil with its companion.

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CHAP. 67.

THE SENSITIVENESS OF WATER ANIMALS; THE TORPEDO, THE PASTINACA, THE SCOLOPENDRA, THE GLANIS, AND THE RAM-FISH.

Upon reflecting on such facts as these, I am the more inclined to wonder at the circumstance that some persons have been found who were of opinion that the water animals are devoid of all sense. The torpedo is very well aware of the extent of its own powers, and that, too, although it experiences no benumbing effects from them itself. Lying concealed in the mud, it awaits the approach of the fish, and, at the moment that they are swimming above in supposed security, communicates the shock, and instantly darts upon them: there is no delicate morsel in existence that is preferred to the liver of this fish. And no less wonderful, too, is the shrewdness manifested by the sea-frog, which is known by us as the "fisher." Stirring up the mud, it protrudes from the surface two little horns, which project from beneath the eyes, and so attracts the small fish which are sporting around it, until at last they approach so close that it is able to seize them. In a similar manner, too, the squatina and the rhombus conceal themselves, but extend their fins, which, as they move to and fro, resemble little worms; the ray also does the same. The pastinaca, too, lies lurking in ambush, and pierces the fish as they pass with the sting with which it is armed. Another proof of instinctive shrewdness is the fact, that although the ray is the very slowest of all the fish in its movements, it is found with the mullet in its belly, which is the swiftest of them all.

(43.) The scolopendra, which bears a strong resemblance to the land insect which we call a centipede, if it chances to swallow a hook, will vomit forth all its intestines, until it has disengaged itself, after which it will suck them in again. The sea-fox too, when exposed to a similar peril, goes on swallowing the line until it meets with a weak part of it, and then with its teeth snaps it asunder with the greatest ease. The fish called the glanis is more cautious; it bites at the hooks from behind, and does not swallow them, but only strips them of the bait.

(44.) The sea-ram commits its ravages just like a wary robber; at one time it will lurk in the shadow of some large vessel that is lying out at sea, and wait for any one who may be tempted to swim; while at another, it will raise its head from the surface of the water, survey the fishermen's boats, and then slily swim towards them and sink them.

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CHAP. 68. (45.)

BODIES WHICH HAVE A THIRD NATURE, THAT OF THE ANIMAL AND VEGETABLE COMBINED-THE SEA-NETTLE.

Indeed, for my own part, I am strongly of opinion that there is sense existing in those bodies which have the nature of neither animals nor vegetables, but a third which partakes of them both: — sea-nettles and sponges, I mean. The sea-nettle wanders to and fro by night, and at night changes its locality. These creatures are by nature a sort of fleshy branch, and are nurtured upon flesh. They have the power of producing an itching, smarting pain, just like that caused by the nettle found on land. For the purpose of seeking its prey, it contracts and stiffens itself to the utmost possible extent, and then, as a small fish swims past, it will suddenly spread out its branches, and so seize and devour it. At another time it will assume the appearance of being quite withered away, and let itself be tossed to and fro by the waves like a piece of sea-weed, until it happens to touch a fish. The moment it does so, the fish goes to rub itself against a rock, to get rid of the itching; immediately upon which, the nettle pounces upon it. By night also it is on the look-out for scallops and sea-urchins. When it perceives a hand approaching it, it instantly changes its colour, and contracts itself; when touched it produces a burning sensation, and if ever so short a time is afforded, makes its escape. Its mouth is situate, it is said, at the root or lower part, and the excrements are discharged by a small canal situated above.

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CHAP. 69.

SPONGES; THE VARIOUS KINDS OF THEM, AND WHERE THEY ARE PRODUCED: PROOFS THAT THEY ARE GIFTED WITH LIFE BY NATURE.

We find three kinds of sponges mentioned; the first are thick, very hard, and rough, and are called "tragi:" the second, are thick, and much softer, and are called "mani;" of the third, being fine and of a closer texture, tents for sores are made; this last is known as "Achillium." All of these sponges grow on rocks, and feed upon shell-and other fish, and slime. It would appear that these creatures, too, have some intelligence; for as soon as ever they feel the hand about to tear them off, they contract themselves, and are separated with much greater difficulty: they do the same also when the waves buffet them to and fro. The small shells that are found in them, clearly show that they live upon food: about Torone it is even said that they will survive after they have been detached, and that they grow again from the roots which have been left adhering to the rock. They leave a colour similar to that of blood upon the rock from which they have been detached, and those more especially which are produced in the Syrtes of Africa.

The manos is the one that grows to the largest size, but the softest of all are those found in the vicinity of Lycia. Where the sea is deep and calm, they are more particularly soft, while those which are found in the Hellespont are rough, and those in the vicinity of Malea coarse. When lying in places exposed to the sun, they become putrid: hence it is that those which are found in deep water are the best. While they are alive, they are of the same blackish colour that they are when saturated with water. They adhere to the rock not by one part only, nor yet by the whole body: and within them there are a number of empty tubes, generally four or five in number, by means of which, it is thought, they take their food. There are other tubes also, but these are closed at the upper extremity; and a sort of membrane is supposed to be spread beneath the roots by which they adhere. It is well known that sponges are very long-lived. The most inferior kind of all are those which are called "aplysiæ," because it is

impossible to clean them: these have large tubes, while the other parts of them are thick and coarse.

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CHAP. 70. (46.)

DOG-FISH.

Vast numbers of dog-fish infest the seas in the vicinity of the sponges, to the great peril of those who dive for them. These persons say that a sort of dense cloud gradually thickens over their heads, bearing the resemblance of some kind of animal like a flat-fish, and that, pressing downward upon them, it prevents them from returning to the surface. It is for this reason that they carry stilettos with them, which are very sharp at the point, and attached to them by strings; for if they did not pierce the object with the help of these, it could not be got rid of. This, however, is entirely the result, in my opinion, of the darkness and their own fears; for no person has ever yet been able to find, among living creatures, the fish-cloud or the fish-fog, the name which they give to this enemy of theirs.

The divers, however, have terrible combats with the dogfish, which attack with avidity the groin, the heels, and all the whiter parts of the body. The only means of ensuring safety, is to go boldly to meet them, and so, by taking the initiative, strike them with alarm: for, in fact, this animal is just as frightened at man, as man is at it; and they are on quite an equal footing when beneath the water. But the moment the diver has reached the surface, the danger is much more imminent; for he loses the power of boldly meeting his adversary while he is endeavouring to make his way out of the water, and his only chance of safety is in his companions, who draw him along by a cord that is fastened under his shoulders. While he is engaging with the enemy, he keeps pulling this cord with his left hand, according as there may be any sign of immediate peril, while with the right he wields the stiletto, which he is using in his defence. At first they draw him along at a moderate pace, but as soon as ever they have got him close to the ship, if they do not whip him out in an instant, with the greatest possible celerity, they see him snapped asunder; and many a time, too, the diver, even when already drawn out, is dragged from their hands, through neglecting to aid the efforts of those who are assisting him, by rolling up his body in the shape of

a ball. The others, it is true, are in the meantime brandishing their pronged fish-spears; but the monster has the craftiness to place himself beneath the ship, and so wage the warfare in safety. Consequently, every possible care is taked by the divers to look out for the approach of this enemy.

(47.) It is the surest sign of safety to see flat-fish, which never frequent the spots where these noxious monsters are found: and it is for this reason that the divers call them sacred.

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CHAP. 71.

FISHES WHICH ARE ENCLOSED IN A STONY SHELL — SEA ANIMALS WHICH HAVE NO SENSATION — OTHER ANIMALS WHICH LIVE IN THE MUD.

Those animals, however, it must be admitted, which lie enclosed in a stony shell, have no sensation whatever — such as the oyster, for instance. Many, again, have the same nature as vegetables; such as the holothuria, the pulmones, and the sea-stars. Indeed, I may say that there is no land produc- tion which has not its like in the sea; no, not even those insects which frequent our public-houses in summer, and are so trouble- some with their nimble leaps, nor yet those which more especially make the human hair their place of refuge; for these are often drawn up in a mass collected around the bait. This, too, is supposed to be the reason why the sleep of fish is sometimes so troubled in the night. Upon some fish, indeed, these animals breed as parasites: among these, we find the fish known as the chalcis.

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CHAP. 72. (48.)

VENOMOUS SEA-ANIMALS.

Nor yet are dire and venomous substances found wanting in the sea: such, for instance, as the sea-hare of the Indian seas, which is even poisonous by the very touch, and immediately produces vomiting and disarrangement of the stomach. In our seas it has the appearance of a shapeless mass, and only resembles the hare in colour; in India it resembles it in its larger size, and in its hair, which is only somewhat coarser: there it is never taken alive. An equally deadly animal is the sea-spider, which is especially dangerous for a sting which it has on the back: but there is nothing that is more to be dreaded than the sting which protrudes from the tail of the trygon, by our people known as the pastinaca, a weapon five inches in length. Fixing this in the root of a tree, the fish is able to kill it; it can pierce armour too, just as though with an arrow, and to the strength of iron it adds all the corrosive qualities of poison.

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CHAP. 73. (49.)

THE MALADIES OF FISHES.

We do not find it stated that all kinds of fishes are subject to epizoötic diseases, like other animals of a wild nature: but it is evidently the fact that individuals among them are attacked by maladies, from the emaciated appearance that many present, while at the same moment others of the same species are taken quite remarkable for their fatness.

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CHAP. 74. (50.)

THE GENERATION OF FISHES.

The curiosity and wonder which have been excited in mankind by this subject, will not allow me any longer to defer giving an account of the generation of these animals. Fishes couple by rubbing their bellies against one another; an operation, however, that is performed with such extraordinary celerity as to escape the sight. Dolphins also, and other animals of the cetaceous kind, couple in a similar manner, though the time occupied in so doing is somewhat longer. The female fish, at the season for coupling, follows the male, and strikes against its belly with its muzzle; while the male in its turn, when the female is about to spawn, follows it and devours the eggs. But with them, the simple act of coupling is not sufficient for the purposes of reproduction; it is necessary for the male to pass among the eggs which the female has produced, in order to sprinkle them with its vitalizing fluid. This does not, however, reach all the eggs out of so vast a multitude; indeed, if it did, the seas and lakes would soon be filled, seeing that each female produces these eggs in quantities innumerable.

(51.) The eggs of fishes grow in the sea; some of them with the greatest rapidity, those of the muræna, for instance; others, again, somewhat more slowly. Those among the flat fishes, whose tails or stings are not in the way, as well as those of the turtle kind, couple the one upon the other: the polypus by attaching one of its feelers to the nostrils of the female, the sæpia and loligo, by means of the tongue; uniting the arms, they then swim contrary ways; these last also bring forth at the mouth. The polypi, however, couple with the head downwards towards the ground, while the rest of the soft fish couple backwards in the same manner as the dog; cray-fish and shrimps do the same, and crabs employ the mouth.

Frogs leap the one upon the other, the male with its forefeet clasping the armpits of the female, and with its hinder ones the haunches. The female produces tiny pieces of black flesh, which are known by the name of gyrini, and are only to be distinguished by the

eyes and tail; very soon, however, the feet are developed, and the tail, becoming bifurcate, forms the hind legs. It is a most singular thing, but, after a life of six months' duration, frogs melt away into slime, though no one ever sees how it is done; after which they come to life again in the water during the spring, just as they were before. This is effected by some occult operation of Nature, and happens regularly every year.

Mussels, also, and scallops are produced in the sand by the spontaneous operations of nature. Those which have a harder shell, such as the murex and the purple, are formed from a viscous fluid like saliva, just as gnats are produced from liquids turned sour, and the fish called the apua, "from the foam of the sea when warm, after the fall of a shower.

Those fish, again, which are covered with a stony coat, such as the oyster, are produced from mud in a putrid state, or else from the foam that has collected around ships which have been lying for a long time in the same position, about posts driven into the earth, and more especially around logs of wood. It has been discovered, of late years, in the oyster — Beds, that the animal discharges an impregnating liquid, which has the appearance of milk. Eels, again, rub themselves against rocks, upon which, the particles which they thus scrape from off their bodies come to life, such being their only means of reproduction. The various kinds of fishes do not couple out of their own kind, with the exception of the squatina and the ray. The fish that is produced from the union of these two, resembles a ray in the fore part, and bears a name among the Greeks compounded of the two.

Certain animals are produced only at certain seasons of the year, both in water and on the land, such, for instance, as scallops, snails, and leeches, in the spring, which also disappear at stated periods. Among fishes, the wolf-fish and the trichias bring forth twice in the year, as also do all kinds of rock-fish; the mullet and the chalcis thrice in the year, the cyprinus six times, the scorpæna twice, and the sargus in spring and autumn. Among the flat-fish, the squatina brings forth twice a year, being the only one that does so at the setting of the Vergiliæ in autumn. Most fish spawn in the three months of April, May, and June. The salpa brings forth in the autumn, the sargus, the

torpedo, and the squalus about the time of the autumnal equinox. The soft fishes bring forth in spring, the sæpia every month in the year; its eggs adhere together with a kind of black glutinous substance, in appearance like a bunch of grapes, and the male is very careful to go among them and breathe upon them, as otherwise they would be barren. The polypi couple in winter, and produce eggs in the spring twisted in spiral clusters, in a similar manner to the tendrils of the vine; and so remarkably prolific are they, that when the animal is killed in a state of pregnancy, the cavities of the head are quite unable to contain the multitude of eggs enclosed therein. They bring forth these eggs at the fiftieth day, but in consequence of the vast number of them, great multitudes perish. Cray-fish, and other sea-animals with a thinner crust, lay their eggs one upon the other, and then sit upon them. The female polypus sometimes sits upon its eggs, and at other times closes the entrance of its retreat by spreading out its feelers, interlaced like a net. The sæpia brings forth on dry land, among reeds or such sea-weed as it may find growing there, and hatches its eggs on the fifteenth day. The loligo produces its eggs out at sea, clustered together like those of the sæpia. The purple, the murex, and other fishes of the same kind, bring forth in the spring. Sea-urchins have their eggs at full moon during the winter; sea-snails also are produced during the winter season.

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CHAP. 75.

FISHES WHICH ARE BOTH OVIPAROUS AND VIVIPAROUS.

The torpedo is known to have as many as eighty young ones. It produces within itself very soft eggs, which it then transfers to another place in the uterus, and from that part ejects them. The same is the case with all those fish to which we have given the name of cartilaginous; hence it is, that these alone of all the fishes are at once viviparous and oviparous. The male silurus is the only fish among them all that watches the eggs after they are brought forth, often for as long a period as fifty days, that they may not be devoured by other fish. The females of other kinds bring forth their eggs in the course of three days, if the male has only touched them.

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CHAP. 76.

FISHES THE BELLY OF WHICH OPENS IN SPAWNING, AND THEN CLOSES AGAIN.

The sea-needle, or the belone, is the only fish in which the multitude of its eggs, in spawning, causes the belly to open asunder; but immediately after it has brought forth, the wound heals again: a thing which, it is said, is the case with the blind-worm as well. The sea-mouse digs a hole in the earth, deposits its eggs there, and then covers them up. On the thirtieth day it opens the hole, and leads its young to the water.

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CHAP. 77. (52.)

FISHES WHICH HAVE A WOMB; THOSE WHICH IMPREGNATE THEMSELVES.

The fishes called the ervthinus and the channe are said to have a womb; and those which by the Greeks are called trochi, it is said, impregnate themselves. The young of all aquatic animals are without sight at their birth.

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CHAP. 78. (53.)

THE LONGEST LIVES KNOWN AMONGST FISHES.

We have lately heard of a remarkable instance of length of life in fish. Pausilypum is the name of a villa in Campania, not far from Neapolis; here, as we learn from the works of M. Annsaus Seneca, a fish is known to have died sixty years after it had been placed in the preserves of Cæsar by Vedius Pollio; while others of the same kind, and its equals in age, were living at the time that he wrote. This mention of fish-preserves reminds me that I ought to mention a few more particulars connected with this subject, before we leave the aquatic animals.

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CHAP. 79. (54.)

THE FIRST PERSON THAT FORMED ARTIFICIAL OYSTER — BEDS.

The first person who formed artificial oyster-beds was Ser- gius Orata, who established them at Baiæ, in the time of L. Crassus, the orator, just before the Marsic War. This was done by him, not for the gratification of gluttony, but of avarice, as he contrived to make a large income by this exercise of his ingenuity. He was the first, too, to invent hanging baths, and after buying villas and trimming them up, he would every now and then sell them again. He, too, was the first to adjudge the pre-eminence for delicacy of flavour to the oysters of Lake Lucrinus; for every kind of aquatic animal is superior in one place to what it is in another. Thus, for instance, the wolf-fish of the river Tiber is the best that is caught between the two bridges, and the turbot of Ravenna is the most esteemed, the murena of Sicily, the elops of Rhodes; the same, too, as to the other kinds, not to go through all the items of the culinary catalogue. The British shores had not as yet sent their supplies, at the time when Orata thus ennobled the Lucrine oysters: at a later period, however, it was thought worth while to fetch oysters all the way from Brundisium, at the very extremity of Italy; and in order that there might exist no rivalry between the two flavours, a plan has been more recently hit upon, of feeding the oysters of Brundisium in Lake Lucrinus, famished as they must naturally be after so long a journey.

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CHAP. 80.

WHO WAS THE FIRST INVENTOR OF PRESERVES FOR OTHER FISH.

In the same age, also, Licinius Murena was the first to form preserves for other fish; and his example was soon followed by the noble families of the Philippi and the Hortensii. Lucullus had a mountain pierced near Naples, at a greater outlay even, than that which had been expended on his villa; and here he formed a channel, and admitted the sea to his preserves; it was for this reason that Pompeius Magnus gave him the name of " Xerxes in a toga." After his death, the fish in his preserves was sold for the sum of four million sesterces.

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CHAP. 81. (55.)

WHO INVENTED PRESERVES FOR MURENÆ.

C. Hirrus was the first person who formed preserves for the murena; and it was he who lent six thousand of these fishes for the triumphal banquets of Cæsar the Dictator; on which occasion he had them duly weighed, as he declined to receive the value of them in money or any other commodity. His villa, which was of a very humble character in the interior, sold for four millions of sesterces, in consequence of the valuable nature of the stock-ponds there. Next after this, there arose a passion for individual fish. At Bauli, in the territory of Baiæ, the orator Hortensius had some fish-preserves, in which there was a murena to which he became so much attached, as to be supposed to have wept on hearing of its death. It was at the same villa that Antonia, the wife of Drusus, placed earrings upon a murena which she had become fond of; the report of which singular circumstance attracted many visitors to the place.

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CHAP. 82. (56.)

WHO INVENTED PRESERVES FOR SEA-SNAILS.

Fulvius Lupinus first formed preserves for sea-snails, in the territory of Tarquinii, shortly before the civil war between Cæsar and Pompeius Magnus. He also carefully distinguished them by their several species, separating them from one another. The white ones were those that are produced in the district of Reate; those of Illyria were remarkable for the largeness of their size; while those from Africa were the most prolific; those, however, from the Promontory of the Sun were the most esteemed of all. For the purpose, also, of fattening them, lie invented a mixture of boiled wine, spelt-meal, and other substances; so that fattened periwinkles even became quite an object of gastronomy; and the art of breeding them was brought to such a pitch of perfection, that the shell of a single animal would hold as much as eighty quadrantes. This we learn from M. Varro.

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CHAP. 83. (57.)

LAND FISHES.

Besides these, there are still some wonderful kinds of fishes which we find mentioned by Theophrastus: he says, that when the waters subside, which have been admitted for the purposes of irrigation in the vicinity of Babylon, there are certain fish which remain in such holes as may contain water; from these they come forth for the purpose of feeding, moving along with their fins by the aid of a rapid movement of the tail. If pursued, he says, they retreat to their holes, and, when they have reached them, will turn round and make a stand. The head is like that of the sea-frog, while the other parts are similar to those of the gobio, and they have gills like other fish. He says also, that in the vicinity of Heraclea and Cromna, and about the river Lycus, as well as in many parts of the Euxine, there is one kind of fish which frequents the waters near the banks of the rivers, and makes holes for itself, in which it lives, even when the water retires and the bed of the river is dry; for which reason these fishes have to be dug out of the ground, and only show by the movement of the body that they are still alive. He says also, that in the vicinity of the same Heraclea, when the river Lycus ebbs, the eggs are left in the mud, and that the fish, on being produced from these, go forth to seek their food by means of a sort of fluttering motion, — their gills being but very small, in consequence of which they are not in need of water; for this reason it is that eels also can live so long out of water; and that their eggs come to maturity on dry land, like those of the sea-tortoise. In the same regions also of the Euxine, he says, various kinds of fishes are overtaken by the ice, the gobio more particularly, and they only betray signs of life, by moving when they have warmth applied by the saucepan. All these things, however, though very remarkable, still admit of some explanation. He tells us also, that in Paphlagonia, land fishes are dug up that are most excellent eating; these, he says, are found in deep holes or spots where there is no standing water whatever, and he expresses his surprise at their being thus produced without any contact with moisture, stating it as his

opinion, that there is some innate virtue in these holes, similar to that of wells; as if, indeed, fishes really were to be found in wells. However this may be, these facts, at all events, render the life of the mole under ground less a matter for surprise; unless, perhaps, these fishes mentioned by Theophrastus are similar in nature to the earth-worm.

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CHAP. 84. (58.)

THE MICE OF THE NILE.

But all these things, singular as they are, are rendered credible by a marvel which exceeds them all, at the time of the inundation of the Nile; for, the moment that it subsides, little mice are found, the first rudiments of which have been formed by the generative powers of the waters and the earth: in one part of the body they are already alive, while in that which is of later formation, they are still composed of earth.

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CHAP. 85. (59.)

HOW THE FISH CALLED THE ANTHIAS IS TAKEN.

Nor would it be right to omit what is said about the fish called anthias, and which I find is looked upon as true by most writers. I have already mentioned the Chelidoniæ, certain islands off the coast of Asia; they are situate off a promontory there, in the midst of a sea full of crags and reefs. These parts are much frequented by this fish, which is very speedily taken by the employment of a single method of catching it. A fisherman pushes out in a little boat, dressed in a colour resembling that of his boat; and every day, for several days together, at the same hour, he sails over the same space, while doing which he throws a quantity of bait into the sea. Whatever is thrown from the boat is an object of suspicion to the fish, who keep at a distance from what causes them so much alarm; but after this has been repeated a considerable number of times, one of the fish, reassured by becoming habituated to the scene, at last snaps at the bait. The movements of this one are watched with the greatest care and attention, for in it are centred all the hopes of the fishermen, as it is to be the means of securing them their prey; nor, indeed, is it difficult to recognize it, seeing that for some days it is the only one that ventures to come near the bait. At last, however, it finds some others to follow its example, and by degrees it is better and better attended, till at last it brings with it shoals innumerable. The older ones, at length becoming quite accustomed to the fisherman, easily recognize him, and will even take food from his hands. Upon this, the man throws out, a little way beyond the tips of his fingers, a hook concealed in a bait, and smuggles them out one by one, rather than catches them, standing in the shadow of the boat and whipping them out of the water with a slight jerk, that the others may not perceive it; while another fisherman is ready inside to receive them upon pieces of cloth, in order that no floundering about or other noise may scare the others away. It is of importance to know which has been the betrayer of the others, and not to take it, otherwise the shoal will take to flight, and appear no more for the future. There is a story that a

fisherman, having quarrelled once with his mate, threw out a hook to one of these leading fishes, which he easily recognized, and so captured it with a malicious intent. The fish, however, was recognized in the market by the other fisherman, against whom he had conceived this malice; who accordingly brought an action against him for damages; and, as Mucianus adds, he was condemned to pay them on the hearing of the case. These anthiæ, it is said, when they see one of their number taken with a hook, cut the line with the serrated spines which they have on the back, the one that is held fast stretching it out as much as it can, to enable them to cut it. But among the sargi, the fish itself, that is held fast, rubs the line asunder against the rocks.

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CHAP. 86. (60.)

SEA-STARS.

In addition to what I have already stated, I find that authors, distinguished for their wisdom, express surprise at finding a star in the sea-for such, in fact, is the form of the animal, which has but very little flesh within, and nothing but a hard skin without. It is said that in this fish there is such a fiery heat, that it scorches everything it meets with in the sea, and instantaneously digests its food. By what experiments all this came to be known, I cannot so easily say; but I am about to make mention of one fact which is more remarkable still, and which we have the opportunity of testing by every day's experience.

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CHAP. 87. (61.)

THE MARVELLOUS PROPERTIES OF THE DACTYLUS.

Belonging also to the class of shell-fish is the dactylus, a fish so called from its strong resemblance to the human nails. It is the property of these fish to shine brightly in the dark, when all other lights are removed, and the more moisture they have, the brighter is the light they emit. In the mouth even, while they are being eaten, they give forth their light, and the same too when in the hands; the very drops, in fact, that fall from them on the ground, or on the clothes, are of the same nature. Hence it is beyond a doubt, that it is a liquid that possesses this peculiar property, which, even in a solid body, would be a ground for considerable surprise.

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CHAP. 88. (62.)

THE ANTIPATHIES AND SYMPATHIES THAT EXIST BETWEEN AQUATIC ANIMALS.

There are also marvellous instances to be found of antipathies and sympathies existing between them. The mullet and the wolf-fish are animated with a mutual hatred; and so too, the conger and the murena gnaw each other tails. The crayfish has so great a dread of the polypus, that if it sees it near, it expires in an instant: the conger dreads the cray-fish; while, again, the conger tears the body of the polypus. Nigidius informs us that the wolf-fish gnaws the tail of the mullet, and yet that, during certain months, they are on terms of friendship; all those, however, which thus lose their tails, survive their misfortune. On the other hand, in addition to those which we have already mentioned as going in company together, an instance of friendship is found in the balæna and the musculus, for, as the eye — Brows of the former are very heavy, they sometimes fall over its eyes, and quite close them by their ponderousness, upon which the musculus swims before, and points out the shallow places which are likely to prove inconvenient to its vast bulk, thus serving it in the stead of eyes. We shall now have to speak of the nature of the birds.

SUMMARY. — Remarkable facts, narratives, and observations, 650.

ROMAN AUTHORS QUOTED. — Turranius Gracilis, Trogus, Mæcenas, Alfius Flavus, Cornelius Nepos, Laberius the Mimographer, Fabianus, Fenestella, Mucianus, Ælius Stilo, Statius Sebosus, Melissus, Seneca, Cicero, Æmilius Macer, Messala Corvinus, Trebius Niger, Nigidius. FOREIGN AUTHORS QUOTED. — Aristotle, King Archelaus, Callimachus, Democritus, Theophrastus, Thrasyllus, Hegesidemus, Cythnius, Alexander Polyhistor.

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BOOK X. THE NATURAL HISTORY OF BIRDS.

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CHAP. 1. (1.)

THE OSTRICH.

THE history of the birds follows next, the very largest of which, and indeed almost approaching to the nature of quad- rupeds, is the ostrich of Africa or Æthiopia. This bird exceeds in height a man sitting on horseback, and can surpass him in swiftness, as wings have been given to aid it in running; in other respects ostriches cannot be considered as birds, and do not raise themselves from the earth. They have cloven talons, very similar to the hoof of the stag; with these they fight, and they also employ them in seizing stones for the purpose of throwing at those who pursue them. They have the marvellous property of being able to digest every substance without distinction, but their stupidity is no less remarkable; for although the rest of their body is so large, they imagine, when they have thrust their head and neck into a bush, that the whole of the body is concealed. Their eggs are prized on account of their large size, and are employed as vessels for certain purposes, while the feathers of the wing and tail are used as ornaments for the crest and helmet of the warrior.

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CHAP. 2. (2.)

THE PHŒNIX.

Æthiopia and India, more especially, produce birds of diversified plumage, and such as quite surpass all description. In the front rank of these is the phœnix, that famous bird of Arabia; though I am not quite sure that its existence is not all a fable. It is said that there is only one in existence in the whole world, and that that one has not been seen very often. We are told that this bird is of the size of an eagle, and has a brilliant golden plumage around the neck, while the rest of the body is of a purple colour; except the tail, which is azure, with long feathers intermingled of a roseate hue; the throat is adorned with a crest, and the head with a tuft of feathers. The first Roman who described this bird, and who has done so with the greatest exactness, was the senator Manilius, so famous for his learning; which he owed, too, to the instructions of no teacher. He tells us that no person has ever seen this bird eat, that in Arabia it is looked upon as sacred to the sun, that it lives five hundred and forty years, that when it becomes old it builds a nest of cassia and sprigs of incense, which it fills with perfumes, and then lays its body down upon them to die; that from its bones and marrow there springs at first a sort of small worm, which in time changes into a little bird: that the first thing that it does is to perform the obsequies of its predecessor, and to carry the nest entire to the city of the Sun near Panchaia, and there deposit it upon the altar of that divinity.

The same Manilius states also, that the revolution of the great year is completed with the life of this bird, and that then a new cycle comes round again with the same characteristics as the former one, in the seasons and the appearance of the stars; and he says that this begins about mid-day of the day on which the sun enters the sign of Aries. He also tells us that when he wrote to the above effect, in the consulship of P. Licinius and Cneius Cornelius, it was the two hundred and fifteenth year of the said revolution. Cornelius Valerianus says that the phœnix took its flight from Arabia into Egypt in the consulship of Q. Plautius and Sextus Papinius. This bird

was brought to Rome in the censorship of the Emperor Claudius, being the year from the building of the City, 800, and it was exposed to public view in the Comitium. This fact is attested by the public Annals, but there is no one that doubts that it was a fictitious phœnix only.

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CHAP. 3. (3.)

THE DIFFERENT KINDS OF EAGLES.

Of all the birds with which we are acquainted, the eagle is looked upon as the most noble, and the most remarkable for its strength. There are six different kinds; the one called "melanætos" by the Greeks, and "valeria" in our language, the least in size of them all, but the most remarkable for its strength, is of a blackish colour. It is the only one among all, the eagles that feeds its young; for the others, as we shall mention just now, drive them away; it is the only one too that has neither cry nor murmur; it is an inhabitant of the mountains. The second kind is the pygargus, an inhabitant of the cities and plains, and distinguished by the whiteness of its tail. The third is the morphnos, which Homer also calls the "perenos," while others, again, call it the "plangus" and the "anataria;" it is the second in size and strength, and dwells in the vicinity of lakes. Phemonoë, who was styled the "daughter of Apollo," has stated that this eagle has teeth, but that it has neither voice nor tongue; she says also that it is the blackest of all the eagles, and has a longer tail than the rest; Bœus is of the same opinion. This eagle has the instinct to break the shell of the tortoise by letting it fall from aloft, a circumstance which caused the death of the poet Æschylus. An oracle, it is said, had predicted his death on that day by the fall of a house, upon which he took the precaution of trusting himself only under the canopy of the heavens.

The fourth kind of eagle is the "percnopterus," also called the "oripelargus;" it has much the appearance of the vulture, with remarkably small wings, while the rest of the body is larger than the others; but it is of a timid and degenerate nature, so much so, that even a raven can beat it. It is always famishing and ravenous, and has a plaintive murmuring cry. It is the only one among the eagles that will carry off the dead carcase; the others settle on the spot where they have killed their prey. The character of this species causes the fifth one to be known by the distinctive name of "gnesios," as being the genuine eagle, and the only one of untainted lineage; it is of moderate size, of rather reddish colour, and rarely to be met with.

The haliætus is the last, and is remarkable for its bright and piercing eye. It poises itself aloft, and the moment it catches sight of a fish in the sea below, pounces headlong upon it, and cleaving the water with its breast, carries off its prey.

The eagle which we have mentioned as forming the third species, pursues the aquatic birds in the vicinity of standing waters: in order to make their escape they plunge into the water every now and then, until at length they are overtaken by lassitude and sleep, upon which the eagle immediately seizes them. The contest that takes place is really a sight worthy to be seen. The bird makes for the shore to seek a refuge, and especially if there should happen to be a bed of reeds there; while in the meantime the eagle endeavours to drive it away with repeated blows of its wings, and tumbles into the water in its attempts to seize it. While it is standing on the shore its shadow is seen by the bird, which immediately dives beneath, and then making its way in an opposite direction, emerges at some point at which it thinks it is the least likely to be looked for. This is the reason why these birds swim in flocks, for when in large numbers they are in no danger from the enemy; as by dashing up the spray with their wings they blind him.

Again, it often happens that the eagle is not able to carry the bird aloft on account of its weight, and in consequence they both of them sink together. The haliætus, and this one only, beats its young ones while in an unfledged state, with its wings, and forces them from time to time to look steadily upon the rays of the sun; and if it sees either of them wink, or even its eye water, it throws it headlong out of the nest, as being spurious and degenerate, while, on the other hand, it rears the one whose gaze remains fixed and steady. The haliætus is not a species of itself, but is an eagle of mixed breed: hence their produce are of the species known as the ossifrage, from which again is produced the smaller vulture; while this in its turn produces the large vulture, which, however, is quite barren.

Some writers add to the above a seventh kind, which they call the "bearded" eagle; the Tuscans, however, call it the ossifrage.

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CHAP. 4.

THE NATURAL CHARACTERISTICS OF THE EAGLE.

The first three and the fifth class of eagles employ in the construction of their aerie the stone aëtites, by some known as "gangites;" which is employed also for many remedial purposes, and is proof against the action of fire. This stone has the quality also, in a manner, of being pregnant, for when shaken, another stone is heard to rattle within, just as though it were enclosed in its womb; it has no medical properties, however, except immediately after it has been taken from the nest.

Eagles build among rocks and trees; they lay three eggs, and generally hatch but two young ones, though occasionally as many as three have been seen. Being weary of the trouble of rearing both, they drive one of them from the nest: for just at this time the providential foresight of Nature has denied them a sufficiency of food, thereby using due precaution that the young of all the other animals should not become their prey. During this period, also, their talons become reversed, and their feathers grow white from continued hunger, so that it is not to be wondered at that they take a dislike to their young. The ossifrage, however, a kindred species, takes charge of the young ones thus rejected, and rears them with its own; but the parent bird still pursues them with hostility, even when grown up, and drives them away, as being its rivals in rapine. And indeed, under any circumstances, one pair of eagles requires a very considerable space of ground to forage over, in order to find sufficient sustenance; for which reason it is that they mark out by boundaries their respective allotments, and seek their prey in succession to one another. They do not immediately carry off their prey, but first deposit it on the ground, and it is only after they have tested its weight that they fly away with it.

They die, not of old age, nor yet of sickness, or of hunger; but the upper part of the beak grows to such an extent, and becomes so curved, that they are unable to open it. They take the wing, and begin upon the labours of the chase at mid-day; sitting in idleness during

the hours of the morning, until such time as the places of public resort are filled with people. The feathers of the eagle, if mixed with those of other birds, will consume them. It is said that this is the only bird that has never been killed by lightning; hence it is, that usage has pronounced it to be the armour — Bearer of Jove.

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CHAP. 5. (4.)

WHEN THE EAGLE WAS FIRST USED AS THE STANDARD OF THE ROMAN LEGIONS.

Caius Marius, in his second consulship, assigned the eagle exclusively to the Roman legions. Before that period it had only held the first rank, there being four others as well, the wolf, the minotaur, the horse, and the wild boar, each of which preceded a single division. Some few years before his time it had begun to be the custom to carry the eagle only into battle, the other standards being left behind in camp; Marius, however, abolished the rest of them entirely. Since then, it has been remarked that hardly ever has a Roman legion encamped for the winter, without a pair of eagles making their appearance at the spot.

The first and second species of eagle, not only prey upon the whole of the smaller quadrupeds, but will attack deer even. Rolling in the dust, the eagle covers its body all over with it, and then perching on the antlers of the animal, shakes the dust into its eyes, while at the same time it beats it on the head with its wings, until the creature at last precipitates itself down the rocks. Nor, indeed, is this one enemy sufficient for it; it has still more terrible combats with the dragon, and the issue is much more doubtful, although the battle is fought in the air. The dragon seeks the eggs of the eagle with a mischievous avidity; while the eagle, in return, carries it off whenever it happens to see it; upon these occasions, the dragon coils itself about the wings of the bird in multiplied folds, until at last they fall to the earth together.

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CHAP. 6. (5.)

AN EAGLE WHICH PRECIPITATED ITSELF ON THE FUNERAL PILE OF A GIRL.

There is a very famous story about an eagle at the city of Sestos. Having been reared by a little girl, it used to testify its gratitude for her kindness, first by bringing her birds, and in due time various kinds of prey: at last she died, upon which the bird threw itself on the lighted pile, and was consumed with her body. In memory of this event, the inhabitants raised upon the spot what they called an heroic monument, in honour of Jupiter and the damsel, the eagle being a bird consecrated to that divinity.

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CHAP. 7. (6.)

THE VULTURE.

Of the vultures, the black ones are the strongest. No person has yet found a vulture's nest: hence it is that there are some who have thought, though erroneously, that these birds come from the opposite hemisphere. The fact is, that they build their nest upon the very highest rocks; their young ones, indeed, are often to be seen, being generally two in number. Umbricius, the most skilful among the aruspices of our time, says that the vulture lays thirteen eggs, and that with one of these eggs it purifies the others and its nest, and then throws it away: he states also that they hover about for three days, over the spot where carcases are about to be found.

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CHAP. 8. (7.)

THE BIRDS CALLED SANGUALIS AND IMMUSULUS.

There has been considerable argument among the Roman augurs about the birds known as the “sangualis” and the “immusulus.” Some persons are of opinion that the immusulus is the young of the vulture, and the sangualis that of the ossifrage. Massurius says, that the sangualis is the same as the ossifrage, and that the immusulus is the young of the eagle, before the tail begins to turn white. Some persons have asserted that these birds have not been seen at Rome since the time of the augur Mucius; for my part, I think it much more likely, that, amid that general heedlessness as to all knowledge, which has of late prevailed, no notice has been taken of them.

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CHAP. 9. (8.)

HAWKS. THE BUTEO.

We find no less than sixteen kinds of hawks mentioned; among these are the ægithus, which is lame of one leg, and is looked upon as the most favourable omen for the augurs on the occasion of a marriage, or in matters connected with property in the shape of cattle: the triorchis also, so called from the number of its testicles, and to which Phemonoë has assigned the first rank in augury. This last is by the Romans known as the "buteo;" indeed there is a family that has taken its surname from it, from the circumstance of this bird having given a favourable omen by settling upon the ship of one of them when he held a command. The Greeks call one kind "epileus;" the only one, indeed, that is seen at all seasons of the year, the others taking their departure in the winter.

The various kinds are distinguished by the avidity with which they seize their prey; for while some will only pounce on a bird while on the ground, others will only seize it while hovering round the trees, others, again, while it is perched aloft, and others while it is flying in mid air. Hence it is that pigeons, on seeing them, are aware of the nature of the danger to which they are exposed, and either settle on the ground or else fly upwards, instinctively protecting themselves by taking due precautions against their natural propensities. The hawks of the whole of Massæsylia, breed in Cerne, an island of Africa, lying in the ocean; and none of the kinds that are accustomed to those parts will breed anywhere else.

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CHAP. 10.

IN WHAT PLACES HAWKS AND MEN PURSUE THE CHASE IN COMPANY WITH EACH OTHER.

In the part of Thrace which lies above Amphipolis, men and hawks go in pursuit of prey, in a sort of partnership as it were; for while the men drive the birds from out of the woods and the reed — Beds, the hawks bring them down as they fly; and after they have taken the game, the fowlers share it with them. It has been said, that when sent aloft, they will pick out the birds that are wanted, and that when the opportune moment for taking them has come, they invite the fowler to seize the opportunity by their cries and their peculiar mode of flying. The sea-wolves, too, in the Palus Mæotis, do something of a very similar nature; but if they do not receive their fair share from the fishermen, they will tear their nets as they lie extended. Hawks will not eat the heart of a bird. The night-hawk is called cybindis; it is rarely found, even in the woods, and in the day-time its sight is not good; it wages war to the death with the eagle, and they are often to be found clasped in each other's talons.

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CHAP. 11. (9.)

THE ONLY BIRD THAT IS KILLED BY THOSE OF ITS OWN KIND. — A BIRD THAT LAYS ONLY ONE EGG.

The cuckoo seems to be but another form of the hawk, which at a certain season of the year changes its shape; it being the fact that during this period no other hawks are to be seen, except, perhaps, for a few days only; the cuckoo, too, itself is only seen for a short period in the summer, and does not make its appearance after. It is the only one among the hawks that has not hooked talons; neither is it like the rest of them in the head, or, indeed, in any other respect, except the colour only, while in the beak it bears a stronger resemblance to the pigeon. In addition to this, it is devoured by the hawk, if they chance at any time to meet; this being the only one among the whole race of birds that is preyed upon by those of its own kind. It changes its voice also with its appearance, comes out in the spring, and goes into retirement at the rising of the Dog-star. It always lays its eggs in the nest of another bird, and that of the ring-dove more especially,- mostly a single egg, a thing that is the case with no other bird; sometimes however, but very rarely, it is known to lay two. It is supposed, that the reason for its thus substituting its young ones, is the fact that it is aware how greatly it is hated by all the other birds; for even the very smallest of them will attack it. Hence it is, that it thinks its own race will stand no chance of being perpetuated unless it contrives to deceive them, and for this reason builds no nest of its own: and besides this, it is a very timid animal. In the meantime, the female bird, sitting on her nest, is rearing a supposititious and spurious progeny; while the young cuckoo, which is naturally craving and greedy, snatches away all the food from the other young ones, and by so doing grows plump and sleek, and quite gains the affections of his foster-mother; who takes a great pleasure in his fine appearance, and is quite surprised that she has become the mother of so handsome an offspring. In comparison with him, she discards her own young as so many strangers, until at last, when the young cuckoo is now able to take the wing, he finishes by devouring her.

For sweetness of the flesh, there is not a bird in existence to be compared to the cuckoo at this season.

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CHAP. 12. (10.)

THE KITE.

The kite, which belongs to the same genus, is distinguished from the rest of the hawks by its larger size. It has been remarked of this bird, extremely ravenous as it is, and always craving, that it has never been known to seize any food either from among funereal oblations or from the altar of Jupiter at Olympia; nor yet, in fact, does it ever seize any of the consecrated viands from the hands of those who are carrying them; except where some misfortune is presaged for the town that is offering the sacrifice. These birds seem to have taught man the art of steering, from the motion of the tail, Nature pointing out by their movements in the air the method required for navigating the deep. Kites also disappear during the winter months, but do not take their departure before the swallow. It is said, also, that after the summer solstice they are troubled with the gout.

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CHAP. 13. (11.)

THE CLASSIFICATION OF BIRDS.

The first distinctive characteristic among birds is that which bears reference more especially to their feet: they have either hooked talons, or else toes, or else, again, they belong to the web-footed class, geese for instance, and most of the aquatic birds. Those which have hooked talons feed, for the most part, upon nothing but flesh.

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CHAP. 14. (12.)

CROWS. BIRDS OF ILL OMEN. AT WHAT SEASONS THEY ARE NOT INAUSPICIOUS.

Crows, again, have another kind of food. Nuts being too hard for their beak to break, the crow flies to a great height, and then lets them fall again and again upon the stones or tiles beneath, until at last the shell is cracked, after which the bird is able to open them. This is a bird with a very ill-omened garrulity, though it has been highly praised by some. It is observed, that from the rising of the constellation Arcturus until the arrival of the swallow, it is but rarely to be seen about the sacred groves and temples of Minerva; in some places, indeed, not at all, Athens for instance. In addition to these facts, it is the only one that continues to feed its young for some time after they have begun to fly. The crow is most inauspicious at the time of incubation, or, in other words, just after the summer solstice.

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CHAP. 15.

THE RAVEN.

All the other birds of the same kind drive their young ones from their nest, and compel them to fly; the raven, for instance, which not only feeds on flesh, but even drives its young, when able to fly, to a still greater distance. Hence it is that in small hamlets there are never more than two pairs to be found; and in the neighbourhood of Crannon, in Thessaly, never more than one, the parents always quitting the spot to give place to their offspring. There have been some differences observed between this and the bird last mentioned. Ravens breed before the summer solstice, and continue in bad health for sixty days — Being afflicted with a continual thirst more particularly — Before the ripening of the fig in autumn; while, on the other hand, the crow is attacked by disease after that period. The raven lays, at most, but five eggs. It is a vulgar belief, that they couple, or else lay, by means of the beak; and that, consequently, if a pregnant woman happens to eat a raven's egg, she will be delivered by the mouth. It is also believed, that if the eggs are even so much as brought beneath the roof, a difficult labour will be the consequence. Aristotle denies it, and assures us in all good faith that there is no more truth in this than in the same story about the ibis in Egypt; he says that it is nothing else but that same sort of billing that is so often seen in pigeons. Ravens are the only birds that seem to have any comprehension of the meaning of their auspices; for when the guests of Medus were assassinated, they all took their departure from Peloponnesus and the region of Attica. They are of the very worst omen when they swallow their voice, as if they were being choked.

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CHAP. 16.

THE HORNED OWL.

The birds of the night also have crooked talons, such as the owlet, the horned owl, and the screech-owl, for instance; the sight of all of which is defective in the day-time. The horned owl is especially funereal, and is greatly abhorred in all auspices of a public nature: it inhabits deserted places, and not only desolate spots, but those of a frightful and inaccessible nature: the monster of the night, its voice is heard, not with any tuneful note, but emitting a sort of shriek. Hence it is that it is looked upon as a direful omen to see it in a city, or even so much as in the day-time. I know, however, for a fact, that it is not portentous of evil when it settles on the top of a private house. It cannot fly whither it wishes in a straight line, but is always carried along by a sidelong movement. A horned owl entered the very sanctuary of the Capitol, in the consulship of Sextus Palpelius Hister and L. Pedanius; in consequence of which, Rome was purified on the nones of March in that year.

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CHAP. 17. (13.)

BIRDS, THE RACE OF WHICH IS EXTINCT, OR OF WHICH ALL KNOWLEDGE HAS BEEN LOST.

An inauspicious bird also is that known as the “incendiary;” on account of which, we find in the Annals, the City has had to be repeatedly purified; as, for instance, in the consulship of L. Cassius and C. Marius, in which year also it was purified, in consequence of a horned owl being seen. What kind of bird this incendiary bird was, we do not find stated, nor is it known by tradition. Some persons explain the term this way; they say that the name “incendiary” was applied to every bird that was seen carrying a burning coal from the pyre, or altar; while others, again, call such a bird a “spinturnix; though I never yet found any person who said that he knew what kind of bird this spinturnix was.

(14.) I find also that the people of our time are ignorant what bird it was that was called by the ancients a “clivia.” Some persons say that it was a clamatory, others, again, that it was a prohibitory, bird. We also find a bird mentioned by Nigidius as the “subis,” which breaks the eggs of the eagle.

(15.) In addition to the above, there are many other kinds that are described in the Etruscan ritual, but which no one now living has ever seen. It is surprising that these birds are no longer in existence, since we find that even those kinds abound, among which the gluttony of man commits such ravages.

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CHAP. 18. (16.)

BIRDS WHICH ARE BORN WITH THE TAIL FIRST.

Among foreigners, a person called Hylas is thought to have written the best treatise on the subject of augury. He informs us that the owlet, the horned owl, the woodpecker, which makes holes in trees, the trygon, and the crow, are produced from the egg with the tail first; for the egg, being turned upside down through the weight of the head of the chick, presents the wrong end to be warmed by the mother as she sits upon it.

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CHAP. 19. (17.)

THE OWLET.

The owlet shows considerable shrewdness in its engagements with other birds; for when surrounded by too great a number, it throws itself on its back, and so, resisting with its feet, and rolling up its body into a mass, defends itself with the beak and talons; until the hawk, attracted by a certain natural affinity, comes to its assistance, and takes its share in the combat. Nigidius says, that the incubation of the owlet lasts sixty days, during the winter, and that it has nine different notes.

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CHAP. 20. (18.)

THE WOOD-PECKER OF MARS.

There are some small birds also, which have hooked talons; the wood-pecker, for example, surnamed "of Mars," of considerable importance in the auspices. To this kind belong the birds which make holes in trees, and climb stealthily up them, like cats; mounting with the head upwards, they tap against the bark, and learn by the sound whether or not their food lies beneath; they are the only birds that hatch their young in the hollows of trees. It is a common belief, that if a shepherd drives a wedge into their holes, they apply a certain kind of herb, immediately upon which it falls out. Trebius informs us that if a nail or wedge is driven with ever so much force into a tree in which these birds have made their nest, it will instantly fly out, the tree making a loud cracking noise the moment that the bird has lighted upon the nail or wedge.

These birds have held the first rank in auguries, in Latium, since the time of the king who has given them their name. One of the presages that was given by them, I cannot pass over in silence. A woodpecker came and lighted upon the head of Ælius Tubero, the City prator, when sitting on his tribunal dispensing justice in the Forum, and showed such tameness as to allow itself to be taken with the hand; upon which the augurs declared that if it was let go, the state was menaced with danger, but if killed, disaster would befall the prætor; in an instant he tore the bird to pieces, and before long the omen was fulfilled.

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CHAP. 21. (19.)

BIRDS WHICH HAVE HOOKED TALONS.

Many birds of this kind feed also on acorns and fruit, but only those which are not carnivorous, with the exception of the kite; though when it feeds on anything but flesh, it is a bird of ill omen.

The birds which have hooked talons are never gregarious; each one seeks its prey by itself. They nearly all of them soar to a great height, with the exception of the birds of the night, and more especially those of larger size. They all have large wings, and a small body; they walk with difficulty, and rarely settle upon stones, being prevented from doing so by the curved shape of their talons.

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CHAP. 22. (20.)

THE PEACOCK.

We shall now speak of the second class of birds, which is divided into two kinds; those which give omens by their note, and those which afford presages by their flight. The variation of the note in the one, and the relative size in the other, constitute the differences between them. These last, therefore, shall be treated of first, and the peacock shall have precedence of all the rest, as much for its singular beauty as its superior instinct, and the vanity it displays.

When it hears itself praised, this bird spreads out its gorgeous colours, and especially if the sun happens to be shining at the time, because then they are seen in all their radiance, and to better advantage. At the same time, spreading out its tail in the form of a shell, it throws the reflection upon the other feathers, which shine all the more brilliantly when a shadow is cast upon them; then at another moment it will contract all the eyes depicted upon its feathers in a single mass, manifesting great delight in having them admired by the spectator. The peacock loses its tail every year at the fall of the leaf, and a new one shoots forth in its place at the flower season; between these periods the bird is abashed and moping, and seeks retired spots. The peacock lives twenty-five years, and begins to show its colours in the third. By some authors it is stated that this bird is not only a vain creature, but of a spiteful disposition also, just in the same way that they attribute bashfulness to the goose. The characteristics, however, which they have thus ascribed to these birds, appear to me to be utterly unfounded.

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CHAP. 23.

WHO WAS THE FIRST TO KILL THE PEACOCK FOR FOOD. — WHO FIRST TAUGHT THE ART OF CRAMMING THEM.

The orator Hortensius was the first Roman who had the peacock killed for table; it was on the occasion of the banquet given by him on his inauguration in the college of the priesthood. M. Aufidius Lurco was the first who taught the art of fattening them, about the time of the last war with the Pirates. From this source of profit he acquired an income of sixty thousand sesterces.

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CHAP. 24. (21.)

THE DUNGHILL COCK.

Next after the peacock, the animal that acts as our watchman by night, and which Nature has produced for the purpose of arousing mortals to their labours, and dispelling their slumbers, shows itself most actuated by feelings of vanity. The cock knows how to distinguish the stars, and marks the different periods of the day, every three hours, by his note. These animals go to roost with the setting of the sun, and at the fourth watch of the camp recall man to his cares and toils. They do not allow the rising of the sun to creep upon us unawares, but by their note proclaim the coming day, and they prelude their crowing by clapping their sides with their wings. They exercise a rigorous sway over the other birds of their kind, and, in every place where they are kept, hold the supreme command. This, however, is only obtained after repeated battles among themselves, as they are well aware that they have weapons on their legs, produced for that very purpose, as it were, and the contest often ends in the death of both the combatants at the same moment. If, on the other hand, one of them obtains the mastery, he instantly by his note proclaims himself the conqueror, and testifies by his crowing that he has been victorious; While his conquered opponent silently slinks away, and, though with a very bad grace, submits to servitude. And with equal pride does the throng of the poultry yard strut along, with head uplifted and crest erect. These, too, are the only ones among the winged race that repeatedly look up to the heavens, with the tail, which in its drooping shape resembles that of a sickle, raised aloft: and so it is that these birds inspire terror even in the lion, the most courageous of all animals.

Some of these birds, too, are reared for nothing but warfare and perpetual combats, and have even shed a lustre thereby on their native places, Rhodes and Tanagra. The next rank is considered to belong to those of Melos and Chalcis. Hence, it is not without very good reason that the consular purple of Rome pays these birds such singular honours. It is from the feeding of these creatures that the

omens by fowls are derived; it is these that regulate day by day the movements of our magistrates, and open or shut to them their own houses, as the case may be; it is these that give an impulse to the fasces of the Roman magistracy, or withhold them; it is these that command battles or forbid them, and furnish auspices for victories to be gained in every part of the world. It is these that hold supreme rule over those who are themselves the rulers of the earth, and whose entrails and fibres are as pleasing to the gods as the first spoils of victory. Their note, when heard at an unusual hour or in the evening, has also its peculiar presages; for, on one occasion, by crowing the whole night through for several nights, they presaged to the Boeotians that famous victory which they gained over the Lacedæmonians; such, in fact, being the interpretation that was put upon it by way of prognostic, as this bird, when conquered, is never known to crow.

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CHAP. 25.

HOW COCKS ARE CASTRATED. A COCK THAT ONCE SPOKE.

When castrated, cocks cease to crow. This operation is performed two different ways. Either the loins of the animal are seared with red-hot iron, or else the lower part of the legs; after which, the wound is covered up with potter's clay: this way they are fattened much more easily. At Pergamus, there is every year a public show of fights of game-cocks, just as in other places we have those of gladiators.

We find it stated in the Roman Annals, that in the consulship of M. Lepidus and Q. Catulus a dung-hill cock spoke, at the farm-house of Galerius; the only occasion, in fact, that I know of.

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CHAP. 26. (22.)

THE GOOSE.

The goose also keeps a vigilant guard; a fact which is well attested by the defence of the Capitol, at a moment when, by the silence of the dogs, the commonwealth had been betrayed: for which reason it is that the Censors always, the first thing of all, attend to the farming-out of the feeding of the sacred geese. What is still more, too, there is a love-story about this animal. At Ægium one is said to have conceived a passion for a beautiful boy, a native of Olenos, and another for Glauce, a damsel who was lute-player to King Ptolemy; for whom at the same time a ram is said also to have conceived a passion. One might almost be tempted to think that these creatures have an appreciation of wisdom: for it is said, that one of them was the constant companion of the philosopher, Lacydes, and would never leave him, either in public or when at the bath, by night or by day.

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CHAP. 27.

WHO FIRST TAUGHT US TO USE THE LIVER OF TEE GOOSE FOR FOOD.

Our people, however, are more wise; for they only esteem the goose for the goodness of its liver. When they are crammed, this grows to a very large size, and on being taken from the animal, is made still larger by being soaked in honeyed milk. And, indeed, it is not without good reason that it is matter of debate who it was that first discovered so great a delicacy; whether, in fact, it was Scipio Metellus, a man of consular dignity, or M. Seius, a contemporary of his, and a Roman of equestrian rank. However, a thing about which there is no dispute, it was Messalinus Cotta, the son of the orator Messala, who first discovered the art of roasting the webbed feet of the goose, and of cooking them in a ragout with cocks' combs: for I shall faithfully award each culinary palm to such as I shall find deserving of it. It is a wonderful fact, in relation to this bird, that it comes on foot all the way from the country of the Morini to Rome; those that are tired are placed in the front rank, while the rest, taught by a natural instinct to move in a compact body, drive them on.

A second income, too, is also to be derived from the feathers of the white goose. In some places, this animal is plucked twice a year, upon which the feathers quickly grow again. Those are the softest which lie nearest to the body, and those that come from Germany are the most esteemed: the geese there are white, but of small size, and are called *gantæ.* The price paid for their feathers is five denarii per pound. It is from this fruitful source that we have repeated charges brought against the commanders of our auxiliaries, who are in the habit of detaching whole cohorts from the posts where they ought to be on guard, in pursuit of these birds: indeed, we have come to such a pitch of effeminacy, that now-a-days, not even the men can think of lying down without the aid of the goose's feathers, by way of pillow.

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CHAP. 28.

OF THE COMMAGENIAN MEDICAMENT.

The part of Syria which is called Commagene, has discovered another invention also; the fat of the goose is enclosed with some cinnamon in a brazen vessel, and then covered with a thick layer of snow. Under the influence of the excessive cold, it becomes macerated, and fit for use as a medicament, remarkable for its properties: from the country which produces it, it is known to us as “Commagenum.”

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CHAP. 29.

THE CHENALOPEX, THE CHENEROS, THE TETRAO, AND THE OTIS.

To the goose genus belong also the chenalopex, and the cheneros, a little smaller than the common goose, and which forms the most exquisite of all the dainties that Britannia provides for the table. The tetrao is remarkable for the lustre of its plumage, and its extreme darkness, while the eyelids are of a scarlet colour. Another species of this last bird exceeds the vulture in size, and is of a similar colour to it; and, indeed, there is no bird, with the exception of the ostrich, the body of which is of a greater weight; for to such a size does it grow, that it becomes incapable of moving, and allows itself to be taken on the ground. The Alps and the regions of the North produce these birds; but when kept in aviaries, they lose their fine flavour, and by retaining their breath, will die of mere vexation. Next to these in size are the birds which in Spain they call the “tarda,” and in Greece the “otis:” they are looked upon however as very inferior food; the marrow, when disengaged from the bones, immediately emits a most noisome smell.

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CHAP. 30. (23.)

CRANES.

By the departure of the cranes, which, as we have already stated, were in the habit of waging war with them, the nation of the Pygmies now enjoys a respite. The tracts over which they travel must be immense, if we only consider that they come all the way from the Eastern Sea. These birds agree by common consent at what moment they shall set out, fly aloft to look out afar, select a leader for them to follow, and have sentinels duly posted in the rear, which relieve each other by turns, utter loud cries, and with their voice keep the whole flight in proper array. During the night, also, they place sentinels on guard, each of which holds a little stone in its claw: if the bird should happen to fall asleep, the claw becomes relaxed, and the stone falls to the ground, and so convicts it of neglect. The rest sleep in the meanwhile, with the head beneath the wing, standing first on one leg and then on the other: the leader looks out, with neck erect, and gives warning when required. These birds, when tamed, are very frolicsome, and even when alone will describe a sort of circle, as they move along, with their clumsy gait.

It is a well-known fact, that these birds, when about to fly over the Euxine, first of all repair to the narrowest part of it, that lies between the two Promontories of Criumetopon and Carambis, and then ballast themselves with coarse sand. When they have arrived midway in the passage, they throw away the stones from out of their claws, and, as soon as they reach the mainland, discharge the sand by the throat.

Cornelius Nepos, who died in the reign of the late Emperor Augustus, after stating that thrushes had been fattened for the first time shortly before that period, has added that storks were more esteemed as food than cranes: whereas at the present day, this last bird is one of those that are held in the very highest esteem, while no one will so much as touch the other.

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CHAP. 31.

STORKS.

Up to the present time it has not been ascertained from what place the storks come, or whither they go when they leave us. There can be no doubt but that, like the cranes, they come from a very great distance, the cranes being our winter, the storks our summer, guests. When about to take their departure, the storks assemble at a stated place, and are particularly careful that all shall attend, so that not one of their kind may be left behind, with the exception of such as may be in captivity or tamed; and then on a certain day they set out, as though by some law they were directed to do so. No one has ever yet seen a flight of cranes taking their departure, although they have been often observed preparing to depart; and in the same way, too, we never see them arrive, but only when they have arrived; both their departure as well as their arrival take place in the night. Although, too, we see them flying about in all directions, it is still supposed that they never arrive at any other time but in the night. Pythonos- come is the name given to some vast plains of Asia, where, as they assemble together, they keep up a gabbling noise, and tear to pieces the one that happens to arrive the last; after which they take their departure. It has been remarked that after the ides of August, they are never by any accident to be seen there.

There are some writers who assure us that the stork has no tongue. So highly are they esteemed for their utility in destroying serpents, that in Thessaly, it was a capital crime for any one to kill a stork, and by the laws the same penalty was inflicted for it as for homicide.

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CHAP. 32.

SWANS.

Geese, and swans also, travel in a similar manner, but then they are seen to take their flight. The flocks, forming a point, move along with great impetus, much, indeed, after the manner of our Liburnian beaked galleys; and it is by doing so that they are enabled to cleave the air more easily than if they presented to it a broad front. The flight gradually enlarges in the rear, much in the form of a wedge, presenting a vast surface to the breeze, as it impels them onward; those that follow place their necks on those that go before, while the leading birds, as they become weary, fall to the rear. Storks return to their former nests, and the young, in their turn, support their parents when old. It is stated that at the moment of the swan's death, it gives utterance to a mournful song; but this is an error, in my opinion, at least I have tested the truth of the story on several occasions. These birds will eat the flesh of one another.

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CHAP. 33.

FOREIGN BIRDS WHICH VISIT US; THE QUAIL, THE GLOTTIS, THE CYCHRAMUS, AND THE OTUS.

Having spoken of the emigration of these birds over sea and land, I cannot allow myself to defer mentioning some other birds of smaller size, which have the same natural instinct: although in the case of those which I have already mentioned, their very size and strength would almost seem to invite them to such habits. The quail, which always arrives among us even before the crane, is a small bird, and when it has once arrived, more generally keeps to the ground than flies aloft. These birds fly also in a similar manner to those I have already spoken of, and not without considerable danger to mariners, when they come near the surface of the earth: for it often happens that they settle on the sails of a ship, and that too always in the night: the consequence of which is, that the vessel often sinks. These birds pursue their course along a tract of country with certain resting-places. When the south wind is blowing, they will not fly, as that wind is always humid, and apt to weigh them down. Still, however, it is an object with them to get a breeze to assist them in their flight, the body being so light, and their strength so very limited: hence it is that we hear them make that murmuring noise as they fly, it being extorted from them by fatigue. It is for this reason also, that they take to flight more especially when the north wind is blowing, having the ortygometra for their leader. The first of them that approaches the earth is generally snapped up by the hawk. When they are about to return from these parts, they always invite other birds to join their company, and the glottis, otus, and cychramus, yielding to their persuasions, take their departure along with them.

The glottis protrudes a tongue of remarkable length, from which circumstance it derives its name: at first it is quite pleased with the journey, and sets out with the greatest ardour; very soon, however, when it begins to feel the fatigues of the flight, it is overtaken by regret, while at the same time it is equally as 10th to return alone, as to accompany the others. Its travels, however, never last more than a

single day, for at the very first resting-place they come to, it deserts: here too it finds other birds, which have been left behind in a similar manner in the preceding year. The same takes place with other birds day after day. The cychramus, however, is much more persevering, and is quite in a hurry to arrive at the land which is its destination: hence it is that it arouses the quails in the night, and reminds them that they ought to be on the road.

The otus is a smaller bird than the horned owl, though larger than the owlet; it has feathers projecting like ears, whence its name. Some persons call it in the Latin language the “asio;” in general it is a bird fond of mimicking, a great parasite, and, in some measure, a dancer as well. Like the owlet, it is taken without any difficulty; for while one person occupies its attention, another goes behind, and catches it.

If the wind, by its contrary blasts, should begin to prevent the onward progress of the flight, the birds immediately take up small stones, or else fill their throats with sand, and so contrive to ballast themselves as they fly. The seeds of a certain venomous plant are most highly esteemed by the quails as food; for which reason it is that they have been banished from our tables; in addition to which, a great repugnance is manifested to eating their flesh, on account of the epilepsy, to which alone of all animals, with the exception of man, the quail is subject.

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CHAP. 34. (24.)

SWALLOWS.

The swallow, the only bird that is carnivorous among those which have not hooked talons, takes its departure also during the winter months; but it only goes to neighbouring countries, seeking sunny retreats there on the mountain sides; sometimes they have been found in such spots bare and quite unfledged. This bird, it is said, will not enter a house in Thebes, because that city has been captured so frequently; nor will it approach the country of the Bizyæ, on account of the crimes committed there by Tereus. Cæcina of Volaterræ, a member of the equestrian order, and the owner of several chariots, used to have swallows caught, and then carried them with him to Rome. Upon gaining a victory, he would send the news by them to his friends; for after staining them the colour of the party that had gained the day, he would let them go, immediately upon which they would make their way to the nests they had previously occupied. Fabius Pictor also relates, in his Annals, that when a Roman garrison was being besieged by the Ligurians, a swallow which had been taken from its young ones was brought to him, inorder that he might give them notice, by the number of knots on a string tied to its leg, on what day succour would arrive, and a sortie might be made with advantage.

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CHAP. 35.

BIRDS WHICH TAKE THEIR DEPARTURE FROM US, AND WHITHER THEY GO; THE THRUSH, THE BLACKBIRD, AND THE STARLING — BIRDS WHICH LOSE THEIR FEATHERS DURING THEIR RETIREMENT — THE TURTLE-DOVE AND THE RING-DOVE — THE FLIGHT OF STARLINGS AND SWALLOWS.

In a similar manner also, the blackbird, the thrush, and the starling take their departure to neighbouring countries; but they do not lose their feathers, nor yet conceal themselves, as they are often to be seen in places where they seek their food during the winter: hence it is that in winter, more especially, the thrush is so often to be seen in Germany. It is, however, a well-ascertained fact, that the turtle-dove conceals itself, and loses its feathers. The ring-dove, also, takes its departure: and with these too, it is a matter of doubt whither they go. It is a peculiarity of the starling to fly in troops, as it were, and then to wheel round in a globular mass like a ball, the central troop acting as a pivot for the rest. Swallows are the only birds that have a sinuous flight of remarkable velocity; for which reason it is that they are not exposed to the attacks of other birds of prey: these too, in fine, are the only birds that take their food solely on the wing.

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CHAP. 36. (25.)

BIRDS WHICH REMAIN WITH US THROUGHOUT THE YEAR; BIRDS WHICH REMAIN WITH US ONLY SIX OR THREE MONTHS; WITWALLS AND HOOPOES.

The time during which birds show themselves differs very considerably. Some remain with us all the year round, the pigeon, for instance; some for six months, such as the swallow; and some, again, for three months only, as the thrush, the turtledove, and those which take their departure the moment they have reared their young, the witwall and the hoopoe, for instance.

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CHAP. 37. (26.)

THE MEMNONIDES.

There are some authors who say that every year certain birds fly from Æthiopia to Ilium, and have a combat at the tomb of Memnon there; from which circumstance they have received from them the name of Memnonides, or birds of Memnon. Cremutius states it also as a fact, ascertained by himself, that they do the same every fifth year in Æthiopia, around the palace of Memnon.

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CHAP. 38.

THE MELEAGRIDES.

In a similar manner also, the birds called meleagrides fight in Bœotia. They are a species of African poultry, having a hump on the back, which is covered with a mottled plumage. These are the latest among the foreign birds that have been received at our tables, on account of their disagreeable smell. The tomb, however, of Meleager has rendered them famous.

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CHAP. 39. (27.)

THE SELEUCIDES.

Those birds are called seleucides, which are sent by Jupiter at the prayers offered up to him by the inhabitants of Mount Casius, when the locusts are ravaging their crops of corn. Whence they come, or whither they go, has never yet been ascertained, as, in fact, they are never to be seen but when the people stand in need of their aid.

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CHAP. 40. (28.)

THE IBIS.

The Egyptians also invoke their ibis against the incursions of serpents; and the people of Elis, their god Myiagros, when the vast multitudes of flies are bringing pestilence among them; the flies die immediately the propitiatory sacrifice has been made to this god.

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CHAP. 41. (29.)

PLACES IN WHICH CERTAIN BIRDS ARE NEVER FOUND.

With reference to the departure of birds, the owlet, too, is said to lie concealed for a few days. No birds of this last kind are to be found in the island of Crete, and if any are imported thither, they immediately die. Indeed, this is a remarkable distinction made by Nature; for she denies to certain places, as it were, certain kinds of fruits and shrubs, and of animals as well; it is singular that when introduced into these localities they will be no longer productive, but die immediately they are thus transplanted. What can it be that is thus fatal to the increase of one particular species, or whence this envy manifested against them by Nature? What, too, are the limits that have been marked out for the birds on the face of the earth?

Rhodes possesses no eagles. In Italy beyond the Padus, there is, near the Alps, a lake known by the name of Larius, beautifully situate amid a country covered with shrubs; and yet this lake is never visited by storks, nor, indeed, are they ever known to come within eight miles of it; while, on the other hand, in the neighbouring territory of the Insubres there are immense flocks of magpies and jackdaws, the only bird that is guilty of stealing gold and silver, a very singular propensity.

It is said that in the territory of Tarentum, the woodpecker of Mars is never found. It is only lately too, and that but very rarely, that various kinds of pies have begun to be seen in the districts that lie between the Apennines and the City; birds which are known by the name of "variæ," and are remarkable for the length of the tail. It is a peculiarity of this bird, that it becomes bald every year at the time of sowing rape. The partridge does not fly beyond the frontiers of Bœotia, into Attica; nor does any bird, in the island in the Euxine in which Achilles was buried, enter the temple there consecrated to him. In the territory of Fidenæ, in the vicinity of the City, the storks have no young nor do they build nests: but vast numbers of ringdoves arrive from beyond sea every year in the district of Volaterræ. At Rome, neither flies nor dogs ever enter the temple of

Hercules in the Cattle Market. There are numerous other instances of a similar nature in reference to all kinds of animals, which from time to time I feel myself prompted by prudent considerations to omit, lest I should only weary the reader. Theophrastus, for example, relates that even pigeons, as well as peacocks and ravens, have been introduced from other parts into Asia, as also croaking frogs into Cyrenaica.

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CHAP. 42.

THE VARIOUS KINDS OF BIRDS WHICH AFFORD OMENS BY THEIR NOTE — BIRDS WHICH CHANGE THEIR COLOUR AND THEIR VOICE.

There is another remarkable fact too, relative to the birds which give omens by their note; they generally change their colour and voice at a certain season of the year, and suddenly become quite altered in appearance; a thing that, among the larger birds, happens with the crane only, which grows black in its old age. From black, the blackbird changes to a reddish colour, sings in summer, chatters in winter, and about the summer solstice loses its voice; when a year old, the beak also assumes the appearance of ivory; this, however, is the case only with the male. In the summer, the thrush is mottled about the neck, but in the winter it becomes of one uniform colour all over.

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CHAP. 43.

THE NIGHTINGALE.

The song of the nightingale is to be heard, without intermission, for fifteen days and nights, continuously, when the foliage is thickening, as it bursts from the bud; a bird which deserves our admiration in no slight degree. First of all, what a powerful voice in so small a body! its note, how long, and how well sustained! And then, too, it is the only bird the notes of which are modulated in accordance with the strict rules of musical science. At one moment, as it sustains its breath, it will prolong its note, and then at another, will vary it with different inflexions; then, again, it will break into distinct chirrups, or pour forth an endless series of roulades. Then it will warble to itself, while taking breath, or else disguise its voice in an instant; while sometimes, again, it will twitter to itself, now with a full note, now with a grave, now again sharp, now with a broken note, and now with a prolonged one. Sometimes, again, when it thinks fit, it will break out into quavers, and will run through, in succession, alto, tenor, and bass: in a word, in so tiny a throat is to be found all the melody that the ingenuity of man has ever discovered through the medium of the invention of the most exquisite flute: so much so, that there can be no doubt it was an infallible presage of his future sweetness as a poet, when one of these creatures perched and sang on the infant lips of the poet Stesichorus.

That there may remain no doubt that there is a certain degree of art in its performances, we may here remark that every bird has a number of notes peculiar to itself; for they do not, all of them, have the same, but each, certain melodies of its own. They vie with one another, and the spirit with which they contend is evident to all. The one that is vanquished, often dies in the contest, and will rather yield its life than its song. The younger birds are listening in the meantime, and receive the lesson in song from which they are to profit. The learner hearkens with the greatest attention, and repeats what it has heard, and then they are silent by turns; this is understood to be the correction of an error on the part of the scholar, and a sort of reproof,

as it were, on the part of the teacher. Hence it is that nightingales fetch as high a price as slaves, and, indeed, sometimes more than used formerly to be paid for a man in a suit of armour.

I know that on one occasion six thousand sesterces were paid for a nightingale, a white one it is true, a thing that is hardly ever to be seen, to be made a present of to Agrippina, the wife of the Emperor Claudius. A nightingale has been often seen that will sing at command, and take alternate parts with the music that accompanies it; men, too, have been found who could imitate its note with such exactness, that it would be impossible to tell the difference, by merely putting water in a reed held crosswise, and then blowing into it, a languette being first inserted, for the purpose of breaking the sound and rendering it more shrill. But these modulations, so clever and so artistic, begin gradually to cease at the end of the fifteen days; not that you can say, however, that the bird is either fatigued or tired of singing; but, as the heat increases, its voice becomes altogether changed, and possesses no longer either modulation or variety of note. Its colour, too, becomes changed, and at last, throughout the winter, it totally disappears. The tongue of the nightingale is not pointed at the tip, as in other birds. It lays at the beginning of the spring, six eggs at the most.

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CHAP. 44.

THE MELANCORYPHUS, THE ERITHACITS, AND THE PHŒNICURUS.

The change is different that takes place in the ficedula, for this bird changes its shape as well as its colour. “Ficedula” is the name by which it is called in autumn, but not after that period; for then it is called “melancoryphus.” In the same manner, too, the erithacus of the winter is the “phœnicurus” of the summer. The hoopoe also, according to the poet Æschylus, changes its form; it is a bird that feeds upon filth of all kinds, and is remarkable for its twisted topknot, which it can contract or elevate at pleasure along the top of the head.

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CHAP. 45.

THE ŒNANTHE, THE CHLORION, THE BLACKBIRD, AND THE IBIS.

The cenanthe, too, is a bird that has stated days for its re- treat. At the rising of Sirius it conceals itself, and at the setting of that star comes forth from its retreat: and this it does, a most singular thing, exactly upon both those days. The chlorion, also, the body of which is yellow all over, is not seen in the winter, but comes out about the summer solstice.

(30.) The blackbird is found in the vicinity of Cyllene, in Arcadia, with white plumage; a thing that is the case nowhere else. The ibis, in the neighbourhood of Pelusium only is black, while in all other places it is white.

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CHAP. 46. (31.)

THE TIMES OF INCUBATION OF BIRDS.

The birds that have a note, with the exception of those previously mentioned, do not by any chance produce their young before the vernal or after the autumnal equinox. As to the broods produced before the summer solstice, it is very doubtful if they will survive, but those hatched after it thrive well.

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CHAP. 47. (32.)

THE HALCYONES: THE HALCYON DAYS THAT ARE FAVOURABLE TO NAVIGATION.

It is for this that the halcyon is more especially remarkable; the seas, and all those who sail upon their surface, well know the days of its incubation. This bird is a little larger than a sparrow, and the greater part of its body is of an azure blue colour, with only an intermixture of white and purple in some of the larger feathers, while the neck is long and slender. There is one kind that is remarkable for its larger size and its note; the smaller ones are heard singing in the reed-beds. It is a thing of very rare occurrence to see a halcyon, and then it is only about the time of the setting of the Vergiliæ, and the summer and winter solstices; when one is sometimes to be seen to hover about a ship, and then immediately disappear. They hatch their young at the time of the winter solstice, from which circumstance those days are known as the " halcyon days:" during this period the sea is calm and navigable, the Sicilian sea in particular. They make their nest during the seven days before the winter solstice, and sit the same number of days after. Their nests are truly wonderful; they are of the shape of a ball slightly elongated, have a very narrow mouth, and bear a strong resemblance to a large sponge. It is impossible to cut them asunder with iron, and they are only to be broken with a strong blow, upon which they separate, just like foam of the sea when dried up. It has never yet been discovered of what material they are made; some persons think that they are formed of sharp fish-Bones, as it is on fish that these birds live. They enter rivers also; their eggs are five in number.

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CHAP. 48.

OTHER KINDS OF AQUATIC BIRDS.

The sea-mew also builds its nest in rocks, and the diver in trees as well. These birds produce three at the very most; the sea-mew in summer, the diver at the beginning of spring.

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CHAP. 49. (33.)

THE INSTINCTIVE CLEVERNESS DISPLAYED BY BIRDS IN THE CONSTRUCTION OF THEIR NESTS. THE WONDER- FUL WORKS OF THE SWALLOW. THE BANK-SWALLOW.

The form of the nest built by the halcyon reminds me also of the instinctive cleverness displayed by other birds; and, indeed, in no respect is the ingenuity of birds more deserving of our admiration. The swallow builds its nest of mud, and strengthens it with straws. If mud happens to fail, it soaks itself with a quantity of water, which it then shakes from off its feathers into the dust. It lines the inside of the nest with soft feathers and wool, to keep the eggs warm, and in order that the nest may not be hard and rough to its young when hatched. It divides the food among its offspring with the most rigid justice, giving it first to one and then to another. With a remarkable notion of cleanliness, it throws out of the nest the ordure of the young ones, and when they have grown a little older, teaches them how to turn round, and let it fall outside of the nest.

There is another kind of swallow, also, that frequents the fields and the country; its nest is of a different shape, though of the same materials, but it rarely builds it against houses. The nest has its mouth turned straight upwards, and the entrance to it is long and narrow, while the body is very capacious. It is quite wonderful what skill is displayed in the formation of it, for the purpose of concealing the young ones, and of presenting a soft surface for them to lie upon. At the Heracleotic Mouth of the Nile in Egypt, the swallows present an insuperable obstacle to the inroads of that river, in the embankment which is formed by their nests in one continuous line, nearly a stadium in length; a thing that could not possibly have been effected by the agency of man. In Egypt, too, near the city of Coptos, there is an island sacred to Isis. In the early days of spring, the swallows strengthen the angular corner of this island with chaff and straw, thus fortifying it in order that the river may not sweep it away. This work they persevere in for three days and nights together, with such unremitting labour, that it is a well-known fact that many of

them die with their exertions. This, too, is a toil which recurs regularly for them every year.

There is, again, a third kind of swallow, which makes holes in the banks of rivers, to serve for its nest. The young of these birds, reduced to ashes, are a good specific against mortal maladies of the throat, and tend to cure many other diseases of the human body. These birds do not build nests, and they take care to migrate a good many days before, if it so happens that the rise of the river is about to reach their holes.

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CHAP. 50.

THE ACANTHYLLIS AND OTHER BIRDS.

Belonging to the genus of birds known as the " vitiparræ," there is one whose nest is formed of dried moss, and is in shape so exactly like a ball, that it is impossible to discover the mouth of it. The bird, also, that is known as the acanthyllis, makes its nest of a similar shape, and interweaves it with pieces of flax. The nest of one of the woodpeckers, very much like a cup in shape, is suspended by a twig from the end of the branch of a tree, so that no quadruped may be able to reach it. It is strongly asserted, that the witwall sleeps suspended by its feet, because it fancies that by doing so it is in greater safety. A thing, indeed, that is well-known of them all, is the fact that, in a spirit of foresight, they select the projecting branches of trees that are sufficiently strong, for the purpose of supporting their nests, and then arch them over to protect them from the rain, or else shield them by means of the thickness of the foliage.

In Arabia there is a bird known as the "cinnamolgus." It builds its nest with sprigs of cinnamon; and the natives knock them down with arrows loaded with lead, in order to sell them. In Scythia there is a bird, the size of the otis, which produces two young ones always, in a hare's skin suspended from the top branches of a tree. Pies, when they have observed a person steadily gazing at their nest, will immediately remove their eggs to another place. This is said to be accomplished in a truly wonderful manner, by such birds as have not toes adapted for holding and removing their eggs. They lay a twig upon two eggs, and then solder them to it by means of a glutinous matter secreted from their body; after which, they pass their neck between the eggs, and so forming an equipoise, convey them to another place.

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CHAP. 51.

THE MEROPS — PARTRIDGES.

No less, too, is the shrewdness displayed by those birds which make their nests upon the ground, because, from the extreme weight of their body, they are unable to fly aloft. There is a bird, known as the "merops," which feeds its parents in their retreat: the colour of the plumage on the inside is pale, and azure without, while it is of a somewhat reddish hue at the extremity of the wings: this bird builds its nest in a hole which it digs to the depth of six feet.

Partridges fortify their retreat so well with thorns and shrubs, that it is effectually protected against beasts of prey. They make a soft bed for their eggs by burying them in the dust, but do not hatch them where they are laid: that no suspicion may arise from the fact of their being seen repeatedly about the same spot, they carry them away to some other place. The females also conceal themselves from their mates, in order that they may not be delayed in the process of incubation, as the males, in consequence of the warmth of their passions, are apt to break the eggs. The males, thus deprived of the females, fall to fighting among themselves; and it is said that the one that is conquered, is treated as a female by the other. Trogus Pompeius tells us that quails and dunghill cocks sometimes do the same; and adds, that wild partridges, when newly caught, or when beaten by the others, are trodden promiscuously by the tame ones. Through the very pugnacity thus inspired by the strength of their passions, these birds are often taken, as the leader of the whole covey frequently advances to fight with the decoy-Bird of the fowler; as soon as he is taken, another and then another will advance, all of which are caught in their turn. The females, again, are caught about the pairing season; for then they will come forward to quarrel with the female decoy-Bird of the fowler, and so drive her away. Indeed, in no other animal is there any such susceptibility in the sexual feelings; if the female only stands opposite to the male, while the wind is blowing from that direction, she will become impregnated; and during this time she is in a state of the greatest excitement, the

beak being wide open and the tongue thrust out. The female will conceive also from the action of the air, as the male flies above her, and very often from only hearing his voice: indeed, to such a degree does passion get the better of her affection for her offspring, that although at the moment she is sitting furtively and in concealment, she will, if she perceives the female decoy-Bird of the fowler approaching her mate, call him back, and summon him away from the other, and voluntarily submit to his advances.

Indeed, these birds are often carried away by such frantic madness, that they will settle, being quite blinded by fear, upon the very head of the fowler. If he happens to move in the direction of the nest, the female bird that is sitting will run and throw herself before his feet, pretending to be over-heavy, or else weak in the loins, and then, suddenly running or flying for a short distance before him, will fall down as though she had a wing broken, or else her feet; just as he is about to catch her, she will then take another fly, and so keep baffling him in his hopes, until she has led him to a considerable distance from her nest. As soon as she is rid of her fears, and free from all maternal disquietude, she will throw herself on her back in some furrow, and seizing a clod of earth with her claws, cover herself all over. It is supposed that the life of the partridge extends to sixteen years.

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CHAP. 52. (34.)

PIGEONS.

Next to the partridge, it is in the pigeon that similar tendencies are to be seen in the same respect: but then, chastity is especially observed by it, and promiscuous intercourse is a thing quite unknown. Although inhabiting a domicile in common with others, they will none of them violate the laws of conjugal fidelity: not one will desert its nest, unless it is either widower or widow. Although, too, the males are very imperious, and sometimes even extremely exacting, the females put up with it: for in fact, the males sometimes suspect them of infidelity, though by nature they are incapable of it. On such occasions the throat of the male seems quite choked with indignation, and he inflicts severe blows with the beak: and then afterwards, to make some atonement, he falls to billing, and by way of pressing his amorous solicitations, sidles round and round the female with his feet. They both of them manifest an equal degree of affection for their offspring; in- deed, it is not unfrequently that this is a ground for correction, in consequence of the female being too slow in going to her young. When the female is sitting, the male renders her every attention that can in any way tend to her solace and comfort. The first thing that they do is to eject from the throat some saltish earth, which they have digested, into the mouths of the young ones, in order to prepare them in due time to receive their nutriment. It is a peculiarity of the pigeon and of the turtle-dove, not to throw back the neck when drinking, but to take in the water at a long draught, just as beasts of burden do.

(35.) We read in some authors that the ring-dove lives so long as thirty years, and sometimes as much as forty, without any other inconvenience than the extreme length of the claws, which with them, in fact, is the chief mark of old age; they can be cut, however, without any danger. The voice of all these birds is similar, being composed of three notes, and then a mournful noise at the end. In winter they are silent, and they only recover their voice in the spring. Nigidius expresses it as his opinion that the ring-dove will abandon

the place, if she hears her name mentioned under the roof where she is sitting on her eggs: they hatch their young just after the summer solstice. Pigeons and turtle-doves live eight years.

(36.) The sparrow, on the other hand, which has an equal degree of salaciousness, is short-lived in the extreme. It is said that the male does not live beyond a year; and as a ground for this belief, it is stated that at the beginning of spring, the black marks are never to be seen upon the beak which began to appear in the summer. The females, however, are said to live somewhat longer.

Pigeons have even a certain appreciation of glory. There is reason for believing that they are well aware of the colours of their plumage, and the various shades which it presents, and even in their very mode of flying they court our applause, as they cleave the air in every direction. It is, indeed, through this spirit of ostentation that they are handed over, fast bound as it were, to the hawk; for from the noise that they make, which, in fact, is only produced by the flapping of their wings, their long feathers become twisted and disordered: otherwise, when they can fly without any impediment, they are far swifter in their movements than the hawk. The robber, lurking amid the dense foliage, keeps on the look-out for them, and seizes them at the very moment that they are indulging their vainglorious self-complaisance.

(37.) It is for this reason that it is necessary to keep along with the pigeons the bird that is known as the "tinnunculus;" as it protects them, and by its natural superiority scares away the hawk; so much so, indeed, that the hawk will vanish at the very sight of it, and the instant it hears its voice. Hence it is that the pigeons have an especial regard for this bird; and, it is said, if one of these birds is buried at each of the four corners of the pigeon-house in pots that have been newly glazed, the pigeons will not change their abode — a result which has been obtained by some by cutting a joint of their wings with an instrument of gold; for if any other were used, the wounds would be not unattended with danger. — The pigeon in general may be looked upon as a bird fond of change; they have the art, too, among themselves of gaining one another over, and so seducing their companions: hence it is that we frequently find them return attended by others which they have enticed away.

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CHAP. 53.

WONDERFUL THINGS DONE BY THEM; PRICES AT WHICH THEY HAVE BEEN SOLD.

In addition to this, pigeons have acted as messengers in affairs of importance. During the siege of Mutina, Decimus Brutus, who was in the town, sent despatches to the camp of the consuls fastened to pigeons' feet. Of what use to Antony then were his intrenchments, and all the vigilance of the be- sieging army? his nets, too, which he had spread in the river, while the messenger of the besieged was cleaving the air?

Many persons have quite a mania for pigeons — Building towns for them on the top of their roofs, and taking a pleasure in relating the pedigree and noble origin of each. Of this there is an ancient instance that is very remarkable; L. Axius, a Roman of the equestrian order, shortly before the Civil War of Pompeius, sold a single pair for four hundred denarii, as we learn from the writings of M. Varro. Countries even have gained renown for their pigeons; it is thought that those of Campania attain the largest size.

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CHAP. 54. (38.)

DIFFERENT MODES OF FLIGHT AND PROGRES- SION IN BIRDS.

The flight of the pigeon also leads me to consider that of other birds as well. All other animals have one determinate mode of progression, which in every kind is always the same; it is birds alone that have two modes of moving-the one on the ground, the other in the air. Some of them walk, such as the crow, for instance; some hop, as the sparrow and the blackbird; some, again, run, as the partridge and the woodhen; while others throw one foot before the other, the stork and the crane, for instance. Then again, in their flight, some birds expand their wings, and, poising themselves in the air, only move them from time to time; others move them more frequently, but then only at the extremities; while others expand them so as to expose the whole of the side. On the other hand, some fly with the greater part of the wings kept close to the side; and some, after striking the air once, others twice, make their way through it, as though pressing upon it enclosed beneath their wings; other birds dart aloft in a vertical direction, others horizontally, and others come falling straight downwards. You would almost think that some had been hurled upwards with a violent effort, and that others, again, had fallen straight down from aloft; while others are seen to spring forward in their flight. Ducks alone, and the other birds of that kind, in an instant raise themselves aloft, taking a spring from the spot where they stand straight upwards towards the heavens; and this they can do from out of the water even; hence it is that they are the only birds that can make their escape from the pitfalls which we employ for the capture of wild beasts.

The vulture and the heavier wild birds can only fly after taking a run, or else by commencing their flight from an elevated spot. They use the tail by way of rudder. There are some birds that are able to see all around them; others, again, have to turn the neck to do so. Some of them eat what they have seized, holding it in their feet. Many, as they fly, utter some cry; while on the other hand, many, in their flight, are silent. Some fly with the breast half upright, others

with it held downwards, others fly obliquely, or else side-ways, and others following the direction of the bill. Some, again, are borne along with the head upwards; indeed the fact is, that if we were to see several kinds at the same moment, we should not suppose that they have to make their way in the same element.

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CHAP. 55. (39.)

THE BIRDS CALLED APODES, OR CYPSELI.

Those birds which are known as “apodes” fly the most of all, because they are deprived of the use of their feet. By some persons they are called “cypseli.” They are a species of swallow which build their nests in the rocks, and are the same birds that are to be seen everywhere at sea; indeed, however far a ship may go, however long its voyage, and however great the distance from land, the apodes never cease to hover around it. Other birds settle and come to a stand, whereas these know no repose but in the nest; they are always either on the wing or else asleep.

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CHAP. 56. (40.)

RESPECTING THE FOOD OF BIRDS–THE CAPRI- MULGUS, THE PLATEA.

The instincts, also, of birds are no less varied, and more especially in relation to their food. “Caprimulgus is the name of a bird, which is to all appearance a large blackbird; it thieves by night, as it cannot see during the day. It enters the folds of the shepherds, and makes straight for the udder of the she-goat, to suck the milk. Through the injury thus inflicted the udder shrivels away, and the goat that has been thus deprived of its milk, is afflicted with incipient blindness.

“Platea” is the name of another, which pounces upon other birds when they have dived in the sea, and, seizing the head with its bill, makes them let go their prey. This bird also swallows and fills itself with shell-fish, shells and all; after the natural heat of its crop has softened them, it brings them up again, and then picking out the shells from the rest, selects the parts that are fit for food.

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CHAP. 57. (41.)

THE INSTINCTS OF BIRDS — THE CARDUELIS, THE TAURUS, THE ANTHUS.

The farm-yard fowls have also a certain notion of religion; upon laying an egg they shudder all over, and then shake their feathers; after which they turn round and purify themselves, or else hallow themselves and their eggs with some stalk or other. (42.) The carduelis, which is the very smallest bird of any, will do what it is bid, not only with the voice but with the feet as well, and with the beak, which serves it instead of hands. There is one bird, found in the territory of Arelate, that imitates the lowing of oxen, from which circumstance it has received the name of “taurus.” In other respects it is of small size. Another bird, called the “anthus,” imitates the neighing of the horse; upon being driven from the pasture by the approach of the horses, it will mimic their voices-and this is the method it takes of revenging itself.

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CHAP. 58.

BIRDS WHICH SPEAK-THE PARROT.

But above all, there are some birds that can imitate the human voice; the parrot, for instance, which can even converse. India sends us this bird, which it calls by the name of “sittaces;” the body is green all over, only it is marked with a ring of red around the neck. It will duly salute an emperor, and pronounce the words it has heard spoken; it is rendered especially frolicsome under the influence of wine. Its head is as hard as its beak; and this, when it is being taught to talk, is beaten with a rod of iron, for otherwise it is quite insensible to blows. When it lights on the ground it falls upon its beak, and by resting upon it makes itself all the lighter for its feet, which are naturally weak.

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CHAP. 59.

THE PIE WHICH FEEDS ON ACORNS.

The magpie is much less famous for its talking qualities than the parrot, because it does not come from a distance, and yet it can speak with much more distinctness. These birds love to hear words spoken which they can utter; and not only do they learn them, but are pleased at the task; and as they con them over to themselves with the greatest care and attention, make no secret of the interest they feel. It is a well-known fact, that a magpie has died before now, when it has found itself mastered by a difficult word that it could not pronounce. Their memory, however, will fail them if they do not from time to time hear the same word repeated; and while they are trying to recollect it, they will show the most extravagant joy, if they happen to hear it. Their appearance, although there is nothing remarkable in it, is by no means plain; but they have quite sufficient beauty in their singular ability to imitate the human speech.

It is said, however, that it is only the kind of pie which feeds upon acorns that can be taught to speak; and that among these, those which have five toes on each foot can be taught with the greatest facility; but in their case even, only during the first two years of their life. The magpie has a broader tongue than is usual with most other birds; which is the case also with all the other birds that can imitate the human voice; although some individuals of almost every kind have the faculty of doing so.

Agrippina, the wife of Claudius Cæsar, had a thrush that could imitate human speech, a thing that was never known before. At the moment that I am writing this, the young Cæsars have a starling and some nightingales that are being taught to talk in Greek and Latin; besides which, they are studying their task the whole day, continually repeating the new words that they have learnt, and giving utterance to phrases even of considerable length. Birds are taught to talk in a retired spot, and where no other voice can be heard, so as to interfere with their lesson; a person sits by them, and continually repeats the words he wishes them to learn, while at the same time he encourages

them by giving them food.

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CHAP. 60. (43.)

A SEDITION THAT AROSE AMONG THE ROMAN PEOPLE, IN CONSEQUENCE OF A RAVEN SPEAKING.

Let us do justice, also, to the raven, whose merits have been attested not only by the sentiments of the Roman people, but by the strong expression, also, of their indignation. In the reign of Tiberius, one of a brood of ravens that had bred on the top of the temple of Castor, happened to fly into a shoemaker's shop that stood opposite: upon which, from a feeling of religious veneration, it was looked upon as doubly recommended by the owner of the place. The bird, having been taught to speak at an early age, used every morning to fly to the Rostra, which look towards the Forum; here, addressing each by his name, it would salute Tiberius, and then the Cæsars Germanicus and Drusus, after which it would proceed to greet the Roman populace as they passed, and then return to the shop: for several years it was remarkable for the constancy of its attendance. The owner of another shoemaker's shop in the neighbourhood, in a sudden fit of anger killed the bird, enraged, as he would have had it appear, because with its ordure it had soiled some shoes of his. Upon this, there was such rage manifested by the multitude, that he was at once driven from that part of the city, and soon after put to death. The funeral, too, of the bird was celebrated with almost endless obsequies; the body was placed upon a litter carried upon the shoulders of two Æthiopians, preceded by a piper, and borne to the pile with garlands of every size and description. The pile was erected on the right-hand side of the Appian Way, at the second milestone from the City, in the field generally known as the "field of Rediculus." Thus did the rare talent of a bird appear a sufficient ground to the Roman people for honouring it with funeral obsequies, as well as for inflicting punishment on a Roman citizen; and that, too, in a city in which no such crowds had ever escorted the funeral of any one out of the whole number of its distinguished men, and where no one had been found to avenge the death of Scipio Æmilianus, the man who had destroyed Carthage and Numantia. This event happened in the consulship of M. Servilius and

Caius Cestius, on the fifth day before the calends of April.

At the present day also, the moment that I am writing this, there is in the city of Rome a crow which belongs to a Roman of equestrian rank, and was brought from Bætica. In the first place, it is remarkable for its colour, which is of the deepest black, and at the same time it is able to pronounce several connected words, while it is repeatedly learning fresh ones. Recently, too, there has been a story told about Craterus, surnamed Monoceros, in Erizena, a country of Asia, who was in the habit of hunting with the assistance of ravens, and used to carry them into the woods, perched on the tuft of his helmet and on his shoulders. The birds used to keep on the watch for game, and raise it; and by training he had brought this art to such a pitch of perfection, that even the wild ravens would attend him in a similar manner when he went out. Some authors have thought the following circumstance deserving of remembrance: — A crow that was thirsty was seen heaping stones into the urn on a monument, in which there was some rain-water which it could not reach: and so, being afraid to go down to the water, by thus accumulating the stones, it caused as much water to come within its reach as was necessary to satisfy its thirst.

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CHAP. 61. (44.)

THE BIRDS OF DIOMEDES.

Nor yet must I pass by the birds of Diomedes in silence. Juba calls these birds "cataractæ," and says that they have teeth and eyes of a fiery colour, while the rest of the body is white: that they always have two chiefs, the one to lead the main body, the other to take charge of the rear; that they excavate holes with their bills, and then cover them with hurdles, which they cover again with the earth that has been thus thrown up; that it is in these places they hatch their young; that each of these holes has two outlets; that one of them looks towards the east, and that by it they go forth to feed, returning by the one which looks towards the west; and that when about to ease themselves, they always take to the wing, and fly against the wind. In one spot only throughout the whole earth are these birds to be seen, in the island, namely, which we have mentioned as famous for the tomb and shrine of Diomedes, lying over against the coast of Apulia: they bear a strong resemblance to the coot. When strangers who are barbarians arrive on that island, they pursue them with loud and clamorous cries, and only show courtesy to Greeks by birth; seeming thereby, with a wonderful discernment, to pay respect to them as the fellow-countrymen of Diomedes. Every day they fill their throats, and cover their feathers, with water, and so wash and purify the temple there. From this circumstance arises the fable that the companions of Diomedes were metamorphosed into these birds.

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CHAP. 62. (45.)

ANIMALS THAT CAN LEARN NOTHING.

We ought not to omit, while we are speaking of instincts, that among birds the swallow is quite incapable of being taught, and among land animals the mouse; while on the other hand, the elephant does what it is ordered, the lion submits to the yoke, and the sea-calf and many kinds of fishes are capable of being tamed.

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CHAP. 63. (46.)

THE MODE OF DRINKING WITH BIRDS. THE PORPHYRIO.

Birds drink by suction; those which have a long neck taking their drink in a succession of draughts, and throwing the head back, as though they were pouring the water down the throat. The porphyrio is the only bird that seems to bite at the water as it drinks. The same bird has also other peculiarities of its own; for it will every now and then dip its food in the water, and then lift it with its foot to its bill, using it as a hand. Those that are the most esteemed are found in Commagene. They have beaks and very long legs, of a red colour.

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CHAP. 64. (47.)

THE HÆMATOPOUS.

There are the same characteristics in the hæmatopous also, a bird of much smaller size, although standing as high on the legs. It is a native of Egypt, and has three toes on each foot; flies forming its principal food. If brought to Italy, it survives for a few days only.

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CHAP. 65.

THE FOOD OF BIRDS.

All the heavy birds are frugivorous; while those with a higher flight feed upon flesh only. Among the aquatic birds, the divers are in the habit of devouring what the other birds have disgorged.

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CHAP. 66.

THE PELICAN.

The pelican is similar in appearance to the swan, and it would be thought that there was no difference between them whatever, were it not for the fact that under the throat there is a sort of second crop, as it were. It is in this that the everinsatiate animal stows everything away, so much so, that the capacity of this pouch is quite astonishing. After having finished its search for prey, it discharges bit by bit what it has thus stowed away, and reconveys it by a sort of ruminating process into its real stomach. The part of Gallia that lies nearest to the Northern Ocean produces this bird.

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CHAP. 67.

FOREIGN BIRDS: THE PHALERIDES, THE PHEASANT, AND THE NUMIDICÆ.

In the Hercynian Forest, in Germany, we hear of a singular kind of bird, the feathers of which shine at night like fire; the other birds there have nothing remarkable beyond the celebrity which generally attaches to objects situate at a distance.

(48.) The phalerides, the most esteemed of all the aquatic birds, are found at Seleucia, the city of the Parthians of that name, and in Asia as well; and again, in Colchis, there is the pheasant, a bird with two tufts of feathers like ears, which it drops and raises every now and then. The numidicæ come from Numidia, a part of Africa: all these varieties are now to be found in Italy.

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CHAP. 68.

THE PEŒNICOPTERITS, THE ATTAGEN, THE PHALACRO- CORAX, THE PYBRHOCORAX, AND THE LAGOPUS.

Apicius, that very deepest whirlpool of all our epicures, has informed us that the tongue of the phœnicopterus is of the most exquisite flavour. The attagen, also, of Ionia is a famous bird; but although it has a voice at other times, it is mute in captivity. It was formerly reckoned among the rare birds, but at the present day it is found in Gallia, Spain, and in the Alps even; which is also the case with the phalacrocorax, a bird peculiar to the Balearic Isles, as the pyrrhocorax, a black bird with a yellow bill, is to the Alps, and the lagopus, which is esteemed for its excellent flavour. This last bird derives its name from its feet, which are covered, as it were, with the fur of a hare, the rest of the body being white, and the size of a pigeon. It is not an easy matter to taste it out of its native country, as it never becomes domesticated, and when dead it quickly spoils.

There is another bird also, which has the same name, and only differs from the quail in size; it is of a saffron colour, and is most delicate eating. Egnatius Calvinus, who was prefect there, pretends that he has seen in the Alps the ibis also, a bird that is peculiar to Egypt.

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CHAP. 69. (49.)

THE NEW BIRDS. THE VIPIO.

During the civil wars that took place at Bebriacum, beyond the river Padus, the “new birds” were introduced into Italy — for by that name they are still known. They resemble the thrush in appearance, are a little smaller than the pigeon in size, and of an agreeable flavour. The Balearic islands also send us a porphyrio, that is superior to the one previously mentioned. There the buteo, a kind of hawk, is held in high esteem for the table, as also the vipio, the name given to a small kind of crane.

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CHAP. 70.

FABULOUS BIRDS.

I look upon the birds as fabulous which are called “pegasi,” and are said to have a horse’s head; as also the griffons, with long ears and a hooked beak. The former are said to be natives of Scythia, the latter of Æthiopia. The same is my opinion, also, as to the tragopan; many writers, however, assert that it is larger than the eagle, has curved horns on the temples, and a plumage of iron colour, with the exception of the head, which is purple. Nor yet do the sirens obtain any greater credit with me, although Dinon, the father of Clearchus, a celebrated writer, asserts that they exist in India, and that they charm men by their song, and, having first lulled them to sleep, tear them to pieces. The person, however, who may think fit to believe in these tales, may probably not refuse to believe also that dragons licked the ears of Melampodes, and bestowed upon him the power of understanding the language of birds; as also what Democritus says, when he gives the names of certain birds, by the mixture of whose blood a serpent is produced, the person who eats of which will be able to understand the language of birds; as well as the statements which the same writer makes relative to one bird in particular, known as the “galerita,” — indeed, the science of augury is already too much involved in embarrassing questions, without these fanciful reveries.

There is a kind of bird spoken of by Homer as the “scops:” but I cannot very easily comprehend the grotesque movements which many persons have attributed to it, when the fowler is laying snares for it; nor, indeed, is it a bird that is any longer known to exist. It will be better, therefore, to confine my relation to those the existence of which is generally admitted.

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CHAP. 71. (50.)

WHO FIRST INVENTED THE ART OF CRAMMING POULTRY: WHY THE FIRST CENSORS FORBADE THIS PRACTICE.

The people of Delos were the first to cram poultry; and it is with them that originated that abominable mania for devouring fattened birds, larded with the grease of their own bodies. I find in the ancient sumptuary regulations as to banquets, that this was forbidden for the first time by a law of the consul Caius Fannius, eleven years before the Third Punic War; by which it was ordered that no bird should be served at table beyond a single pullet, and that not fattened; an article which has since made its appearance in all the sumptuary laws. A method, however, has been devised of evading it, by feeding poultry upon food that has been soaked in milk: prepared in this fashion, they are considered even still more delicate. All pullets, however, are not looked upon as equally good for the purposes of fattening, and only those are selected which have a fatty skin about the neck. Then, too, come all the arts of the kitchen-that the thighs may have a nice plump appearance, that the bird may be properly divided down the back, and that poultry may be brought to such a size that a single leg shall fill a whole platter. The Parthians, too, have taught their fashions to our cooks; and yet after all, in spite of their refinements in luxury, no article is found to please equally in every part, for in one it is the thigh, and in another the breast only, that is esteemed.

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CHAP. 72.

WHO FIRST INVENTED AVIARIES. THE DISH OF ÆSOPUS.

The first person who invented aviaries for the reception of all kinds of birds was M. Lænius Strabo, a member of the equestrian order, who resided at Brundisium. It was in his time that we thus began to imprison animals to which Nature had assigned the heavens as their element.

(51.) But more remarkable than anything in this respect, is the story of the dish of Clodius Æsopus, the tragic actor, which was valued at one hundred thousand sesterces, and in which were served up nothing but birds that had been remarkable for their song, or their imitation of the human voice, and purchased, each of them, at the price of six thousand sesterces; he being induced to this folly by no other pleasure than that in these he might eat the closest imitators of man; never for a moment reflecting that his own immense fortune had been acquired by the advantages of his voice; a parent, indeed, right worthy of the son of whom we have already made mention, as swallowing pearls. It would not, to say the truth, be very easy to come to a conclusion which of the two was guilty of the greatest baseness; unless, indeed, we are ready to admit that it was less unseemly to banquet upon the most costly of all the productions of Nature, than to devour tongues which had given utterance to the language of man.

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CHAP. 73. (52.)

THE GENERATION OF BIRDS: OTHER OVIPAROUS ANIMALS.

The generation of birds would appear to be very simple, while at the same time it has its own peculiar marvels. Indeed, there are quadrupeds as well that produce eggs, the chameleon, for instance, the lizard, and those of the serpent tribe of which we have previously spoken. Of the feathered race, those which have hooked talons are comparatively unprolific; the cenchris being the only one among them that lays more than four eggs. Nature has so ordained it in the birds, that the timid ones should be more prolific than those which are courageous. The ostrich, the common fowl, and the partridge, are the only birds that lay eggs in considerable numbers. Birds have two modes of coupling, the female crouching on the ground, as in the barn-door fowl, or else standing, as is the case with the crane.

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CHAP. 74.

THE VARIOUS KINDS OF EGGS, AND THEIR NATURE.

Some eggs are white, as those of the pigeon and partridge, for instance; others are of a pale colour, as in the aquatic birds: others, again, are dotted all over with spots, as is the case with those of the meleagris; others are red, like those of the pheasant and the cenchris. In the inside, the eggs of all birds are of two colours; those of the aquatic kind have more of the yellow than the white, and the yellow is of a paler tint than in those of other birds. Among fish, the eggs are of the same colour throughout, there being, in fact, no white. The eggs of birds are of a brittle nature, in consequence of the natural heat of the animal, while those of serpents are supple, in consequence of their coldness, and those of fish soft, from their natural humidity. Again, the eggs of aquatic birds are round, while those of most other kinds are elongated, and taper to a point. Eggs are laid with the round end foremost, and at the moment that they are laid the shell is soft, but it immediately grows hard, as each portion becomes exposed to the air. Horatius Flaccus expresses it as his opinion that those eggs which are of an oblong shape are of the most agreeable flavour. The rounder eggs are those which produce the female, the others the male. The umbilical cord is in the upper part of the egg, like a drop floating on the surface in the shell.

(53.) There are some birds that couple at all seasons of the year, barn-door fowls, for instance; they lay, too, at all times, with the exception of two months at mid-winter. Pullets lay more eggs than the older hens, but then they are smaller. In the same brood those chickens are the smallest that are hatched the first and the last. These animals, indeed, are so prolific, that some of them will lay as many as sixty eggs, some daily, some twice a day, and some in such vast numbers that they have been known to die from exhaustion. Those known as the "Adrianæ," are the most esteemed. Pigeons sit ten times a year, and some of them eleven, and in Egypt during the month of the winter solstice even. Swallows, blackbirds, ring-doves, and turtle-doves sit twice a year, most other birds only once.

Thrushes make their nests of mud, in the tops of trees, almost touching one another, and lay during the time of their retirement. The egg comes to maturity in the ovary ten days after treading; but if the hen or pigeon is tormented by pulling out the feathers, or by the infliction of any injury of a similar nature, the maturing of the egg is retarded.

In the middle of the yolk of every egg there is what appears to be a little drop of blood; this is supposed to be the heart of the chicken, it being the general belief that that part is formed the first in every animal: at all events, while in the egg this speck is seen to throb and palpitate. The body of the animal itself is formed from the white fluid in the egg; while the yellow part constitutes its food. The head in every kind, while in the shell, is larger than the rest of the body; the eyes, too, are closed, and are larger than the other parts of the head. As the chicken grows, the white gradually passes to the middle of the egg, while the yellow is spread around it. On the twentieth day, if the egg is shaken, the voice of the now living animal can be heard in the shell. From this time it gradually becomes clothed with feathers; and its position is such that it has the head above the right foot, and the right wing above the head: the yolk in the meantime gradually disappears. All birds are born with the feet first, while with every other animal the contrary is the case. Some hens lay all their eggs with two yolks, and sometimes hatch twin chickens from the same egg, one being larger than the other, according to Cornelius Celsus: other writers, however, deny the possibility of twin chickens being hatched. It is a rule never to give a brood hen more than twenty-five eggs to sit upon at once. Hens begin to lay immediately after the winter solstice. The best broods are those which are hatched before the vernal equinox: chickens that are hatched after the summer solstice, never attain their full growth, and the more so, the later they are produced.

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CHAP. 75. (54.)

DEFECTS IN BROOD-HENS, AND THEIR REMEDIES.

Those eggs which have been laid within the last ten days, are the best for putting under the hen; old ones, or those which have just been laid, will be unfruitful; an uneven number also ought to be placed. On the fourth day after the hen has begun to sit, if, upon taking an egg with one hand by the two ends and holding it up to the light, it is found to be clear and of one uniform colour, it is most likely to be barren, and another should be substituted in its place. There is also a way of testing them by means of water; an empty egg will float on the surface, while those that fall to the bottom, or, in other words, are full, should be placed under the hen. Care must be taken, however, not to make trial by shaking them, for if the organs which are necessary for life become confused, they will come to nothing. Incubation ought to begin just after the new moon; for, if commenced before, the eggs will be unproductive. The chickens are hatched sooner if the weather is warm: hence it is that in summer they break the shell on the nineteenth day, but in winter on the twenty-fifth only. If it happens to thunder during the time of incubation, the eggs are addled, and if the cry of a hawk is heard they are spoilt. The best remedy against the effects of thunder, is to put an iron nail beneath the straw on which the eggs are laid, or else some earth from off a ploughshare. Some eggs, however, are hatched by the spontaneous action of Nature, without the process of incubation, as is the case in the dung-hills of Egypt. There is a well-known story related about a man at Syracuse, who was in the habit of covering eggs with earth, and then continuing his drinking bout till they were hatched.

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CHAP. 76. (55.)

AN AUGURY DERIVED FROM EGGS BY AN EMPRESS.

And, what is even more singular still, eggs can be hatched also by a human being. Julia Augusta, when pregnant in her early youth of Tiberius Cæsar, by Nero, was particularly desirous that her offspring should be a son, and accordingly employed the following mode of divination, which was then much in use among young women: she carried an egg in her bosom, taking care, whenever she was obliged to put it down, to give it to her nurse to warm in her own, that there might be no interruption in the heat: it is stated that the result promised by this mode of augury was not falsified.

It was perhaps from this circumstance, that the modern invention took its rise, of placing eggs in a warm spot and covering them with chaff, the heat being maintained by a moderate fire, while in the meantime a man is employed in turning them. By the adoption of this plan, the young, all of them, break the shell on a stated day. There is a story told of a breeder of poultry, of such remarkable skill, that on seeing an egg he could tell which hen had laid it. It is said also that when a hen has happened to die while sitting, the males have been seen to take her place in turns, and perform all the other duties of a brood-hen, taking care in the meantime to abstain from crowing. But the most remarkable thing of all, is the sight of a hen, beneath which ducks' eggs have been put and hatched. — At first, she is unable to quite recognize the brood as her own, while in her anxiety she gives utterance to her clucking as she doubtfully calls them; then at last she will stand at the margin of the pond, uttering her laments, while the ducklings, with Nature for their guide, are diving beneath the water.

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CHAP. 77. (56.)

THE BEST KINDS OF FOWLS.

The breed of a fowl is judged of by the erectness of the crest, which is sometimes double, its black wings, reddish beak, and toes of unequal number, there being sometimes a fifth placed transversely above the other four. For the purposes of divination, those that have a yellow beak and feet are not considered pure; while for the secret rites of Bona Dea, black ones are chosen. There is also a dwarf species of fowl, which is not barren either; a thing that is the case with no other kind of bird. These dwarfs, however, rarely lay at any stated periods, and their incubation is productive of injury to the eggs.

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CHAP. 78. (57.)

THE DISEASES OF FOWLS, AND THEIR REMEDIES.

The most dangerous malady with every kind of fowl is that known as the “pituita;” which is prevalent more particularly between the times of harvest and vintage. The mode of treatment is to put them on a spare diet, and to expose them, while asleep, to the action of smoke, and more especially that of bay leaves or of the herb called savin. A feather also is inserted, and passed across through the nostrils, care being taken to move it every day; while their food consists of leeks mixed with speltmeal, or else is first soaked in water in which an owlet has been dipped, or boiled together with the seeds of the white vine. There are also some other receipts besides.

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CHAP. 79. (58.)

WHEN BIRDS LAY, AND HOW MANY EGGS. THE VARIOUS KINDS OF HERONS.

Pigeons have the peculiarity of billing before they couple; they generally lay two eggs, Nature so willing it, that among birds the produce should be more frequent with some, and more numerous with others. The ring-dove and turtle-dove mostly lay three eggs, and never more than twice, in the spring; such being the case when the first brood has been lost. Although they may happen to lay three eggs, they never hatch more than two; the third egg, which is barren, is generally known by the name of "urinum." The female ring-dove sits on the eggs from mid-day till morning, the male the rest of the time. Pigeons always produce a male and a female; the male first, the female the day after. Both the male and the female pigeon sit on the eggs; the male in the day-time, the female during the night. They hatch on the twentieth day of incubation, and lay the fifth day after coupling. Sometimes, indeed, in summer, these birds will rear three couples in two months; for then they hatch on the eighteenth day of incubation, and immediately conceive again; hence it is that eggs are often found among the young ones, some of which last are just taking wing, while others are only bursting the shell. The young ones, themselves, begin to produce at the age of five months. The females, if there should happen to be no male among them, will even tread each other, and lay barren eggs, from which nothing is produced. By the Greeks, these eggs are called "hypenemia.

(59.) The pea-hen produces at three years old. In the first year she will lay one or two eggs, in the next four or five, and in the remaining years twelve, but never beyond that number. She lays for two or three days at intervals, and will produce three broods in the year, if care is taken to put the eggs under a common hen. The males are apt to break the eggs in getting at the females while sitting, and hence it is that the pea-hen lays by night, and in secret places, or else sits on her eggs in an elevated spot; the eggs will break, too, unless they are received upon some surface that is soft. One male is

sufficient for every five females; when there are only one or two females to a male, all chance of their being prolific is spoilt through their extreme salaciousness. The young breaks the shell in twenty-seven days, or, at the very latest, on the thirtieth.

Geese pair in the water, and lay in spring; or, if they have paired in the winter, they lay about forty eggs, after the summer solstice. The hatching takes place twice in the year, if a hen hatches the first brood; otherwise, their greatest number of eggs will be sixteen, their lowest seven. If their eggs are taken away from them, they will keep on laying until they burst; they will not hatch the eggs of any other birds. The best number of eggs for placing under the goose for hatching, is nine, or else eleven. The females only sit, and that for thirty days; but if they are kept very warm, then only twenty-five. The contact of the nettle is fatal to their young, and their own greediness is no less so-sometimes, through overeating, and sometimes through over-exertion; for seizing the root of a plant with the bill, they will make repeated efforts to tear it out of the ground, and so, at last, dislocate the neck. A remedy against the noxious effects of the nettle, is to place the root of that plant under the straw of their nest.

(60.) There are three kinds of herons, called, respectively, the leucon, the asterias, and the pellos. These birds experience great pain in coupling; uttering loud cries, the males bleed from the eyes, while the females lay their eggs with no less difficulty.

The eagle sits for thirty days, as do most of the larger birds; the smaller ones, the kite and the hawk for instance, only twenty. The eagle mostly lays but one egg, never more than three. The bird which is known as the "ægolios," lays four, and the raven sometimes five; they sit, too, the same number of days as the kite and the hawk. The male crow provides the female with food while she is sitting. The magpie lays nine eggs, the malancoryphus more than twenty, but always an uneven number, and no bird of this kind ever lays more; so much superior in fecundity are the smaller birds. The young ones of the swallow are blind at first, as is the case also with almost all the birds the progeny of which is numerous.

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CHAP. 80.

WHAT EGGS ARE CALLED HYPENEMIA, AND WHAT CYNOSURA. HOW EGGS ARE BEST KEPT.

The barren eggs, which we have mentioned as “hypenemia,” are either conceived by the females when they are influenced by libidinous fancies, and couple with one another, or else at the moment when they are rolling themselves in the dust; they are produced not only by the pigeon, but by the common hen as well, the partridge, the pea-hen, the goose, and the chenalopex; these eggs are barren, smaller than the others, of a less agreeable flavour, and more humid. There are some who think that they are generated by the wind, for which reason they give them the name of “zephyria.” The eggs known as “urina,” and which by some are called “cy- nosura, are only laid in the spring, and at a time when the hen has discontinued sitting. Eggs, if soaked in vinegar, are rendered so soft thereby, that they may be twisted round the finger like a ring. The best method of preserving them is to keep them packed in bean-meal, or chaff, during the winter, and in bran during the summer. It is a general belief, that if kept in salt, they will lose their contents.

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CHAP. 81. (61.)

THE ONLY WINGED ANIMAL THAT IS VIVIPAROUS, AND NURTURES ITS YOUNG WITH ITS MILK.

Among the winged animals, the only one that is viviparous is the bat; it is the only one, too, that has wings formed of a membrane. This is, also, the only winged creature that feeds its young with milk from the breast. The mother clasps her two young ones as she flies, and so carries them along with her. This animal, too, is said to have but one joint in the haunch, and to be particularly fond of gnats.

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CHAP. 82. (62.)

TERRESTRIAL ANIMALS THAT ARE OVIPAROUS. — VARIOUS KINDS OF SERPENTS.

Again, among the terrestrial animals, there are the serpents that are oviparous; of which, as yet, we have not spoken. These creatures couple by clasping each other, and entwine so closely around one another, that they might be taken for only one animal with two heads. The male viper thrusts its head into the mouth of the female, which gnaws it in the transports of its passion. This, too, is the only one among the terrestrial animals that lays eggs within its body — of one colour, and soft, like those of fishes. On the third day it hatches its young in the uterus, and then excludes them, one every day, and generally twenty in number; the last ones become so impatient of their confinement, that they force a passage through the sides of their parent, and so kill her. Other serpents, again, lay eggs attached to one another, and then bury them in the earth; the young being hatched in the following year. Crocodiles sit on their eggs in turns, first the male, and then the female. But let us now turn to the generation of the rest of the terrestrial animals.

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CHAP. 83. (63.)

GENERATION OF ALL KINDS OF TERRESTRIAL ANIMALS.

The only one among the bipeds that is viviparous is man. Man is the only animal that repents of his first embraces; sad augury, indeed, of life, that its very origin should thus cause repentance! Other animals have stated times in the year for their embraces; but man, as we have already observed, em- ploys for this purpose all hours both of day and night; other animals become sated with venereal pleasures, man hardly knows any satiety. Messalina, the wife of Claudius Cæsar, thinking this a palm quite worthy of an empress, selected, for the purpose of deciding the question, one of the most notorious of the women who followed the profession of a hired prostitute; and the empress outdid her, after continuous intercourse, night and day, at the twenty-fifth embrace. In the human race also, the men have devised various substitutes for the more legitimate exercise of passion, all of which outrage Nature; while the females have recourse to abortion. How much more guilty than the brute beasts are we in this respect! Hesiod has stated that men are more lustful in winter, women in summer.

Coupling is performed back to back by the elephant, the camel, the tiger, the lynx, the rhinoceros, the lion, the dasy- pus, and the rabbit, the genital parts of all which animals lie far back. Camels even seek desert places, or, at all events, spots of a retired nature; and to come upon them on such an occasion is not unattended with danger. Coupling, with them, lasts a whole day; the only animal, indeed, of all those with solid hoofs, with which such is the case. Among the quadrupeds, it is the smell that excites the passions of the male. In this act, dogs also, seals, and wolves turn back to back, and remain attached, though greatly against their will. In the greater part of the animals above mentioned, the females solicit the males; in some, however, the males the females. As to bears, they lie down, like the human race, as previously mentioned by us; while hedgehogs embrace standing upright. In cats, the male stands above, while the female assumes a crouching posture; foxes lie on the side, the female

embracing the male. In the case of the cow and the hind, the female is unable to endure the violence of the male, consequently she keeps in motion during the time of coupling. The buck goes from one hind to another in turn, and then comes back to the first. Lizards couple entwined around each other, like the animals without feet.

All animals, the larger they are in bulk, are proportionably less prolific: the elephant, the camel, and the horse produce but one, while the acanthis, a very small bird, produces twelve. Those animals, also, which are the most prolific, are the shortest time in breeding. The larger an animal is, the longer is the time required for its formation in the womb; those, also, which are the longest-lived, require the longest gestation; the growing age, too, is not suitable for the purposes of generation. Those animals which have solid hoofs bear but a single young one, while those which have cloven hoofs bear two. Those, again, whose feet are divided into toes, have a still more numerous offspring; but, while the others bring forth their young perfect, these last bear them in an unformed state, such, for instance, as the lioness and the she — Bear. The fox also brings forth its young in an even more imperfect state than these; it is a very uncommon thing, however, to find it whelping. After the birth, these animals warm their young by licking them, and thereby give them their proper shape; they mostly produce four at a birth.

The dog, the wolf, the panther, and the jackal produce their young blind. There are several kinds of dogs; those of Laconia, of both sexes, are ready for breeding in the eighth month, and the females carry their young sixty or sixty-three days at most; other dogs are fit for breeding when only six months old; the female, in all cases, becomes pregnant at the first congress. Those which have conceived before the proper age, bear pups which are longer blind, though not all the same number of days. It is thought that dogs, in general, lift the leg when they water at six months old; this, too, is looked upon as a sign that they have attained their full growth and strength; when doing this, the female squats. The most numerous litters known consist of twelve, but more generally five or six is the number; sometimes, indeed, only one is pro- dued, but then it is looked upon as a prodigy, and the same is the case, too, when all the pups are of one sex. In the dog, the males come into the world first, but in other

animals, the two sexes are born alternately. The female admits the male again six months after she has littered. Those of the Laconian breed bear eight young ones. It is a peculiarity in this kind, that after undergoing great labour, the males are remarkable for their salacity. In the Laconian breed the male lives ten years, the female twelve; while other kinds, again, live fifteen years, and sometimes as much as twenty; but they are not fit for breeding to the end of their life, as they generally cease at about the twelfth year. The cat and the ichneumon are, in other respects, like the dog; but they only live six years.

The dasypus brings forth every month in the year, and is subject to superfœtation, like the hare. It conceives immediately after it has littered, even though it is still suckling its young, which are blind at their birth. The elephant, as we have already stated, produces but one, and that the size of a calf three months old. The gestation of the camel lasts twelve months; the female conceives when three years old, and brings forth in the spring; at the end of a year from that time, she is ready to conceive again. It is thought advisable to have the mare covered so soon as three days, and indeed, sometimes, only one, after she has foaled; and, however unwilling she may be, means are taken to compel her. It is believed also, that it is by no means an uncommon thing for a woman to conceive on the seventh day after her delivery. It is recommended that the manes of mares should be cut, so as to humble their pride, in order to make them submit to be covered by the male ass; for when the mane is long, they are liable to be proud and vain. This is the only animal, the female of which, after covering, runs, facing the north or the south, according as she has conceived a male or a female. They change their colour immediately after, and the hair becomes of a redder hue, and deeper, whatever the colour may naturally be; it is this that indicates that they must no longer be covered, and they, themselves, will even resist it. Gestation does not, however, preclude some of them from being worked, and they are often with foal long before it is known. We read that the mare of Echecrates, the Thessalian, conquered at the Olympic games, while with foal.

Those who are more careful enquirers into these matters, tell us that in the horse, the dog, and the swine, the males are most ardent

for sexual intercourse in the morning, while the female seeks the society of the male after mid-day. They say also, that mares in harness desire the horse sixty days sooner than those that live in herds; that it is swine only that foam at the mouth during the time of coupling; and that a boar, if it hears the voice of a sow in heat, will refuse to take its food, — to such a degree, indeed, as to starve itself, if it is not allowed to cover — while the female is reduced to such a state of frantic madness, as to attack and tear a man, more especially if wearing a white garment. This frenzy, however, is appeased by sprinkling vinegar on the sexual parts. It is supposed also that salacity is promoted by certain aliments; the herb rocket, for instance, in the case of man, and onions in that of cattle. Wild animals that have been tamed, do not conceive, the goose, for instance; the wild boar and the stag will only produce late in life, and even then they must have been taken and tamed when very young; a singular fact. The pregnant females, among the quadrupeds, refuse the male, with the exception, indeed, of the mare and the sow; superfœtation, however, takes place in none but the dasypus and the hare.

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CHAP. 84. (64.)

THE POSITION OF ANIMALS IN THE UTERUS.

All those animals that are viviparous produce their young with the head first, the young animal about the time of yeaning turning itself round in the womb, where at other times it lies extended at full length. Quadrupeds during the time of gestation have the legs extended, and lying close to the belly; while, on the other hand, man is gathered up into a ball, with the nose between the knees. With reference to moles, of which we have previously spoken, it is supposed that they are produced when a female has conceived, not by a male, but of herself only. Hence it is that there is no vitality in this false conception, because it does not proceed from the conjunction of the two sexes; and it has only that sort of vegetative existence in itself which we see in plants and trees.

(65.) Of all those which produce their young in a perfect state, the swine is the only one that bears them in considerable numbers as well; and, indeed, several times in the year a thing that is contrary to the usual nature of animals with a solid or cloven hoof.

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CHAP. 85.

ANIMALS WHOSE ORIGIN IS STILL UNKNOWN.

But it is mice that surpass all the other animals in fecundity; and it is not without some hesitation that I speak of them, although I have Aristotle and some of the officers of Alexander the Great for my authority. It is said that these animals generate by licking one another, and not by copulation. They have related cases where a single female has given birth to one hundred and twenty young ones, and in Persia some were found, even pregnant themselves, while yet in the womb of the parent. It is believed also that these animals will become pregnant on tasting salt. Hence we find that we have no longer any reason to wonder how such vast multitudes of field-mice devastate the standing corn; though it is still a mystery, with reference to them, in what way it is that such multitudes die so suddenly; for their dead bodies are never to be found, and there is not a person in existence that has ever dug up a mouse in a field during the winter. Multitudes of these animals visit Troas, and before this they have driven away the inhabitants in consequence of their vast numbers.

They multiply greatly during times of drought; it is said also that when they are about to die, a little worm grows in their head. The mice of Egypt have hard hairs, just like those of the hedge-hog. They walk on their hind feet, as also do those of the Alps. When two animals couple of different kinds, the union is only prolific if the time of gestation is the same in both. Among the oviparous quadrupeds, it is generally believed that the lizard brings forth by the mouth, though Aristotle denies the fact. These animals, too, do not sit upon their eggs, as they forget in what place they have laid them, being utterly destitute of memory; hence it is that the young ones are hatched spontaneously.

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CHAP. 86. (66.)

SALAMANDERS.

We find it stated by many authors, that a serpent is produced from the spinal marrow of a man. Many creatures, in fact, among the quadrupeds even, have a secret and mysterious origin.

(67) Thus, for instance, the salamander, an animal like a lizard in shape, and with a body starred all over, never comes out except during heavy showers, and disappears the moment it becomes fine. This animal is so intensely cold as to extinguish fire by its contact, in the same way as ice does. It spits forth a milky matter from its mouth; and whatever part of the human body is touched with this, all the hair falls off, and the part assumes the appearance of leprosy.

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CHAP. 87. (68.)

ANIMALS WHICH ARE BORN OF BEINGS THAT HAVE NOT BEEN BORN THEMSELVES — ANIMALS WHICH ARE BORN THEMSELVES BUT ARE NOT REPRODUCTIVE — ANIMALS WHICH ARE OF NEITHER SEX.

Some animals, again, are engendered of beings that are not engendered themselves, and have no such origin as those above mentioned, which are produced in the spring, or at some stated period of the year. Some of these are non-productive, the salamander, for instance, which is of no sex, either male or female; a distinction also, which does not exist in the eel and the other kinds that are neither viviparous nor oviparous. The oyster also, as well as the other shell-fish that adhere to the bottom of the sea or to rocks, are of neither sex. Again, as to those animals which are able to engender of themselves, if they are looked upon as divided into male and female, they do engender something, it is true, by coupling, but the produce is imperfect, quite dissimilar to the animal itself, and one from which nothing else is reproduced; this we find to be the case with flies, when they give birth to maggots. This fact is better illustrated by the nature of those animals which are known as insects; a subject, indeed, very difficult of explanation, and one which requires to be treated of in a Book by itself. We will, therefore, proceed for the present with our remarks upon the instincts of the animals that have been previously mentioned.

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CHAP. 88. (69.)

THE SENSES OF ANIMALS — THAT ALL HAVE THE SENSES OF TOUCH AND TASTE — THOSE WHICH ARE MORE REMARK- ABLE FOR THEIR SIGHT, SMELL, OR HEARING — MOLES — WHETHER OYSTERS HAVE THE SENSE OF HEARING.

Man excels more especially in his sense of touch, and next, in that of taste. In other respects, he is surpassed by many of the animals. Eagles can see more clearly than any other animals, while vultures have the better smell; moles hear more distinctly than others, although buried in the earth, so dense and sluggish an element as it is; and what is even more, although every sound has a tendency upwards, they can hear the words that are spoken; and, it is said, they can even understand it if you talk about them, and will take to flight immediately. Among men, a person who has not enjoyed the sense of hearing in his infancy, is deprived of the powers of speech as well; and there are none deaf from their birth who are not dumb also. Among the marine animals, it is not probable that oysters enjoy the sense of hearing, but it is said that immediately a noise is made the solen will sink to the bottom; it is for this reason, too, that silence is observed by persons while fishing at sea.

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CHAP. 89. (70.)

WHICH FISHES HAVE THE BEST HEARING.

Fishes have neither organs of hearing, nor yet the exterior orifice. And yet, it is quite certain that they do hear; for it is a well-known fact, that in some fish-ponds they are in the habit of being assembled to be fed by the clapping of the hands. In the fish-ponds, too, that belong to the Emperor, the fish are in the habit of coming, each kind as it bears its name. So too, it is said, the mullet, the wolf-fish, the salpa, and the chromis, have a very exquisite sense of hearing, and that it is for this reason that they frequent shallow water.

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CHAP. 90.

WHICH FISHES HAVE THE FINEST SENSE OF SMELL.

It is quite manifest that fishes have the sense of smell also; for they are not all to be taken with the same bait, and are seen to smell at it before they seize it. Some, too, that are concealed in the bottom of holes, are driven out by the fisherman, by the aid of the smell of salted fish; with this he rubs the entrance of their retreat in the rock, immediately upon which they take to flight from the spot, just as though they had recognized the dead carcases of those of their kind. Then, again, they will rise to the surface at the smell of certain odours, such, for instance as roasted sæpia and polypus; and hence it is that these baits are placed in the osier kipes used for taking fish. They immediately take to flight upon smelling the bilge water in a ship's hold, and more especially upon scenting the blood of fish.

The polypus cannot possibly be torn away from the rock to which it clings; but upon the herb cunila being applied, the instant it smells it the fish quits its hold. Purples also are taken by means of fetid substances. And then, too, as to the other kinds of animals, who is there that can feel any doubt? Serpents are driven away by the smell of harts' horns, and more particularly by that of storax. Ants, too, are killed by the odours of origanum, lime, or sulphur. Gnats are attracted by acids, but not by anything sweet.

(71.) All animals have the sense of touch, those even which have no other sense; for even in the oyster, and, among land animals, in the worm, this sense is found.

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CHAP. 91.

DIVERSITIES IN THE FEEDING OF ANIMALS.

I am strongly inclined to believe, too, that the sense of taste exists in all animals; for why else should one seek one kind of food, and another another? And it is in this more especially that is to be seen the wondrous power of Nature, the framer of all things. Some animals seize their prey with their teeth, others, again, with their claws; some tear it to pieces with their hooked beak; others, that have a broad bill, wabble in their food; others, with a sharp nib, work holes into it; others suck at their food; others, again, lick it, others sup it in, others chew it, and others bolt it whole. And no less a diversity is there in the uses they make of their feet, for the purpose of carrying, tearing asunder, holding, squeezing, suspending their bodies, or incessantly scratching the ground.

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CHAP. 92. (72.)

ANIMALS WHICH LIVE ON POISONS.

Roe-Bucks and quails grow fat on poisons, as we have already mentioned, being themselves the most harmless of animals. Serpents will feed on eggs, and the address displayed by the dragon is quite remarkable. — For it will either swallow the egg whole, it its jaws will allow of it, and roll over and over so as to break it within, and then by coughing eject the shells: or else, if it is too young to be able to do so, it will gradually encircle the egg with its coils, and hold it so tight as to break it at the end, just, in fact, as though a piece had been cut out with a knife; then holding the remaining part in its folds, it will suck the contents. In the same manner, too, when it has swallowed a bird whole, it will make a violent effort, and vomit the feathers.

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CHAP. 93.

ANIMALS WHICH LIVE ON EARTH-ANIMALS WHICH WILL NOT DIE OF HUNGER OR THIRST.

Scorpions live on earth. Serpents, when an opportunity presents itself, show an especial liking for wine, although in other respects they need but very little drink. These animals, also, when kept shut up, require but little aliment, hardly any at all, in fact. The same is the case also with spiders, which at other times live by suction. Hence it is, that no venomous animal will die of hunger or thirst; it being the fact that they have neither heat, blood, nor sweat; all which humours, from their natural saltness, increase the animal's voracity. In this class of animals all those are the most deadly, which have eaten some of their own kind just before they inflict the wound. The sphingium and the satyr stow away food in the pouches of their cheeks, after which they will take it out piece by piece with their hands and eat it; and thus they do for a day or an hour what the ant usually does for the whole year.

(73.) The only animal with toes upon the feet that feeds upon grass is the hare, which will eat corn as well; while the solid-hoofed animals, and the swine among the cloven-footed ones, will eat all kinds of food, as well as roots. To roll over and over is a peculiarity of the animals with a solid hoof. All those which have serrated teeth are carnivorous. Bears live also upon corn, leaves, grapes, fruit, bees, crabs even, and ants; wolves, as we have already stated, will eat earth even when they are famishing. Cattle grow fat by drinking; hence it is that salt agrees with them so well; the same is also the case with beasts of burden, although they live on corn as well as grass; but they eat just in proportion to what they drink. In addition to those already spoken of, among the wild animals, stags ruminate, when reared in a domesticated state. All animals ruminate lying in preference to standing, and more in winter than in summer, mostly for seven months in the year. The Pontic mouse also ruminates in a similar manner.

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CHAP. 94.

DIVERSITIES IN THE DRINKING OF ANIMALS.

In drinking, those animals which have serrated teeth, lap; and common mice do the same, although they belong to another class. Those which have the teeth continuous, horses and oxen, for instance, sup; bears do neither the one nor the other, but seem to bite at the water, and so devour it. In Africa, the greater part of the wild beasts do not drink in summer, through the want of rain; for which reason it is that the mice of Libya, when caught, will die if they drink. The ever-thirsting plains of Africa produce the oryx, an animal which, in consequence of the nature of its native locality, never drinks, and which, in a remarkable manner, affords a remedy against drought: for the Gætulian bandits by its aid fortify themselves against thirst, by finding in its body certain vesicles filled with a most wholesome liquid. In this same Africa, also, the pards conceal themselves in the thick foliage of the trees, and then spring down from the branches on any creature that may happen to be passing by, thus occupying what are ordinarily the haunts of the birds. Cats too, with what silent stealthiness, with what light steps do they creep towards a bird! How slily they will sit and watch, and then dart out upon a mouse! These animals scratch up the earth and bury their ordure, being well aware that the smell of it would betray their presence.

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CHAP. 95. (74.)

ANTIPATHIES OF ANIMALS. PROOFS THAT THEY ARE SENSIBLE OF FRIENDSHIP AND OTHER AFFECTIONS.

Hence there will be no difficulty in perceiving that animals are possessed of other instincts besides those previously mentioned. In fact, there are certain antipathies and sympathies among them, which give rise to various affections besides those which we have mentioned in relation to each species in its appropriate place. The swan and the eagle are always at variance, and the raven and the chloreus seek each other's eggs by night. In a similar manner, also, the raven and the kite are perpetually at war with one another, the one carrying off the other's food. So, too, there are antipathies between the crow and the owl, the eagle and the trochilus; — Between the last two, if we are to believe the story, because the latter has received the title of the "king of the birds:" the same, again, with the owlet and all the smaller birds.

Again, in relation to the terrestrial animals, the weasel is at enmity with the crow, the turtle-dove with the pyrallis, the ichneumon with the wasp, and the phalangium with other spiders. Among aquatic animals, there is enmity between the duck and the sea-mew, the falcon known as the "harpe," and the hawk called the "triorchis." In a similar manner, too, the shrew-mouse and the heron are ever on the watch for each other's young; and the ægithus, so small a bird as it is, has an antipathy to the ass; for the latter, when scratching itself, rubs its body against the brambles, and so crushes the bird's nest; a thing of which it stands in such dread, that if it only hears the voice of the ass when it brays, it will throw its eggs out of the nest, and the young ones themselves will sometimes fall to the ground in their fright; hence it is that it will fly at the ass, and peck at its sores with its beak. The fox, too, is at war with the nisus, and serpents with weasels and swine. Æsalon is the name given to a small bird that breaks the eggs of the raven, and the young of which are anxiously sought by the fox; while in its turn it will peck at the young of the fox, and even the parent itself. As soon as the ravens espy this, they

come to its assistance, as though against a common enemy. The acanthis, too, lives among the brambles; hence it is that it also has an antipathy to the ass, because it devours the bramble blossoms. The ægithus and the anthus, too, are at such mortal enmity with each other, that it is the common belief that their blood will not mingle; and it is for this reason that they have the bad repute of being employed in many magi- cal incantations. The thos and the lion are at war with each other; and, indeed, the smallest objects and the greatest just as much. Caterpillars will avoid a tree that is infested with ants. The spider, poised in its web, will throw itself on the head of a serpent as it lies stretched beneath the shade of the tree where it has built, and with its bite pierce its brain; such is the shock, that the creature will hiss from time to time, and then, seized with vertigo, coil round and round, while it finds itself unable to take to flight, or so much as to break the web of the spider, as it hangs suspended above; this scene only ends with its death.

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CHAP. 96.

INSTANCES OF AFFECTION SHOWN BY SERPENTS.

On the other hand, there is a strict friendship existing between the peacock and the pigeon, the turtle-dove and the parrot, the blackbird and the turtle, the crow and the heron, all of which join in a common enmity against the fox. The harpe also, and the kite, unite against the triorchis.

And then, besides, have we not seen instances of affection in the serpent even, that most ferocious of all animals? We have already related the story that is told of a man in Arcadia, who was saved by a dragon which had belonged to him, and of his voice being recognized by the animal. We must also make mention here of another marvellous story that is related by Phylarchus about the asp. He tells us, that in Egypt one of these animals, after having received its daily nourishment at the table of a certain person, brought forth, and that it so happened that the son of its entertainer was killed by one of its young ones; upon which, returning to its food as usual, and becoming sensible of the crime, it immediately killed the young one, and returned to the house no more.

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CHAP. 97. (75.)

THE SLEEP OF ANIMALS.

The question as to their sleep, is one that is by no means difficult to solve. In the land animals, it is quite evident that all that have eyelids sleep. With reference to aquatic animals, it is admitted that they also sleep, though only for short periods, even by those writers who entertain doubts as to the other animals; and they come to this conclusion, not from any appearance of the eyes, for they have no eyelids, indeed, to close, but because they are to be seen buried in deep repose, and to all appearance fast asleep, betraying no motion in any part of the body except the tail, and by starting when they happen to hear a noise. With regard to the thunny, it is stated with still greater confidence that it sleeps; indeed, it is often found in that state near the shore, or among the rocks. Flat fish are also found fast asleep in shallow water, and are often taken in that state with the hand: and, as to the dolphin and the balæna, they are even heard to snore.

It is quite evident, also, that insects sleep, from the silent stillness which they preserve; and even if a light is put close to them, they will not be awoke thereby.

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CHAP. 98.

WHAT ANIMALS ARE SUBJECT TO DREAMS.

Man, just after his birth, is hard pressed by sleep for several months, after which he becomes more and more wakeful, day by day. The infant dreams[267] from the very first, for it will suddenly awake with every symptom of alarm, and while asleep will imitate the action of sucking. There are some persons, however, who never dream; indeed, we find instances stated where it has been a fatal sign for a person to dream, who has never done so before. Here we find ourselves invited by a grand field of investigation, and one that is full of alleged proofs on both sides of the question, whether, when the mind is at rest in sleep, it has any foreknowledge of the future, and if so, by what process this is brought about, or whether this is not altogether a matter quite fortuitous, as most other things are? If we were to attempt to decide the question by instances quoted, we should find as many on the one side as on the other.

It is pretty generally agreed, that dreams, immediately after we have taken wine and food, or when we have just fallen asleep again after waking, have no signification whatever. Indeed, sleep is nothing else than the retiring[268] of the mind into itself. It is quite evident that, besides man, horses, dogs, oxen, sheep, and goats have dreams; consequently, the same is supposed to be the case with all animals that are viviparous. As to those which are oviparous, it is a matter of uncertainty, though it is equally certain that they do sleep. But we must now pass on to a description of the insects.

SUMMARY. — Remarkable facts, narratives, and observations, seven hundred and ninety-three.

ROMAN AUTHORS QUOTED. — Manilius, Cornelius Valerianus, the Acta Triumphorum, Umbricius Melior, Massurius Sabinus, Antistius Labeo, Trogus, Cremutius, M. Varro, Macer Æmilius, Melissus, Mucianus, Nepos, Fabius Pictor, T. Lucretius,

Cornelius Celsus, Horace, Deculo, Hyginus, the Sasernæ, Nigidius, Mamilius Sura.

FOREIGN AUTHORS QUOTED. — Homer, Phemonoë, Philemon, Bœus who wrote the Ornithogonia, Hylas who wrote an augury, Aristotle, Theophrastus, Callimachus, Æschylus, King Hiero, King Philometor, Archytas of Tarentum, Amphilochus of Athens, Anaxipolis of Thasos, Apollodorus of Lemnos, Aristophanes of Miletus, Antigonus of Cymæ, Agathocles of Chios, Apollonius of Pergamus, Aristander of Athens, Bacchius of Miletus, Bion of Soli, Chæreas of Athens, Diodorus of Priene, Dion of Colophon, Democritus, Diophanes of Nicæa, Epigenes of Rhodes, Euagon of Thasos, Euphronius of Athens, Juba, Androtion who wrote on Agriculture, Æschrion who wrote on Agriculture, Lysimachus who wrote on Agriculture, Dionysius who translated Mago, Diophanes who made an Epitome of Dionysius, Nicander, Onesicritus, Phylarchus, Hesiod.

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BOOK XI. THE VARIOUS KINDS OF INSECTS.

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CHAP. 1. (1.)

THE EXTREME SMALLNESS OF INSECTS.

WE shall now proceed to a description of the insects, a subject replete with endless difficulties; for, in fact, there are some authors who have maintained that they do not respire, and that they are destitute of blood. The insects are numerous, and form many species, and their mode of life is like that of the terrestrial animals and the birds. Some of them are furnished with wings, bees for instance; others are divided into those kinds which have wings, and those which are without them, such as ants; while others, again, are destitute of both wings and feet. All these animals have been very properly called "insects," from the incisures or divisions which separate the body, sometimes at the neck, and sometimes at the corselet, and so divide it into members or segments, only united to each other by a slender tube. In some insects, however, this division is not complete, as it is surrounded by wrinkled folds; and thus the flexible vertebræ of the creature, whether situate at the abdomen, or whether only at the upper part of the body, are protected by layers, overlapping each other; indeed, in no one of her works has Nature more fully displayed her exhaustless ingenuity.

(2.) In large animals, on the other hand, or, at all events, in the very largest among them, she found her task easy and her materials ready and pliable; but in these minute creatures, so nearly akin as they are to non-entity, how surpassing the intelligence, how vast the resources, and how ineffable the perfection which she has displayed. Where is it that she has united so many senses as in the gnat? — not to speak of creatures that might be mentioned of still smaller size — Where, I say, has she found room to place in it the organs of sight? Where has she centred the sense of taste? Where has she inserted the power of smell? And where, too, has she implanted that sharp shrill voice of the creature, so utterly disproportioned to the smallness of its body? With what astonishing subtlety has she united the wings to the trunk, elongated the joints of the legs, framed that long, craving concavity for a belly, and then inflamed the animal with an insatiate

thirst for blood, that of man more especially! What ingenuity has she displayed in providing it with a sting, so well adapted for piercing the skin! And then too, just as though she had had the most extensive field for the exercise of her skill, although the weapon is so minute that it can hardly be seen, she has formed it with a twofold mechanism, providing it with a point for the purpose of piercing, and at the same moment making it hollow, to adapt it for suction.

What teeth, too, has she inserted in the teredo, to adapt it for piercing oak even with a sound which fully attests their destructive power! while at the same time she has made wood its principal nutriment. We give all our admiration to the shoulders of the elephant as it supports the turret, to the stalwart neck of the bull, and the might with which it hurls aloft whatever comes in its way, to the onslaught of the tiger, or to the mane of the lion; while, at the same time, Nature is nowhere to be seen to greater perfection than in the very smallest of her works. For this reason then, I must beg of my readers, notwithstanding the contempt they feel for many of these objects, not to feel a similar disdain for the information I am about to give relative thereto, seeing that, in the study of Nature, there are none of her works that are unworthy of our consideration.

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CHAP. 2. (3.)

WHETHER INSECTS RESPIRE, AND WHETHER THEY HAVE BLOOD.

Many authors deny that insects respire, and make the assertion upon the ground, that in their viscera there is no respiratory organ to be found. On this ground, they assert that insects have the same kind of life as plants and trees, there being a very great difference between respiring and merely having life. On similar grounds also, they assert that insects have no blood, a thing which cannot exist, they say, in any animal that is destitute of heart and liver; just as, according to them, those creatures cannot breathe which have no lungs. Upon these points, however, a vast number of questions will naturally arise; for the same writers do not hesitate to deny that these creatures are destitute also of voice, and this, notwithstanding the humming of bees, the chirping of grasshoppers, and the sounds emitted by numerous other insects which will be considered in their respective places. For my part, whenever I have considered the subject, I have ever felt persuaded that there is nothing impossible to Nature, nor do I see why creatures should be less able to live and yet not inhale, than to respire without being possessed of viscera, a doctrine which I have already maintained, when speaking of the marine animals; and that, notwithstanding the density and the vast depth of the water which would appear to impede all breathing. But what person could very easily believe that there can be any creatures that fly to and fro, and live in the very midst of the element of respiration, while, at the same time, they themselves are devoid of that respiration; that they can be possessed of the requisite instincts for nourishment, generation, working, and making provision even for time to come, in the enjoyment too (although, certainly, they are not possessed of the organs which act, as it were, as the receptacles of those senses) of the powers of hearing, smelling, and tasting, as well as those other precious gifts of Nature, address, courage, and skilfulness? That these creatures have no blood I am ready to admit, just as all the terrestrial animals are not possessed of it; but then, they have something similar, by way of equivalent. Just as in the sea, the

sæpiahas a black liquid in place of blood, and the various kinds of purples, those juices which we use for the purposes of dyeing; so, too, is every insect possessed of its own vital humour, which, whatever it is, is blood to it. While I leave it to others to form what opinion they please on this subject, it is my purpose to set forth the operations of Nature in the clearest possible light, and not to enter upon the discussion of points that are replete with doubt.

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CHAP. 3. (4.)

THE BODIES OF INSECTS.

Insects, so far as I find myself able to ascertain, seem to have neither sinews, bones, spines, cartilages, fat, nor flesh; nor yet so much as a frail shell, like some of the marine animals, nor even anything that can with any propriety be termed skin; but they have a body which is of a kind of intermediate nature between all these, of an arid substance, softer than muscle, and in other respects of a nature that may, in strictness, be rather pronounced yielding, than hard. Such, then, is all that they are, and nothing more: in the inside of their bodies there is nothing, except in some few, which have an intestine arranged in folds. Hence it is, that even when cut asunder, they are remarkable for their tenacity of life, and the palpitations which are to be seen in each of their parts. For every portion of them is possessed of its own vital principle, which is centred in no limb in particular, but in every part of the body; least of all, however, in the head, which alone is subject to no movements unless torn off together with the corselet. No kind of animal has more feet than the insects have, and those among them which have the most, live the longest when cut asunder, as we see in the case of the scolopendra. They have eyes, and the senses as well of touch and taste; some of them have also the sense of smelling, and some few that of hearing.

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CHAP. 4. (5.)

BEES.

But among them all, the first rank, and our especial admiration, ought, in justice, to be accorded to bees, which alone, of all the insects, have been created for the benefit of man. They extract honey and collect it, a juicy substance remarkable for its extreme sweetness, lightness, and wholesomeness. They form their combs and collect wax, an article that is useful for a thousand purposes of life; they are patient of fatigue, toil at their labours, form themselves into political communities, hold councils together in private, elect chiefs in common, and, a thing that is the most remarkable of all, have their own code of morals. In addition to this, being as they are, neither tame nor wild, so all-powerful is Nature, that, from a creature so minute as to be nothing more hardly than the shadow of an animal, she has created a marvel beyond all comparison. What muscular power, what exertion of strength are we to put in comparison with such vast energy and such industry as theirs? What display of human genius, in a word, shall we compare with the reasoning powers manifested by them? In this they have, at all events, the advantage of us-they know of nothing but what is for the common benefit of all. Away, then, with all questions whether they respire or no, and let us be ready to agree on the question of their blood; and yet, how little of it can possibly exist in bodies so minute as theirs. — And now let us form some idea of the instinct they display.

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CHAP. 5. (6.)

THE ORDER DISPLAYED IN THE WORKS OF BEES.

Bees keep within the hive during the winter — for whence are they to derive the strength requisite to withstand frosts and snows, and the northern blasts? The same, in fact, is done by all insects, but not to so late a period; as those which conceal themselves in the walls of our houses, are much sooner sensible of the returning warmth. With reference to bees, either seasons and climates have considerably changed, or else former writers have been greatly mistaken. They retire for the winter at the setting of the Vergiliæ, and remain shut up till after the rising of that constellation, and not till only the beginning of spring, as some authors have stated; nor, indeed, does any one in Italy ever think of then opening the hives. They do not come forth to ply their labours until the bean blossoms; and then not a day do they lose in inactivity, while the weather is favourable for their pursuits.

First of all, they set about constructing their combs, and forming the wax, or, in other words, making their dwellings and cells; after this they produce their young, and then make honey and wax from flowers, and extract bee-glue from the tears of those trees which distil glutinous substances, the juices, gums, and resins, namely, of the willow, the elm, and the reed. With these substances, as well as others of a more bitter nature, they first line the whole inside of the hive, as a sort of protection against the greedy propensities of other small insects, as they are well aware that they are about to form that which will prove an object of attraction to them. Having done this, they employ similar substances in narrowing the entrance to the hive, if otherwise too wide.

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CHAP. 6. (5.)

THE MEANING OF THE TERMS COMMOSIS, PISSO- CEROS, AND PROPOLIS.

The persons who understand this subject, call the substance which forms the first foundation of their combs, *commosis,* the next, *pissoceros,* and the third *propolis;* which last is placed between the other layers and the wax, and is remarkable for its utility in medicine. The commosis forms the first crust or layer, and has a bitter taste; and upon it is laid the pissoceros, a kind of thin wax, which acts as a sort of varnish. The propolis is produced from the sweet gum of the vine or the poplar, and is of a denser consistency, the juices of flowers being added to it. Still, however, it cannot be properly termed wax, but rather the foundation of the honey-combs; by means of it all inlets are stopped up, which might, otherwise, serve for the admission of cold or other injurious influences; it has also a strong odour, so much so, indeed, that many people use it instead of galbanum.

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CHAP. 7.

THE MEANING OF ERITHACE, SANDARACA, OR CERINTHOS.

In addition to this, the bees form collections of *erithace* or bee-bread, which some persons call “sandaraca,” and others “cerinthos.” This is to serve as the food of the bees while they are at work, and is often found stowed away in the cavi- ties of the cells, being of a bitter flavour also. It is produced from the spring dews and the gummy juices of trees, being less abundant while the south-west wind is blowing, and blackened by the prevalence of a south wind. On the other hand, again, it is of a reddish colour and becomes improved by the north-east wind; it is found in the greatest abundance upon the nut trees in Greece. Menecrates says, that it is a flower, which gives indications of the nature of the coming harvest; but no one says so, with the exception of him.

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CHAP. 8. (8.)

WHAT FLOWERS ARE USED BY THE BEES IN THEIR WORK.

Bees form wax from the blossoms of all trees and plants, with the sole exception of the rumex and the echinopodes, both being kinds of herbs. It is by mistake, however, that spartum is excepted; for many varieties of honey that come from Spain, and have been made in the plantations of it, have a strong taste of that plant. I am of opinion, also, that it is without any sufficient reason that the olive has been excepted, seeing that it is a well-known fact, that where olives are in the greatest abundance, the swarms of bees are the most no- serous. Bees are not injurious to fruit of any kind; they will never settle on a dead flower, much less a dead carcase. They pursue their labours within three-score paces of their hives; and when the flowers in their vicinity are exhausted, they send out scouts from time to time, to discover places for forage at a greater distance. When overtaken by night in their expeditions, they watch till the morning, lying on their backs, in order to protect their wings from the action of the dew.

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CHAP. 9. (9.)

PERSONS WHO HAVE MADE BEES THEIR STUDY.

It is not surprising that there have been persons who have made bees their exclusive study; Aristomachus of Soli, for instance, who for a period of fifty-eight years did nothing else; Philiscus of Thasos, also, surnamed Agrius, who passed his life in desert spots, tending swarms of bees. Both of these have written works on this subject.

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CHAP. 10. (10.)

THE MODE IN WHICH BEES WORK.

The manner in which bees carry on their work is as follows. In the day time a guard is stationed at the entrance of the hive, like the sentries in a camp. At night they take their rest until the morning, when one of them awakes the rest with a humming noise, repeated twice or thrice, just as though it were sounding a trumpet. They then take their flight in a body, if the day is likely to turn out fine; for they have the gift of foreknowing wind and rain, and in such case will keep close within their dwellings. On the other hand, when the weather is fine — and this, too, they have the power of foreknowing — the swarm issues forth, and at once applies itself to its work, some loading their legs from the flowers, while others fill their mouths with water, and charge the downy surface of their bodies with drops of liquid. Those among them that are young go forth to their labours, and collect the materials already mentioned, while those that are more aged stay within the hives and work. The bees whose business it is to carry the flowers, with their fore feet load their thighs, which Nature has made rough for the purpose, and with their trunks load their fore feet: bending beneath their load, they then return to the hive, where there are three or four bees ready to receive them and aid in discharging their burdens. For, within the hive as well, they have their allotted duties to perform: some are engaged in building, others in smoothing, the combs, while others again are occupied in passing on the materials, and others in preparing food from the provision which has been brought; that there may be no unequal division, either in their labour, their food, or the distribution of their time, they do not even feed separately.

Commencing at the vaulted roof of the hive, they begin the construction of their cells, and, just as we do in the manufacture of a web, they construct their cells from top to bottom, taking care to leave two passages around each compartment, for the entrance of some and the exit of others. The combs, which are fastened to the hive in the upper part, and in a slight degree also at the sides, adhere

to each other, and are thus suspended altogether. They do not touch the floor of the hive, and are either angular or round, according to its shape; sometimes, in fact, they are both angular and round at once, when two swarms are living in unison, but have dissimilar modes of operation. They prop up the combs that are likely to fall, by means of arched pillars, at intervals springing from the floor, so as to leave them a passage for the purpose of effecting repairs. The first three ranks of their cells are generally left empty when constructed, that there may be nothing exposed to view which may invite theft; and it is the last ones, more especially, that are filled with honey: hence it is that the combs are always taken out at the back of the hive.

The bees that are employed in carrying look out for a favourable breeze, and if a gale should happen to spring up, they poise themselves in the air with little stones, by way of ballast; some writers, indeed, say that they place them upon their shoulders. When the wind is contrary, they fly close to the ground, taking care, however, to keep clear of the brambles. It is wonderful what strict watch is kept upon their work: all instances of idleness are carefully remarked, the offenders are chastised, and on a repetition of the fault, punished with death. Their sense of cleanliness, too, is quite extraordinary; everything is removed that might he in the way, and no filth is allowed to remain in the midst of their work. The ordure even of those that are at work within, that they may not have to retire to any distance, is all collected in one spot, and on stormy days, when they are obliged to cease their ordinary labours, they employ themselves in carrying it out. When it grows towards evening, the buzzing in the hive becomes gradually less and less, until at last one of their number is to be seen flying about the hive with the same loud humming noise with which they were aroused in the morning, thereby giving the signal, as it were, to retire to rest: in this, too, they imitate the usage of the camp. The moment the signal is heard, all is silent.

(11.) They first construct the dwellings of the commonalty, and then those of the king-bee. If they have reason to expect an abundant season, they add abodes also for the drones: these are cells of a smaller size, though the drones themselves are larger than the bees.

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CHAP. 11.

DRONES.

The drones have no sting, and would seem to be a kind of imperfect bee, formed the very last of all; the expiring effort, as it were, of worn-out and exhausted old age, a late and tardy offspring, and doomed, in a measure, to be the slaves of the genuine bees. Hence it is that the bees exercise over them a rigorous authority, compel them to take the foremost rank in their labours, and if they show any sluggishness, punish them without mercy. And not only in their labours do the drones give them their assistance, but in the propagation of their species as well, the very multitude of them contributing greatly to the warmth of the hive. At all events, it is a well-known fact, that the greater the multitude of the drones, the more numerous is sure to be the progeny of the swarm. When the honey is beginning to come to maturity, the bees drive away the drones, and setting upon each in great numbers, put them all to death. It is only in the spring that the drones are ever to be seen. If you deprive a drone of its wings, and then replace it in the hive, it will pull off the wings of the other drones.

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CHAP. 12.

THE QUALITIES OF HONEY.

In the lower part of the hive they construct for their future sovereign a palatial abode, spacious and grand, separated from the rest, and surmounted by a sort of dome: if this prominence should happen to be flattened, all hopes of progeny are lost. All the cells are hexagonal, each foot having formed its own side. No part of this work, however, is done at any stated time, as the bees seize every opportunity for the performance of their task when the days are fine; in one or two days, at most, they fill their cells with honey.

(12.) This substance is engendered from the air, mostly at the rising of the constellations, and more especially when Sirius is shining; never, however, before the rising of the Vergiliæ, and then just before day-break. Hence it is, that at early dawn the leaves of the trees are found covered with a kind of honey-like dew, and those who go into the open air at an early hour in the morning, find their clothes covered, and their hair matted, with a sort of unctuous liquid. Whether it is that this liquid is the sweat of the heavens, or whether a saliva emanating from the stars, or a juice exuding from the air while purifying itself, would that it had been, when it comes to us, pure, limpid, and genuine, as it was, when first it took its downward descent. But as it is, falling from so vast a height, attracting corruption in its passage, and tainted by the exhalations of the earth as it meets them, sucked, too, as it is from off the trees and the herbage of the fields, and accumulated in the stomachs of the bees — for they cast it up again through the mouth — deteriorated besides by the juices of flowers, and then steeped within the hives and subjected to such repeated changes — still, in spite of all this, it affords us by its flavour a most exquisite pleasure, the result, no doubt, of its æthereal nature and origin.

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CHAP. 13. (13.)

WHERE THE BEST HONEY IS PRODUCED.

The honey is always best in those countries where it is to be found deposited in the calix of the most exquisite flowers, such, for instance, as the districts of Hymettus and Hybla, in Attica and Sicily respectively, and after them the island of Calydna. At first, honey is thin, like water, after which it effervesces for some days, and purifies itself like must. On the twentieth day it begins to thicken, and soon after becomes covered with a thin membrane, which gradually increases through the scum which is thrown up by the heat. The honey of the very finest flavour, and the least tainted by the leaves of trees, is that gathered from the foliage of the oak and the linden, and from reeds.

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CHAP. 14. (14.)

THE KINDS OF HONEY PECULIAR TO VARIOUS PLACES.

The peculiar excellence of honey depends, as already stated, on the country in which it is produced; the modes, too, of estimating its quality are numerous. In some countries we find the honey-comb remarkable for the goodness of the wax, as in Sicily, for instance, and the country of the Peligni; in other places the honey itself is found in greater abundance, as in Crete, Cyprus, and Africa; and in others, again, the comb is remarkable for its size; the northern climates, for instance, for in Germany a comb has been known to be as much as eight feet in length, and quite black on the concave surface.

But whatever the country in which it may happen to have been produced, there are three different kinds of honey. — Spring honey is that made in a comb which has been constructed of flowers, from which circumstance it has received the name of *an- thinum.* There are some persons who say that this should not be touched, because the more abundant the nutriment, the stronger will be the coming swarm; while others, again, leave less of this honey than of any other for the bees, on the ground that there is sure to be a vast abundance at the rising of the greater constellations, as well as at the summer solstice, when the thyme and the vine begin to blossom, for then they are sure to find abundant materials for their cells.

In taking the combs the greatest care is always requisite, for when they are stinted for food the bees become desperate, and either pine to death, or else wing their flight to other places: but on the other hand, over-abundance will entail idleness, and then they will feed upon the honey, and not the bee-bread. Hence it is that the most careful breeders take care to leave the bees a fifteenth part of this gathering. There is a certain day for beginning the honey-gathering, fixed, as it were, by a law of Nature, if men would only understand or observe it, being the thirtieth day after the bees have swarmed and come forth. This gathering mostly takes place before the end of May.

The second kind of honey is “summer honey,” which, from the

circumstance of its being produced at the most favourable season, has received the Greek name of *horaion*; it is generally made during the next thirty days after the solstice, while Sirius is shining in all its brilliancy. Nature has revealed in this substance most remarkable properties to mortals, were it not that the fraudulent propensities of man are apt to falsify and corrupt everything. For, after the rising of each constellation, and those of the highest rank more particularly, or after the appearance of the rainbow, if a shower does not ensue, but the dew becomes warmed by the sun's rays, a medicament, and not real honey, is produced; a gift sent from heaven for the cure of diseases of the eyes, ulcers, and maladies of the internal viscera. If this is taken at the rising of Sirius, and the rising of Venus, Jupiter, or Mercury should happen to fall on the same day, as often is the case, the sweetness of this substance, and the virtue which it possesses of restoring men to life, are not inferior to those attributed to the nectar of the gods.

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CHAP. 15. (15.)

HOW HONEY IS TESTED. ERICÆUM. TETRA- LIX, OR SISIRUM.

The crop of honey is most abundant if gathered at full moon, and it is richest when the weather is fine. In all honey, that which flows of itself, like must or oil, has received from us the name of *acetum.* The summer honey is the most esteemed of all, from the fact of its being made when the weather is driest: it is looked upon as the most serviceable when made from thyme; it is then of a golden colour, and of a most delicious flavour. The honey that we see formed in the calix of flowers is of a rich and unctuous nature; that which is made from rosemary is thick, while that which is candied is little esteemed. Thyme honey does not coagulate, and on being touched will draw out into thin viscous threads, a thing which is the principal proof of its heaviness. When honey shows no tenacity, and the drops immediately part from one another, it is looked upon as a sign of its worthlessness. The other proofs of its goodness are the fine aroma of its smell, its being of a sweetness that closely borders on the sour, and being glutinous and pellucid.

Cassius Dionysius is of opinion that in the summer gathering the tenth part of the honey ought to be left for the bees if the hives should happen to be well filled, and even if not, still in the same proportion; while, on the other hand, if there is but little in them, he recommends that it should not be touched at all. The people of Attica have fixed the period for commencing this gathering at the first ripening of the wild fig; others have made it the day that is sacred to Vulcan.

(16.) The third kind of honey, which is the least esteemed of all, is the wild honey, known by the name of *ericeunm.* It is collected by the bees after the first showers of autumn, when the heather alone is blooming in the woods, from which circumstance it derives its sandy appearance. It is mostly pro- duced at the rising of Arcturus, beginning at the day before the ides of September. Some persons delay the gathering of the summer honey until the rising of Arcturus, because from then till the autumnal equinox there are fourteen days

left, and it is from the equinox till the setting of the Vergiliæ, a period of forty-eight days, that the heather is in the greatest abundance. The Athenians call this plant by the name of *tetralix,* and the Eubœans *sisirum,* and they look upon it as affording great pleasure to the bees to browse upon, probably because there are no other flowers for them to resort to. This gathering terminates at the end of the vintage and the setting of the Vergiliæ, mostly about the ides of November. Experience teaches us that we ought to leave for the bees two-thirds of this crop, and always that part of the combs as well, which contains the bee-bread.

From the winter solstice to the rising of Arcturus the bees are buried in sleep for sixty days, and live without any nourishment. Between the rising of Arcturus and the vernal equinox, they awake in the warmer climates, but even then they still keep within the hives, and have recourse to the provisions kept in reserve for this period. In Italy, however, they do this immediately after the rising of the Vergiliæ, up to which period they are asleep. Some persons, when they take the honey, weigh the hive and all, and remove just as much as they leave: a due sense of equity should always be stringently observed in dealing with them, and it is generally stated that if imposed upon in this division, the swarm will die of grief. It is particularly recommended also that the person who takes the honey should be well washed and clean: bees have a particular aversion, too, to a thief and a menstruous woman. When the honey is taken, it is the best plan to drive away the bees by means of smoke, lest they should become irritated, or else devour the honey themselves. By often applying smoke, too, they are aroused from their idleness to work; but if they have not duly incubated in the comb, it is apt to become of a livid colour. On the other hand, if they are smoked too often, they will become tainted; the honey, too, a substance which turns sour at the very slightest contact with dew, will very quickly receive injury from the taint thus contracted: hence it is that among the various kinds of honey which are preserved, there is one which is known by the name of *acapnon.*

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CHAP. 16.

THE REPRODUCTION OF BEES.

How bees generate their young has been a subject of great and subtle research among the learned; seeing that no one has ever witnessed any sexual intercourse among these insects. Many persons have expressed an opinion that they must be produced from flowers, aptly and artistically arranged by Nature; while others, again, suppose that they are produced from an intercourse with the one which is to be found in every swarm, and is usually called the king. This one, they say, is the only male in the hive, and is endowed with such extraordinary proportions, that it may not become exhausted in the performance of its duties. Hence it is, that no offspring can be produced without it, all the other bees being females, and attending it in its capacity of a male, and not as their leader. This opinion, however, which is otherwise not improbable, is sufficiently refuted by the generation of the drones. For on what grounds could it possibly happen that the same intercourse should produce an offspring part of which is perfect, and part in an imperfect state? The first surmise which I have mentioned would appear, indeed, to be much nearer the truth, were it not the case that here another difficulty meets us — the circumstance that sometimes, at the extremity of the combs, there are produced bees of a larger size, which put the others to flight. This noxious bee bears the name of *æstrus,* and how is it possible that it should ever be produced, if it is the fact that the bees themselves form their progeny?

A fact, however, that is well ascertained, is, that bees sit, like the domestic fowl, that which is hatched by them at first having the appearance of a white maggot, and lying across and adhering so tenaciously to the wax as to seem to be part of it. The king, however, from the earliest moment, is of the colour of honey, just as though he were made of the choicest flowers, nor has he at any time the form of a grub, but from the very first is provided with wings. The rest of the bees, as soon as they begin to assume a shape, have the name of *nymphæ,* while the drones are called *sirenes,* or *cephenes.* If a person

takes off the head of either kind before the wings are formed, the rest of the body is considered a most choice morsel by the parents. In process of time the parent bees instil nutriment into them, and sit upon them, making on this occasion a loud humming noise, for the purpose, it is generally supposed, of generating that warmth which is so requisite for hatching the young. At length the membrane in which each of them is enveloped, as though it lay in an egg, bursts asunder, and the whole swarm comes to light.

This circumstance was witnessed at the suburban retreat of a man of consular dignity near Rome, whose hives were made of transparent lantern horn: the young were found to be developed in the space of forty-five days. In some combs, there is found what is known by the name of " nail" wax; it is bitter and hard, and is only met with when the bees have failed to hatch their young, either from disease or a natural sterility, it is the abortion, in fact, of the bees. The young ones, the moment they are hatched, commence working with their parents, as though in a course of training, and the newly-born king is accompanied by a multitude of his own age.

That the supply may not run short, each swarm rears several kings; but afterwards, when this progeny begins to arrive at a mature age, with one accord they put to death the inferior ones, lest they should create discord in the swarm. There are two sorts of king bees; those of a reddish colour are better than the black and mottled ones. The kings have always a peculiar form of their own, and are double the size of any of the rest; their wings are shorter than those of the others, their legs are straight, their walk more upright, and they have a white spot on the forehead, which bears some resemblance to a diadem: they differ, too, very much from the rest of the community, in their bright and shining appearance.

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CHAP. 17. (17.)

THE MODE OF GOVERNMENT OF THE BEES.

Let a man employ himself, forsooth, in the enquiry whether there has been only one Hercules, how many fathers Liber there have been, and all the other questions which are buried deep in the mould of antiquity! Here behold a tiny object, one to be met with at most of our country retreats, and numbers of which are always at hand, and yet, after all, it is not agreed among authors whether or not the king is the only one among them that is provided with no sting, and is possessed of no other arms than those afforded him by his majestic office, or whether Nature has granted him a sting, and has only denied him the power of making use of it; it being a well-known fact, that the ruling bee never does use a sting. The obedience which his subjects manifest in his presence is quite surprising. When he goes forth, the whole swarm attends him, throngs about him, surrounds him, protects him, and will not allow him to be seen. At other times, when the swarm is at work within, the king is seen to visit the works, and appears to be giving his encouragement, being himself the only one that is exempt from work: around him are certain other bees which act as body-guards and lictors, the careful guardians of his authority. The king never quits the hive except when the swarm is about to depart; a thing which may be known a long time beforehand, as for some days a peculiar buzzing noise is to be heard within, which denotes that the bees are waiting for a favourable day, and making all due preparations for their departure. On such an occasion, if care is taken to deprive the king of one of his wings, the swarm will not fly away. When they are on the wing, every one is anxious to be near him, and takes a pleasure in being seen in the performance of its duty. When he is weary, they support him on their shoulders; and when he is quite tired, they carry him outright. If one of them falls in the rear from weariness, or happens to go astray, it is able to follow the others by the aid of its acuteness of smell. Wherever the king bee happens to settle, that becomes the encampment of all.

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CHAP. 18.

HAPPY OMENS SOMETIMES AFFORDED BY A SWARM OF BEES.

And then, too, it is that they afford presages both of private and public interest, clustering, as they do, like a bunch of grapes, upon houses or temples; presages, in fact, that are often accounted for by great events. Bees settled upon the lips of Plato when still an infant even, announcing thereby the sweetness of that persuasive eloquence for which he was so noted. Bees settled, too, in the camp of the chieftain Drusus when he gained the brilliant victory at Arbalo; a proof, indeed, that the conjectures of soothsayers are not by any means infallible, seeing that they are of opinion that this is always of evil augury. When their leader is withheld from them, the swarm can always be detained; and when lost, it will disperse and take its departure to find other kings. Without a king, in fact, they cannot exist, and it is with the greatest reluctance that they put them to death when there are several; they prefer, too, to destroy the cells of the young ones, if they find reason to despair of providing food; in such case they then expel the drones. And yet, with regard to the last, I find that some doubts are entertained; and that there are some authors who are of opinion that they form a peculiar species, like that bee, the very largest among them all, which is known by the name of the " thief," because it furtively devours the honey; it is distinguished by its black colour and the largeness of its body. It is a well-known fact, however, that the bees are in the habit of killing the drones. These last have no king of their own; but how it is that they are produced without a sting, is a matter still undetermined.

In a wet spring the young swarms are more numerous; in a dry one the honey is most abundant. If food happens to fail the inhabitants of any particular hive, the swarm makes a concerted attack upon a neighbouring one, with the view of plundering it. The swarm that is thus attacked, at once ranges itself in battle array, and if the bee-keeper should happen to be present, that side which perceives itself favoured by him will refrain from attacking him. They often fight, too, for other reasons as well, and the two generals

are to be seen drawing up their ranks in battle array against their opponents. The dispute generally arises in culling from the flowers, when each, the moment that it is in danger, summons its companions to its aid. The battle, however, is immediately put an end to by throwing dust among them, or raising a smoke; and if milk or honey mixed with water is placed be- fore them, they speedily become reconciled.

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CHAP. 19. (18.)

THE VARIOUS KINDS OF BEES.

There are field bees also, and wild bees, ungainly in appear- ance, and much more irascible than the others, but remarkable for their laboriousness and the excellence of their work. Of domestic bees there are two sorts; the best are those with short bodies, speckled all over, and of a compact round shape. Those that are long, and resemble the wasp in appearance, are an inferior kind; and of these last, the very worst of all are those which have the body covered with hair. In Pontus there is a kind of white bee, which makes honey twice a month. On the banks of the river Thermodon there are two kinds found, one of which makes honey in the trees, the other under ground: they form a triple row of combs, and produce honey in the greatest abundance. Nature has provided bees with a sting, which is inserted in the abdomen of the insect. There are some who think that at the first blow which they inflict with this weapon they will instantly die, while others, again, are of opinion that such is not the case, unless the animal drives it so deep as to cause a portion of the intestines to follow; and they assert, also, that after they have thus lost their sting they become drones, and make no honey, being thus castrated, so to say, and equally incapable of inflicting injury, and of making themselves useful by their labours. We have instances stated of horses being killed by bees.

They have a great aversion to bad smells, and fly away from them; a dislike which extends to artificial perfumes even. Hence it is that they will attack persons who smell of unguents. They themselves, also, are exposed to the attacks of wasps and hornets, which belong to the same class, but are of a degenerate nature; these wage continual warfare against them, as also does a species of gnat, which is known by the name of " mulio;" swallows, too, and various other birds prey upon them. Frogs lie in wait for them when in quest of water, which, in fact, is their principal occupation at the time they are rearing their young. And it is not only the frog that frequents ponds and streams that is thus injurious to them, but the bramble-frog as

well, which will come to the hives even in search of them, and, crawling up to the entrance, breathe through the apertures; upon hearing which, a bee flies to the spot, and is snapped up in an instant. It is generally stated that frogs are proof against the sting of the bee. Sheep, too, are peculiarly dangerous to them, as they have the greatest difficulty in extricating themselves from the fleece. The smell of crabs, if they happen to be cooked in their vicinity, is fatal to them.

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CHAP. 20.

THE DISEASES OF BEES.

Bees are also by nature liable to certain diseases of their own. The sign that they are diseased, is a kind of torpid, moping sadness: on such occasions, they are to be seen bringing out those that are sick before the hives, and placing them in the warm sun, while others, again, are providing them with food. Those that are dead they carry away from the hive, and attend the bodies, paying their last duties, as it were, in funeral procession. If the king should happen to be carried off by the pestilence, the swarm remains plunged in grief and listless inactivity; it collects no more food, and ceases to issue forth from its abode; the only thing that it does is to gather around the body, and to emit a melancholy humming noise. Upon such occasions, the usual plan is to disperse the swarm and take away the body; for otherwise they would continue listlessly gazing upon it, and so prolong their grief. Indeed, if due care is not taken to come to their aid, they will die of hunger. It is from their cheerfulness, in fact, and their bright and sleek appearance that we usually form an estimate as to their health.

(19) There are certain maladies, also, which affect their productions; when they do not fill their combs, the disease under which they are labouring is known by the name of *claros,* and if they fail to rear their young, they are suffering from the effects of that known as *blapsigonia.*

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CHAP. 21.

THINGS THAT ARE NOXIOUS TO BEES.

Echo, or the noise made by the reverberation of the air, is also injurious to bees, as it dismays them by its redoubled sounds; fogs, also, are noxious to them. Spiders, too, are especially hostile to bees; when they have gone so far as to build their webs within the hive, the death of the whole swarm is the result. The common and ignoble moth, too, that is to be seen fluttering about a burning candle, is deadly to them, and that in more ways than one. It devours the wax, and leaves its ordure behind it, from which the maggot known to us as the " teredo" is produced; besides which, wherever it goes, it drops the down from off its wings, and thereby thickens the threads of the cobwebs. The teredo is also engendered in the wood of the hive, and then it proves especially destructive to the wax. Bees are the victims, also, of their own greediness, for when they glut themselves overmuch with the juices of the flowers, in the spring season more particularly, they are troubled with flux and looseness. Olive oil is fatal to not only bees, but all other insects as well, and more especially if they are placed in the sun, after the head has been immersed in it. Sometimes, too, they themselves are the cause of their own destruction; as, for instance, when they see preparations being made for taking their honey, and immediately fall to devouring it with the greatest avidity. In other respects they are remarkable for their abstemiousness, and they will expel those that are inclined to be prodigal and voracious, no less than those that are sluggish and idle. Their own honey even may be productive of injury to them; for if they are smeared with it on the fore-part of the body, it is fatal to them. Such are the enemies, so numerous are the accidents — and how small a portion of them have I here enumerated! — to which a creature that proves so bountiful to us is exposed. In the appropriate place we will treat of the proper remedies; for the present the nature of them is our subject.

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CHAP. 22. (20.)

How TO KEEP BEES TO THE HIVE.

The clapping of the hands and the tinkling of brass afford bees great delight, and it is by these means that they are brought together; a strong proof, in fact, that they are possessed of the sense of hearing. When their work is completed, their offspring brought forth, and all their duties fulfilled, they still have certain formal exercises to perform, ranging abroad throughout the country, and soaring aloft in the air, wheeling round and round as they fly, and then, when the hour for taking their food has come, returning home. The extreme period of their life, supposing that they escape accident and the attacks of their enemies, is only seven years; a hive, it is said, never lasts more than ten. There are some persons, who think that, when dead, if they are preserved in the house throughout the winter, and then exposed to the warmth of the spring sun, and kept hot all day in the ashes of fig-tree wood, they will come to life again.

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CHAP. 23.

METHODS OF RENEWING THE SWARM.

These persons say also, that if the swarm is entirely lost, it may be replaced by the aid of the belly of an ox newly killed, covered over with dung. Virgil also says that this may be done with the body of a young bull, in the same way that the carcase of the horse produces wasps and hornets, and that of the ass beetles, Nature herself effecting these changes of one substance into another. But in all these last, sexual intercourse is to be perceived as well, though the characteristics of the offspring are pretty much the same as those of the bee.

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CHAP. 24. (21.)

WASPS AND HORNETS: ANIMALS WHICH APPRO- PRIVATE WHAT BELONGS TO OTHERS.

Wasps build their nests of mud in lofty places, and make wax therein: hornets, on the other hand, build in holes or under ground. With these two kinds the cells are also hexagonal, but, in other respects, though made of the bark of trees, they strongly resemble the substance of a spider's web. Their young also are found at irregular intervals, and are of unshapely appearance; while one is able to fly, another is still a mere pupa, and a third only in the maggot state. It is in the autumn, too, and not in the spring, that all their young are produced; and they grow during the full moon more particularly. The wasp which is known as the ichneumon, a smaller kind than the others, kills one kind of spider in particular, known as the phalangium; after which it carries the body to its nest, covers it over with a sort of gluey substance, and then sits and hatches from it its young. In addition to this, they are all of them carnivorous, while on the other hand bees will touch no animal substance whatever. Wasps more particularly pursue the larger flies, and after catching them cut off the head and carry away the remaining portion of the body.

Wild hornets live in the holes of trees, and in winter, like other insects, keep themselves concealed; their life does not exceed two years in length. It is not unfrequently that their sting is productive of an attack of fever, and there are authors who say that thrice nine stings will suffice to kill a man. Of the other hornets, which seem not to be so noxious, there are two kinds; the working ones, which are smaller in size and die in the winter; and the parent hornets, which live two years; these last, indeed, are quite harmless. In spring they build their nests, which have generally four entrances, and here it is that the working hornets are produced: after these have been hatched they form other nests of larger size, in which to bring forth the parents of the future generation. From this time the working hornets begin to follow their vocation, and apply themselves to supplying the others with food. The parent hornets are of larger size than the

others, and it is very doubtful whether they have a sting, as it is never to be seen protruded. These races, too, have their drones. Some persons are of opinion that all these insects lose their stings in the winter. Neither hornets nor wasps have a king, nor do they ever congregate in swarms; but their numbers are recruited by fresh offspring from time to time.

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CHAP. 25. (22.)

THE BOMBYX OF ASSYRIA.

A fourth class of this kind of insect is the bombyx, which is a native of Assyria, and is of larger size than any of those which have been previously mentioned. They construct their nests of a kind of mud which has the appearance of salt, and then fasten them to a stone, where they become so hard, that it is scarcely possible to penetrate them with a dart-even. In these nests they make wax, in larger quantities than bees, and the grub which they then produce is larger.

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CHAP. 26.

THE LARVÆ OF THE SILK-WORM-WHO FIRST INVENTED SILK CLOTHS.

There is another class also of these insects produced in quite a different manner. These last spring from a grub of larger size, with two horns of very peculiar appearance. The larva then becomes a caterpillar, after which it assumes the state in which it is known as *bombylis,* then that called *necy- dalus,* and after that, in six months, it becomes a silk-worm. These insects weave webs similar to those of the spider, the material of which is used for making the more costly and luxurious garments of females, known as " bombycina." Pamphile, a woman of Cos, the daughter of Platea, was the first person who discovered the art of unravelling these webs and spinning a tissue therefrom; indeed, she ought not to be deprived of the glory of having discovered the art of making vestments which, while they cover a woman, at the same moment reveal her naked charms.

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CHAP. 27. (23.)

THE SILK-WORM OF COS — HOW THE COAN VESTMENTS ARE MADE.

The silk-worm, too, is said to be a native of the isle of Cos, where the vapours of the earth give new life to the flowers of the cypress, the terebinth, the ash, and the oak which have been beaten down by the showers. At first they assume the appearance of small butterflies with naked bodies, but soon after, being unable to endure the cold, they throw out bristly hairs, and assume quite a thick coat against the winter, by rubbing off the down that covers the leaves, by the aid of the roughness of their feet. This they compress into balls by carding it with their claws, and then draw it out and hang it between the branches of the trees, making it fine by combing it out as it were: last of all, they take and roll it round their body, thus forming a nest in which they are enveloped. It is in this state that they are taken; after which they are placed in earthen vessels in a warm place, and fed upon bran. A peculiar sort of down soon shoots forth upon the body, on being clothed with which they are sent to work upon another task. The cocoons which they have begun to form are rendered soft and pliable by the aid of water, and are then drawn out into threads by means of a spindle made of a reed. Nor, in fact, have the men even felt ashamed to make use of garments formed of this material, in consequence of their extreme lightness in summer: for, so greatly have manners degenerated in our day, that, so far from wearing a cuirass, a garment even is found to be too heavy. The produce of the Assyrian silk-worm, however, we have till now left to the women only.

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CHAP. 28. (24.)

SPIDERS; THE KINDS THAT MAKE WEBS; THE MATERIALS USED BY THEM IN SO DOING.

It is by no means an absurdity to append to the silk-worm an account of the spider, a creature which is worthy of our especial admiration. There are numerous kinds of spiders, however, which it will not be necessary here to mention, from the fact of their being so well known. Those that bear the name of *phalangium* are of small size, with bodies spotted and running to a point; their bite is venomous, and they leap as they move from place to place. Another kind, again, is black, and the fore-legs are remarkable for their length. They have all of them three joints in the legs. The smaller kind of wolf-spider does not make a web, but the larger ones make their holes in the earth, and spread their nets at the narrow entrance thereof. A third kind, again, is remarkable for the skill which it displays in its operations. These spin a large web, and the abdomen suffices to supply the material for so extensive a work, whether it is that, at stated periods the excrements are largely secreted in the abdomen, as Democritus thinks, or that the creature has in itself a certain faculty of secreting a peculiar sort of woolly substance. How steadily does it work with its claws, how beautifully rounded and how equal are the threads as it forms its web, while it employs the weight of its body as an equipoise! It begins at the middle to weave its web, and then extends it by adding the threads in rings around, like a warp upon the woof: forming the meshes at equal intervals, but continually enlarging them as the web increases in breadth, it finally unites them all by an indissoluble knot. With what wondrous art does it conceal the snares that lie in wait for its prey in its checkered nettings! How little, too, would it seem that there is any such trap laid in the compactness of its web and the tenacious texture of the woof, which would appear of itself to be finished and arranged by the exercise of the very highest art! How loose, too, is the body of the web as it yields to the blasts, and how readily does it catch all objects which come in its way! You would fancy that it had left, quite exhausted,

the thrums of the upper portion of its net unfinished where they are spread across; it is with the greatest difficulty that they are to be perceived, and yet the moment that an object touches them, like the lines of the hunter's net, they throw it into the body of the web. With what architectural skill, too, is its hole arched over, and how well defended by a nap of extra thickness against the cold! How carefully, too, it retires into a corner, and appears intent upon anything but what it really is, all the while that it is so carefully shut up from view, that it is impossible to perceive whether there is anything within or not! And then too, how extraordinary the strength of the web! When is the wind ever known to break it, or what accumulation of dust is able to weigh it down?

The spider often spreads its web right across between two trees, when plying its art and learning how to spin; and then, as to its length, the thread extends from the very top of the tree to the ground, while the insect springs up again in an instant from the earth, and travels aloft by the very self-same thread, thus mounting at the same moment and spinning its threads. When its prey falls into its net, how on the alert it is, and with what readiness it runs to seize it! Even though it should be adhering to the very edge of its web, the insect always runs instantly to the middle, as it is by these means that it can most effectually shake the web, and so successfully entangle its prey. When the web is torn, the spider immediately sets about repairing it, and that so neatly, that nothing like patching can ever be seen. The spider lies in wait even for the young of the lizard, and after enveloping the head of the animal, bites its lips; a sight by no means unworthy of the amphitheatre itself, when it is one's good fortune to witness it. Presages also are drawn from the spider; for when a river is about to swell, it will suspend its web higher than usual. In calm weather these insects do not spin, but when it is cloudy they do, and hence it is, that a great number of cobwebs is a sure sign of showery weather. It is generally supposed that it is the female spider that spins, and the male that lies in wait for prey, thus making an equal division of their duties.

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CHAP. 29.

THE GENERATION OF SPIDERS.

Spiders couple backwards, and produce maggots like eggs; for I ought not to defer making some mention of this subject, seeing, in fact, that of most insects there is hardly anything else to be said. All these eggs they lay in their webs, but scattered about, as they leap from place to place while laying them. The phalangium is the only spider that lays a considerable number of them, in a hole; and as soon as ever the progeny is hatched it devours its mother, and very often the male parent as well, for that, too, aids in the process of incubation. These last produce as many as three hundred eggs, the others a smaller number. Spiders take three days to hatch their eggs. They come to their full growth in twenty-eight days.

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CHAP. 30. (25.)

SCORPIONS.

In a similar manner to the spider, the land scorpion also produces maggots similar to eggs, and dies in a similar manner. This animal is a dangerous scourge, and has a venom like that of the serpent; with the exception that its effects are far more painful, as the person who is stung will linger for three days before death ensues. The sting is invariably fatal to virgins, and nearly always so to matrons. It is so to men also, in the morning, when the animal has issued from its hole in a fasting state, and has not yet happened to discharge its poison by any accidental stroke. The tail is always ready to strike, and ceases not for an instant to menace, so that no opportunity may possibly be missed. The animal strikes too with a sidelong blow, or else by turning the tail upwards. Apollodorus informs us, that the poison which they secrete is of a white colour, and he has divided them into nine classes, distinguished mostly by their colours — to very little purpose, however, for it is impossible to understand which among these it is that he has pronounced to be the least dangerous. He says, also, that some of them have a double sting, and that the males — for he asserts that they are engendered by the union of the sexes — are the most dangerous. These may easily be known, he says, by their slender form and greater length. He states, also, that they all of them have venom in the middle of the day, when they have been warmed by the heat of the sun, as, also, when they are thirsty — their thirst, indeed, can never be quenched. It is an ascertained fact, that those which have seven joints in the tail are the most deadly; the greater part, however, have but six.

For this pest of Africa, the southern winds have provided means of flight as well, for as the breeze bears them along, they extend their arms and ply them like so many oars in their flight; the same Apollodorus, however, asserts that there are some which really have wings. The Psylli, who for their own profit have been in the habit of importing the poisons of other lands among us, and have thus filled Italy with the pests which belong to other regions, have made

attempts to import the flying scorpion as well, but it has been found that it cannot live further north than the latitude of Sicily. However, they are sometimes to be seen in Italy, but are quite harmless there; they are found, also, in many other places, the vicinity of Pharos, in Egypt, for instance. In Scythia, the scorpion is able to kill the swine even with its sting, an animal which, in general, is proof against poisons of this kind in a remarkable degree. When stung, those swine which are black die more speedily than others, and more particularly if they happen to throw themselves into the water. When a person has been stung, it is generally supposed that he may be cured by drinking the ashes of the scorpion mixed with wine. It is the belief also that there is nothing more baneful to the scorpion and the stellio, than to dip them in oil. This last animal is also dangerous to all other creatures, except those which, like itself, are destitute of blood: in figure it strongly resembles the common lizard. For the most part, also, the scorpion does no injury to any animal which is bloodless. Some writers, too, are of opinion that the scorpion devours its offspring, and that the one among the young which is the most adroit avails itself of its sole mode of escape, by placing itself on the back of the mother, and thus finding a place where it is in safety from the tail and the sting. The one that thus escapes, they say, becomes the avenger of the rest, and at last, taking advantage of its elevated position, puts its parents to death. The scorpion produces eleven at a birth.

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CHAP. 31. (26.)

THE STELLIO.

The stellio has in some measure the same nature as the chameleon, as it lives upon nothing but dew, and such spiders as it may happen to find.

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CHAP. 32.

THE GRASSHOPPER: THAT IT HAS NEITHER MOUTH NOR OUTLET FOR FOOD.

The cicada also lives in a similar manner, and is divided into two kinds. The smaller kind are born the first and die the last, and are without a voice. The others are of the flying kind, and have a note; there are two sorts, those known as *achetæ,* and the smaller ones called *tettiqonia:* these last have the loudest voice. In both of these last-mentioned kinds, it is the male that sings, while the female is silent. There are nations in the east that feed upon these insects, the Parthians even, wealthy and affluent as they are. They prefer the male before it has had sexual intercourse, and the female after; and they take their eggs, which are white. They engender with the belly upwards. Upon the back they have a sharp-edged instrument, by means of which they excavate a hole to breed in, in the ground. The young is, at first, a small maggot in appearance, after which the larva assumes the form in which it is known as the *tettigometra.* It bursts its shell about the time of the summer solstice, and then takes to flight, which always happens in the night. The insect, at first, is black and hard.

This is the only living creature that has no mouth; though it has something instead which bears a strong resemblance to the tongues of those insects which carry a sting in the mouth: this organ is situate in the breast of the animal, and is employed by it in sucking up the dew. The corselet itself forms a kind of pipe; and it is by means of this that the achetæ utter their note, as already mentioned. Beyond this, they have no viscera in the abdomen. When surprised, they spring upwards, and eject a kind of liquid, which, indeed, is our only proof that they live upon dew. This, also, is the only animal that has no outlet for the evacuations of the body. Their powers of sight are so bad, that if a person contracts his finger, and then suddenly extends it close to them, they will come upon it just as though it were a leaf. Some authors divide these animals into two kinds, the "surcularia," which is the largest, and the " frumentaria," by many

known as the “ avenaria;” this last makes its appearance just as the corn is turning dry in the ear.

(27.) The grasshopper is not a native of countries that are bare of trees-hence it is that there are none in the vicinity of the city of Cyrene-nor, in fact, is it produced in champaign coun- tries, or in cool and shady thickets. They will take to some places much more readily than others. In the district of Miletus they are only to be found in some few spots; and in Cephallenia, there is a river which runs through the country, on one side of which they are not to be found, while on the other they exist in vast numbers. In the territory of Rhegium, again, none of the grasshoppers have any note, while beyond the river, in the territory of Locri, they sing aloud. Their wings are formed similarly to those of bees, but are larger, in proportion to the body.

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CHAP. 33. (28.)

THE WINGS OF INSECTS.

There are some insects which have two wings, flies, for instance; others, again, have four, like the bee. The wings of the grasshopper are membranous. Those insects which are armed with a sting in the abdomen, have four wings. None of those which have a sting in the mouth, have more than two wings. The former have received the sting for the purpose of defending themselves, the latter for the supplying of their wants. If pulled from off the body, the wings of an insect will not grow again; no insect which has a sting inserted in its body, has two wings only.

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CHAP. 34.

THE BEETLE. THE GLOW-WORM. OTHER KINDS OF BEETLES.

Some insects, for the preservation of their wings, are covered with a erust the beetle, for instance, the wing of which is peculiarly fine and frail. To these insects a sting has been denied by Nature; but in one large kind we find horns of a remarkable length, two-pronged at the extremities, and forming pincers, which the animal closes when it is its intention to bite. These beetles are suspended from the neck of infants by way of remedy against certain maladies: Nigidius calls them “lucani.” There is another kind of beetle, again, which, as it goes backwards with its feet, rolls the dung into large pellets, and then deposits in them the maggots which form its young, as in a sort of nest, to protect them against the rigours of winter. Some, again, fly with a loud buzzing or a drony noise, while others burrow numerous holes in the hearths and out in the fields, and their shrill chirrup is to be heard at night.

The glow-worm, by the aid of the colour of its sides and haunches, sends forth at night a light which resembles that of fire; being resplendent, at one moment, as it expands its wings, and then thrown into the shade the instant it has shut them. These insects are never to be seen before the grass of the pastures has come to maturity, nor yet after the hay has been cut. On the other hand, it is the nature of the black beetle to seek dark corners, and to avoid the light: it is mostly found in baths, being produced from the humid vapours which arise therefrom. There are some beetles also, belonging to the same species, of a golden colour and very large size, which burrow in dry ground, and construct small combs of a porous nature, and very like sponge; these they fill with a poisonous kind of honey. In Thrace, near Olynthus, there is a small locality, the only one in which this animal cannot exist; from which circumstance it has received the name of “ Cantharolethus.”

The wings of all insects are formed without any division in them, and they none of them have a tail, with the exception of the scorpion; this, too, is the only one among them that has arms, together with a

sting in the tail. As to the rest of the insects, some of them have the sting in the mouth, the gad-fly for instance, or the “tabanus,” as some persons choose to call it: the same is the case, too, with the gnat and some kinds of flies. All these insects have their stings situate in the mouth instead of a tongue; but in some the sting is not pointed, being formed not for pricking, but for the purpose of suction: this is the case more especially with flies, in which it is clear that the tongue is nothing more than a tube. These insects, too, have no teeth. Others, again, have little horns protruding in front of the eyes, but without any power in them; the butterfly, for instance. Some insects are destitute of wings, such as the scolopendra, for instance.

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CHAP. 35.

LOCUSTS.

Those insects which have feet, move sideways. Some of them have the hind feet longer than the fore ones, and curving outwards, the locust, for example.

(29.) These creatures lay their eggs in large masses, in the autumn, thrusting the end of the tail into holes which they form in the ground. These eggs remain underground throughout the winter, and in the ensuing year, at the close of spring, small locusts issue from them, of a black colour, and crawling along without legs and wings. Hence it is that a wet spring destroys their eggs, while, if it is dry, they multiply in great abundance. Some persons maintain that they breed twice a year, and die the same number of times; that they bring forth at the rising of the Vergiliæ, and die at the rising of the Dog-star, after which others spring up in their places: according to some, it is at the setting of Arcturus that the second litter is produced. That the mothers die the moment they have brought forth, is a well-known fact, for a little worm immediately grows about the throat, which chokes them: at the same time, too, the males perish as well. This insect, which thus dies through a cause apparently so trifling, is able to kill a serpent by itself, when it pleases, by seizing its jaws with its teeth. Locusts are only produced in champaign places, that are full of chinks and crannies. In India, it is said that they attain the length of three feet, and that the people dry the legs and thighs, and use them for saws. There is another mode, also, in which these creatures perish; the winds carry them off in vast swarms, upon which they fall into the sea or standing waters, and not, as the ancients supposed, because their wings have been drenched by the dampness of the night. The same authors have also stated, that they are unable to fly during the night, in consequence of the cold, being ignorant of the fact, that they travel over lengthened tracts of sea for many days together, a thing the more to be wondered at, as they have to endure hunger all the time as well, for this it is which causes them to be thus seeking pastures in other lands. This is looked upon as a plague

inflicted by the anger of the gods; for as they fly they appear to be larger than they really are, while they make such a loud noise with their wings, that they might be readily supposed to be winged creatures of quite another species. Their numbers, too, are so vast, that they quite darken the sun; while the people below are anxiously following them with the eye, to see if they are about to make a descent, and so cover their lands. After all, they have the requisite energies for their flight; and, as though it had been but a trifling matter to pass over the seas, they cross immense tracts of country, and cover them in clouds which bode destruction to the harvests. Scorching numerous objects by their very contact, they eat away everything with their teeth, the very doors of the houses even.

Those from Africa are the ones which chiefly devastate Italy; and more than once the Roman people have been obliged to have recourse to the Sibylline Books, to learn what remedies to employ under their existing apprehensions of impending famine. In the territory of Cyrenaica there is a law, which even compels the people to make war, three times a year, against the locusts, first, by crushing their eggs, next by killing the young, and last of all by killing those of full growth; and he who fails to do so, incurs the penalty of being treated as a deserter. In the island of Lemnos also, there is a certain measure fixed by law, which each individual is bound to fill with locusts which he has killed, and then bring it to the magistrates. It is for this reason, too, that they pay such respect to the jack-daw, which flies to meet the locusts, and kills them in great numbers. In Syria, also, the people are placed under martial law, and compelled to kill them: in so many countries does this dreadful pest prevail. The Parthians look upon them as a choice food, and the grasshopper as well. The voice of the locust appears to proceed from the back part of the head. It is generally believed that in this place, where the shoulders join on to the body, they have, as it were, a kind of teeth, and that it is by grinding these against each other that they produce the harsh noise which they make. It is more especially about the two equinoxes that they are to be heard, in the same way that we hear the chirrup of the grasshopper about the summer solstice. The coupling of locusts is similar to that of all other insects that couple, the female supporting the male, and turning back the extremity of the tail

towards him; it is only after a considerable time that they separate. In all these kinds of insects the male is of smaller size than the female.

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CHAP. 36. (30.)

ANTS.

The greater part of the insects produce a maggot. Ants also produce one in spring, which is similar to an egg, and they work in common, like bees; but whereas the last make their food, the former only store it away. If a person only compares the burdens which the ants carry with the size of their bodies, he must confess that there is no animal which, in proportion, is possessed of a greater degree of strength. These burdens they carry with the mouth, but when it is too large to admit of that, they turn their backs to it, and push it onwards with their feet, while they use their utmost energies with their shoulders. These insects, also, have a political community among themselves, and are possessed of both memory and foresight. They gnaw each grain before they lay it by, for fear lest it should shoot while under ground; those grains, again, which are too large for admission, they divide at the entrance of their holes; and those which have become soaked by the rain, they bring out and dry. They work, too, by night, during the full moon; but when there is no moon, they cease working. And then, too, in their labours, what ardour they display, what wondrous carefulness! Because they collect their stores from different quarters, in ignorance of the proceedings of one another, they have certain days set apart for holding a kind of market, on which they meet together and take stock. What vast throngs are then to be seen hurrying together, what anxious enquiries appear to be made, and what earnest parleys are going on among them as they meet! We see even the very stones worn away by their footsteps, and roads beaten down by being the scene of their labours. Let no one be in doubt, then, how much assiduity and application, even in the very humblest of objects, can upon every occasion effect! Ants are the only living beings, besides man, that bestow burial on the dead. In Sicily there are no winged ants to be found.

(31.) The horns of an Indian ant, suspended in the temple of Hercules, at Erythræ, have been looked upon as quite miraculous for their size. This ant excavates gold from holes, in a country in the

north of India, the inhabitants of which are known as the Dardæ. It has the colour of a cat, and is in size as large as an Egyptian wolf. This gold, which it extracts in the winter, is taken by the Indians during the heats of summer, while the ants are compelled, by the excessive warmth, to hide themselves in their holes. Still, however, on being aroused by catching the scent of the Indians, they sally forth, and frequently tear them to pieces, though provided with the swiftest camels for the purpose of flight; so great is their fleetness, combined with their ferocity and their passion for gold!

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CHAP. 37. (32.)

THE CHRYSALIS.

Many insects, however, are engendered in a different manner; and some more especially from dew. This dew settles upon the radish leaf in the early days of spring; but when it has been thickened by the action of the sun, it becomes reduced to the size of a grain of millet. From this a small grub afterwards arises, which, at the end of three days, becomes transformed into a caterpillar. For several successive days it still increases in size, but remains motionless, and covered with a hard husk. It moves only when touched, and is covered with a web like that of the spider. In this state it is called a chrysalis, but after the husk is broken, it flies forth in the shape of a butterfly.

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CHAP. 38. (33.)

ANIMALS WHICH BREED IN WOOD.

In the same manner, also, some animals are generated in the earth from rain, and some, again, in wood. And not only wood-worms are produced in wood, but gad-flies also and other insects issue from it, whenever there is an excess of moisture; just as in man, tape-worms are sometimes found, as much as three hundred feet or more in length.

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CHAP. 39.

INSECTS THAT ARE PARASITES OF MAN. WHICH IS THE SMALLEST OF ANIMALS? ANIMALS FOUND IN WAX EVEN.

Then, too, in dead carrion there are certain animals produced, and in the hair, too, of living men. It was through such vermin as this that the Dictator Sylla, and Aleman, one of the most famous of the Grecian poets, met their deaths. These insects infest birds too, and are apt to kill the pheasant, unless it takes care to bathe itself in the dust. Of the animals that are covered with hair, it is supposed that the ass and the sheep are the only ones that are exempt from these vermin. They are produced, also, in certain kinds of cloth, and more particularly those made of the wool of sheep which have been killed by the wolf. I find it stated, also, by authors, that some kinds of water which we use for bathing are more productive of these parasites than others. Even wax is found to produce mites, which are supposed to be the very smallest of all living creatures. Other insects, again, are engendered from filth, acted upon by the rays of the sun-these fleas are called “petauristæ,” from the activity which they display in their hind legs. Others, again, are produced with wings, from the moist dust that is found lying in holes and corners.

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CHAP. 40. (34.)

AN ANIMAL WHICH HAS NO PASSAGE FOR THE EVACUATIONS.i

There is an animal, also, that is generated in the summer, which has its head always buried deep in the skill [of a beast], and so, living on its blood, swells to a large size. This is the only living creature that has no outlet for its food; hence, when it has overgorged itself, it bursts asunder, and thus its very aliment is made the cause of its death. This insect never breeds on beasts of burden, but is very commonly seen on oxen, and sometimes on dogs, which, indeed, are subject to every species of vermin. With sheep and goats, it is the only parasite. The thirst, too, for blood displayed by leeches, which we find in marshy waters, is no less singular; for these will thrust the entire head into the flesh in quest of it. There is a winged insect which peculiarly infests dogs, and more especially attacks them with its sting about the ears, where they are unable to defend themselves with their teeth.

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CHAP. 41. (35.)

MOTHS, CANTHARIDES, GNATS–AN INSECT THAT BREEDS IN THE SNOW.

Dust, too, is productive of worms in wools and cloths, and this more especially if a spider should happen to be enclosed in them: for, being sensible of thirst, it sucks up all the mois- ture, and thereby increases the dryness of the material. These will breed in paper also. There is one kind which carries with it its husk, in the same manner as the snail, only that the feet are to be seen. If deprived of it, it does not survive; and when it is fully developed, the insect becomes a chrysalis. The wild fig-tree produces gnats, known as “ficarii;” and the little grubs of the fig-tree, the pear-tree, the pine, the wild rose, and the common rose produce cantharides, when fully developed. These insects, which are venomous, carry with them their antidote; for their wings are useful in medicine, while the rest of the body is deadly. Again, liquids turned sour will produce other kinds of gnats, and white grubs are to be found in snow that has lain long on the ground, while those that lie above are of a reddish colour — indeed, the snow itself becomes red after it has lain some time on the ground. These grubs are covered with a sort of hair, are of a rather large size, and in a state of torpor.

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CHAP. 42. (36.)

AN ANIMAL FOUND IN FIRE — THE PYRALLIS OR PYRAUSTA.

That element, also, which is so destructive to matter, produces certain animals; for in the copper-smelting furnaces of Cyprus, in the very midst of the fire, there is to be seen flying about a four-footed animal with wings, the size of a large fly: this creature is called the “ pyrallis,” and by some the “ pyrausta.” So long as it remains in the fire it will live, but if it comes out and flies a little distance from it, it will instantly die.

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CHAP. 43.

THE ANIMAL CALLED HEMEROBION.

The Hypanis, a river of Pontus, brings down in its waters, about the time of the summer solstice, small membranous particles, like a grape-stone in appearance; from which there issues an animal with four legs and with wings, similar to the one just mentioned. It does not, however, live more than a single day, from which circumstance it has obtained the name of " hemerobion." The life of other insects of a similar nature is regulated from its beginning to its end by multiples of seven. Thrice seven days is the duration of the life of the gnat and of the maggot, while those that are viviparous live four times seven days, and their various changes and transfornations take place in periods of three or four days. The other insects of this kind that are winged, generally die in the autumn, the gad-fly becoming quite blind even before it dies. Flies which have been drowned in water, if they are covered with ashes, will return to life.

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CHAP. 44. (37.)

THE NATURE AND CHARACTERISTICS OF ALL ANIMALS CONSIDERED LIMB BY LIMB. THOSE WHICH HAVE TUFTS AND CRESTS.

In addition to what is already stated, we will add an account of every part of the body of an animal, taken limb by limb.

All those which have blood, have a head as well. A small number of animals, and those only among the birds, have tufts of various kinds upon the head. The phœnix has a long row of feathers on it, from the middle of which arises another row; peacocks have a hairy tuft, resembling a bushy shrub; the stymphalis has a sort of pointed crest, and the pheasant, again, small horns. Added to these, there is the lark, a little bird, which, from the appearance of its tuft, was formerly called "galerita," but has since received the Gallic name of " alauda," a name which it has transferred to one of our legions. We have already made mention, also, of one bird to which Nature has given a crest, which it can fold or unfold at pleasure: the birds of the coot kind have also received from her a crest, which takes its rise at the beak, and runs along the middle of the head; while the pie of Mars, and the Balearic crane, are furnished with pointed tufts. But the most remarkable feature of all, is the crest which we see attached to the heads of our domestic fowls, substantial and indented like a saw; we cannot, in fact, strictly call it flesh, nor can we pronounce it to be cartilage or a callosity, but must admit that it is something of a nature peculiar to itself. As to the crests of dragons, there is no one to be found who ever saw one.

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CHAP. 45.

THE VARIOUS KINDS OF HORNS. ANIMALS IN WHICH THEY ARE MOVEABLE.

Horns, too, of various forms have been granted to many animals of the aquatic, marine, and reptile kind, but those which are more properly understood under that name belong to the quadrupeds only; for I look upon the tales of Actæon and of Cippus even, in Latin story, as nothing more nor less than fables. And, indeed, in no department of her works has Nature displayed a greater capriciousness. In providing animals with these weapons, she has made merry at their expense; for some she has spread them out in branches, the stag, for instance; to others she has given them in a more simple form, as in the " subulo," so called from the resemblance of its horns to a " subula," or shoemaker's awl. In others, again, she has flattened them in the shape of a man's hand, with the fingers extended, from which circumstance the animal has received the name of " platyceros. To the roebuck she has given branching horns, but small, and has made them so as not to fall off and be cast each year; while to the ram she has given them of a contorted and spiral form, as though she were providing it with a cæstus for offence. The horns of the bull, again, are upright and threatening. In this last kind, the females, too, are provided with them, while in most it is only the males. The chamois has them, curving backwards; while in the fallow deer they bend forward. The strepsiceros, which in Africa bears the name of addax, has horns erect and spiral, grooved and tapering to a sharp point, so much so, that you would almost take them to be the sides of a lyre. In the oxen of Phrygia, the horns are moveable, like the ears; and among the cattle of the Troglodytæ, they are pointed downwards to the ground, for which reason it is that they are obliged to feed with the head on one side. Other animals, again, have a single horn, and that situate in the middle of the head, or else on the nose, as already stated.

Then, again, in some animals the horns are adapted for butting, and in others for goring; with some they are curved inwards, with

others outwards, and with others, again, they are fitted for tossing: all which objects are effected in various ways, the horns either lying backwards, turning from, or else towards each other, and in all cases running to a sharp point. In one kind, also, the horns are used for the purpose of scratching the body, instead of hands.

In snails the horns are fleshy, and are thus adapted for the purpose of feeling the way, which is also the case with the ce- rastes; some reptiles, again, have only one horn, though the snail has always two, suited for protruding and withdrawing. The barbarous nations of the north drink from the horns of the urus, a pair of which will hold a couple of urnæ: other tribes, again, point their spears with them. With us they are cut into laminæ, upon which they become transparent; indeed, the rays of a light placed within them may be seen to a much greater distance than without. They are used also for various appliances of luxury, either coloured or varnished, or else for those kinds of paintings which are known as " cestrota," or horn-pictures. The horns of all animals are hollow within, it being only at the tip that they are solid: the only exception is the stag, the horn of which is solid throughout, and is cast every year. When the hoofs of oxen are worn to the quick, the husbandmen have a method of curing them, by anointing the horns of the animal with grease. The substance of the horns is so ductile, that even while upon the body of the living animal, they can be bent by being steeped in boiling wax, and if they are split down when they are first shooting, they may be twisted different ways, and so appear to be four in number upon one head. In females the horns are generally thinner than in the males, as is the case, also, with most kinds of wool-bearing animals.

No individuals, however, among sheep, or hinds, nor yet any that have the feet divided into toes, or that have solid hoofs, are furnished with horns; with the sole exception of the Indian ass, which is armed with a single horn. To the beasts that are cloven-footed Nature has granted two horns, but to those that have fore-teeth in the upper jaw, she has given none. Those persons who entertain the notion that the substance of these teeth is expended in the formation of the horns, are easily to be refuted, if we only consider the case of the hind, which has no more teeth than the male, and yet is without horns altogether. In the stag the horn is only imbedded in the skin, but in

the other animals it adheres to the bone.

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CHAP. 46.

THE HEADS OF ANIMALS. THOSE WHICH HAVE NONF.

The head of the fish is very large in proportion to the rest of the body, probably, to facilitate its diving under water. Animals of the oyster and the sponge kind have no head, which is the case, also, with most of the other kinds, whose only sense is that of touch. Some, again, have the head blended with the body, the crab, for instance.

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CHAP. 47.

THE HAIR.

Of all animals man has the longest hair upon the head; which is the case more especially with those nations where the men and women in common leave the hair to grow, and do not cut it. Indeed, it is from this fact, that the inhabitants of the Alps have obtained from us the name of " Capillati," as also those of Gallia, " Comata." There is, however, a great difference in this respect according to the various countries. In the island of Myconus, the people are born without hair, just as at Caunus the inhabitants are afflicted with the spleen from their birth. There are some animals, also, that are naturally bald, such as the ostrich, for instance, and the aquatic raven, which last has thence derived its Greek name. It is but rarely that the hair falls off in women, and in eunuchs such is never known to be the case; nor yet does any person lose it before having known sexual intercourse. The hair does not fall off below the brain, nor yet beneath the crown of the head, or around the ears and the temples. Man is the only animal that becomes bald, with the exception, of course, of such animals as are naturally so. Man and the horse are the only creatures whose hair turns grey; but with man this is always the case, first in the fore-part of the head, and then in the hinder part.

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CHAP. 48.

THE BONES OF THE HEAD.

Some few persons only are double-crowned. The bones of the head are flat, thin, devoid of marrow, and united with sutures indented like a comb. When broken asunder they cannot be united, but the extraction of a small portion is not necessarily fatal, as a fleshy cicatrix forms, and so makes good the loss. We have already mentioned, in their respective places, that the skull of the bear is the weakest of all, and that of the parrot the hardest.

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CHAP. 49.

THE BRAIN.

The brain exists in all animals which have blood, and in those sea animals as well, which we have already mentioned as mollusks, although they are destitute of blood, the polypus, for instance. Man, however, has, in proportion to his body, the most voluminous brain of all. This, too, is the most humid, and the coldest of all the viscera, and is enveloped above and below with two membranous integuments, for either of which to be broken is fatal. In addition to these facts, we may remark that the brain is larger in men than in women. In man the brain is destitute of blood and veins, and in other animals it has no fat. Those who are well informed on the subject, tell us that the brain is quite a different substance from the marrow, seeing that on being boiled it only becomes harder. In the very middle of the brain of every animal there are small bones found. Man is the only animal in which it is known to palpitate during infancy; and it does not gain its proper consistency until after the child has made its first attempt to speak. The brain is the most elevated of all the viscera, and the nearest to the roof of the head; it is equally devoid of flesh, blood, and excretions. The senses hold this organ as their citadel; it is in this that are centred all the veins which spring from the heart; it is here that they terminate; this is the very culminating point of all, the regulator of the understanding. With all animals it is advanced to the fore-part of the head, from the fact that the senses have a tendency to the direction in which we look. From the brain proceeds sleep, and its return it is that causes the head to nod. Those creatures, in fact, which have no brain, never sleep. It is said that stags have in the head certain small maggots, twenty in number: they are situate in the empty space that lies beneath the tongue, and around the joints by which the head is united to the body.

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CHAP. 50.

THE EARS. ANIMALS WHICH HEAR WITHOUT EARS OR APERTURES.

Man is the only animal the ears of which are immoveable. It is from the natural flaccidity of the ear, that the surname of *Flaccus* is derived. There is no part of the body that creates a more enormous expense for our women, in the pearls which are suspended from them. In the East, too, it is thought highly becoming for the men, even, to wear gold rings in their ears. Some animals have large, and others small ears. The stag alone has them cut and divided, as it were; in the field-mouse they have a velvet surface. All the animals that are viviparous have ears of some kind or other, with the sole exception of the sea-calf, the dolphin, the fishes which we have mentioned as cartilaginous, and the viper. These animals have only cavities instead of ears, with the exception of the cartilaginous fishes and the dolphin, which last, however, it is quite clear possesses the sense of hearing, for it is charmed by singing, and is often taken while enraptured with the melody: how it is that it does hear, is quite marvellous. These animals, too, have not the slightest trace of olfactory organs, and yet they have a most acute sense of smell.

Among the winged animals, only the horned owl and the longeared owl have feathers which project like ears, the rest having only cavities for the purpose of hearing; the same is the case, also, with the scaly animals and the serpents. Among horses and beasts of burden of all kinds, it is the ears which indicate the natural feelings; when the animal is weary, they are drooping and flaccid; when it is startled, they quiver to and fro; when it is enraged, they are pricked up; and when it is ailing, they are pendant.

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CHAP. 51.

THE FACE, THE FOREHEAD, AND THE EYE-BROWS.

Man is the only creature that has a face, the other animals having only a muzzle or a beak. Other animals have a forehead as well, but it is only on the forehead of man that is depicted sorrow, gladness, compassion, or severity. It is the forehead that is the index of the mind. Man has eyebrows, also, which move together or alternately; these, too, serve in some measure as indications of the feelings. Do we deny or do we assent, it is the eyebrows, mostly, that indicate our intentions. Feelings of pride may be generated elsewhere, but it is here that they have their principal abode; it is in the heart that they take their rise, but it is to the eyebrows that they mount, and here they take up their position. In no part of the body could they meet with a spot more lofty and more precipitous, in which to establish themselves free from all control.

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CHAP. 52.

THE EYES — ANIMALS WHICH HAVE NO EYES, OR HAVE ONLY ONE EYE.

Below the forehead are the eyes, which form the most precious portion of the human body, and which, by the enjoyment of the blessings of sight, distinguish life from death. Eyes, however, have not been granted to all animals; oysters have none, but, with reference to some of the shell-fish, the question is still doubtful; for if we move the fingers before a scallop half open, it will immediately close its shell, apparently from seeing them, while the solen will start away from an iron instrument when placed near it. Among quadrupeds the mole has no sight, though it has something that bears a resemblance to eyes, if we remove the membrane that is extended in front of them. Among birds also, it is said that a species of heron, which is known as the "leucus," is wanting of one eye: a bird of most excellent augury, when it flies towards the south or north, for it is said that it portends thereby that there is about to be an end of perils and alarms. Nigidius says also, that neither locusts nor grasshoppers have eyes. In snails, the two small horns with which they feel their way, perform the duties of eyes. Neither the mawworm nor any other kind of worm has eyes.

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CHAP. 53.

THE DIVERSITY OF THE COLOUR OF THE EYES.

The eyes vary in colour in the human race only; in all other animals they are of one uniform colour peculiar to the kind, though there are some horses that have eyes of an azure colour. But in man the varieties and diversities are most numerous; the eyes being either large, of middling size, remarkably small, or remarkably prominent. These last are generally supposed to be very weak, while those which are deep-seated are considered the best, as is the case also with those which in colour resemble the eyes of the goat.

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CHAP. 54.

THE THEORY OF SIGHT — PERSONS WHO CAN SEE BY NIGHT.

In addition to this, there are some persons who can see to a very great distance, while there are others, again, who can only distinguish objects when brought quite close to them. The vision of many stands in need of the rays of the sun; such persons cannot see on a cloudy day, nor yet after the sun has set. Others, again, have bad sight in the day-time, but a sight superior to that of others by night. Of persons having double pupils, or the evil eye, we have already spoken at sufficient length. Blue eyes are the best for seeing in the dark.

It is said that Tiberius Cæsar, like no other human being, was so endowed by Nature, that on awaking in the night he could for a few moments distinguish objects just as well as in the clearest daylight, but that by degrees he would find his sight again enveloped in darkness. The late Emperor Augustus had azure eyes like those of some horses, the white being larger than with other men; he used to be very angry if a person stared intently at them for this peculiarity. Claudius Cæsar had at the corners of the eyes a white fleshy substance, covered with veins, which would occasionally become suffused with blood; with the Emperor Caius they had a fixed, steady gaze, while Nero could see nothing distinctly without winking, and having it brought close to his eyes. The Emperor Caius had twenty pairs of gladiators in his training-school, and of all these there were only two who did not wink the eyes when a menacing gesture was made close to them: hence it was that these men were invincible. So difficult a matter is it for a man to keep his eyes from winking: indeed, to wink is so natural to many, that they cannot desist from it; such persons we generally look upon as the most timid.

No persons have the eye all of one colour; that of the middle of the eye is always different from the white which surrounds it. In all animals there is no part in the whole body that is a stronger exponent of the feelings, and in man more especially, for it is from the expression of the eye that we detect clemency, moderation, compassion, hatred, love, sadness, and joy. From the eyes, too, the

various characters of persons are judged of, according as they are ferocious, me- nacing, sparkling, sedate, leering, askance, downcast, or lan- guishing. Beyond a doubt it is in the eyes that the mind has its abode: sometimes the look is ardent, sometimes fixed and steady, at other times the eyes are humid, and at others, again, half closed. From these it is that the tears of pity flow, and when we kiss them we seem to be touching the very soul. It is the eyes that weep, and from them proceed those streams that moisten our cheeks as they trickle down. And what is this liquid that is always so ready and in such abundance in our moments of grief; and where is it kept in reserve at other times? It is by the aid of the mind that we see, by the aid of the mind that we enjoy perception; while the eyes, like so many vessels, as it were, receive its visual faculties and transmit them. Hence it is that profound thought renders a man blind for the time, the powers of sight being withdrawn from external objects and thrown inward: so, too, in epilepsy, the mind is covered with darkness, while the eyes, though open, are able to see nothing. In addition to this, it is the fact that hares, as well as many human beings, can sleep with the eyes open, a thing which the Greeks express by the term χορυβαντιᾷν. Nature has composed the eye of numerous membranes of remarkable thinness, covering them with a thick coat to ensure their protection against heat and cold. This coat she purifies from time to time by the lachrymal humours, and she has made the surface lubricous and slippery, to protect the eye against the effects of a sudden shock.

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CHAP. 55.

THE NATURE OF THE PUPIL-EYES WHICH DO NOT SHUT.

In the midst of the cornea of the eye Nature has formed a window in the pupil, the small dimensions of which do not permit the sight to wander at hazard and with uncertainty, hut direct it as straight as though it were through a tube, and at the same time ensure its avoidance of all shocks communicated by foreign bodies. The pupils are surrounded by a black circle in some persons, while it is of a yellowish cast with others, and azure again with others. By this happy combination the light is received by the eye upon the white that lies around the pupil, and its reflection being thus tempered, it fails to impede or confuse the sight by its harshness. So complete a mirror, too, does the eye form, that the pupil, small as it is, is able to reflect the entire image of a man. This is the reason why most birds, when held in the hand of a person, will more particularly peck at his eyes; for seeing their own likeness reflected in the pupils, they are attracted to it by what seem to be the objects of their natural affection.

It is only some few beasts of burden that are subject to maladies of the eyes towards the increase of the moon: but it is man alone that is rescued from blindness by the discharge of the humours that have caused it. Many persons have had their sight restored after being blind for twenty years; while others, again, have been denied this blessing from their very birth, without there being any blemish in the eyes. Many persons, again, have suddenly lost their sight from no apparent cause, and without any preceding injury. The most learned authors say that there are veins which communicate from the eye to the brain, but I am inclined to think that the communication is with the stomach; for it is quite certain that a person never loses the eye without feeling sickness at the stomach. It is an important and sacred duty, of high sanction among the Romans, to close the eyes of the dead, and then again to open them when the body is laid on the funeral pile, the usage having taken its rise in the notion of its being improper that the eyes of the dead should be beheld by man, while it

is an equally great offence to hide them from the view of heaven. Man is the only living creature the eyes of which are subject to deformities, from which, in fact, arose the family names of " Strabo" and "Pætus." The ancients used to call a man who was born with only one eye, "cocles," and "ocella," a person whose eyes were remarkably small. " Luscinus" was the surname given to one who happened to have lost one eve by an accident.

The eyes of animals that see at night in the dark, cats, for instance, are shining and radiant, so much so, that it is impossible to look upon them; those of the she-goat, too, and the wolf are resplendent, and emit a light like fire. The eyes of the sea-calf and the hyena change successively to a thousand colours; and the eyes, when dried, of most of the fishes will give out light in the dark, just in the same way as the trunk of the oak when it has become rotten with extreme old age. We have already mentioned the fact, that animals which turn, not the eyes but the head, for the purpose of looking round, are never known to wink. It is said, too, that the chameleon is able to roll the eye-balls completely round. Crabs look sideways, and have the eves enclosed beneath a thin crust. Those of craw-fish and shrimps are very hard and prominent, and lie in a great measure beneath a defence of a similar nature. Those animals, however, the eyes of which are hard, have worse sight than those of which the eyes are formed of a humid substance. It is said that if the eyes are taken away from the young of serpents and of the swallow, they will grow again. In all insects and in animals covered with a shell, the eyes move just in the same way as the ears of quadrupeds do; those among them which have a brittle covering have the eyes hard. All animals of this nature, as well as fishes and insects, are destitute of eye-lids, and their eyes have no covering; but in all there is a membrane that is transparent like glass, spread over them.

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CHAP. 56.

THE HAIR OF THE EYE-LIDS; WHAT ANIMALS ARE WITHOUT THEM. ANIMALS WHICH CAN SEE ON ONE SIDE ONLY.

Man has lashes on the eye-lids on either side; and women even make it their daily care to stain them; so ardent are they in the pursuit of beauty, that they must even colour their very eyes. It was with another view, however, that Nature had provided the hair of the eyelids — they were to have acted, so to say, as a kind of rampart for the protection of the sight, and as an advanced bulwark against the approach of insects or other objects which might accidentally come in their way. It is not without some reason that it is said that the eye-lashes fall off with those persons who are too much given to venereal pleasures. Of the other animals, the only ones that have eyelashes are those that have hair on the rest of the body as well; but the quadrupeds have them on the upper eyelid only, and the birds on the lower one: the same is the case also with those which have a soft skin, such as the serpent, and those among the quadrupeds that are oviparous, the lizard, for instance. The ostrich is the only one among the birds that, like man, has eyelashes on either side.

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CHAP. 57.

ANIMALS WHICH HAVE NO EYELIDS.

All birds, however, have not eyelids: hence it is, that those which are viviparous have no nictation of the eye. The heavier kinds of birds shut the eye by means of the lower eyelid, and they wink by drawing forward a membrane which lies in the corner of the eye. Pigeons, and other birds of a similar nature, shut the two eyelids; but the quadrupeds which are oviparous, such, for instance, as the tortoise and the crocodile, have only the lower eyelid moveable, and never wink, in consequence of the hardness of the eye. The edge of the upper eyelid was by the ancients called " cilium," from which comes our word "supercilia." If the eyelid happens to be severed by a wound it will not reunite, which is the case also with some few other parts of the human body.

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CHAP. 58.

THE CHEEKS.

Below the eyes are the cheeks, a feature which is found in man only. From the ancients they received the name of “genæ,” and by the laws of the Twelve Tables, women were forbidden to tear them. The cheeks are the seat of bashfulness; it is on them more particularly that blushes are to be seen.

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CHAP. 59.

THE NOSTRILS.

Within the cheeks is the mouth, which gives such strong indications of the feelings of joyousness and laughter; and above it, but in man only, is the nose, which modern notions have stamped as the exponent of sarcasm and ridicule. In no other animal but man, is the nose thus prominent; birds, serpents, and fishes, have no nostrils, but apertures only for the purpose of smell. It is from the peculiarity of the nose that are derived the surnames of “Simus” and “Silo.” Children born in the seventh month often have the ears and the nostrils imperforate.

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CHAP. 60.

THE MOUTH; THE LIPS; THE CHIN; AND THE JAW-BONE.

It is from the " labia," or lips, that the Brocchi have received the surname of Labeo. All animals that are viviparous have a mouth that is either well-formed, or harshly defined, as the case may be. Instead of lips and mouth, the birds have a beak that is horny and sharp at the end. With birds that live by rapine, the beak is hooked inwards, but with those which gather and peck only, it is straight: those animals, again, which root up grass or puddle in the mud, have the muzzle broad, like swine. The beasts of burden employ the mouth in place of hands in gathering their food, while those which live by rapine and slaughter have it wider than the rest. No animal, with the exception of man, has either chin or cheek-bones. The crocodile is the only animal that has the upper jaw-bone moveable; among the land quadrupeds it is the same as with other animals, except that they can move it obliquely.

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CHAP. 61.

THE TEETH; THE VARIOUS KINDS OF TEETH; IN WHAT ANIMALS THEY ARE NOT ON BOTH SIDES OF THE MOUTH: ANIMALS WHICH HAVE HOLLOW TEETH.

Teeth are arranged in three different ways, serrated, in one continuous row, or else protruding from the mouth. When serrated they unite together, just like those of a comb, in order that they may not be worn by rubbing against one another, as in serpents, fishes, and dogs, for instance. In some creatures they are set in one continuous row, man and the horse, for instance; while in the wild boar, the elephant, and the hippopotamus, they protrude from the mouth. Among those set in one continuous row, the teeth which divide the food are broad and sharp, while those which grind it are double; the teeth which lie between the incisive and the molar teeth, are those known as the canine or dog-teeth; these are by far the largest in those animals which have serrated teeth. Those animals which have continuous rows of teeth, have them either situate on both sides of the mouth, as in the horse, or else have no fore-teeth in the upper part of the mouth, as is the case with oxen, sheep, and all the animals that ruminate. The she-goat has no upper teeth, except the two front ones. No animals which have serrated teeth, have them protruding from the mouth; among these, too, the females rarely have them; and to those that do have them, they are of no use: hence it is, that while the boar strikes, the sow bites. No animal with horns has projecting teeth; and all such teeth are hollow, while in other animals the teeth are solid. All fish have the teeth serrated, with the exception of the scarus, this being the only one among the aquatic animals that has them level at the edges. In addition to this, there are many fishes that have teeth upon the tongue and over the whole of the mouth, in order that, by the multitude of the bites which they inflict, they may soften those articles of food which they could not possibly manage by tearing. Many animals, also, have teeth in the palate, and even in the tail; in addition to which, some have them inclining to the interior of the mouth, that the food may not fall out, the animal itself having

no other means of retaining it there.

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CHAP. 62.

THE TEETH OF SERPENTS; THEIR POISON. A BIRD WHICH HAS TEETH.

The asp also, and other serpents, have similar teeth; but in the upper jaw, on the right and left, they have two of extreme length, which are perforated with a small tube in the interior, just like the sting of the scorpion, and it is through these that they eject their venom. The writers who have made the most diligent enquiries on the subject, inform us that this venom is nothing but the gall of the serpent, and that it is conveyed to the mouth by certain veins which run beneath the spine; indeed, there are some who state that there is only one poisonfang, and that being barbed at the end, it is bent backwards when the animal has inflicted a bite. Other writers, however, affirm that on such an occasion the fang falls out, as it is very easily displaced, but that it soon grows again; this tooth, they say, is thus wanting in the serpents which we see handled about by persons. It is also stated that this fang exists in the tail of the scorpion, and that most of these animals have no less than three. The teeth of the viper are concealed in the gums: the animal, being provided with a similar venom, exercises the pressure of its fangs for the purpose of instilling the poison in its bite.

No winged creatures have teeth, with the sole exception of the bat. The camel is the only one among the animals without horns, that has no fore-teeth in the upper jaw. None of the horned animals have serrated teeth. Snails, too, have teeth; a proof of which are the vetches which we find gnawed away by snails of the very smallest size. To assert that among marine animals, those that have shells, and those that are cartilaginous have fore-teeth, and that the sea-urchin has five teeth, I am very much surprised how such a notion could have possibly arisen. With insects the sting supplies the place of teeth; the ape has teeth just like those in man. The elephant has in the interior of the mouth fourteen teeth, adapted for chewing, in addition to those which protrude; in the male these are curved inwards, but in the female they are straight, and project outwards. The sea-mouse, a fish which goes before the balæna, has no teeth at all, but in place of

them, the interior of the mouth is lined with bristles, as well as the tongue and palate. Among the smaller land quadrupeds, the two fore-teeth in each jaw are the longest.

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CHAP. 63.

WONDERFUL CIRCUMSTANCES CONNECTED WITH THE TEETH.

The other animals are born with teeth, whereas man has them only at the seventh month after his birth. While other animals keep their teeth to the time of their death, man, the lion, the beasts of burden, the dog, and the ruminating animals, all change them; the lion and the dog, however, change none but the canine teeth. The canine tooth of the wolf, on the right side, is held in high esteem as an amulet. There is no animal that changes the maxillary teeth, which stand beyond the canine teeth. With man, the last teeth, which are known as the " genuini," or cheek teeth, come about the twentieth year, and with many men, and females as well, so late even as the eightieth; but this only in the case of those who have not had them in their youth. It is a well-known fact, that the teeth are sometimes shed in old age, and replaced by others. Mucianus has stated that he, himself, saw one Zocles, a native of Samothrace, who had a new set of teeth when he was past his one hundred and fourth year. In addition to these facts, in man males have more teeth than females, which is the case also in sheep, goats, and swine. Timarchus, the son of Nicocles the Paphian, had a double row of teeth in his jaws: the same person had a brother also who never changed his front teeth, and, consequently, wore them to the very stumps. There is an instance, also, of a man having a tooth growing in the palate. The canine teeth, when lost by any accident, are never known to come again. While in all other animals the teeth grow of a tawny colour with old age, with the horse, and him only, they become whiter the older he grows.

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CHAP. 64.

HOW AN ESTIMATE IS FORMED OF THE AGE OF ANIMALS FROM THEIR TEETH.

The age, in beasts of burden, is indicated by the teeth. In the horse they are forty in number. At thirty months it loses the two fore-teeth in either jaw, and in the following year the same number next to them, at the time that the eye-teeth come. At the beginning of the fifth year the animal loses two teeth, which grow again in the sixth, and in the seventh it has all its teeth, those which have replaced the others, and those which have never been changed. If a horse is gelded before it changes its teeth, it never sheds them. In a similar manner, also, the ass loses four of its teeth in the thirtieth month, and the others from six months to six months. If a she-ass happens not to have foaled before the last of these teeth are shed, it is sure to be barren. Oxen change their teeth at two years old: with swine they are never changed.,When these several indications of age have been lost in horses and other beasts of burden, the age is ascertained by the projecting of the teeth, the greyness of the hair in the eyebrows, and the hollow pits that form around them; at this period the animal is supposed to be about sixteen years old. In the human teeth there is a certain venom; for if they are placed uncovered before a mirror, they will tarnish its brightness, and they will kill young pigeons while yet unfledged. The other particulars relative to the teeth have been already mentioned under the head of the generation of man. When teething first commences, the bodies of infants are subject to certain maladies. Those animals which have serrated teeth inflict the most dangerous bites.

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CHAP. 65.

THE TONGUE; ANIMALS WHICH HAVE NO TONGUE. THE NOISE MADE BY FROGS. THE PALATE.

The tongue is not similarly formed in all animals. Serpents have a very thin tongue, and three-forked, which they vibrate to and fro: it is of a black colour, and when drawn from out of the mouth, of extraordinary length. The tongue of the lizard is two-forked, and covered with hair. That of the sea-calf also is twofold, but with the serpents it is of the thinness of a hair; the other animals employ it to lick the parts around the mouth. Fishes have nearly the whole of the tongue adhering to the palate, while in the crocodile the whole of it does adhere thereto: but in the aquatic animals the palate, which is fleshy, performs the duty of the tongue as the organ of taste. In lions, pards, and all the animals of that class, and in cats as well, the tongue is covered with asperities, which overlap each other, and bear a strong resemblance to a rasp. Such being its formation, if the animal licks a man's skin, it will wear it away by making it thinner and thinner; for which reason it is that the saliva of even a perfectly tame animal, being thus introduced to the close vicinity of the blood, is apt to bring on madness. Of the tongue of the purple we have made mention already. With the frog the end of the tongue adheres to the mouth, while the inner part is disjoined from the sides of the gullet; and it is by this means that the males give utterance to their croaking, at the season at which they are known as ololygones. This happens at stated periods of the year, at which the males invite the females for the purposes of propagation: letting down the lower lip to the surface of the water, they receive a small portion of it in the mouth, and then, by quavering with the tongue, make a gurgling noise, from which the croaking is produced which we hear. In making this noise, the folds of the mouth, becoming distended, are quite transparent, and the eyes start from the head and burn again with the effort. Those insects which have a sting in the lower part of the body, have teeth, and a tongue as well; with bees it is of considerable length, and in the grasshopper it is very prominent. Those insects which have a

fistulous sting in the mouth, have neither tongue nor teeth; while others, again, have a tongue in the interior of the mouth, the ant, for instance. In the elephant the tongue is remarkably broad; and while with all other animals, each according to its kind, it is always perfectly at liberty, with man, and him alone, it is often found so strongly tied down by certain veins, that it becomes necessary to cut them. We find it stated that the pontiff Metellus had a tongue so ill adapted for articulation, that he is generally supposed to have voluntarily submitted to torture for many months, while preparing to pronounce the speech which he was about to make on the dedication of the temple of Opifera. In most persons the tongue is able to articulate with distinctness at about the seventh year; and many know how to employ it with such remarkable skill, as to be able to imitate the voices of various birds and other animals with the greatest exactness. The other animals have the sense of taste centred in the fore-part of the tongue; but in man it is situate in the palate as well.

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CHAP. 66.

THE TONSILS; THE UVA; THE EPIGLOSSIS; THE ARTERY; THE GULLET.

In man there are tonsils at the root of the tongue; these in swine are called the glandules. The uvula, which is suspended between them at the extremity of the palate, is found only in man. Beneath this lies a smaller tongue, known by the name of “epiglossis,” but it is wanting in animals that are oviparous. Placed as it is between two passages, the functions of the epiglottis are of a twofold nature. The one of these passages that lies more inward is called the [tracheal] artery, and leads to the lungs and the heart: the epiglottis covers it during the action of eating, that the drink or food may not go the wrong way, and so be productive of suffering, as it is by this passage that the breath and the voice are conveyed. The other or exterior passage is called the “gula,” and it is by this passage that the victuals and drink pass: this leads to the belly, while the former one communicates with the chest. The epiglottis covers the pharynx, in its turn, when only the breath or the voice is passing, in order that the victuals may not inopportunely pass upwards, and so disturb the breathing or articulation. The tracheal artery is composed of cartilage and flesh, while the gullet is formed of a sinewy substance united with flesh.

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CHAP. 67.

THE NECK; THE THROAT; THE DORSAL SPINE.

The neck is found to exist in no animal but those which have both these passages. All the others which have the gullet only, have nothing but a gorge or throat. In those which have a neck, it is formed of several rounded vertebræ, and is flexible, and joined together by distinct articulations, to allow of the animal turning round the head to look. The lion, the wolf, and the hyæna are the only animals in which it is formed of a single rigid bone. The neck is annexed to the spine, and the spine to the loins. The vertebral column is of a bony substance, but rounded, and pierced within, to afford a passage for the marrow to descend from the brain. It is generally concluded that the marrow is of the same nature as the brain, from the fact that if the membrane of exceeding thinness which covers it is pierced, death immediately ensues. Those animals which have long legs have a long throat as well, which is the case also with aquatic birds, although they have short legs, as well as with those which have hooked talons.

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CHAP. 68.

THE THROAT; THE GULLET; THE STOMACH.

Man only, and the swine, are subject to swellings in the throat which are mostly caused by the noxious quality of the water which they drink. The upper part of the gullet is called the fauces, the lower the stomach. By this name is understood a fleshy concavity, situate behind the tracheal artery, and joining the vertebral column; it extends in length and breadth like a sort of chasm. Those animals which have no gullet have no stomach either, nor yet any neck or throat, fishes, for example; and in all these the mouth communicates immediately with the belly. The sea-tortoise has neither tongue nor teeth; it can break anything, however, with the sharp edge of its muzzle. After the tracheal artery there is the œsophagus, which is indented with hard asperities resembling bramble-thorns, for the purpose of levigating the food, the incisions gradually becoming smaller as they approach the belly. The roughness at the very extremity of this organ strongly resembles that of a blacksmith's file

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CHAP. 69.

THE HEART; THE BLOOD; THE VITAL SPIRIT.

In all other animals but man the heart is situate in the middle of the breast; in man alone it is placed just below the pap on the left-hand side, the smaller end terminating in a point, and bearing outward. It is among the fish only that this point is turned towards the mouth. It is asserted that the heart is the first among the viscera that is formed in the fœtus, then the brain, and last of all, the eyes: it is said, too, that the eyes are the first organs that die, and the heart the very last of all. The heart also is the principal seat of the heat of the body; it is constantly palpitating, and moves as though it were one animal enclosed within another. It is also enve- loped in a membrane equally supple and strong, and is protected by the bulwarks formed by the ribs and the bone of the breast, as being the primary source and origin of life. It contains within itself the primary receptacles for the spirit and the blood, in its sinuous cavity, which in the larger animals is threefold, and in all twofold at least: here it is that the mind has its abode. From this source proceed two large veins, which branch into the fore-part and the back of the body, and which, spreading out in a series of branches, convey the vital blood by other smaller veins over all parts of the body. This is the only one among the viscera that is not affected by maladies, nor is it subject to the ordinary penalties of human life; but when injured, it produces instant death. While all the other viscera are injured, vitality may still remain in the heart.

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CHAP. 70.

THOSE ANIMALS WHICH HAVE THE LARGEST HEART, AND THOSE WHICH HAVE THE SMALLEST. WHAT ANIMALS HAVE TWO HEARTS.

Those animals are looked upon as stupid and lumpish which have a hard, rigid heart, while those in which it is small are courageous, and those are timid which have it very large. The heart is the largest, in proportion to the body, in the mouse, the hare, the ass, the stag, the panther, the weasel, the hyæna, and all the animals, in fact, which are timid, or dangerous only from the effects of fear. In Paphlagonia the partridge has a double heart. In the heart of the horse and the ox there are bones sometimes found. It is said that the heart increases every year in man, and that two drachmæ in weight are added yearly up to the fiftieth year, after which period it decreases yearly in a similar ratio; and that it is for this reason that men do not live beyond their hundredth year, the heart then failing them: this is the notion entertained by the Egyptians, whose custom it is to embalm the bodies of the dead, and so preserve them. It is said that men have been born with the heart covered with hair, and that such persons are excelled by none in valour and energy; such, for instance, as Aristomenes, the Messenian, who slew three hundred Lacedæmonians. Being covered with wounds, and taken prisoner, he, on one occasion, made his escape by a narrow hole which he discovered in the stone quarry where he was imprisoned, while in pursuit of a fox which had found that mode of exit. Being again taken prisoner, while his guards were fast asleep he rolled himself towards a fire close by, and, at the expense of his body, burnt off the cords by which he was bound. On being taken a third time, the Lacedæmonians opened his breast while he was still alive, and his heart was found covered with hair.

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CHAP. 71.

WHEN THE CUSTOM WAS FIRST ADOPTED OF EXAMINING THE HEART IN THE INSPECTION OF THE ENTRAILS.

On an examination of the entrails, to find a certain fatty part on the top of the heart, is looked upon as a fortunate presage. Still, however the heart has not always been considered as forming a part of the entrails for this purpose. It was under Lucius Postumnius Albinus, the King of the Sacrifices, and after the 126th Olympiad, when King Pyrrhus had quitted Italy, that the aruspices began to examine the heart, as part of the consecrated entrails. The first day that the Dictator Cæsar appeared in public, clothed in purple, and sitting on a seat of gold, the heart was twice found wanting when he sacrificed. From this circumstance has risen a great question among those who discuss matters connected with divination — whether it was possible for the victim to have lived without that organ, or whether it had lost it at the very moment of its death. It is asserted that the heart cannot be burnt of those persons who die of the cardiac disease; and the same is said of those who die by poison. At all events, there is still in existence an oration pronounced by Vitellius, in which he accuses Piso of this crime, and employs this alleged fact as one of his proofs, openly asserting that the heart of Germanicus Cæsar could not be burnt at the funeral pile, in consequence of his having been poisoned. On the other hand, the peculiar nature of the disease under which Germanicus was labouring, was alleged in Piso's defence.

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THE LUNGS: IN WHAT ANIMALS THEY ARE THE LAR- GEST, AND IN WHAT THE SMALLEST. ANIMALS WHICH HAVE NOTHING BUT LUNGS IN THE INTERIOR OF THE BODY. CAUSES WHICH PRODUCE EXTRAORDINARY SWIFTNESS IN ANIMALS.

Beneath the heart are the lungs, the laboratory in which the respiration is prepared. The use of these, is to draw in the air and then expel it; for which purpose their substance is of a spongy nature, and filled with cavernous holes. Some few among the aquatic animals have lungs, as we have already stated; and among the rest of those which are oviparous, they are small, of a fungous nature, and containing no blood; hence it is, that these animals do not experience thirst. It is for the same reason also, that frogs and seals are able to remain so long under water. The tortoise, too, although it has lungs of remarkable size, and extending throughout the whole of the shell, is also equally destitute of blood. The smaller the lungs are in proportion to the body, the greater is the swiftness of the animal. It is in the chameleon that the lungs are the largest in proportion to the body; in which, in fact, it has no other viscera at all.

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CHAP. 73.

THE LIVER: IN WHAT ANIMALS, AND IN WHAT PART THERE ARE TWO LIVERS FOUND.

The liver is on the right side: in this part is situate what has been called the " head of the entrails," and it is subject to considerable variations. No liver at all was found in a victim which was sacrificed by M. Marcellus, about the period when he was killed in battle against Hannibal; while in a victim which was slain on the following day, a double liver was found. It was wanting, also, in a victim sacrificed by C. Marius, at Utica, and in one which was offered by the Emperor Caius upon the calends of January, on the occasion of his entering the year of the consulship in which he was slain: the same thing happened, also, to his successor, Claudius, in the month in which he was cut off by poison. When the late Emperor Augustus was sacrificing at Spoletum, upon the first day of his entering on the imperial dignity, in six different victims the liver was found rolled over within itself, from the very lowest lobe; and the answer that was given by the diviners was to the effect that, in the course of the year, he would gain a twofold sway. It is of evil omen to find an incision in the head of the entrails, except on occasions of disquietude and alarm; for then it is significant of cutting all cares, and so putting an end to them. The hares that are found in the vicinity of Briletum and Tharne, and in the Chersonnesus on the Propontis, have a double liver; but, what is very singular, if they are removed to another place, they will lose one of them.

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CHAP. 74.

THE GALL; WHERE SITUATE, AND IN WHAT ANIMALS IT IS DOUBLE. ANIMALS WHICH HAVE NO GALL, AND OTHERS IN WHICH IT IS NOT SITUATE IN THE LIVER.

In the liver is the gall, which, however, does not exist in every animal. At Chalcis, in Eubœa, none of the cattle have it, while in the cattle of the Isle of Naxos, it is of extraordinary size, and double, so that to a stranger either of these facts would appear as good as a prodigy. The horse, the mule, the ass, the stag, the roe-buck, the wild boar, the camel, and the dolphin have no gall, but some kinds of rats and mice have it. Some few men are without it, and such persons enjoy robust health and a long life. There are some authors who say that the gall exists in the horse, not in the liver, but in the paunch, and that in the stag it is situate either in the tail or the intestines; and that hence it is, that those parts are so bitter that dogs will not touch them. The gall, in fact, is nothing else but the worst parts of the blood purged off, and for this reason it is that it is so bitter: at all events, it is a well-known fact, that no animal has a liver unless it has blood as well. The liver receives the blood from the heart, to which it is united, and then disperses it in the veins.

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CHAP. 75.

THE PROPERTIES OF THE GALL.

When the gall is black, it is productive of madness in man, and if it is wholly expelled death will ensue. Hence it is, too, that the word " bile" has been employed by us to characterize a harsh, embittered disposition; so powerful are the effects of this secretion, when it extends its influence to the mind. In addition to this, when it is dispersed over the whole of the body, it deprives the eyes, even, of their natural colour; and when ejected, will tarnish copper vessels even, rendering everything black with which it comes in contact; so that no one ought to be surprised that it is the gall which constitutes the venom of serpents. Those animals of Pontus which feed on wormwood have no gall: in the raven, the quail, and the pheasant, the gall-bladder is united to the renal parts, and, on one side only, to the intestines. In many animals, again, it is united only to the intestines, the pigeon, the hawk, and the murena, for example. In some few birds it is situate in the liver; but it is in serpents and fishes that it is the largest in proportion. With the greater part of birds, it extends all along throughout the intestines, as in the hawk and the kite. In some other birds, also, it is situate in the breast as well: the gall, too, of the sea-calf is celebrated for its application to many purposes. From the gall of the bull a colour is extracted like that of gold. The aruspices have consecrated the gall to Neptune and the influence of water. The Emperor Augustus found a double gall in a victim which he was sacrificing on the day of his victory at Actium.

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CHAP. 76.

IN WHAT ANIMALS THE LIVER INCREASES AND DE- CREASES WITH THE MOON. OBSERVATIONS OF THE ARUSPICES RELATIVE THERETO, AND REMARKABLE PRODIGIES.

It is said, that in the small liver of the mouse the number of lobes corresponds to the day of the moon, and that they are found to be just as many in number as she is days old; in addition to which, it is said that it increases at the winter solstice. In the rabbits of Bætica, the liver is always found to have a double lobe. Ants will not touch one lobe of the liver of the bramble-frog, in consequence of its poisonous nature, it is generally thought. The liver is remarkable for its powers of preservation, and sieges have afforded us remarkable instances of its being kept so long as a hundred years.

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CHAP. 77.

THE DIAPHRAGM. THE NATURE OF LAUGHTER.

The entrails of serpents and lizards are of remarkable length. It is related that — a most fortunate omen — Cæcina of Volaterræ beheld two dragons arising from the entrails of the victim; and this will not be at all incredible, if we are ready to believe that while King Pyrrhus was sacrificing, the day upon which he died, the heads of the victims, on being cut off, crawled along the ground and licked up their own blood. In man, the entrails are separated from the lower part of the viscera by a certain membrane, which is called the " præcordia," because it is extended in front of the heart; the Greeks have given it the name of " phrenes." All the principal viscera have been enclosed by Nature, in her prudent foresight, in their own peculiar membranes, just like so many sheaths, in fact. With reference to the diaphragm, there was a peculiar reason for this wise provision of Nature, its proximity to the guts, and the chances that the food might possibly intercept the respiration. It is to this organ that is attributed quick and ready wit, and hence it is that it has no fleshy parts, but is composed of fine sinews and membranes. This part is also the chief seat of gaiety of mind, a fact which is more particularly proved by the titillation of the arm-holes, to which the midriff extends; indeed, in no part of the body is the skin more fine; for this reason it is, also, that we experience such peculiar pleasure in scratching the parts in its vicinity. Hence it is, that in battles and gladiatorial combats, many persons have been known to be pierced through the midriff, and to die in the act of laughing.

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CHAP. 78.

THE BELLY: ANIMALS WHICH HAVE NO BELLY. WHICH ARE THE ONLY ANIMALS THAT VOMIT.

In those animals which have a stomach, below the diaphragm the belly is situate. In other animals it is single, but in those which ruminate it is double; in those, again, which are destitute of blood, there is no belly, for the intestinal canal commences in some of them at the mouth, and returns to that part, as is the case with the sæpia and the polypus. In man it is connected with the extremity of the stomach, and the same with the dog. These are the only creatures that have the belly more narrow at the lower part; hence it is, too, that they are the only ones that vomit, for on the belly being filled, the narrowness at its extremity precludes the food from passing; a thing that cannot possibly be the case with the animals in which the belly is more capacious at the extremity, and so leaves a free passage for the food to the lower parts of the body.

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CHAP. 79.

THE SMALL GUTS, THE FRONT INTESTINES, THE ANUS, THE COLON. THE CAUSES OF THE INSATIATE VORACITY OF CER- TAIN ANIMALS.

After the belly we find in man and the sheep the " lactes," the place of which in other animals is occupied by the "hillæ:" it is through these organs that the food passes. We then find the larger intestines, which communicate with the anus, and which in man consist of extremely sinuous folds. Those animals which have the longest intestinal canal, are the most voracious; and those which have the belly the most loaded with fat, are the least intelligent. There are some birds, also, which have two receptacles; the one of which is the crop, in which they stow away the food which they have just swallowed, while the other is the belly, into which they discharge the food when it is duly prepared and digested; this is the case with the domestic fowl, the ring-dove, the pigeon, and the partridge. The other birds are in general destitute of crop, but then they have a more capacious gorge, the jackdaw, the raven, and the crow, for instance: some, again, are constituted in neither manner, but have the belly close to the gorge, those, for instance, which have the neck very long and narrow, such as the porphyrio.

In the solid-hoofed animals the belly is rough and hard, while in some land animals it is provided with rough asperities like teeth, and in others, again, it has a reticulated surface like that of a file. Those animals which have not the teeth on both sides, and do not ruminate, digest the food in the belly, from whence it descends to the lower intestines. There is an organ in all animals attached in the middle to the navel, and in man similar in its lower part to that of the swine, the name given thereto by the Greeks being " colon," a part of the body which is subject to excruciating pains. In dogs this gut is extremely contracted, for which reason it is that they are unable to ease it, except by great efforts, and not without considerable suffering. Those animals with which the food passes at once from the belly through the straight intestine, are of insatiate appetite, as, for instance, the hind-wolf, and among birds the diver. The elephant has four bellies;

the rest of its intestines are similar to those of the swine, and the lungs are four times as large as those of the ox. The belly in birds is fleshy, and formed of a callous substance. In that of young swallows there are found little white or pink pebbles, known by the name of " chelidonii," and said to be employed in magical incantations. In the second belly of the heifer there is a black tufa found, round like a ball, and of no weight to speak of: this, it is generally thought, is singu- larly efficacious in laborious deliveries, if it happens not to have touched the ground.

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CHAP. 80.

THE OMENTUM: THE SPLEEN; ANIMALS WHICH ABE WITHOUT IT.

The belly and the intestines are covered with a caul known as the "omentum," consisting of a fatty, thin membrane; except in the case of those animals which are oviparous. To this membrane is attached the spleen, which lies on the left side, and opposite the liver: sometimes, indeed, it changes place with the liver, but such a case is looked upon as nothing less than a prodigy. Some persons imagine that a spleen of extremely diminutive size exists in the oviparous animals, as also in serpents; at all events, it is to be detected in the tortoise, the crocodile, the lizard, and the frog; though it is equally certain that it does not exist in the bird known as the " ægocephalos," nor yet in those animals which are destitute of blood. The spleen sometimes offers a peculiar impe- diment in running, for which reason the region of the spleen is cauterized in runners who are troubled with pains there. It is said also, that if the spleen is removed by an incision, animals may survive. There are some persons who think that with the spleen man loses the power of laughing, and that excessive laughter is caused by the overgrowth of it. There is a territory of Asia, known as Scepsis, in which it is said that the spleen of the cattle is remarkably small, and that from thence it is that remedies for diseases of the spleen have been introduced.

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CHAP. 81.

THE KIDNEYS: ANIMALS WHICH HAVE FOUR KID- NEYS. ANIMALS WHICH HAVE NONE.

About Briletum and Tharne the stags have four kidneys: while, on the other hand, those animals which have wings and scales have none. The kidneys adhere to the upper part of the loins. Among all animals, the kidney on the right side is more elevated than the other, less fat, and drier. In both kidneys there is a certain streak of fat running from the middle, with the sole exception of those of the sea-calf. It is above the kidneys, also, that animals are fattest, and the accumulation of fat about them is often the cause of death in sheep. Small stones are sometimes found in the kidneys. All quadrupeds that are viviparous have kidneys, but of those which are oviparous the tortoise is the only one that has them; an animal which has all the other viscera, but, like man, has the kidneys composed, to all appearance, of several kidneys, similar to those of the ox.

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CHAP. 82.

THE BREAST: THE RIBS.

Nature has placed the breast, or, in other words, certain bones, around the diaphragm and the organs of life, but not around the belly, for the expansion of which it was necessary that room should be left. Indeed, there is no animal that has any bones around the belly. Man is the only creature that has a broad breast; in all others it is of a carinated shape, in birds more particularly, and most of all, the aquatic birds. The ribs of man are only eight in number; swine have ten, the horned animals thirteen, and serpents thirty.

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CHAP. 83.

THE BLADDER: ANIMALS WHICH HAVE NO BLADDER.

Below the paunch, on the anterior side, lies the bladder, which is never found in any oviparous animal, with the exception of the tortoise, nor yet in any animal that has not lungs with blood, or in any one that is destitute of feet. Between it and the paunch are certain arteries, which extend to the pubes, and are known as the " ilia." In the bladder of the wolf there is found a small stone, which is called " syrites;" and in the bladders of some persons calculi are sometimes found, which produce most excruciating pains; small hairs, like bristles, are also occasionally found in the bladder. This organ consists of a membrane, which, when once wounded, does not cicatrize, just like those in which the brain and the heart are enveloped: there are many kinds of membranes, in fact.

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CHAP. 84.

THE WOMB: THE WOMB OF THE SOW: THE TEARS.

Women have all the same organs, except that adjoining to the bladder there is one like a small sac, from which circumstance it is called the " uterus." Another name for this part is " loci;" but in other animals it is known by the name of "vulva." With the viper and other animals which generate their young within themselves, the womb is double; while with those which are oviparous, it is attached to the diaphragm. In woman it has two concavities, one on either side: when the matrix becomes displaced, it is productive of fatal effects, by causing suffocation. It is asserted that the cow, when pregnant, carries her young only in the right concavity of the womb, and that this is the case even when she produces twins. The womb of the sow is considered better eating if she has slipped her young, than if she has duly brought forth: in the former case it is known by the name of "ejectitia," in the latter it is called " porcaria." The womb of a sow that has farrowed only once is the most esteemed, and that of those which have ceased farrowing, the least. After farrowing, unless the animal is killed the same day, the womb is of a livid colour, and lean. This part, however, is not esteemed in a young sow, except just after the first farrowing: indeed, it is much more highly valued in an animal of a more mature age, so long as it is not past breeding, or has been killed two days before farrowing, or two days after, or upon the day on which it has miscarried. The next best after that of a sow that has miscarried, is that of one that has been killed the day after farrowing: indeed, the paps of this last, if the young have not begun to suck, are excellent eating, while those of an animal that has miscarried are very inferior. The ancients called this part by the name of " abdomen," before it grew hard, and were not in the habit of killing swine while in a state of pregnancy.

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CHAP. 85.

ANIMALS WHICH HAVE SUET: ANIMALS WHICH DO NOT GROW FAT.

Those among the horned animals which have teeth in one jaw only, and pastern bones on the feet, produce tallow or suet. Those, on the other hand, which are cloven-footed, or have the feet divided into toes, and are without horns, have simple fat only. This fat becomes hard, and when quite cold turns brittle, and is always found at the extremity of the flesh; while, on the other hand, the fat which lies between the skin and the flesh forms a kind of liquid juice. Some animals naturally do not become fat, such as the hare and the partridge, for instance. All fat animals, male as well as female, are mostly barren; and those which are remarkably fat become old the soonest. All animals have a certain degree of fatness in the eyes. The fat in all animals is devoid of sensation, having neither arteries nor veins. With the greater part of animals, fatness is productive of insensibility; so much so, indeed, that it has been said, that living swine have been gnawed even by mice. It has been even asserted that the fat was drawn off from the body of a son of L. Apronius, a man of consular rank, and that he was thus relieved of a burden which precluded him from moving.

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CHAP. 86.

THE MARROW: ANIMALS WHICH HAVE NO MARROW.

The marrow seems also to be formed of a similar material; in the young it is of a reddish colour, but it is white in the aged. It is only found in those bones which are hollow, and not in the tibiæ of horses or dogs; for which reason it is, that when the tibia is broken, the bone will not reunite, a process which is effected by the flow of the marrow. The marrow is of a greasy nature in those animals which have fat, and suetty in those with horns. It is full of nerves, and is found only in the vertebral column in those animals which have no bones, fishes, for instance. The bear has no marrow; and the lion has a little only in some few bones of the thighs and the brachia, which are of such extraordinary hardness that sparks may be emitted therefrom, as though from a flint-stone.

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CHAP. 87.

BONES AND FISH-BONES: ANIMALS WHICH HAVE NEITHER. CARTILAGES.

The bones are hard, also, in those animals which do not grow fat; those of the ass are used by musicians for making flutes. Dolphins have bones, and not ordinary fish-bones; for they are viviparous. Serpents, on the other hand, have bones like those of fish. Among aquatic animals, the mollusks have no bones, but the body is surrounded with circles of flesh, as in the sæpia and the cuttle-fish, for instance; insects, also, are said to be equally destitute of bones. Among aquatic animals, those which are cartilaginous have marrow in the vertebral column; the sea-calf has cartilages, and no bones. The ears also, and the nostrils in all animals, when remarkably prominent, are made flexible by a remarkable provision of Nature, in order that they may not be broken. When cartilage is once broken, it will not unite; nor will bone, when cut, grow again, except in beasts of burden, between the hoof and the pastern.

Man increases in height till his twenty-first year, after which he fills out; but it is more particularly when he first arrives at the age of puberty that he seems to have untied a sort of knot in his existence, and this especially when he has been overtaken by illness.

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CHAP. 88.

THE NERVE: ANIMALS WHICH HAVE NONE.

The nerves take their rise at the heart, and even surround it in the ox; they have the same nature and principle as the marrow. In all animals they are fastened to the lubricous surface of the bones, and so serve to fasten those knots in the body which are known as articulations or joints, sometimes lying between them, sometimes surrounding them, and sometimes running from one to another; in one place they are long and round, and in another broad, according as the necessity of each case may demand. When cut, they will not reunite, and if wounded, it is wonderful what excruciating pain they cause; though, if completely cut asunder, they are productive of none whatever. Some animals are destitute of nerves, fish, for instance, the bodies of which are united by arteries, though even these are not to be found in the mollusks. Wherever there are nerves found, it is the inner ones that contract the limb, and the outer ones that extend it.

Among the nerves lie concealed the arteries, which are so many passages for the spirit; and upon these float the veins, as conduits for the blood. The pulsation of the arteries is more especially perceptible on the surface of the limbs, and afford indications of nearly every disease, being either stationary, quickened, or retarded, conformably to certain measures and metrical laws, which depend on the age of the patient, and which have been described with remarkable skill by Herophilus, who has been looked upon as a prophet in the wondrous art of medicine. These indications, however, have been hitherto neglected, in consequence of their remarkable subtilty and minuteness, though, at the same time, it is by the observation of the pulse, as being fast or slow, that the health of the body, as regulating life, is ascertained.

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CHAP. 89.

THE ARTERIES; THE VEINS: ANIMALS WITHOUT ARTERIES OR VEINS. THE BLOOD AND THE SWEAT.

The arteries are destitute of sensation, for they are devoid of blood. They do not, all of them, however, contain the vital spirit, and when one of them has been cut, it is only that part of the body that is reduced to a torpid state. Birds have neither veins nor arteries, which is the case also with serpents, tortoises, and lizards; and they have but a very small proportion of blood. The veins, which are dispersed beneath the whole skin in filaments of extreme thinness, terminate with such remarkable fineness, that the blood is able to penetrate no further, or, indeed, anything else, except an extremely subtle humour which oozes forth from the skin in innumerable small drops, and is known to us as “sweat.” The knot, and place of union of the veins, is the navel.

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CHAP. 90. (38.)

ANIMALS, THE BLOOD OF WHICH COAGULATES WITH THE GREATEST RAPIDITY: OTHER ANIMALS, THE BLOOD OF WHICH DOES NOT COAGULATE. ANIMALS WHICH HAVE THE THICKEST BLOOD: THOSE THE BLOOD OF WHICH IS THE THINNEST: ANIMALS WHICH HAVE NO BLOOD.

Those animals in which the blood is more abundant and of an unctuous nature, are irascible; it is darker in males than in females, and in the young than in the aged: the blood of the lower extremities is the thickest. There is great vitality, too, in the blood, and when it is discharged from the body, it carries the life with it: it is not sensible, however, of touch. Those animals in which the blood is the thickest are the most courageous, and those in which it is the thinnest the most intelligent; while those, again, which have little or no blood are the most timorous of all. The blood of the bull coagulates and hardens the most speedily of all, and hence it is so particu- larly deadly when drunk. On the other hand, the blood of the wild boar, the stag, the roe-buck, and oxen of all kinds, does not coagulate. Blood is of the richest quality in the ass, and the poorest in man. Those animals which have more than four feet have no blood. In animals which are very fat, the blood is less abundant than in others, being soaked up by the fat. Man is the only creature from which the blood flows at the nostrils; some persons bleed at one nostril only, some at both, while others again void blood by the lower parts. Many persons discharge blood from the mouth at stated periods, such, for instance, as Macrinus Viscus, lately, a man of prætorian dignity, and Volusius Saturninus, the Prefect of the City, who every year did the same, and yet lived to beyond ninety. The blood is the only substance in the body that is sensible of any temporary increase, for a larger quantity will come from the victims if they happen to have drunk just before they are sacrificed.

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CHAP. 91.

ANIMALS WHICH ARE WITHOUT BLOOD AT CERTAIN PERIODS OF THE YEAR.

Those animals which conceal themselves at certain periods of the year, as already mentioned, have no blood at those times, with the exception, indeed, of some very small drops about the heart. A marvellous dispensation of Nature! and very similar to that witnessed in man, where the blood is sensible of various modifications from the slightest causes; for not only, similarly to the bile, does it rush upwards to the face, but it serves also to indicate the various tendencies of the mind, by depicting shame, anger, and fear, in many ways, either by the paleness of the features or their unusual redness; as, in fact, the redness of anger and the blush of modesty are quite different things. It is a well-known fact, that when a man is in fear, the blood takes to flight and disappears, and that many persons have been pierced through the body without losing one drop of blood; a thing, however, which is only the case with man. But as to those animals which we have already mentioned as changing colour, they derive that colour from the reflection of other objects; while, on the other hand, man is the only one that has the elements which cause these changes centred in himself. All diseases, as well as death, tend to absorb the blood.

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CHAP. 92. (39.)

WHETHER THE BLOOD IS THE PRINCIPLE OF LIFE.

There are some persons who are of opinion that the fineness of the wit does not depend upon the thinness of the blood, but that animals are more or less stupid in proportion to the skin or other coverings of the body, as the oyster and the tortoise, for instance: that the hide of the ox and the bristles of the hog, in fact, offer a resistance to the fine and penetrating powers of the air, and leave no passage for its transmission in a pure and liquid state. The same, they say, is the case, too, with men, when the skin is very thick or callous, and so excludes the air. Just as if, indeed, the crocodile was not equally remarkable for the hardness of its skin and its extreme cunning.

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CHAP. 93.

THE HIDE OF ANIMALS.

The hide, too, of the hippopotamus is so thick, that lances, even, are turned from it, and yet this animal has the intelligence to administer certain medicaments to itself. The hide, too, of the elephant makes bucklers that are quite impenetrable, and yet to it is ascribed a degree of intelligence superior to that of any quadruped. The skin itself is entirely devoid of sen- sation, and more particularly that of the head; wherever it is found alone, and unaccompanied with flesh, if wounded, it will not unite, as in the cheek and on the eyelid, for instance.

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CHAP. 94.

THE HAIR AND THE COVERING OF THE SKIN.

Those animals which are viviparous, have hair; those which are oviparous, have feathers, scales, or a shell, like the tortoise; or else a purple skin, like the serpent. The lower part of all feathers is hollow; if cut, they will not grow again, but if pulled out, they will shoot afresh. Insects fly by the aid of a frail membrane; the wings of the fish called the "swallow" are moistened in the sea, while those of the bat which frequents our houses are dry; the wings of this last animal have certain articulations as well. The hairs that issue from a thick skin are rough, while those on females are of a finer quality. Those found on the horse's mane are more abundant, which is the case also with the shoulders of the lion. The dasypus has hair in the inside of the mouth even and under the feet, two features which Trogus has also attributed to the hare; from which the same author concludes that hairy men are the most prone to lust. The most hairy of all animals is the hare. Man is the only creature that has hair as the mark of puberty; and a person who is devoid of this, whether male or female, is sure to be sterile. The hair of man is partly born with him, and in part produced after his birth. The last kind of hair will not grow upon eunuchs, though that which has been born with them does not fall off; which is the case also with women, in a great degree. Still however, there have been women known to be afflicted with falling off of the hair, just as some are to be seen with a fine down on the face, after the cessation of the menstrual discharge. In some men the hair that mostly shoots forth after birth will not grow spontaneously. The hair of quadrupeds comes off every year, and grows again. That of the head in man grows the fastest, and next to it the hair of the beard. When cut, the hairs shoot, not from the place where they have been cut, as is the case with grass, but at the root. The hair grows quickly in certain diseases, phthisis more particularly; it grows also with rapidity in old age, and on the body after death. In persons of a libidinous tendency the hair that is produced at birth falls off more speedily, while that which is

afterwards produced grows with the greatest rapidity. In quadrupeds, the hair grows thicker in old age; but on those with wool, it becomes thinner. Those quadrupeds which have thick hair on the back, have the belly quite smooth. From the hides of oxen, and that of the bull more especially, glue is extracted by boiling.

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CHAP. 95.

THE PAPS: BIRDS THAT HAVE PAPS. REMARKABLE FACT'S CONNECTED WITH THE DUGS OF ANIMALS.

Man is the only male among animals that has nipples, all the rest having mere marks only in place of them. Among female animals even, the only ones that have mammæ on the breast are those which can nurture their young. No oviparous animal has mammæ, and those only have milk that are vivi- parous; the bat being the only winged animal that has it. As for the stories that they tell, about the screech-owl ejecting milk from its teats upon the lips of infants, I look upon it as utterly fabulous: from ancient times the name "strix," I am aware, has been employed in maledictions, but I do not think it is well ascertained what bird is really meant by that name.

(40.) The female ass is troubled with pains in the teats after it has foaled, and it is for that reason that at the end of six months it weans its young; while the mare suckles its young for nearly the whole year. The solid-hoofed animals do not bear more than two young ones at a time: they all of them have two paps, and nowhere but between the hind legs. Animals with cloven feet and with horns, such as the cow, for instance, have four paps, similarly situate, sheep and goats two. Those which produce a more numerous progeny, and those which have toes on the feet, have a greater number of paps distributed in a double row all along the belly, such as the sow, for instance; the better sorts have twelve, the more common ones two less: the same is the case also with the female of the dog. Other animals, again, have four paps situate in the middle of the belly, as the female panther; others, again, two only, as the lioness. The female elephant has two only, situate between the shoulders, and those not in the breast, but without it, and hidden in the arm-pits: none of the animals which have toes have the paps between the hind legs. The sow presents the first teat to the first-born in each farrow, the first teat being the one that is situate nearest to the throat. Each pig, too, knows its own teat, according to the order in which it was born, and draws its nourishment from that and no other: if its own

suckling, too, should happen to be withdrawn from my one of them, the pap will immediately dry up, and shrink back within the belly: if there should be only one pig left of all the farrow, that pap alone which has been assigned for its nutriment when born, will continue to hang down for the purpose of giving suck. The she-bear has four mammæ, the dolphin only two, at the bottom of the belly; they are not easily visible, and have a somewhat oblique direction: this is the only animal which gives suck while in motion. The balæna and sea-calf also suckle their young by teats.

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CHAP. 96. (41.)

THE MILK: THE BIESTINGS. CHEESE; OF WHAT MILK CHEESE CANNOT BE MADE. RENNET; THE VARIOUS KINDS OF ALIMENT IN MILK.

The milk that is secreted in a woman before her seventh month is useless; but after that month, so long as the fœtus is healthy, the milk is wholesome: many women, indeed, are so full of milk, that it will flow not only from the mammæ, but exudes at the arm-pits even. Camels continue in milk until they are pregnant again. Their milk, mixed in the proportion of one part to three of water, is considered a very pleasant beverage. The cow has no milk before it has calved, and that which immediately follows upon its bringing forth is known as the " colostra:" if water is not mixed with it, it will coagulate, and assume the hardness of pumice. She-asses, as soon as they are pregnant, have milk in their udders; when the pasturage is rich, it is fatal to their young to taste the mother's milk the first two days after birth; the kind of malady by which they are attacked is known by the name of "colostration." Cheese cannot be made from the milk of animals which have teeth on either jaw, from the circumstance that their milk does not coagulate. The thinnest milk of all is that of the camel, and next to it that of the mare. The milk of the she-ass is the richest of all, so much so, indeed, that it is often used instead of rennet. Asses' milk is also thought to he very efficacious in whitening the skin of females: at all events, Poppæa, the wife of Domitius Nero, used always to have with her five hundred asses with foal, and used to bathe the whole of her body in their milk, thinking that it also con- ferred additional suppleness on the skin. All milk thickens by the action of fire, and becomes serous when exposed to cold. The milk of the cow produces more cheese than that of the goat: when equal in quantity, it will produce nearly twice the weight. The milk of animals which have more than four mammæ does not produce cheese; and that is the best which is made of the milk of those that have but two. The rennet of the fawn, the hare, and the kid is the most esteemed, but the best of all is that of the dasypus: this last acts as a specific for diarrhœa, that animal being the only one

with teeth in both jaws, the rennet of which has that property. It is a remarkable circumstance, that the barbarous nations which subsist on milk have been for so many ages either ignorant of the merits of cheese, or else have totally disregarded it; and yet they understand how to thicken milk and form there from an acrid kind of liquid with a pleasant flavour, as well as a rich butter: this last is the foam of milk, and is of a thicker consistency than the part which is known as the " serum." We ought not to omit that butter has certain of the properties of oil, and that it is used for an ointment among all barbarous nations, and among ourselves as well, for infants.

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CHAP. 97. (42.)

VARIOUS KINDS OF CHEESE.

The kinds of cheese that are most esteemed at Rome, where the various good things of all nations are to be judged of by comparison, are those which come from the provinces of Ne- mausus, and more especially the villages there of Lesura and Gabalis; but its excellence is only very short-lived, and it must be eaten while it is fresh. The pastures of the Alps recommend themselves by two sorts of cheese; the Dalmatic Alps send us the Docleatian cheese, and the Centronian Alps the Vatusican. The kinds produced in the Apennines are more numerous; from Liguria we have the cheese of Ceba, which is mostly made from the milk of sheep; from Umbria we have that of Æsina, and from the frontiers of Etruria and Liguria those of Luna, remarkable for their vast size, a single cheese weighing as much as a thousand pounds. Nearer the City, again, we have the cheese of Vestinum, the best of this kind being that which comes from the territory of Ceditium. Goats also produce a cheese which has been of late held in the highest esteem, its flavour being heightened by smoking it. The cheese of this kind which is made at Rome is considered preferable to any other; for that which is made in Gaul has a strong taste, like that of medicine. Of the cheeses that are made beyond sea, that of Bithynia is usually considered the first in quality. That salt exists in pasture- lands is pretty evident, from the fact that all cheese as it grows old contracts a saltish flavour, even where it does not appear to any great extent; while at the same time it is equally well known that cheese soaked in a mixture of thyme and vinegar will regain its original fresh flavour. It is said that Zoroaster lived thirty years in the wilderness upon cheese, prepared in such a peculiar manner, that he was insensible to the advances of old age.

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CHAP. 98. (43.)

DIFFERENCES OF THE MEMBERS OF MAN FROM THOSE OF OTHER ANIMALS.

Of all the terrestrial animals, man is the only biped: he is also the only one that has a throat, and shoulders, or "humeri," parts in other animals known by the name of "armi." Man, too, is the only animal that has the "ulna," or elbow. Those animals which are provided with hands, have flesh only on the interior of them, the outer part consisting of sinews and skin.

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CHAP. 99.

THE FINGERS, THE ARMS.

Some persons have six fingers on the hands. We read that C. Horatius, a man of patrician rank, had two daughters, who for this reason had the name of "Sedigitæ;" and we find mention made of Volcatius Sedigitus, as a famous poet. The fingers of man have three joints, the thumb only two, it bending in an opposite direction to all the other fingers. Viewed by itself, the movement of the thumb has a sidelong direction, and it is much thicker than the rest of the fingers. The little finger is equal in length to the thumb, and two others are also equal in length, the middle finger being the longest of all. Those quadrupeds which live by rapine have five toes on the fore feet, and four on the hinder ones. The lion, the wolf, and the dog, with some few others, have five claws on the hind feet, one of which hangs down near the joint of the leg. The other animals, also, which are of smaller size, have five toes. The two arms are not always equal in length: it is a well-known fact, that, in the school of gladiators belonging to Caius Cæsar, the Thracian Studiosus had the right arm longer than the left. Some animals also use their forepaws to perform the duties of hands, and employ them in conveying food to the mouth as they sit, the squirrel, for instance.

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CHAP. 100. (44.)

RESEMBLANCE OF THE APE TO MAN.

As to the various kinds of apes, they offer a perfect resem- blance to man in the face, the nostrils, the ears, and the eyelids; being the only quadrupeds, in fact, that have eyelashes on the lower eyelid. They have mammæ also on the breast, arms and legs, which bend in opposite directions, and nails upon the hands and fingers, the middle finger being the longest. They differ somewhat from man in the feet; which, like the hands, are of remarkable length, and have a print similar to that of the palm of our hand. They have a thumb also, and articulations similar to those in man. The males differ from man in the sexual parts only, while all the internal viscera exactly resemble those of man.

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CHAP. 101. (45.)

THE NAILS.

It is generally supposed that the nails are the terminations of the sinews. All animals which have fingers have nails as well. In the ape they are long and overlapping, like a tile, while in man they are broad: they will grow even after death. In the beasts of prey they are hooked, while in others, such as the dog, for instance, they are straight, with the exception, indeed, of the one which is attached to the leg in most of them. All the animals which have feet [and not hoofs], have toes as well, except the elephant; he, also, would appear to have toes, five in number, but rudely developed, undivided, and hardly distinct from one another, bearing a nearer resem- blance, in fact, to hoofs than to claws. In the elephant the fore-feet are the largest, and in the hind-feet there are short joints. This animal is able, also, to bend the hams inward like a man, while in all the others the joints of the hinder legs bend in a contrary direction to those of the fore ones. Those animals which are viviparous bend the fore-leg forward, while the joint of the hind-leg is directed backward.

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CHAP. 102.

THE KNEES AND THE HAMS.

In man the knee and the elbow bend contrary ways; the same is the case, too, with the bear and the ape, and it is for this reason that they are not so swift of foot as other animals. Those quadrupeds which are oviparous, such as the crocodile and the lizard, bend the knee of the fore-leg back- wards, and that of the hind-leg forwards; their thighs are placed on them obliquely, in a similar manner to a man's thumb; which is the case also with the multipede insects, the hind-legs only excepted of such as leap. Birds, like quadru- peds, have the joints of the wings bending forwards, but those of the legs backwards.

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CHAP. 103.

PARTS OF THE HUMAN BODY TO WHICH CERTAIN RELIGIOUS IDEAS ARE ATTACHED.

In accordance with the usages of various nations, certain religious ideas have been attached to the knees. It is the knees that suppliants clasp, and it is to these that they extend their hands; it is the knees that they worship like so many altars, as it were; perhaps, because in them is centred the vital strength. For in the joint of either knee, the right as well as the left, there is on the fore-side of each a certain empty space, which bears a strong resemblance to a mouth, and through which, like the throat, if it is once pierced, the vital powers escape. There are also certain religious ideas attached to other parts of the body, as is testified in raising the back of the right hand to the lips, and extending it as a token of good faith. It was the custom of the ancient Greeks, when in the act of supplication, to touch the chin. The seat of the memory lies in the lower part of the ear, which we touch when we summon a witness to depose upon memory to an arrest. The seat, too, of Nemesis lies behind the right ear, a goddess which has never yet found a Latin name, no, not in the Capitol even. It is to this part that we apply the finger next the little finger, after touching the mouth with it, when we silently ask pardon of the gods for having let slip an indiscreet word.

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CHAP. 104.

VARICOSE VEINS.

Men only, in general, have varicose veins in the legs, women but very rarely. We are informed by Oppius, that C. Marius, who was seven times consul, was the only man ever known to be able to have them extracted in a standing position.

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CHAP. 105.

THE GAIT, THE FEET, THE LEGS.

All animals take a right-hand direction when they first begin to walk, and lie down on the left side. While the other animals walk just as it may happen, the lion only and the camel walk foot by foot, or in such a way that the left foot never passes the right, but always comes behind it. Men have the largest feet; in every kind of animal the female has the smallest. Man only has calves, and flesh upon the legs: we find it stated by authors, however, that there was once an Egyptian who had no calves on his legs. All men, too, with some few exceptions, have a sole to the foot. It is from these exceptional cases that persons have obtained the names of Plancus, Plautus, Pansa, and Scaurus; just as, from the malformation of the legs, we find persons called Varus, Vacia, and Vatinius, all which blemishes are to be seen in quadrupeds also. Animals which have no horns have a solid hoof, from which circumstance it is used by them as a weapon of offence, in place of horns; such animals as these are also destitute of pastern bones, but those which have cloven hoofs have them; while those, again, which have toes have none, nor are they ever found in the fore-feet of animals. The camel has pastern bones like those of the ox, but somewhat smaller, the feet being cloven, with a slight line of division, and having a fleshy sole, like that of the bear: hence it is, that in a long journey, the animal becomes fatigued, and the foot cracks, if it is not shod.

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CHAP. 106. (46.)

HOOFS.

The horn of the hoof grows again in no animals except beasts of burden. The swine in some places in Illyricum have solid hoofs. Nearly all the horned animals are cloven-footed, no animal having solid hoofs and two horns. The Indian ass is only a one-horned animal, and the oryx is both one-horned and cloven-footed. The Indian ass is the only solid-hoofed animal that has pastern-bones. As to swine, they are looked upon as a sort of mongrel race, with a mixture of both kinds, and hence it is that their ankle-bones are so misshapen. Those authors who have imagined that man has similar pastern-bones, are easily to be confuted. The lynx is the only one among the animals that have the feet divided into toes, that has anything bearing a resemblance to a pastern-bone; while with the lion it is more crooked still. The great pastern-bone is straight, and situate in the joints of the foot; it projects outwards in a convex protuberance, and is held fast in its vertebration by certain ligaments.

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CHAP. 107. (47.)

THE FEET OF BIRDS.

Among birds, some have the feet divided into toes, while others, again, are broad and flatfooted — in others, which partake of the intermediate nature of both, the toes are divided, with a wide space between them. All birds, however, have four toes — three in front, and one on the heel; this last, however, is wanting in some that have long legs. The iynx is the only bird that has two toes on each side of the leg. This bird also protrudes a long tongue similar to that of the serpent, and it can turn the neck quite round and look backwards; it has great talons, too, like those of the jackdaw. Some of the heavier birds have spurs also upon the legs; but none of those have them which have crooked talons as well. The long-footed birds, as they fly, extend the legs towards the tail, while those that have short legs hold them contracted close to the middle of the body. Those authors who deny that there is any bird without feet, assert that those even which are called apodes, are not without them, as also the oce, and the drepanis, which last is a bird but very rarely seen. Serpents, too, have been seen with feet like those of the goose.

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CHAP. 108. (48.)

THE FEET OF ANIMALS, FROM THOSE HAVING TWO FEET TO THOSE WITH A HUNDRED. — DWARFS.

Among insects, those which have hard eyes have the forefeet long, in order that from time to time they may rub the eyes with their feet, as we frequently see done by flies. The insects which have long hind-feet are able to leap, the locust, for instance. All these insects have six feet: and some of the spiders have two very long feet in addition. They have, all of them, three joints. We have already" stated that marine insects have eight feet, such as the polypus, the sæpia, the cuttle-fish, and the crab, animals which move their arms in a contrary direction to their feet, which last they move around as well as obliquely: they are the only animals the feet of which have a rounded form. Other insects have two feet to regulate their movements; in the crab, and in that only, these duties are performed by four. The land animals which exceed this number of feet, as most of the worms, never have fewer than twelve feet, and some, indeed, as many as a hundred. The number of feet is never uneven in any animal. Among the solid-hoofed animals, the legs are of their proper length from the moment of their birth, after which they may with more propriety be said to extend themselves than to increase in growth: hence it is, that in infancy they are able to scratch their ears with the hind feet, a thing which, when they grow older, they are not able to do, because their increase of growth affects only the superficies of the body. It is for the same reason also, that they are only able to graze at first by bending the knees, until such time as the neck has attained its proper length.

(49.) There are dwarfs to be found among all animals, and among birds even.

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CHAP. 109.

THE SEXUAL PARTS. — HERMAPHRODITES.

We have already spoken sufficiently at length of those animals, the males of which have the sexual parts behind. In the wolf, the fox, the weasel, and the ferret, these parts are bony; and it is the genitals of the last-mentioned animal that supply the principal remedies for calculus in the human bladder. It is said also that the genitals of the bear are turned into a horny substance the moment it dies. Among the peoples of the East the very best bow-strings are those which are made of the member of the camel. These parts also, among different nations, are made the object of certain usages and religious observances; and the Galli, the priests of the Mother of the gods, are in the habit of castrating themselves, without any dangerous results. On the other hand, there is in some few women a monstrous resemblance to the male conformation, while hermaphrodites appear to partake of the nature of both. Instances of this last conformation were seen in quadrupeds in Nero's reign, and for the first time, I imagine; for he ostentatiously paraded hermaphrodite horses yoked to his car, which had been found in the territory of the Treviri, in Gaul; as if, indeed, it was so remarkably fine a sight to behold the ruler of the earth seated in a chariot drawn by monstrosities

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CHAP. 110.

THE TESTES — THE THREE CLASSES OF EUNUCHS.

In sheep and cattle the testes hang down to the legs, while in the boar they are knit up close to the body. In the dolphin they are very long, and are concealed in the lower part of the belly. In the elephant, also, they are quite concealed. In oviparous animals they adhere to the interior of the loins: these animals are the most speedy in the venereal congress. Fishes and serpents have no testes, but in place of them they have two veins, which run from the renal region to the genitals. The bird known as the “buteo,” has three testes. Man is the only creature in which the testes are ever broken, either accidentally or by some natural malady; those who are thus afflicted form a third class of half men, in addition to hermaphrodites and eunuchs. In all species of animals the male is more courageous than the female, with the exception of the panther and the bear.

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CHAP. 111. (50.)

TE TAILS OF ANIMALS.

Nearly all the animals, both viviparous as well as oviparous, with the exception of man and the ape, have tails in proportion to the necessities of the body. In animals with bristles the tail is bare, as in the boar, for instance. In those that are shaggy, it is small, such as the bear; while in those animals that have long hair, the tail is long also, the horse, for instance. The tail of a lizard or serpent, if cut off, will grow again. The tail governs the movements of the fish like a rudder, and turning from side to side, to the right or to the left, impels it onwards, acting in some degree like an oar. A double tail is sometimes found in lizards. In oxen, the stalk of the tail is of remarkable length, and is covered with rough hair at the extremity. In the ass, too, it is longer than in the horse, but in beasts of burden it is covered with bristly hairs. The tail of the lion, at the extremity, is like that of the ox and the field-mouse; but this is not the case with the panther. In the fox and the wolf it is covered with long hair, as in sheep, in which it is longer also. In swine, the tail is curled; among dogs, those that are mongrels carry it close beneath the belly.

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CHAP. 112. (51.)

THE DIFFERENT VOICES OF ANIMALS.

Aristotle is of opinion that no animal has a voice which does not respire, and that hence it is that there is no voice in insects, but only a noise, through the circulation of the air in the interior, and its resounding, by reason of its compression. Some insects, again, he says, emit a sort of humming noise, such as the bee, for instance; others a shrill, long-drawn note, like the grasshopper, the two cavities beneath the thorax receiving the air, which, meeting a moveable membrane within, emits a sound by the attrition. — Also that flies, bees, and other insects of that nature, are only heard while they are flying, and cease to be heard the moment they settle, and that the sound which they emit proceeds from the friction and the air within them, and not from any act of respiration. At all events, it is generally believed that the locust emits a sound by rubbing together the wings and thighs, and that among the aquatic animals the scallop makes a certain noise as it flies. Mollusks, however, and the testaceous animals have no voice and emit no sounds. As for the other fishes, although they are destitute of lungs and the tracheal artery, they are not entirely without the power of emitting certain sounds: it is only a mere joke to say that the noise which they make is produced by grating their teeth together. The fish, too, that is found in the river Acheloüs, and is known as the boar-fish, makes a grunting noise, as do some others which we have previously mentioned. The oviparous animals hiss: in the serpent this hissing is prolonged, in the tortoise it is short and abrupt. Frogs make a peculiar noise of their own, as already stated; unless, indeed, this, too, is to be looked upon as a matter of doubt; but their noise originates in the mouth, and not in the thorax. Still, however, in reference to this subject, the nature of the various localities exercises a very considerable influence, for in Macedonia, it is said, the frogs are dumb, and the same in reference to the wild boars there. Among birds, the smaller ones chirp and twitter the most, and more especially about the time of pairing. Others, again, exercise their

voice while fighting, the quail, for instance; others before they begin to fight, such as the partridge; and others when they have gained the victory, the dunghill cock, for instance. The males in these species have a peculiar note of their own, while in others, the nightingale for example, the male has the same note as the female.

Some birds sing all the year round, others only at certain times of the year, as we have already mentioned when speaking of them individually. The elephant produces a noise similar to that of sneezing, by the aid of the mouth, and in- dependently of the nostrils; but by means of the nostrils it emits a sound similar to the hoarse braving of a trumpet. It is only in the bovine race that the voice of the female is the deepest, it being in all other kinds of animals more shrill than that of the male; it is the same also with the male of the human race when castrated. The infant at its birth is never heard to utter a cry before it has entirely left the uterus: it begins to speak at the end of the first year. A son of Crœsus, however, spoke when only six months old, and, while yet wielding the child's rattle, afforded portentous omens, for it was at the same period that his father's empire fell. Those children which begin to speak the soonest, begin to walk the latest. The human voice acquires additional strength at the fourteenth year; but in old age it becomes more shrill again, and there is no living creature in which it is subject to more frequent changes.

In addition to the preceding, there are still some singular circumstances that deserve to be mentioned with reference to the voice. If saw-dust or sand is thrown down in the orchestra of a theatre, or if the walls around are left in a rough state, or empty casks are placed there, the voice is absorbed; while, on the other hand. if the wall is quite straight, or if built in a concave form, the voice will move along it, and will convey words spoken in the slightest whisper from one end to the other, if there is no inequality in the surface to impede its progress. The voice, in man, contributes in a great degree to form his physiognomy, for we form a knowledge of a man before we see him by hearing his voice, just as well as if we had seen him with our eyes. There are as many kinds of voices, too, as there are individuals in existence, and each man has his own peculiar voice, just as much as his own peculiar physiognomy. Hence it is, that

arises that vast diversity of nations and languages throughout the whole earth: in this, too, originate the many tunes, measures, and inflexions that exist. But, before all other things, it is the voice that serves to express our sentiments, a power that distinguishes us from the beasts; just as, in the same way, the various shades and differences in language that exist among men have created an equally marked difference between us and the brutes.

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CHAP. 113. (52.)

SUPERFLUOUS LIMBS.

Supernumerary limbs, when they grow on animals, are of no use, which is the case also with the sixth finger, when it grows on man. It was thought proper in Egypt to rear a human monster, that had two additional eves in the back part of the head; it could not see with them, however.

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CHAP. 114.

SIGNS OF VITALITY AND OF THE MORAL DISPOSITION OF MAN, FROM THE LIMBS.

I am greatly surprised that Aristotle has not only believed, but has even committed it to writing, that there are in the human body certain prognostics of the duration of life. Although I am quite convinced of the utter futility of these remarks, and am of opinion that they ought not to be published without hesitation, for fear lest each person might be anxiously looking out for these prognostics in his own person, I shall still make some slight mention of the subject, seeing that so learned a man as Aristotle did not treat it with contempt. He has set down the following as indications of a short life — few teeth, very long fingers, a leaden colour, and numerous broken lines in the palm of the hand. On the other hand, he looks upon the following as prognostics of a long life — stooping in the shoulders, one or two long unbroken lines in the hand, a greater num- ber than two-and-thirty teeth, and large ears. He does not, I imagine, require that all these symptoms should unite in one person, but looks upon them as individually significant: in my opinion, however, they are utterly frivolous, all of them, although they obtain currency among the vulgar. Our own writer, Trogus, has in a similar manner set down the physiognomy as indicative of the moral disposition; one of the very gravest of the Roman authors, whose own words I will here subjoin: —

"Where the forehead is broad, it is significant of a dull and sluggish understanding beneath; and where it is small, it in- dicates an unsteady disposition. A rounded forehead denotes an irascible temper, it seeming as though the swelling anger had left its traces there. Where the eye-brows are extended in one straight line, they denote effeminacy in the owner, and when they are bent downwards towards the nose, an austere disposition. On the other hand, when the eye-brows are bent towards the temples, they are indicative of a sarcastic disposition; but when they lie very low, they denote malice and envy. Long eyes are significant of a spiteful, malicious nature

and where the corners of the eyes next the nose are fleshy, it is a sign also of a wicked disposition. If the white of the eye is large, it bears tokens of impudence, while those who are incessantly closing the eyelids are inconstant. Largeness of

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CHAP. 115. (53.)

RESPIRATION AND NUTRIMENT.

The breath of the lion is fetid, and that of the bear quite pestilential; indeed, no beast will touch anything with which its breath has come in contact, and substances which it has breathed upon will become putrid sooner than others. It is in man only that Nature has willed that the breath should become tainted in several ways, either through faultiness in the victuals or the teeth, or else, as is more generally the case, through extreme old age. Our breath in itself was insensible to all pain, utterly devoid as it was of all powers of touch and feeling, without which there can be no sensation; ever renewed, it was always forthcoming, destined to be the last adjunct that shall leave the body, and the only one to remain when all is gone beside; it drew, in fine, its origin from heaven. In spite of all this, however, certain penalties were discovered to be inflicted upon it, so that the very substance by the aid of which we live might become a torment to us in life. This inconvenience is more particularly experienced among the Parthians, from their youth upwards, on account of the indiscriminate use of food among them; and, indeed, their very excess in wine causes their breath to be fetid. The grandees, however, of that nation have a remedy for bad breath in the pips of the Assyrian citron, which they mix with their food, and the aroma of which is particularly agreeable. The breath of the elephant will attract serpents from their holes, while that of the stag scorches them. We have already made mention of certain races of men who could by suction extract from the body the venom of serpents; and swine will even eat serpents, which to other animals are poisonous. All those creatures which we have spoken of as insects, can be killed by merely sprinkling them with oil. Vultures, which are put to flight by unguents, are attracted by other odours: the beetle, too, is attracted by the rose. The scorpion puts to death certain serpents. The Scythians dip their arrows in the poison of serpents and human blood: against this frightful composition there is no remedy, for with the slightest touch it is productive of instant death.

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CHAP. 116.

ANIMALS WHICH WHEN FED UPON POISON DO NOT DIE, AND THE FLESH OF WHICH IS POISONOUS.

The animals which feed upon poison have been already mentioned. Some of them, which are harmless of themselves, become noxious if fed upon venomous substances. The wild boar of Pamphylia and the mountainous parts of Cilicia, after having devoured a salamander, will become poisonous to those who eat its flesh; and yet the danger is quite imperceptible by reason of any peculiarity in the smell and taste. The sala- mander, too, will poison either water or wine, in which it happens to be drowned; and what is more, if it has only drunk thereof, the liquid becomes poisonous. The same is the case, too, with the frog known to us as the bramble-frog. So nu- merous are the snares that are laid in wait for life! Wasps greedily devour the flesh of the serpent, a nutriment which renders their stings fatal; so vast is the difference to be found between one kind of food and another. In the country, too, of the Ichthyophagi, as we learn from Theophrastus, the oxen are fed upon fish, but only when alive.

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CHAP. 117.

REASONS FOR INDIGESTION. REMEDIES FOR CRUDITY.

The most wholesome nutriment for man is plain food. An accumulation of flavours is injurious, and still more so, if heightened by sauces. All acrid elements are difficult of digestion, and the same is the case if food is devoured greedily, or in too large quantities. Food is also less easily digested in summer than in winter, and in old age than in youth. The vomits which man has invented, by way of remedy for this evil, render the body more cold, and are more particularly injurious to the eyes and teeth.

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CHAP. 118.

FROM WHAT CAUSES CORPULENCE ARISES; HOW IT MAY BE REDUCED.

Digestion during sleep is more productive of corpulence than strength. Hence it is, that it is preferable for athletes to quicken digestion by walking. Watching, at night more especially, promotes digestion of the food.

(54.) The size of the body is increased by eating sweet and fatty substances, as well as by drinking, while, on the other hand, it is diminished by eating dry, acrid, or cold substances, and by abstaining from drink. Some animals of Africa, as well as sheep, drink but once every four days. Abstinence from food for seven days, even, is not of necessity fatal to man; and it is a well-known fact, that many persons have not died till after an abstinence of eleven days. Man is the only animal that is ever attacked with an insatiate craving for food.

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CHAP. 119.

WHAT THINGS, BY MERELY TASTING OF THEM, ALLAY HUNGER AND THIRST.

On the other hand, there are some substances which, tasted in small quantities only, appease hunger and thirst, and keep up the strength, such as butter, for instance, cheese made of mares' milk, and liquorice. But the most pernicious thing of all, and in every station of life, is excess, and more especially excess in food; in fact, it is the most prudent plan to retrench everything that may be possibly productive of injury. Let us, however, now pass on to the other branches of Nature.

SUMMARY. — Remarkable facts, narratives, and observations, two thousand, two hundred, and seventy.

ROMAN AUTHORS QUOTED. — M. Varro, Hyginus, Scrofa, Saserna, Celsus Cornelius, Æmilius Macer, Virgil, Columella, Julius Aquila who wrote on the Tuscan art of Divination, Tarquitius who wrote on the same subject, Umbricius Melior who wrote on the same subject, Cato the Censor, Domitius Calvinus, Trogus, Melissus, Fabianus, Mucianus, Nigidius, Manilius, Oppius.

FOREIGN AUTHORS QUOTED. — Aristotle, Democritus, Neop- tolemus who wrote the Meliturgica, Aristomachus who wrote on the same subject, Philistus who wrote on the same subject, Nicander, Menecrates, Dionysius who translated Mago, Empedocles, Callimachus, King Attalus, Apollodorus who wrote on venomous animals, Hippocrates, Herophilus, Erasistratus, Asclepiades, Themison, Posidonius the Stoic, Menander of Priene and Menander of Heraclea, Euphronius of Athens, Theophrastus, Hesiod, King Philometor.

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BOOK XII. THE NATURAL HISTORY OF TREES

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CHAP. 1.

THE HONOURABLE PLACE OCCUPIED BY TREES IN THE SYSTEM OF NATURE.

Such, then, is the history, according to their various species and their peculiar conformations, of all the animals within the compass of our knowledge. It now remains for us to speak of the vegetable productions of the earth, which are equally far from being destitute of a vital spirit, (for, indeed, nothing can live without it), that we may then proceed to describe the minerals extracted from it, and so none of the works of Nature may be passed by in silence. Long, indeed, were these last bounties of hers concealed beneath the ground, the trees and forests being regarded as the most valuable benefits conferred by Nature upon mankind. It was from the forest that man drew his first aliment, by the leaves of the trees was his cave rendered more habitable, and by their bark was his clothing supplied; even at this very day, there are nations that live under similar circumstances to these. Still more and more, then, must we be struck with wonder and admiration, that from a primæval state such as this, we should now be cleaving the mountains for their marbles, visiting the Seres to obtain our clothing, seeking the pearl in the depths of the Red Sea, and the emerald in the very bowels of the earth. For our adornment with these precious stones it is that we have devised those wounds which we make in our ears; because, forsooth, it was deemed not enough to carry them on our hands, our necks, and our hair, if we did not insert them in our very flesh as well. It will be only proper, then, to follow the order of human inventions, and to speak of the trees before treating of other subjects; thus may we trace up to their very origin the manners and usages of the present day.

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CHAP. 2. (1.)

THE EARLY HISTORY OF TREES.

The trees formed the first temples of the gods, and even at the present day, the country people, preserving in all their simplicity their ancient rites, consecrate the finest among their trees to some divinity; indeed, we feel ourselves inspired to adoration, not less by the sacred groves and their very stillness, than by the statues of the gods, resplendent as they are with gold and ivory. Each kind of tree remains immutably consecrated to its own peculiar divinity, the beech to Jupiter, the laurel to Apollo, the olive to Minerva, the myrtle to Venus, and the poplar to Hercules: besides which, it is our belief that the Sylvans, the Fauns, and various kinds of goddess Nymphs, have the tutelage of the woods, and we look upon those deities as especially appointed to preside over them by the will of heaven. In more recent times, it was the trees that by their juices, more soothing even than corn, first mollified the natural asperity of man; and it is from these that we now derive the oil of the olive that renders the limbs so supple, the draught of wine that so efficiently recruits the strength, and the numerous delicacies which spring up spontaneously at the various seasons of the year, and load our tables with their viands — tables to replenish which, we engage in combat with wild beasts, and seek for the fishes which have fattened upon the dead corpse of the shipwrecked mariner — indeed, it is only at the second course, after all, that the produce of the trees appears.

But, in addition to this, the trees have a thousand other uses, all of which are indispensable to the full enjoyment of life. It is by the aid of the tree that we plough the deep, and bring near to us far distant lands; it is by the aid of the tree, too, that we construct our edifices. The statues, even, of the deities were formed of the wood of trees, in the days when no value had been set as yet on the dead carcase of a wild beast, and when, luxury not yet deriving its sanction from the gods themselves, we had not to behold, resplendent with the same ivory, the heads of the divinities and the feet of our tables. It is related that the Gauls, separated from us as they were by the Alps,

which then formed an almost insurmountable bulwark, had, as their chief motive for invading Italy, its dried figs, its grapes, its oil, and its wine, samples of which had been brought back to them by Helico, a citizen of the Helvetii, who had been staying at Rome, to practise there as an artizan. We may offer some excuse, then, for them, when we know that they came in quest of these various productions, though at the price even of war.

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CHAP. 3.

EXOTIC TREES. WHEN THE PLANE-TREE FIRST APPEARED IN ITALY, AND WHENCE IT CAME.

But who is there that will not, with good reason, be surprised to learn that a tree has been introduced among us from a foreign clime for nothing but its shade? I mean the plane, which was first brought across the Ionian Sea to the Isle of Diomedes, there to be planted at his tomb, and was afterwards imported thence into Sicily, being one of the very first exotic trees that were introduced into Italy. At the present day, however, it has penetrated as far as the country of the Morini, and occupies even a tributary soil; in return for which those nations have to pay a tax for the enjoyment of its shade. Dionysius the Elder, one of the tyrants of Sicily, had plane-trees conveyed to the city of Rhegium, where they were looked upon as the great marvel of his palace, which was afterwards converted into a gymnasium. These trees did not, however, in that locality, attain any very great height. I find it also stated by some authors, that there were some other instances, in those days even, of plane-trees being found in Italy, and I find some mentioned by name as existing in Spain.

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CHAP. 4.

THE NATURE OF THE PLANE-TREE.

This circumstance took place about the time of the capture of the City of Rome; and to such high honour, in the course of time, did the plane-tree attain, that it was nurtured by pouring wine upon it, it being found that the roots were greatly strengthened by doing so. Thus have we taught the very trees, even, to be wine-bibbers!

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CHAP. 5.

REMARKABLE FACTS CONNECTED WITH THE PLANE-TREE.

The first plane-trees that were spoken of in terms of high admiration were those which adorned the walks of the Academy at Athens-[in one of which], the roots extended a distance of thirty-three cubits, and spread far beyond its branches. At the present day, there is a very famous plane in Lycia, situate in close proximity to a fountain of the most refreshing coolness; standing near the road, with the cavity in its interior, it forms a species of house eighty-one feet in width. Its summit, too, presents the foliage of a grove, while it shields itself with huge branches, each of which would equal an ordinary tree in size, as it throws its lengthened shade across the fields. In addition to this, that nothing may be wanting to its exact resemblance to a grotto, there is a circle of seats within, formed of stone, intermingled with pumice overgrown with moss. This tree was looked upon as so worthy of remark, that Licinius Mucianus, who was three times consul, and recently the legatus of that province, thought it a circumstance deserving of transmission even to posterity, that he, together with eighteen persons of his retinue, had sat down to a banquet in the interior of it. Its leaves afforded material for their couches in the greatest abundance, while he himself, sheltered from every gust of wind, and trying in vain to hear the pattering of the rain on the leaves, took his meal there, and enjoyed himself more than he would have done amid the resplendence of marble, a multiplicity of paintings, and beneath a cieling refulgent with gold.

Another curious instance, again, was that afforded in the reign of the Emperor Caius. That prince was so struck with admiration on seeing a plane in the territory of Veliternum, which presented floor after floor, like those of the several stories of a house, by means of broad benches loosely laid from branch to branch, that he held a banquet in it-himself adding very materially to the shade it threw-the triclinium being formed for the reception of fifteen guests and the necessary attendants: to this singular dining-room he gave the name of his “nest.”

At Gortyna, in the Isle of Crete, there is, in the vicinity of a fountain there, a single plane-tree, which has been long celebrated in the records of both the Greek and the Latin language: it never loses its leaves, and from an early period one of the fabulous legends of Greece has been attached to it, to the effect that it was beneath this tree that Jupiter lay with Europa; just as if there had not been another tree of a similar nature in the island of Cyprus. Slips of the tree at Gortyna — so fond is man by nature of novelty — were at an early period planted at different places in Crete, and reproduced the natural imperfections of the tree; though, indeed, there is no higher recommendation in the plane than the fact that in summer it protects us from the rays of the sun, while in winter it admits them. In later times, during the reign of the Emperor Claudius, a Thessalian eunuch, the freedman of Marcellus Æserninus, who, however, from motives of ambition had enrolled himself in the number of the freedmen of the emperor, and had acquired very considerable wealth, introduced this plane into Italy, in order to beautify his country-seat: so that he may not inappropriately be styled a second Dionysius. These monstrosities of other lands are still to be seen in Italy, independently of those which that country has herself devised.

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CHAP. 6. (2.)

THE CHAMÆPLATANUS. WHO WAS THE FIRST TO CLIP GREEN SHRUBS.

For we find in Italy some plane-trees, which are known as chamæplatani, in consequence of their stunted growth; for we have discovered the art of causing abortion in trees even, and hence, even in the vegetable world we shall have occasion to make mention of dwarfs, an unprepossessing subject in every case. This result is obtained in trees, by a peculiar method adopted in planting and lopping them. C. Matius, a member of the Equestrian order, and a friend of the late Emperor Augustus, invented the art of clipping arbours, within the last eighty years.

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CHAP. 7. (3.)

HOW THE CITRON IS PLANTED.

The cherry and the peach, and all those trees which have either Greek or foreign names, are exotics: those, however, of this number, which have begun to be naturalized among us, will be treated of when I come to speak of the fruit-trees in general. For the present, I shall only make mention of the really exotic trees, beginning with the one that is applied to the most salutary uses. The citron tree, called the Assyrian, and by some the Median apple, is an antidote against poisons. The leaf is similar to that of the arbute, except that it has small prickles running across it. As to the fruit, it is never eaten, but it is remarkable for its extremely powerful smell, which is the case, also, with the leaves; indeed, the odour is so strong, that it will penetrate clothes, when they are once impregnated with it, and hence it is very useful in repelling the attacks of noxious insects. The tree bears fruit at all seasons of the year; while some is falling off, other fruit is ripening, and other, again, just bursting into birth. Various nations have attempted to naturalize this tree among them, for the sake of its medical properties, by planting it in pots of clay, with holes drilled in them, for the purpose of introducing the air to the roots; and I would here remark, once for all, that it is as well to remember that the best plan is to pack all slips of trees that have to be carried to any distance, as close together as they can possibly be placed. It has been found, however, that this tree will grow nowhere except in Media or Persia. It is this fruit, the pips of which, as we have already mentioned, the Parthian grandees employ in seasoning their ragouts, as being peculiarly conducive to the sweetening of the breath. We find no other tree very highly commended that is produced in Media.

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CHAP. 8. (4.)

THE TREES OF INDIA.

In describing the country of the Seres, we have already made mention of the wool-bearing trees which it produces; and we have, likewise, touched upon the extraordinary magnitude of the trees of India. Virgil has spoken in glowing terms of the ebony-tree, one of those which are peculiar to India, and he further informs us, that it will grow in no other country. Herodotus, however, has preferred to ascribe it to Æthiopia; and states that the people of that country were in the habit of paying to the kings of Persia, every third year, by way of tribute, one hundred billets of ebony-wood, together with a certain quantity of gold and ivory. Nor ought we here to omit the fact, inasmuch as the same author has stated to that effect, that the Æthiopians were also in the habit of paying, by way of tribute, twenty large elephants' teeth. So high was the esteem in which ivory was held in the year from the building of our city, 310: for it was at that period that this author was compiling his History at Thurii, in Italy; which is all the more remarkable, from the implicit confidence we place in him, when he says that up to that time, no native of Asia or Greece, to his knowledge at least, had ever beheld the river Padus. The plan of Æthiopia, which, as we have already mentioned, was recently laid before the Emperor Nero, informs us, that this tree is very uncommon in the country that lies between Syene, the extreme boundary of the empire, and Meroë, a distance of eight hundred and ninety-six miles; and that, in fact, the only kind of tree that is to be found there, is the palm. It was, probably, for this reason, that ebony held the third place in the tribute that was thus imposed.

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CHAP. 9.

WHEN EBONY WAS FIRST SEEN AT ROME. THE VARIOUS KINDS OF EBONY.

Pompeius Magnus displayed ebony on the occasion of his triumph over Mithridates. Fabianus declares, that this wood will give out no flame; it burns, however, with a very agreeable smell. There are two kinds of ebony; the rarest kind is the best, and is produced from a tree that is singularly free from knots. The wood is black and shining, and pleasing to the eye, without any adventitious aid from art. The other kind of ebony is the produce of a shrub which resembles the cytisus, and is to be found scattered over the whole of India.

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CHAP. 10. (5.)

THE INDIAN THORN.

There is in India, also, a kind of thorn very similar to ebony, though it may be distinguished from it, by the aid of a lantern even; for, on the application of flame, it will instantly run across the tree. We will now proceed to describe those trees which were the admiration of Alexander the Great in his victorious career, when that part of the world was first revealed by his arms.

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CHAP. 11.

THE INDIAN FIG.

The Indian fig bears but a small fruit. Always growing spontaneously, it spreads far and wide with its vast branches, the ends of which bend downwards into the ground to such a degree, that they take fresh root in the course of a year, and thus form a new plantation around the parent stock, traced in a circular form, just as though it had been the work of the ornamental gardener. Within the bowers thus formed, the shepherds take up their abode in the summer, the space occupied by them being, at once, overshadowed and protected by the bulwark which the tree thus throws around; a most graceful sight, whether we stand beneath and look upwards, or whether we view its arcaded foliage from a distance. The higher branches, however, shoot upwards to a very considerable height, and, by their number, form quite a grove, spring ing aloft from the vast trunk of the parent tree, which overspreads, very frequently, a space of sixty paces in extent, while the shade that is thrown by it will cover as much as a couple of stadia. The broad leaves of the tree have just the shape of an Amazonian buckler; and hence it is that the fruit, from being quite covered by the leaves, is greatly impeded in its growth. The fruit, indeed, of this tree is but scanty, and never exceeds a bean in size; being ripened, however, by the rays of the sun, as these penetrate the leaves, the figs are remarkable for their singular lusciousness, and are quite worthy of the marvellous tree by which they are produced. These fig-trees are found, more particularly, in the vicinity of the river Acesines.

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CHAP. 12. (6.)

THE PALA: THE FRUIT CALLED ARIENA.

There is another tree in India, of still larger size, and even more remarkable for the size and sweetness of its fruit, upon which the sages of India live. The leaf of this tree resembles, in shape, the wing of a bird, being three cubits in length, and two in breadth. It puts forth its fruit from the bark, a fruit remarkable for the sweetness of its juice, a single one containing sufficient to satisfy four persons. The name of this tree is “pala,” and of the fruit, “ariena.” They are found in the greatest abundance in the country of the Sydraci, a territory which forms the extreme limit of the expedition of Alexander. There is another tree, also, very similar to this, but bearing a still sweeter fruit, though very apt to cause derangement of the bowels. Alexander issued strict orders, forbidding any one in the expedition to touch this fruit.

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CHAP. 13.

INDIAN TREES, THE NAMES OF WHICH ARE UNKNOWN. INDIAN TREES WHICH BEAR FLAX.

The Macedonians have made mention of various other kinds of trees, the greater part of which, however, are without names. There is one which resembles the terebinth in every respect, except the fruit, which is very similar to the almond, though less in size, and remarkable for its extreme sweetness. This tree was met with in Bactria, and some persons looked upon it as a variety of the terebinth, rather than as bearing a strong resemblance to it. As to the tree from which they manufacture a kind of linen cloth, in leaf it resembles the mulberry-tree, while the calix of the fruit is similar to the dog-rose. This tree is reared in the plains, and there is no sight throughout the cultivated parts of the country that is more enchanting than the plantations of it.

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CHAP. 14. (7.)

THE PEPPER-TREE. — THE VARIOUS KINDS OF PEPPER — BREGMA — ZINGIBERI, OR ZIMPIBERI.

The olive-tree of India is unproductive, with the sole exception of the wild olive. In every part we meet with trees that bear pepper, very similar in appearance to our junipers, although, indeed, it has been alleged by some authors that they only grow on the slopes of Caucasus which lie exposed to the sun. The seeds, however, differ from those of the juniper, in being enclosed in small pods similar to those which we see in the kidney-bean. These pods are picked before they open, and when dried in the sun, make what we call "long pepper." But if allowed to ripen, they will open gradually, and when arrived at maturity, discover the white pepper; if left exposed to the heat of the sun, this becomes wrinkled, and changes its colour. Even these productions, however, are subject to their own peculiar infirmities, and are apt to become blasted by the inclemency of the weather; in which case the seeds are found to be rotten, and mere husks. These abortive seeds are known by the name of "bregma," a word which in the Indian language signifies "dead." Of all the various kinds of pepper, this is the most pungent, as well as the very lightest, and is remarkable for the extreme paleness of its colour. That which is black is of a more agreeable flavour; but the white pepper is of a milder quality than either.

The root of this tree is not, as many persons have imagined, the same as the substance known as zimpiberi, or, as some call it, zingiberi, or ginger, although it is very like it in taste. For ginger, in fact, grows in Arabia and in Troglodytica, in various cultivated spots, being a small plant with a white root. This plant is apt to decay very speedily, although it is of intense pungency; the price at which it sells is six denarii per pound. Long pepper is very easily adulterated with Alexandrian mustard; its price is fifteen denarii per pound, while that of white pepper is seven, and of black, four. It is quite surprising that the use of pepper has come so much into fashion, seeing that in other substances which we use, it is sometimes their

sweetness, and sometimes their appearance that has attracted our notice; whereas, pepper has nothing in it that can plead as a recommendation to either fruit or berry, its only desirable quality being a certain pungency; and yet it is for this that we import it all the way from India! Who was the first to make trial of it as an article of food? and who, I wonder, was the man that was not content to prepare himself by hunger only for the satisfying of a greedy appetite? Both pepper and ginger grow wild in their respective countries, and yet here we buy them by weight — just as if they were so much gold or silver. Italy, too, now possesses a species of pepper-tree, somewhat larger than the myrtle, and not very unlike it. The bitterness of the grains is similar to that which we may reasonably suppose to exist in the Indian pepper when newly gathered; but it is wanting in that mature flavour which the Indian grain acquires by exposure in the sun, and, consequently, bears no resemblance to it, either in colour or the wrinkled appearance of the seeds. Pepper is adulterated with juniper berries, which have the property, to a marvellous degree, of assuming the pungency of pepper. In reference to its weight, there are also several methods of adulterating it.

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CHAP. 15.

CARYOPHYLLON, LYCION, AND THE CHIRONIAN PYXACANTHUS.

There is, also, in India another grain which bears a considerable resemblance to pepper, but is longer and more brittle; it is known by the name of caryophyllon. It is said that this grain is produced in a sacred grove in India; with us it is imported for its aromatic perfume. The same country produces, also, a thorny shrub, with grains which bear a resemblance to pepper, and are of a remarkably bitter taste. The leaves of this shrub are small, like those of the cyprus; the branches are three cubits in length, the bark pallid, and the roots wide-spreading and woody, and of a colour resembling that of boxwood. By boiling this root with the seed in a copper vessel, the medicament is prepared which is known by the name of lycion. This thorny shrub grows, also, on Mount Pelion; this last kind is much used for the purpose of adulterating the medicament above mentioned. The root of the asphodel, ox-gall, wormwood, sumach, and the amurca of olive oil, are also employed for a similar purpose. The best lycion for medicinal purposes, is that which has a froth on its surface; the Indians send it to us in leather bottles, made of the skin of the camel or the rhinoceros. The shrub itself is known by some persons in Greece under the name of the Chironian pyxacanthus.

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CHAP. 16. (8.)

MACIR.

Macir, too, is a vegetable substance that is brought from India, being a red bark that grows upon a large root, and bears the name of the tree that produces it; what the nature of this tree is, I have not been able to ascertain. A decoction of this bark, mixed with honey, is greatly employed in medicine, as a specific for dysentery.

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CHAP. 17.

SUGAR.

Arabia, too, produces sugar; but that of India is the most esteemed. This substance is a kind of honey, which collects in reeds, white, like gum, and brittle to the teeth. The larger pieces are about the size of a filbert; it is only employed, however, in medicine.

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CHAP. 18.

TREES OF ABIANA, GEDROSIA, AND HYRCANIA.

On the frontiers of India is a country called Ariana, which produces a thorny shrub, rendered precious by the tears which it distils. It bears some resemblance to myrrh, but is very difficult of access, by reason of the thorns with which it is armed. Here, too, a poisonous shrub is found, with a root like the radish, and leaves like those of the laurel, By its powerful odour it attracts horses, and was very nearly depriving Alexander of all his cavalry upon his first arrival there, an accident which also happened in Gedrosia. A thorny shrub has been also spoken of as a native of the same country, with leaves like those of the laurel, the juice of which, if sprinkled upon the eyes, is productive of blindness in all animals. Another plant is also mentioned, with a most remarkable odour, and full of diminutive serpents, the sting of which is sure to cause instant death. Onesicritus states, that in the vallies of Hyrcania, there is a tree resembling the fig, and known as the occhus, from which a honey distils for two hours every morning.

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CHAP. 19. (9.)

TREES OF BACTRIANA, BDELLIUM, OR BROCHON, OTHERWISE MALACHA, OR MALDACON, SCORDASTUM. ADULTERATIONS USED IN ALL SPICES AND AROMATICS; THE VARIOUS TESTS OF THEM AND THEIR RESPECTIVE VALUES.

In the vicinity, too, of India, is Bactriana, in which region we find bdellium, that is so highly esteemed. This tree is of a black colour, and about the size of the olive; it has leaves like those of the robur, and bears a fruit similar to that of the wild fig, and in nature resembling a kind of gum. This fruit is by some persons called brochon, by others malacha, and by others, again, maldacon. When of a black colour, and rolled up in cakes, it bears the name of hadrobolon. This substance ought to be transparent and the colour of wax, odoriferous, unctuous when subjected to friction, and bitter to the taste, though without the slightest acidity. When used for sacred purposes, it is steeped in wine, upon which it emits a still more powerful odour. The tree is a native of both India and Arabia, as well as Media and Babylon; some persons give to the bdellium that is imported by way of Media, the name of peraticum. This last is remarkable for its brittleness, while, at the same time, it is harder and more bitter than the other kinds; that of India, on the other hand, is moister, and gummy. This last sort is adulterated by means of almonds, while the various other kinds are falsified with the bark of scordastum, that being the name of a tree the gum of which strongly resembles bdellium. These aduiterations, however, are to be detected — and let it suffice to mention it here, in relation to all other perfumes as well — by the smell, the colour, the weight, the taste, and the action of fire. The bdellium of Bactriana is shining and dry, and covered with numerous white spots resembling the finger-nails; besides which, it should be of a certain weight, heavier or lighter than which it ought not to be. The price of bdellium, in its pure state, is three denarii per pound.

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CHAP. 20.

TREES OF PERSIS.

Adjoining the countries which we have previously mentioned is Persis, lying along the shores of the Red Sea, which, when describing it, we have mentioned as the Persian Sea, the tides of which penetrate far into the land. The trees in these regions are of a marvellous nature; for, corroded by the action of the salt, and bearing a considerable resemblance to vegetable substances that have been thrown up and abandoned by the tide, they are seen to embrace the arid sands of the seashore with their naked roots, just like so many polypi. When the tide rises, buffeted by the waves, there they stand, fixed and immoveable; nay, more, at high water they are completely covered; a fact which proves to conviction, that they derive their nutriment from the salt contained in the water. The size of these trees is quite marvellous; in appearance they strongly resemble the arbute; the fruit, which on the outside is very similar to the almond, has a spiral kernel within.

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CHAP. 21. (10.)

TREES OF THE ISLANDS OF THE PERSIAN SEA. THE COTTON TREE.

In the same gulf, there is the island of Tylos, covered with a forest on the side which looks towards the East, where it is washed also by the sea at high tides. Each of the trees is in size as large as the fig; the blossoms are of an indescribable sweetness, and the fruit is similar in shape to a lupine, but so rough and prickly, that it is never touched by any animal. On a more elevated plateau of the same island, we find trees that bear wool, but of a different nature from those of the Seres; as in these trees the leaves produce nothing at all, and, indeed, might very readily be taken for those of the vine, were it not that they are of smaller size. They bear a kind of gourd, about the size of a quince; which, when arrived at maturity, bursts asunder and discloses a ball of down, from which a costly kind of linen cloth is made.

(11.) This tree is known by the name of gossypinus: the smaller island of Tylos, which is ten miles distant from the larger one, produces it in even greater abundance.

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CHAP. 22.

THE TREE CALLED CYNA. TREES FROM WHICH FABRICS FOR CLOTHING ARE MADE IN THE EAST.

Juba states, that about a certain shrub there grows a woolly down, from which a fabric is manufactured, preferable even to those of India. He adds, too, that certain trees of Arabia, from which vestments are made, are called cynæ, and that they have a leaf similar to that of the palm. Thus do their very trees afford clothing for the people of India. In the islands of Tylos, there is also another tree, with a blossom like the white violet in appearance, though four times as large, but it is destitute of smell, a very remarkable fact in these climates.

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CHAP. 23.

A COUNTRY WHERE THE TREES NEVER LOSE THEIR LEAVES.

There is also another tree similar to the preceding one, but with a thicker foliage, and a blossom like the rose. This flower shuts at night, and, beginning to open towards sun-rise, appears in full blow by mid-day; the natives are in the habit of saying that in this way it goes to sleep. The same island bears also the palm, the olive, the vine, and the fig, with various other kinds of fruit. None of the trees in this island lose their leaves; it is abundantly watered by cool streams, and receives the benefit of rain.

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CHAP. 24.

THE VARIOUS USEFUL PRODUCTS OF TREES.

Arabia, which is in the vicinity of these islands, requires that we should make some distinction in its vegetable products, seeing that here the various parts of trees which are employed for useful purposes are the root, the branches, the bark, the juices, the gum, the wood, the shoots, the blossoms, the leaves, and the fruit.

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CHAP. 25. (12.)

COSTUS.

A root and a leaf, however, are the productions which are held in the very highest estimation in India. The root is that of the costus; it has a burning taste in the mouth, and a most exquisite odour; in other respects, the branches are good for nothing. In the island of Patale, situate at the very mouth of the river Indus, there are two kinds of costus found, the black and the white; the last is considered the best. The price of it is five denarii per pound.

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CHAP. 26.

NARD. THE TWELVE VARIETIES OF THE PLANT.

Of the leaf, which is that of the nard, it is only right to speak somewhat more at length, as it holds the principal place among our unguents. The nard is a shrub with a heavy, thick root, but short, black, brittle, and yet unctuous as well; it has a musty smell, too, very much like that of the cyperus, with a sharp, acrid taste, the leaves being small, and growing in tufts. The heads of the nard spread out into ears; hence it is that nard is so famous for its two-fold production, the spike or ear, and the leaf. There is another kind, again, that grows on the banks of the Ganges, but is altogether condemned, as being good for nothing; it bears the name of ozænitis, and emits a fetid odour. Nard is adulterated with a sort of plant called pseudo-nard, which is found growing everywhere, and is known by its thick, broad leaf, and its sickly colour, which inclines to white. It is sophisticated, also, by being mixed with the root of the genuine nard, which adds very considerably to its weight. Gum is also used for the same purpose, antimony, and cyperus; or, at least, the outer coat of the cyperus. Its genuineness is tested by its lightness, the redness of its colour, its sweet smell, and the taste more particularly, which parches the mouth, and leaves a pleasant flavour behind it; the price of spikenard is one hundred denarii per pound.

Leaf nard varies in price according to the size; for that which is known by the name of hadrosphærum, consisting of the larger leaves, sells at forty denarii per pound; when the leaves are smaller, it is called mesosphærum, and is sold at sixty. But that which is considered the most valuable of all, is known as microsphærum, and consists of the very smallest of the leaves; it sells at seventy-five denarii per pound. All these varieties of nard have an agreeable odour, but it is most powerful when fresh. If the nard is old when gathered, that which is of a black colour is considered the best.

In our part of the world, the Syrian nard is held in the next highest esteem next to this; then the Gallic; and in the third place, that of Crete, which by some persons is called “agrion,” and by others

"phu." This last has exactly the leaf of the olusatrum, with a stalk a cubit in length, knotted, of a whitish colour, inclining to purple, and a root that runs sideways; it is covered, too, with long hair, and strongly resembles the foot of a bird. Field nard is known by the name of baccar. We shall have further occasion to mention it when we come to speak of the flowers. All these kinds of nard, however, are to be reckoned as herbs, with the exception of Indian nard. Of these, the Gallic kind is pulled up along with the root, and washed in wine; after which it is dried in the shade, and wrapped up in paper, in small parcels. It is not very different from the Indian nard, but is lighter than that of Syria; the price at which it sells is three denarii per pound. The only way of testing the leaves of all these varieties of nard, is to see that they are not brittle and parched, instead of being dried naturally and gradually. Together with the nard that grows in Gaul, there always springs up a herb, which is known by the name of hirculus, or the "little goat," on account of its offensive smell, it being very similar to that of the goat. This herb, too, is very much used in the adulteration of nard, though it differs from it in the fact that it has no stem, and its leaves are smaller; the root, too, is not bitter, and is entirely destitute of smell.

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CHAP. 27. (13.)

ASARUM, OR FOAL-FOOT.

The herb asarum, too, has the properties of nard, and, indeed, by some persons is known as wild nard. It has a leaf, however, more like that of the ivy, only that it is rounder and softer. The flower is purple, the root very similar to that of the Gallic nard, and the seed is like a grape. It is of a warm and vinous flavour, and blossoms twice a year, growing upon hill sides that are densely shaded. The best kind is that found in Pontus, and the next best that of Phrygia; that of Illyricum being only of third-rate quality. The root is dug up when it is just beginning to put forth its leaves, and then dried in the sun. It very soon turns mouldy, and loses its properties. There has, also, been lately found a certain herb in some parts of Greece, the leaves of which do not differ in the slightest degree from those of the Indian nard.

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CHAP. 28.

AMOMUM. — AMOMIS.

The clustered amomum is very extensively used; it grows upon a kind of wild vine that is found in India, though some persons have been of opinion that it is borne by a shrub, resembling the myrtle in appearance, and about the same height as the palm. This plant, also, is plucked along with the root, and is carefully pressed together with the hands; for it very soon becomes brittle. That kind is held in the highest esteem, the leaves of which bear a strong resemblance to those of the pomegranate, being free from wrinkles, and of a red colour. The second quality is that which is of a pallid hue. That which has a green, grassy appearance, is not so good, and the white is the worst of all; it assumes this appearance when old. The price of clustered amomum is sixty denarii per pound, but in dust it sells at only forty-nine. Amomum is produced, also, in that part of Armenia which is known as Otene; as, also, in Media and Pontus. It is adulterated with the leaves of the pomegranate and a solution of gum, which is employed in order to make the leaves adhere and form clusters, like those of the grape.

There is another substance, also, which is known by the name of amomis; it is not so full of veins as amomum, harder, and not so odoriferous; from which it would appear, either that it is altogether a different plant, or else that it is amomum gathered in an unripe state.

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CHAP. 29.

CARDAMOMUM.

Similar to these substances, both in name as well as the shrub which produces it, is the cardamomum, the seeds of which are of an oblong shape. It is gathered in the same manner both in India and Arabia. There are four different kinds of cardamomum. That which is of a very green colour, unctuous, with sharp angles, and very difficult to break, is the most highly esteemed of all. The next best is of a reddish white tint, while that of third-rate quality is shorter and blacker, the worst of all being mottled and friable, and emitting but little smell; which, in its genuine state ought to be very similar to costum. Cardamomum grows also in Media. The price of the best is three denarii per pound.

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CHAP. 30.

THE COUNTRY OF FRANKINCENSE.

Next in affinity to cardamomum would have been cinnamomum, and this we should have now proceeded to speak of, were it not more convenient first to make mention of the treasures of Arabia, and the reasons for which that country has received the names of "Happy" and "Blest." The chief productions of Arabia are frankincense and myrrh, which last it bears in common with the country of the Troglodytæ. (14.) There is no country in the world that produces frankincense except Arabia, and, indeed, not the whole of that. Almost in the very centre of that region, are the Atramitæ, a community of the Sabæi, the capital of whose kingdom is Sabota, a place situate on a lofty mountain. At a distance of eight stations from this is the incense-bearing region, known by the name of Saba. The Greeks say that the word signifies a "secret mystery." This district looks towards the north-east, and is rendered inaccessible by rocks on every side, while it is bounded on the right by the sea, from which it is shut out by cliffs of tremendous height. The soil of this territory is said to be of a milky white, a little inclining to red. The forests extend twenty schœni in length, and half that distance in breadth. The length of the schœnus, according to the estimate of Eratosthenes, is forty stadia, or, in other words, five miles; some persons, however, have estimated the schœnus at no more than thirty-two stadia. In this district some lofty hills take their rise, and the trees, which spring up spontaneously, run downwards along the declivities to the plains. It is generally agreed that the soil is argillaceous, and that the springs which there take their rise are but few in number, and of a nitrous quality. Adjoining are the Minæi, the people of another community, through whose country is the sole transit for the frankincense, along a single narrow road. The Minæi were the first people who carried on any traffic in frankincense, which they still do to a greater extent than any other persons, and hence it is that it has received the appellation of "Minæan." It is the Sabæi alone, and no other people among the Arabians, that behold the incense-tree; and, indeed, not all of them,

for it is said that there are not more than three thousand families which have a right to claim that privilege, by virtue of hereditary succession; and that for this reason those persons are called sacred, and are not allowed, while pruning the trees or gathering the harvest, to receive any pollution, either by intercourse with women, or coming in contact with the dead; by these religious observances it is that the price of the commodity is so considerably enhanced. Some persons, however, say, that the right of gathering incense in the forests belongs to all these people in common, while others again state, that they take their turns year by year.

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CHAP. 31.

THE TREES THAT BEAR FRANKINCENSE.

Nor is it by any means agreed what is the appearance of the incense-tree. We have sent several expeditions against Arabia, and the Roman arms have penetrated into the greater part of that country; indeed, Caius Cæsar, the son of Augustus, even earned considerable renown there; and yet this tree has been described by no Latin writer, at least that I know of. The descriptions given of it by the Greek writers vary very considerably: some of them say that it has exactly the leaf of the pear-tree, only somewhat smaller, and of a grass-green colour. Others, again, say, that it has a rather reddish leaf, like that of the mastich, and others, that it is a kind of terebinth, and that King Antigonus, to whom a branch of it was brought, was of that opinion. King Juba, in the work which he wrote and dedicated to Caius Cæsar, the son of Augustus, who was inflamed by the wide-spread renown of Arabia, states, that the tree has a spiral stem, and that the branches bear a considerable resemblance to those of the Pontic maple, while it secretes a sort of juice very similar to that of the almond-tree. Such, he says, is the appearance of the tree as seen in Carmania and Egypt, where it was introduced and planted under the auspices of the Ptolemies when reigning there. It is well known that it has a bark not unlike that of the laurel, and, indeed, some persons have asserted that their leaves are similar. At all events, such was the case with the tree as it grew at Sardes: for the kings of Asia also took considerable care to have it planted there. The ambassadors who in my time have come to Rome from Arabia, have made all these matters more uncertain, even, than they were before; a thing at which we may justly be surprised, seeing that some sprigs even of the incense-tree have been brought among us, from which we have some reason to conclude that the parent tree is round and tapering, and that it puts forth its shoots from a trunk that is entirely free from knots.

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CHAP. 32.

VARIOUS KINDS OF FRANKINCENSE.

In former times, when they had fewer opportunities of selling it, they used to gather the frankincense only once a year; but at the present day, as there is a much greater demand for it, there is a second crop as well. The first, and what we may call the natural, vintage, takes place about the rising of the Dog-star, a period when the heat is most intense; on which occasion they cut the tree where the bark appears to be the fullest of juice, and extremely thin, from being distended to the greatest extent. The incision thus made is gradually extended, but nothing is removed; the consequence of which is, that an unctuous foam oozes forth, which gradually coagulates and thickens. When the nature of the locality requires it, this juice is received upon mats of palm-leaves, though in some places the space around the tree is made hard by being well rammed down for the purpose. The frankincense that is gathered after the former method, is in the purest state, though that which falls on the ground is the heaviest in weight: that which adheres to the tree is pared off with an iron instrument, which accounts for its being found mingled with pieces of bark.

The forest is allotted in certain portions, and such is the mutual probity of the owners, that it is quite safe from all depredation; indeed, there is no one left to watch the trees after the incisions are made, and yet no one is ever known to plunder his neighbour. But, by Hercules! at Alexandria, where the incense is dressed for sale, the workshops can never be guarded with sufficient care; a seal is even placed upon the workmen's aprons, and a mask put upon the head, or else a net with very close meshes, while the people are stripped naked before they are allowed to leave work. So true it is that punishments afford less security among us than is to be found by these Arabians amid their woods and forests! The incense which has accumulated during the summer is gathered in the autumn: it is the purest of all, and is of a white colour. The second gathering takes place in spring, incisions being made in the bark for that purpose during the winter: this, however, is of a red colour, and not to be

compared with the other incense. The first, or superior kind of incense, is known as carfiathum, the latter is called dathiathum. It is thought, also, that the incense which is gathered from the tree while young is the whitest, though the produce of the old trees has the most powerful smell; some persons, too, have an impression that the best incense is found in the islands, but Juba asserts that no incense at all is grown there.

That incense which has hung suspended in globular drops is known to us as "male" frankincense, although it is mostly the case that we do not use the term "male" except in contradistinction to the word "female:" it has been attributed, however, to religious scruples, that the name of the other sex was not employed as a denomination for this substance. Some persons, again, are of opinion that the male frankincense has been so called from its resemblance to the testes of the male. The incense, however, that is the most esteemed of all is that which is mammose, or breast-shaped, and is produced when one drop has stopped short, and another, following close upon it, has adhered, and united with it. I find it stated that one of these lumps used to make quite a handful, at a time when men displayed less eagerness to gather it, and it was allowed more time to accumulate. The Greeks call such lumps as these by the name of stagonia and atomus, while the smaller pieces are called orobia. The fragments which are broken off by shaking the tree are known to us as manna. Even at the present day, however, there are drops found which weigh one-third of a mina, or, in other words, twenty-eight denarii. Alexander the Great, when a boy, was on one occasion loading the altars with frankincense with the greatest prodigality, upon which his tutor Leonides remarked to him that it would be time to worship the gods in such a lavish manner as that, when he had conquered the countries that produced the frankincense. After Alexandria had conquered Arabia, he despatched to Leonides a ship freighted with frankincense, and sent him word, requesting that he would now worship the gods without stint or limit.

The incense, after being collected, is carried on camels' backs to Sabota, at which place a single gate is left open for its admission. To deviate from the high road while conveying it, the laws have made a capital offence. At this place the priests take by measure, and not by

weight, a tenth part in honour of their god, whom they call Sabis; indeed, it is not allowable to dispose of it before this has been done: out of this tenth the public expenses are defrayed, for the divinity generously entertains all those strangers who have made a certain number of days' journey in coming thither. The incense can only be exported through the country of the Gebanitæ, and for this reason it is that a certain tax is paid to their king as well. Thomna, which is their capital, is distant from Gaza, a city of Judæa, on the shores of our sea, 4436 miles, the distance being divided into sixty-five days' journey by camel. There are certain portions also of the frankincense which are given to the priests and the king's secretaries: and in addition to these, the keepers of it, as well as the soldiers who guard it, the gate-keepers, and various other employes, have their share as well. And then besides, all along the route, there is at one place water to pay for, at another fodder, lodging at the stations, and various taxes and imposts besides; the consequence of which is, that the expense for each camel before it arrives at the shores of our sea is six hundred aud eighty-eight denarii; after all this, too, there are certain payments still to be made to the farmers of the revenue of our empire. Hence it is that a pound of the best frankincense sells at six denarii, the second quality five, and the third three. Among us, it is adulterated with drops of white resin, a substance which bears a strong resemblance to it: but the fraud may be easily detected by the methods which have been already mentioned. It is tested by the following qualities; its whiteness, size, brittleness, and the readiness with which it takes fire when placed on heated coals; in addition to which, it should not give to the pressure of the teeth, but from its natural brittleness crumble all to pieces.

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CHAP. 33. (15.)

MYRRH.

According to some authors, myrrh is the produce of a tree that grows in the same forests as the incense-tree, though most say that they grow in different places: but the fact is that myrrh grows in many parts of Arabia, as will be seen when we come to speak of the several varieties of it. A sort that is highly esteemed is brought from the islands also, and the Sabæi even cross the sea to procure it in the country of the Troglodytæ. It is grown also by being transplanted, and when thus cultivated is greatly preferred to that which is grown in the forests. The plant is greatly improved by raking and baring the roots; indeed, the cooler the roots are kept, the better it is.

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CHAP. 34.

THE TREES WHICH PRODUCE MYRRH.

The tree grows to the height of five cubits, and has thorns upon it: the trunk is hard and spiral, and thicker than that of the incense-tree, and much more so at the root than at the upper part of the tree. Some authors have said that the bark is smooth like that of the arbute, others, that it is rough and covered with thorns: it has the leaf of the olive, but more wavy, with sharp points at the edges: Juba says, however, that it resembles the leaf of the olusatrum. Some again say that it resembles the juniper, only that it is rougher and bristling with thorns, and that the leaves are of a rounder shape, though they have exactly the taste of the juniper. There have been some writers who have incorrectly asserted that both myrrh and frankincense are the product of the same tree.

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CHAP. 35.

THE NATURE AND VARIOUS KINDS OF MYRRH.

Incisions are made in the myrrh-tree also twice a year, and at the same season as in the incense-tree; but in the case of the myrrh-tree they are all made the way up from the root as far as the branches which are able to bear it. The tree spontaneously exudes, before the incision is made, a liquid which bears the name of stacte, and to which there is no myrrh that is superior. Second only in quality to this is the cultivated myrrh: of the wild or forest kind, the best is that which is gathered in summer. They give no tithes of myrrh to the god, because it is the produce of other countries as well; but the growers pay the fourth part of it to the king of the Gebanitæ. Myrrh is bought up indiscriminately by the common people, and then packed into bags; but our perfumers separate it without any difficulty, the principal tests of its goodness being its unctuousness and its aromatic smell. (16.) There are several kinds of myrrh; the first among the wild myrrhs is the Troglodytic; and the next are the Minæan, which includes the Atramitic, and that of Ausaritis, in the kingdom of the Gebanitæ. A third kind is the Dianitic, and a fourth is the mixed myrrh, or "all-sorts;" a fifth, again, is the Sambracenian, which is brought from a city in the kingdom of the Sabæi, near the sea; and a sixth is known by the name of Dusaritic. There is a white myrrh also, which is produced in only one spot, and is carried for sale to the city of Messalum. The Troglodytic myrrh is tested by its unctuousness, and its peculiarly dry appearance: it has also a dirty, rough look with it, but is more acrid than the other kinds. The Sambracenian myrrh has none of these faults, and is more sightly in appearance than any of them, though it is far from being so powerful. In general, however, the proof of its goodness consists in its being separated in little pieces of uneven shape, formed by the concretion of a whitish juice, which dries up little by little. When broken it ought to exhibit white marks like the finger-nails, and to be slightly bitter to the taste. That of second quality is of a mottled appearance within; while of worse quality is that which is of a black colour

within; the very worst of all is that which is black on the outside as well.

The price of myrrh varies according to the number of purchasers. Stacte is sold at prices which vary from three denarii to forty per pound, while the very highest price of the cultivated myrrh is eleven denarii. Erythræan myrrh, the same, it is pretended, as Arabian myrrh, is sixteen denarii per pound, Troglodytic also, is sixteen denarii; and that known as odoraria, or odoriferous myrrh, sells at fourteen. Myrrh is adulterated with pieces of mastich, and other gums; it is also drugged with the juice of wild cucumber, in order to produce a certain bitterness, and with litharge for the purpose of increasing its weight. Other sophistications may be discovered on tasting it, and the gum will adhere to the teeth. But the cleverest mode of adulterating it is with Indian myrrh, a substance which is gathered from a certain prickly shrub which grows there. This is the only thing that India produces of worse quality than the corresponding produce of other countries: they may, however, be very easily distinguished, that of India being so very much inferior.

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CHAP. 36. (17.)

MASTICH.

The transition, therefore, is very easy to mastich, which grows upon another prickly shrub of India and Arabia, known by the name of laina. Of mastich as well there are two different kinds; for in Asia and Greece there is also found a herb which puts forth leaves from the root, and bears a thistly head, resembling an apple, and full of seeds. Upon an incision being made in the upper part of this plant drops distil from it, which can hardly be distinguished from the genuine mastich. There is, again, a third sort, found in Pontus, but more like bitumen than anything else. The most esteemed, however, of all these, is the white mastich of Chios, the price of which is twenty denarii per pound, while the black mastich sells at twelve. It is said that the mastich of Chios exudes from the lentisk in the form of a sort of gum: like frankincense, it is adulterated with resin.

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CHAP. 37.

LADANUM AND STOBOLON.

Arabia, too, still boasts of her ladanum. Many writers have stated that this substance is the fortuitous result of an accidental injury inflicted upon a certain odoriferous plant, under the following circumstances: the goat, they say, which is in general an animal that is extremely mischievous to foliage, is particularly fond of the shrubs that are odoriferous, as if, indeed, it were really sensible of the value that is set upon them. Hence it is that as the animal crops the sprouting shoots of the branches which are swollen with a liquid juice of remarkable sweetness, these juices drop and become mingled together, and are then wiped up by the shaggy hairs of its unlucky beard. Being there mingled with the dust, these juices form knots and tufts, and are then dried by the sun; and hence the circumstance is accounted for that in the ladanum which is imported by us we find goats' hairs. This, however, we are told, occurs nowhere but among the Nabatæi, a people of Arabia, who border upon Syria. The more recent writers call this substance by the name of stobolon, and state that in the forests of Arabia the trees are broken by the goats while browzing, and that the juices in consequence adhere to their shaggy hair; but the genuine ladanum, they assure us, comes from the island of Cyprus. I make mention of this in order that every kind of odoriferous plant may be taken some notice of, even though incidentally and not in the order of their respetive localities. They say also that this Cyprian ladanum is collected in the same manner as the other, and that it forms a kind of greasy substance or œsypum, which adheres to the beards and shaggy legs of the goats; but that it is produced from the flowers of the ground-ivy, which they have nibbled when in quest of their morning food, a time at which the whole island is covered with dew. After this, they say, when the fogs are dispersed by the sun, the dust adheres to their wet coats, and the ladanum is formed, which is afterwards taken off of them with a comb.

There are some authors who give to the plant of Cyprus, from

which it is made, the name of leda; and hence it is that we find it also called ledanum. They say, also, that a viscous substance settles upon this plant, and, that, by the aid of strings wound around it, its leaves are rolled into balls, from which a kind of cake is made. Hence it is, that in Cyprus, as well as in Arabia, there are two kinds of ladanum; the one natural, and mingled with earth, and the other artificial: the former is friable, while the latter is of a viscous nature.

It is stated, also, that this substance is the produce of a shrub originally found in Carmania, and propagated by plants, by order of the Ptolemies, in the parts beyond Egypt; while other authorities are found, which say that it grows on the incense tree, and is gathered like gum, from incisions made in the bark, after which it is collected in bags of goat-skin. That of the most approved quality, sells at the rate of forty asses per pound. Ladanum is adulterated with myrtle berries, and filth taken from the fleeces of other animals besides the goat. If genuine, it ought to have a wild and acrid smell, in some measure redolent of the desert places where it is produced: it is dry and parched in appearance, but becomes soft the moment it is touched. When ignited, it gives a brilliant flame, and emits a powerful but pleasant odour; if mixed with myrtle berries, its spurious quality is immediately discovered by their crackling in the fire. In addition to this, the genuine ladanum has more grits, or stony particles, adhering to it, than dust.

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CHAP. 38.

ENHÆMON.

In Arabia, too, the olive-tree distils a sort of tear, with which the Indians make a medicament, known by the Greeks as enhæmon; it is said to be of wonderful efficacy in contracting and healing wounds and sores. These trees, situate on the coasts there, are covered by the sea at high water, without the berries suffering the slightest injury, although it is a well-known fact, that the salt collects upon the leaves. All these trees are peculiar to Arabia, but it has some few besides, in common with other countries, of which we shall make mention elsewhere, the kinds growing in Arabia being of inferior quality. The people of that country have a wonderful regard for the perfumes of foreign parts, and import them from places at a considerable distance; so soon are men sated with what they have of their own, and so covetous are they of what belongs to others.

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CHAP. 39.

THE TREE CALLED BRATUS.

Hence it is, that they import from the country of the Elymæi the wood of a tree called bratus, which is similar in appearance to a spreading cypress. Its branches are of a whitish colour, and the wood, while burning, emits a pleasant odour; it is highly spoken of by Claudius Cæsar, in his History, for its marvellous properties. He states that the Parthians sprinkle the leaves of it in their drink, that its smell closely resembles that of the cedar, and that the smoke of it is efficacious in counteracting the effects of smoke emitted by other wood. This tree grows in the countries that lie beyond the Pasitigris, in the territory of the city of Sittaca, upon Mount Zagrus.

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CHAP. 40.

THE TREE CALLED STOBRUM.

The Arabians import from Carmania also the wood of a tree called stobrum, which they employ in fumigations, by steeping it in palm wine, and then setting fire to it. The odour first ascends to the ceiling, and then descends in volumes to the floor; it is very agreeable, but is apt to cause an oppression of the head, though unattended with pain; it is used for promoting sleep in persons when ill. For these branches of commerce, they have opened the city of Carræ, which serves as an entrepot, and from which place they were formerly in the habit of proceeding to Gabba, at a distance of twenty days' journey, and thence to Palæstina, in Syria. But at a later period, as Juba informs us, they began to take the road, for the purposes of this traffic, to Charax and the kingdom of the Parthians. For my own part, it would appear to me that they were in the habit of importing these commodities among the Persians, even before they began to convey them to Syria or Egypt; at least Herodotus bears testimony to that effect, when he states that the Arabians paid a yearly tribute of one thousand talents, in frankincense, to the kings of Persia.

From Syria they bring back storax, which, burnt upon the hearth, by its powerful smell dispels that loathing of their own perfumes with which these people are affected. For in general there are no kinds of wood in use among them, except those which are odoriferous; indeed, the Sabæi are in the habit of cooking their food with incense wood, while others, again, employ that of the myrrh tree; and hence, the smoke and smells that pervade their cities and villages are no other than the very same which, with us, proceed from the altars. For the purpose of qualifying this powerful smell, they burn storax in goat-skins, and so fumigate their dwellings. So true it is, that there is no pleasure to be found, but what the continual enjoyment of it begets loathing. They also burn this substance to drive away the serpents, which are extremely numerous in the forests which bear the odoriferous trees.

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CHAP. 41. (18.)

WHY ARABIA WAS CALLED "HAPPY."

Arabia produces neither cinnamon nor cassia; and this is the country styled "Happy" Arabia! False and ungrateful does she prove herself in the adoption of this surname, which she would imply to have been received from the gods above; whereas, in reality, she is indebted for it far more to the gods below. It is the luxury which is displayed by man, even in the paraphernalia of death, that has rendered Arabia thus "happy;" and which prompts him to burn with the dead what was originally understood to have been produced for the service of the gods. Those who are likely to be the best acquainted with the matter, assert that this country does not produce, in a whole year, so large a quantity of perfumes as was burnt by the Emperor Nero at the funeral obsequies of his wife Poppæa. And then let us only take into account the vast number of funerals that are celebrated throughout the whole world each year, and the heaps of odours that are piled up in honour of the bodies of the dead; the vast quantities, too, that are offered to the gods in single grains; and yet, when men were in the habit of offering up to them the salted cake, they did not show themselves any the less propitious; nay, rather, as the facts themselves prove, they were even more favourable to us than they are now. But it is the sea of Arabia that has even a still greater right to be called "happy," for it is this that furnishes us with pearls. At the very lowest computation, India, the Seres, and the Arabian Peninsula, withdraw from our empire one hundred millions of sesterces every year — so dearly do we pay for our luxury and our women. How large a portion, too, I should like to know, of all these perfumes, really comes to the gods of heaven, and the deities of the shades below?

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CHAP. 42. (19.)

CINNAMOMUM. XYLOCINNAMUM.

Fabulous antiquity, and Herodotus more particularly, have related that cinnamomum and cassia are found in the nests of certain birds, and principally that of the phœnix, in the districts where Father Liber was brought up; and that these substances either fall from the inaccessible rocks and trees in which the nests are built, in consequence of the weight of the pieces of flesh which the birds carry up, or else are brought down by the aid of arrows loaded with lead. It is said, also, that cassia grows around certain marshes, but is protected by a frightful kind of bat armed with claws, and by winged serpents as well. All these tales, however, have been evidently invented for the purpose of enhancing the prices of these commodities. Another story, too, bears them company, to the effect that under the rays of the noon-day sun, the entire peninsula exhales a certain indescribable perfume composed of its numerous odours; that the breezes, as they blow from it, are impregnated with these odours, and, indeed, were the first to announce the vicinity of Arabia to the fleets of Alexander the Great, while still far out at sea. All this, however, is false; for cinnamomum, or cinnamum, which is the same thing, grows in the country of the Æthiopians, who are united by intermarriages with the Troglodytæ. These last, after buying it of their neighbours, carry it over vast tracts of sea, upon rafts, which are neither steered by rudder, nor drawn or impelled by oars or sails. Nor yet are they aided by any of the resources of art, man alone, and his daring boldness, standing in place of all these; in addition to which, they choose the winter season, about the time of the equinox, for their voyage, for then a south easterly wind is blowing; these winds guide them in a straight course from gulf to gulf, and after they have doubled the promonotory of Arabia, the north east wind carries them to a port of the Gebanitæ, known by the name of Ocilia. Hence it is that they steer for this port in preference; and they say that it is almost five years before the merchants are able to effect their return, while many perish on the voyage. In return for their wares, they

bring back articles of glass and copper, cloths, buckles, bracelets, and necklaces; hence it is that this traffic depends more particularly upon the capricious tastes and inclinations of the female sex. The cinnamon shrub is only two cubits in height, at the most, the lowest being no more than a palm in height. It is about four fingers in breadth, and hardly has it risen six fingers from the ground, before it begins to put forth shoots and suckers. It has then all the appearance of being dry and withered, and while it is green it has no odour at all. The leaf is like that of wild marjoram, and it thrives best in dry localities, being not so prolific in rainy weather; it requires, also, to be kept constantly clipped. Though it grows on level ground, it thrives best among tangled brakes and brambles, and hence it is extremely difficult to be gathered. It is never gathered unless with the permission of the god, by whom some suppose Jupiter to be meant; the Æthiopians, however, call him Assabinus. They offer the entrails of forty-four oxen, goats, and rams, when they implore his permission to do so, but after all, they are not allowed to work at it before sunrise or after sunset. A priest divides the branches with a spear, and sets aside one portion of them for the god; after which, the dealer stores away the rest in lumps. There is another account given, which states that a division is made between the gatherers and the sun, and that it is divided into three portions, after which lots are twice drawn, and the share which falls to the sun is left there, and forthwith ignites spontaneously.

The thinnest parts in the sticks, for about a palm in length, are looked upon as producing the finest cinnamon; the part that comes next, though not quite so long, is the next best, and so on downwards. The worst of all is that which is nearest the roots, from the circumstance that in that part there is the least bark, the portion that is the most esteemed: hence it is that the upper part of the tree is preferred, there being the greatest proportion of bark there. As for the wood, it is held in no esteem at all, on account of the acrid taste which it has, like that of wild marjoram; it is known as xylocinnamum. The price of cinnamomum is ten denarii per pound. Some writers make mention of two kinds of cinnamon, the white and the black: the white was the one that was formerly preferred, but now, on the contrary, the black is held in the highest estimation, and

the mottled, even, is preferred to the white. The most certain test, however, of the goodness of cinnamon is its not being rough, and the fact that the pieces when rubbed together do not readily crumble to powder. That which is soft is more particularly rejected, which is the case, also, when the outer bark too readily falls off.

The right of regulating the sale of the cinnamon belongs solely to the king of the Gebanitæ, who opens the market for it by public proclamation. The price of it was formerly as much as a thousand denarii per pound; which was afterwards increased to half as much again, in consequence, it is said, of the forests having been set on fire by the barbarians, from motives of resentment; whether this took place through any injustice exercised by those in power, or only by accident, has not been hitherto exactly ascertained. Indeed, we find it stated by some authors, that the south winds that prevail in these parts are sometimes so hot as to set the forests on fire. The Emperor Vespasianus Augustus was the first to dedicate in the temples of the Capitol and the goddess Peace chaplets of cinnamon inserted in embossed gold. I, myself, once saw in the temple of the Palatium, which his wife Augusta dedicated to her husband the late emperor Augustus, a root of cinnamon of great weight, placed in a patera of gold: from it drops used to distil every year, which congealed in hard grains. It remained there until the temple was accidentally destroyed by fire.

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CHAP. 43.

CASSIA.

Cassia is a shrub also, which grows not far from the plains where cinnamon is produced, but in the mountainous localities; the branches of it are, however, considerably thicker than those of cinnamon. It is covered with a thin skin rather than a bark, and, contrary to what is the case with cinnamon, it is looked upon as the most valuable when the bark falls off and crumbles into small pieces. The shrub is three cubits in height, and the colours which it assumes are threefold: when it first shoots from the ground, for the length of a foot, it is white; after it has attained that height, it is red for half a foot, and beyond that it is black. This last is the part that is held in the highest esteem, and next to it the portion that comes next, the white part being the least valued of all. They cut the ends of the branches to the length of two fingers, and then sew them in the fresh skins of cattle that have been killed expressly for the purpose; the object being that the skins may putrefy, and the maggots generated thereby may eat away the woody parts, and so excavate the bark; which is so intensely bitter, that it is quite safe from their attacks. That which is the freshest is the most highly esteemed; it has a very delicate smell, and is so extremely hot to the taste, that it may be said to burn the tongue, rather than gradually warm the mouth. It is of a purple colour, and though of considerable volume, weighs but very little in comparison; the outer coat forms into short tubes which are by no means easily broken: this choice kind of cassia, the barbarians call by the name of lada. There is another sort, again, which is called balsamodes, because it has a smell like that of balsam, but it is bitter; for which reason it is more employed for medicinal purposes, just as the black cassia is used for unguents. There is no substance known that is subject to greater variations in price: the best qualities sell at fifty denarii per pound, others, again, at five.

(20.) To these varieties the dealers have added another, which they call daphnoides, and give it the surname of isocinnamon; the price at which it sells is three hundred denarii per pound. It is

adulterated with storax, and, in consequence of the resemblance of the bark, with very small sprigs of laurel. Cassia is also planted in our part of the world, and, indeed, at the extreme verge of the Empire, on the banks of the river Rhenus, where it flourishes when planted in the vicinity of hives of bees. It has not, however, that scorched colour which is produced by the excessive heat of the sun; nor has it, for the same reason, a similar smell to that which comes from the south.

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CHAP. 44.

CANCAMUM AND TARUM.

From the confines of the country which produces cinnamon and cassia, cancamum and tarum are imported; but these substances are brought by way of the Nabatæan Troglodytæ, a colony of the Nabatæi.

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CHAP. 45. (21.)

SERICHATUM AND GABALIUM.

Thither, too, are carried serichatum and gabalium, aroma. tics which the Arabians rear for their own consumption, and which are only known by name in our part of the world, though they grow in the same country as cinnamon and cassia. Still, however, serichatum does reach us occasionally, and is employed by some persons in the manufacture of unguents. It is purchased at the rate of six denarii per pound.

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CHAP. 46.

MYROBALANUM.

In the country of the Troglodytæ, the Thebais, and the parts of Arabia which separate Judæa from Egypt, myrobalanum is commonly found; it is provided by Nature for unguents, as from its very name would appear. From its name, also, it is evident that it is the nut of a tree, with a leaf similar to that of the heliotropium, which we shall have to mention when speaking of the herbs. The fruit of this tree is about the size of a filbert. The kind that grows in Arabia is known as Syriaca, and is white, while, on the other hand, that which grows in the Thebais is black: the former is preferred for the quality of the oil extracted from it, though that which is pro- duced in the Thebais yields it in larger quantities. Among these various kinds, that which is sent from the country of the Troglodytæ is the worst of all. There are some persons who prefer that of Æthiopia to all of these, the nut of which is black, and not oleaginous; it has only a very small kernel, but the liquid which is extracted from it is more odoriferous than that of the other kinds; it grows, too, in a champaign, open country. It is said that the Egyptian nut is even more oleaginous, being of a reddish colour with a thicker shell, and that the plant, although it grows in wet, marshy spots, is shorter and drier than the other kinds. The Arabian nut, again, is said to be of a green colour and of smaller size, but harder and more compact, from the circumstance that it grows in mountainous districts. The best of all, however, is that of Petra, which comes from a city mentioned on a previous occasion; it has a black shell, but the kernel is white. The perfumers, however, only extract the juices from the shells; but medical men pound the kernels, pouring warm water on them, little by little, as they do it.

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CHAP. 47. (22.)

PHŒNICOBALANUS.

The fruit of the palm in Egypt, which is known by the name of adipsos, is put to a similar use in unguents, and is held next in esteem after the myrobalanum. It is of a green colour, has exactly the smell of a quince, and has no stone or nut within. It is gathered a little before it begins to ripen. That which is left ungathered is known as phœnicobalanus; it turns black, and has a tendency to inebriate the person who eats of it. The price of myrobalanum is two denarii per pound. The shop-keepers give this name also to the dregs of the unguent that is made with it.

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CHAP. 48.

THE SWEET-SCENTED CALAMUS; THE SWEET-SCENTED RUSH.

Scented calamus also, which grows in Arabia, is common to both India and Syria, that which grows in the last country being superior to all the rest. At a distance of one hundred and fifty stadia from the Mediterranean, between Mount Libanus and another mountain of no note (and not, as some have supposed, Antilibanus), there is a valley of moderate size, situate in the vicinity of a lake, the marshy swamps of which are dried up every summer. At a distance of thirty stadia from this lake grow the sweet-scented calamus and rush. We shall here make some further mention of this rush as well, although we have set apart another Book for plants of that description, seeing that it is our object here to describe all the different materials used for unguents. These plants differ in appearance in no respect from others of their kind; but the calamus, which has the more agreeable smell of the two, attracts by its odour at a considerable distance, and is softer to the touch than the other. The best is the kind which is not so brittle, but breaks into long flakes, and not short, like a radish. In the hollow stalk there is a substance like a cobweb, which is generally known by the name of the "flower:" those plants which contain the most of it are esteemed the best. The other tests of its goodness are its being of a black colour — those which are white not being esteemed; besides which, to be of the very best quality it should be short, thick, and pliant when broken. The price of the scented calamus is eleven, and of the rush fifteen denarii per pound. It is said that the sweet-scented rush is to be met with also in Campania.

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CHAP. 49.

HAIMONIACUM.

We have now departed from the lands which look towards the ocean to enter upon those which have an aspect towards our seas. (23.) Africa, which lies below Æthiopia, distils a tear-like gum in its sands, called hammoniacum, the name of which has passed to the oracle of Hammon, situate near the tree which produces it. This substance, which is also called meto pion, bears a strong resemblance to a resin or a gum. There are two kinds of ammoniacum; that to which the name is given of thrauston, and which bears a resemblance to male frankincense, being the kind that is the most esteemed, and that which is known as phyrama, being of an unctuous and resinous nature. This substance is adulterated by means of sand, which has all the appearance of having adhered to it during its growth: hence it is greatly preferred when the pieces are extremely small, and in the purest state possible. The price of hammoniacum of the best quality is forty asses per pound.

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CHAP. 50.

SPHAGNOS.

Below these countries, and in the province of Cyrenaica, the perfume called sphagnos is found in the highest state of per- fection: there are some who call it by the name of bryon. The sphagnos of Cyprus holds the second rank, and that of Phœnicia the third. It is said that this plant is produced in Egypt also, and in Gaul as well, and I see no reason to doubt that such is the fact, for this name is given to certain white shaggy tufts upon trees, such as we often see upon the quercus: those, however, of which we are speaking, emit a most exquisite odour. The most esteemed of all are the whitest, and those situate at the greatest height upon the tree. Those of second quality are red, while those which are black are not of the slightest value. The sphagnos, too, that is produced on islands and among rocks, is held in no esteem, as well as all those varieties which have the odour of the palm-tree, and not that which is so peculiarly their own.

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CHAP. 51.

CYPROS.

The cyprus is a tree of Egypt, with the leaves of the ziziphus, and seeds like coriander, white and odoriferous. These seeds are boiled in olive oil, and then subjected to pressure; the product is known to us as cypros. The price of it is five denarii per pound. The best is that produced on the banks of the Nile, near Canopus, that of second quality coming from Ascalon in Judæa, and the third in estimation for the sweetness of its odour, from the island of Cyprus. Some people will have it that this is the same as the tree which in Italy we call ligustrum.

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CHAP. 52.

ASPALATHOS, OR ERYSISCEPTRUM.

In the same country, too, grows aspalathos, a white, thorny shrub, the size of a moderate tree, and with flowers like the rose, the root of which is in great request for unguents. It is said that every shrub over which the rainbow is extended is possessed of the sweet odour that belongs to the aspalathos, but that if the aspalathos is one of them, its scent is something quite indescribable. Some persons call this plant erysisceptrum, and others, again, sceptrum. The proof of its genuineness is its red or fiery colour; it is also compact to the touch, and has the smell of castoreum: it is sold at the rate of five denarii per pound.

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CHAP. 53.

MARON.

In Egypt, too, grows marum, though of inferior quality to that of Lydia, which last has larger leaves, covered with spots. Those of the other are shorter and smaller, and give out a powerful scent.

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CHAP. 54. (25.)

BALSAMUM; OPOBALSAMUM; AND XYLOBAL- SAMUM.

But to all other odours that of balsamum is considered preferable, a plant that has been only bestowed by Nature upon the land of Judæa. In former times it was cultivated in two gardens only, both of which belonged to the kings of that country: one of them was no more than twenty jugera in extent, and the other somewhat smaller. The emperors Ves- pasianus and Titus had this shrub exhibited at Rome; indeed, it is worthy of signal remark, that since the time of Pompeius Magnus, we have been in the habit of carrying trees even in our triumphal processions. At the present day this tree pays us homage and tribute along with its native land, but it has been found to be of altogether a different nature to that which our own as well as foreign writers had attributed to it: for, in fact, it bears a much stronger resemblance to the vine than to the myrtle. This recent acquisition by conquest has learned, like the vine, to be reproduced by mallet-shoots, and it covers declivities just like the vine, which supports its own weight without the aid of stays. When it puts forth branches it is pruned in a similar manner, and it thrives by being well raked at the roots, growing with remarkable rapidity, and bearing fruit at the end of three years. The leaf bears a very considerable resemblance to that of rue, and it is an evergreen. The Jews vented their rage upon this shrub just as they were in the habit of doing against their own lives and persons, while, on the other hand, the Romans protected it; indeed, combats have taken place before now in defence of a shrub. At the present day the reproduction of it has become a duty of the fiscal authorities, and the plants were never known to be more numerous or of larger growth; they never exceed the height, however, of a couple of cubits.

There are three different kinds of balsamum. The first has a thin and hair-like foliage, and is known by the name of eutheriston. The second is of a rugged appearance, bending downwards, full of branches, and more odoriferous than the first; the name of this is trachy. The third kind is the eumeces, so called, because it is taller

than the others; it has a smooth, even, bark. It is the second in quality, the eutheriston being inferior to the trachy. The seed of this plant has a flavour strongly resembling that of wine; it is of a reddish colour, and not without a certain amount of unctuousness; the grains of inferior quality are lighter in weight and of a greener hue: the branches of the shrub are thicker than those of the myrtle. Incisions are made in it either with glass, or else a sharp stone, or knives made of bone: it being highly injurious to touch the vital parts with iron, for in such case it will immediately wither away and die. On the other hand, it will allow of all the superfluous branches being pruned away with an instrument of iron even. The hand of the person who makes the incision is generally balanced by an artificial guide, in order that he may not accidentally inflict a wound in the wood beyond the bark.

A juice distils from the wound, which is known to us as opobalsamum; it is of extraordinary sweetness, but only exudes in tiny drops, which are then collected in wool, and deposited in small horns. When taken from out of these, the substance is placed in new earthen vessels; it bears a strong resemblance to a thick oil, and is of a white colour when fresh. It soon, however, turns red, and as it hardens loses its transparency. When Alexander the Great waged war in those parts, it was looked upon as a fair summer day's work to fill a single concha with this liquid; the entire produce of the larger garden being six congii, and of the smaller one a single congius; the price, too, at which it was sold was double its weight in silver. At the present day the produce of a single tree, even, is larger; the incisions are made three times every summer, after which the tree is pruned.

The cuttings, too, form an article of merchandize: the fifth year after the conquest of Judæa, these cuttings, with the suckers, were sold for the price of eight hundred thousand sesterces. These cuttings are called xylobalsamum, and are boiled down for mixing with unguents, and in the manufactories have been substituted for the juices of the shrub. The bark is also in great request for medicinal purposes, but it is the tears that are so particularly valuable; the seed holding the second rank in estimation, the bark the third, and the wood being the least esteemed of all. Of the wood, that kind which resembles boxwood is considered the best: it has also the strongest

smell. The best seed is that which is the largest in size and the heaviest in weight; it has a biting or rather burning taste in the mouth. Balsamum is adulterated with hypericon: from Petra, but the fraud is easily detected, from the fact that the grains of the latter are larger, comparatively empty, and longer than those of balsamum; they are destitute also of any pungency of smell, and have a flavour like that of pepper.

As to the tears of balsamum, the test of their goodness is their being unctuous to the touch, small, of a somewhat reddish colour, and odoriferous when subjected to friction. That of second-rate quality is white; the green and coarse is inferior, and the black is the worst of all; for, like olive-oil, it is apt to turn rancid when old. Of all the incisions, the produce is considered the best of those from which the liquid has flowed before the formation of the seed. In addition to what has been already stated, it is often adulterated with the juice of the seed, and it is with considerable difficulty that the fraud is detected by a slight bitterness in the taste, which ought to be delicate and without the slightest mixture of acidity, the only pungency being that of the smell. It is adulterated also with oil of roses, of cyprus, of mastich, of balanus, of turpentine, and of myrtle, as also with resin, galbanum, and Cyprian wax, just as occasion may serve. But the very worst adulteration of all, is that which is effected with gum, a substance which is dry when emptied into the hand, and falls to the bottom when placed in water; both of which are characteristics of the genuine commodity. Balsamum, in a genuine state, should be quite hard, but when it is mixed with gum a brittle pellicle forms upon it. The fraud can also be detected by the taste, and when placed upon hot coals it may easily be seen if there has been any adulteration with wax and resin; the flame too, in this case, burns with a blacker smoke than when the balsamum is pure. When mixed with honey its qualities are immediately changed, for it will attract flies even in the hand. In addition to these various tests, a drop of pure balsamum, if placed in luke-warm water will settle to the bottom of the vessel, whereas, if it is adulterated, it will float upon the surface like oil, and if it has been drugged with metopion or hammoniacum, a white circle will form around it. But the best test of all is, that it will cause milk to curdle, and leave no stain upon cloth. In no commodity are

there practised more palpable frauds than in this, for a sextarius of balsamum which is sold by the fiscal authorities at three hundred denarii, is sold again for a thousand, so vast is the profit to be derived from increasing this liquid by sophistication. The price of xylobalsamum is six denarii per pound.

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CHAP. 55.

STORAX.

That part of Syria joining up to Judæa, and lying above Phœnicia, produces storax, which is found in the vicinity of Gabala and Marathus, as also of Casius, a mountain of Seleucia. The tree bears the same name, and has a strong resemblance to, the quince. The tear has a harsh taste, with a pleasant smell; in the interior it has all the appearance of a reed, and is filled with a liquid juice. About the rising of the Dog- star, certain small winged worms hover about this substance and eat it away, for which reason it is often found in a rotten state, with worm-holes full of dust. The storax next in estimation after that already mentioned, comes from Pisidia, Sidon, Cyprus, and Cilicia; that of Crete being considered the very worst of all. That which comes from Mount Amanus, in Syria, is highly esteemed for medicinal purposes, and even more so by the perfumers. From whatever country it comes, that which is of a red colour is preferred, and it should be both unctuous as well as viscous to the touch; the worst kind is that which crumbles like bran, and is covered all over with a whitish mould. This substance is adulterated with the resin of cedar or with gum, and sometimes with honey or bitter al- monds; all which sophistications may, however, be detected by the taste. The price of storax of the best quality is seventeen denarii per pound. It comes also from Pamphylia, but this last is more arid, and not so full of juice.

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CHAP. 56.

GALBANUM.

Syria produces galbanum too, which grows upon the same mountain of Amanus: it exudes from a kind of giant-fennel of the same name as the resin, though sometimes it is known as stagonitis. The kind that is the most esteemed is cartilaginous, clear like hammoniacum, and free from all ligneous substances. Still, however, it is sometimes adulterated with beans, or with sacopenium. If ignited in a pure state, it has the property of driving away serpents by its smoke, It is sold at five denarii per pound, and is only employed for medicinal purposes.

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CHAP. 57. (26.)

PANAX.

Syria, too, furnishes panax, an ingredient used in unguents. This plant grows also at Psophis in Arcadia, about the sources of the Erymanthus, in Africa also, and in Macedonia. This is a peculiar kind of giant-fennel, which stands five cubits in height: it first throws out four leaves, and then six, which lie close to the ground, round, and of very considerable size; those. however, which grow towards the top resemble the leaves of the olive. It bears its seed in certain tufts, which hang down, just as in the fennel. The juice is obtained by incisions made in the stalk at harvest-time, and in the root in autumn. When in a coagulated state, it is esteemed according to its whiteness. The next in value is that of a pallid colour, while the black is held in no esteem. The price of that of the best quality is two denarii per pound.

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CHAP. 58.

SPONDYLIUM.

The difference between this kind of giant-fennel and that known as spondylium, consists only in the leaf, which is smaller, and divided like that of the plane tree. It grows in shady places only. The seed bears the same name as the plant, and has a strong resemblance to that of hart-wort: it is only employed in medicine.

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CHAP. 59.

MALOBATHRUM.

Syria produces the malobathrum also, a tree which bears a folded leaf, with just the colour of a leaf when dried. From this plant an oil is extracted for unguents. Egypt produces it in still greater abundance; but that which is the most esteemed of all comes from India, where it is said to grow in the marshes like the lentil. It has a more powerful odour than saffron, and has a black, rough appearance, with a sort of brackish taste. The white is the least approved of all, and it very soon turns musty when old. In taste it ought to be similar to nard, when placed under the tongue. When made luke-warm in wine, the odour which it emits is superior to any other. The prices at which this drug ranges are something quite marvellous, being from one denarius to four hundred per pound; as for the leaf, it generally sells at sixty denarii per pound.

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CHAP. 60. (27.)

OMPHACIUM.

Omphacium is also a kind of oil, which is obtained from two trees, the olive and the vine, by two different methods. It is produced from the former by pressing the olive while it is still in the white state. That is of an inferior quality which is made from the druppa — such being the name that is given to the olive before it is ripe and fit for food, but already beginning to change its colour. The difference between them is, that the latter kind is green, the former white. The omphacium that is made from the vine is extracted from either the psythian or the Aminean grape, when the grapes are about the size of a chick-pea, just before the rising of the Dogstar. The grape is gathered when the first bloom is appearing upon it, and the verjuice is extracted, after which the residue is left to dry in the sun, due precautions being taken against the dews of the night. The verjuice, after being collected, is put into earthen vessels, and then, after that, stored in jars of Cyprian copper. The best kind is that which is of a reddish colour, acrid, and dry to the taste? The price at which it sells is six denarii per pound. Omphacium is also made another way — the unripe grape is pounded in a mortar, after which it is dried in the sun, and then divided into lozenges.

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CHAP. 61. (28.)

BRYON, ŒNANTHE, AND MASSARIS.

Bryon also bears an affinity to these substances, being the clusters of berries produced by the white poplar. The best kinds grow in the vicinity of Cnidos, or in Caria, in spots that are destitute of water, or else in dry and rugged localities. A bryon of second-rate quality is produced from the cedar of Lycia. Œnanthe, too, bears an affinity to these substances, being the clusters of the wild vine: it is gathered when it is in flower, or, in other words, when it has the finest smell: after which it is dried in the shade upon a linen sheet spread beneath it, and then stored away in casks. The best sort is that which comes from Parapotamia; the next best kinds are those made at Antiochia and Laodicea in Syria; and that of third-rate quality, comes from the mountainous parts of Media; this last, however, is preferable for medicinal purposes. Some persons give the preference over all to that grown in the island of Cyprus. As to that which comes from Africa, it is solely used for medicinal purposes, being known by the name of massaris. Whatever country it may happen to be, the white wild vine produces an œnanthe of superior quality to the black.

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CHAP. 62.

ELATE OR SPATHE.

There is another tree also, that contributes to the manufacture of unguents, by some persons known under the name of elate, but which we call abies; others again call it a palm, and others give it the name of spathe. That of Hammonium is the most esteemed, and that of Egypt next, after which comes the Syrian tree. It is only odoriferous, however, in places that are destitute of water. The tears of it are of an unctuous nature, and are employed as an ingredient in unguents, to modify the harshness of the oil.

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CHAP. 63.

CINNAMON OR COMACUM.

In Syria, too, is produced that kind of cinnamon which is also known as comacum. This is a juice which is extracted from a nut, and very different from the extract of the real cinnamomum, though it somewhat resembles it in its agreeable smell. The price at which it sells is forty asses per pound.

SUMMARY. — Remarkable facts, narratives, and observations, nine hundred and seventy-four.

ROMAN AUTHORS QUOTED. — M. Varro, Mucianus, Virgil, Fabianus, Sebosus, Pomponius Mela, Flavius, Procilius, Hyginus, Trogus, Claudius Cæsar, Cornelius Nepos, Sextus Niger who wrote a Greek treatise on Medicine, Cassius Hemina, L. Piso, Tuditanus, Antias.

FOREIGN AUTHORS QUOTED. — Theophrastus, Herodotus, Cal- listhenes, Isigonus, Clitarchus, Anaximenes, Duris, Nearchus, Onesicritus, Polycritus, Olympiodorus, Diognetus, Nicobulus, Anticlides, Chares of Mitylene, Men- mechmus, Dorotheus of Athens, Lycus, Antseus, Ephippus, Dion, Demodes, Ptolemy Lagus, Marsyas of Macedon, Zoilus of Macedon, Democritus, Amphilochus, Aristomachus, Alexander Polyhistor, Juba, Apollodorus who wrote on Perfumes, Heraclides the physician, Archidemus the physician, Dionysius the physician, Democlides the physician, Euphron the physician, Muesides the physician, Diagoras the physician, Iollas the physician, Heraclides" of Tarentum, Xenocrates of Ephesus, Eratosthenes.

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BOOK XIII. THE NATURAL HISTORY OF EXOTIC TREES, AND AN ACCOUNT OF UNGUENTS.

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CHAP. 1. (1.)

UNGUENTS — AT WHAT PERIOD THEY WERE FIRST INTRODUCED.

THUS far we have been speaking of the trees which are valuable for the odours they produce, and each of which is a subject for our wonder in itself. Luxury, however, has thought fit to mingle all of these, and to make a single odour of the whole; hence it is that unguents have been invented. Who was the first to make unguents is a fact not recorded. In the times of the Trojan war they did not exist, nor did they use incense when sacrificing to the gods; indeed, people knew of no other smell, or rather stench, I may say, than that of the cedar and the citrus, shrubs of their own growth, as it arose in volumes of smoke from the sacrifices; still, however, even then, the extract of roses was known, for we find it mentioned as conferring additional value on olive-oil.

We ought, by good rights, to ascribe the first use of unguents to the Persians, for they quite soak themselves in it, and so, by an adventitious recommendation, counteract the bad odours which are produced by dirt. The first instance of the use of unguents that I have been able to meet with is that of the chest of perfumes which fell into the hands of Alexander, with the rest of the property of King Darius, at the taking of his camp. Since those times this luxury has been adopted by our own countrymen as well, among the most prized and, indeed, the most elegant of all the enjoyments of life, and has begun even to be admitted in the list of honours paid to the dead; for which reason we shall have to enlarge further on that subject. Those perfumes which are not the produce of shrubs will only be mentioned for the present by name: the nature of them will, however, be stated in their appropriate places.

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CHAP. 2.

THE VARIOUS KINDS OF UNGUENTS — TWELVE PRIN- CIPAL COMPOSITIONS.

The names of unguents are due, some of them, to the original place of their composition, others, again, to the extracts which form their bases, others to the trees from which they are derived, and others to the peculiar circumstance under which they were first made: and it is as well, first of all, to know that in this respect the fashion has often changed, and that the high repute of peculiar kinds has been but transitory. In ancient times, the perfumes the most esteemed of all were those of the island of Delos, and at a later period those of Mendes. This degree of esteem is founded, not only on the mode of mixing them and the relative proportions, but according to the degree of favour or disfavour in which the various places which produce the ingredients are held, and the comparative excellence or degeneracy of the ingredients themselves. The perfume of iris, from Corinth, was long held in the highest esteem, till that of Cyzicus came into fashion. It was the same, too, with the perfume of roses, from Phaselis, the repute of which was afterwards eclipsed by those of Neapolis, Capua, and Præneste. Oil of saffron, from Soli in Cilicia, was for a long time held in repute beyond any other, and then that from Rhodes; after which perfume of œnanthe, from Cyprus, came into fashion, and then that of Egypt was preferred. At a later period that of Adramytteum came into vogue, and then was supplanted by unguent of marjoram, from Cos, which in its turn was superseded by quince blossom unguent from the same place. As to perfume of cyprus, that from the island of Cyprus was at first preferred, and then that of Egypt; when all on a sudden the unguents of Mendes and metopium rose into esteem. In later times Phœnicia eclipsed Egypt in the manufacture of these last two, but left to that country the repute of producing the best unguent of cyprus.

Athens has perseveringly maintained the repute of her panathenaicon. There was formerly a famous unguent, known as “pardalium,” and made at Tarsus; at the present day its very

composition and the mode of mixing it are quite unknown there: they have left off, too, making unguent of narcissus from the flowers of that plant.

There are two elements which enter into the composition of unguents, the juices and the solid parts. The former generally consist of various kinds of oils, the latter of odoriferous substances. These last are known as hedysmata, while the oils are called stymmata. There is a third element, which occu- pies a place between the two, but has been much neglected, the colouring matter, namely. To produce a colour, however, cinnabar and alkanet are often employed. If salt is sprinkled in the oil, it will aid it in retaining its properties; but if alkanet has been employed, salt is never used. Resin and gum are added to fix the odour in the solid perfumes; indeed it is apt to die away and disappear with the greatest rapidity if these substances are not employed.

The unguent which is the most readily prepared of all, and indeed, in all probability, the very first that was ever made, is that composed of bryon and oil of balanus, substances of which we have made mention already. In later times the Mendesian unguent was invented, a more complicated mixture, as resin and myrrh were added to oil of balanus, and at the present day they even add metopion as well, an Egyptian oil extracted from bitter almonds; to which have been added omphacium, cardamum, sweet rush, honey, wine, myrrh, seed of balsamum, galbanum, and resin of terebinth, as so many ingredients. Among the most common unguents at the present day, and for that reason supposed to be the most ancient, is that composed of oil of myrtle, calamus, cypress, cyprus, mastich, and pomegranate-rind. I am of opinion, however, that the unguents which have been the most universally adopted, are those which are compounded of the rose, a flower that grows everywhere; and hence for a long time the composition of oil of roses was of the most simple nature, though more recently there have been added omphacium, rose blossoms, cinnabar, calamus, honey, sweet-rush, flour of salt or else alkanet, and wine. The same is the case, too, with oil of saffron, to which have been lately addedcinnabar, alkanet, and wine; and with oil of sampsuchum, with which omphacium and calamus have been compounded. The best comes from Cyprus and Mitylene, where

sampsuchum abounds in large quantities.

The commoner kinds of oil, too, are mixed with those of myrrh and laurel, to which are added sampsuchum, lilies, fenugreek, myrrh, cassia, nard, sweet-rush, and cinnamon. There is an oil, too, made of the common quince and the sparrow quince, called melinum, as we shall have occasion to mention hereafter; it is used as an ingredient in unguents, mixed with omphacium, oil of cyprus, oil of sesamum, balsamum, sweet-rush, cassia, and abrotonum. Susinum is the most fluid of them all: it is made of lilies, oil of balanus, calamus, honey, cinnamon, saffron, and myrrh; while the unguent of cyprus is compounded of cyprus, omphacium and cardamum, calamus, aspalathus, and abrotonum. There are some persons who, when making unguent of cyprus, employ myrrh also, and panax: the best is that made at Sidon, and the next best that of Egypt: care must be taken not to add oil of sesamum: it will keep as long as four years, and its odour is strengthened by the addition of cinnamon. Telinum is made of fresh olive-oil, cypirus, calamus, melilote, fenugreek, honey, marum, and sweet marjoram. This last was the perfume most in vogue in the time of the Comic poet Menander: a considerable time after that known as "megalium" took its place, being so called as holding the very highest rank; it was composed of oil of balanus, balsamum, calamus, sweet-rush, xylobalsamum, cassia, and resin. One peculiar property of this unguent is, that it requires to be constantly stirred while boiling, until it has lost all smell: when it becomes cold, it recovers its odour.

There are some single essences also which, individually, afford unguents of very high character: the first rank is due to malobathrum, and the next to the iris of Illyricum and the sweet marjoram of Cyzicus, both of them herbs. There are perfumers who sometimes add some few other ingredients to these: those who use the most, employ for the purpose honey, flour of salt, omphacium, leaves of agnus, and panax, all of them foreign ingredients. The price of unguent of cinnamon is quite enormous; to cinnamon there is added oil of balanus, xylobalsamum, calamus, sweet-rush, seeds of balsamum, myrrh, and perfumed honey: it is the thickest in consistency of all the unguents; the price at which it sells ranges from thirty-five to three hundred denarii per pound. Unguent of nard,

or foliatum, is composed of omphacium or else oil of balanus, sweet-rush, costus, nard, amomum, myrrh, and balsamum.

While speaking on this subject, it will be as well to bear in mind that there are nine different kinds of plants of a similar kind, of which we have already made mention as being employed for the purpose of imitating Indian nard; so abundant are the materials that are afforded for adulteration. All these perfumes are rendered still more pungent by the addition of costus and amomum, which have a particularly powerful effect on the olfactory organs; while myrrh gives them greater consistency and additional sweetness, and saffron makes them better adapted for medicinal purposes. They are most pungent, however, when mixed with amomum alone, which will often produce head-ache even. There are some persons who content themselves with sprinkling the more precious ingredients upon the others after boiling them down, for the purpose of economy; but the strength of the unguent is not so great as when the ingredients have been boiled together. Myrrh used by itself, and without the mixture of oil, forms an unguent, but it is stacte only that must be used, for otherwise it will be productive of too great bitterness. Unguent of cyprus turns other unguents green, while lily unguent makes them more unctuous: the unguent of Mendes turns them black, rose unguent makes them white, and that of myrrh of a pallid hue.

Such are the particulars of the ancient inventions, and the various falsifications of the shops in later times; we will now pass on to make mention of what is the very height of refinement in these articles of luxury, indeed, I may say, the beau ideal of them all.

(2.) This is what is called the "regal" unguent, from the fact that it is composed in these proportions for the kings of the Parthians. It consists of myrobalanus, costus, amomum, cinnamon, comacum, cardamum, spikenard, marum, myrrh, cassia, storax, ladanum, opobalsamum, Syrian calamus and Syrian sweet-rush, œnanthe, malobathrum, serichatum, cyprus, aspralathus, panax, saffron, cypirus, sweet marjoram, lotus, honey, and wine. Not one of the ingredients in this compound is produced either in Italy, that conqueror of the world, or, indeed, in all Europe, with the exception of the iris, which grows in Illyricum, and the nard, which is to be found in Gaul: as to the wine, the rose, the leaves of myrtle, and the

olive-oil, they are possessed by pretty nearly all countries in common.

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CHAP. 3.

DIAPASMA, MAGMA; THE MODE OF TESTING UNGUENTS.

Those unguents which are known by the name of “dia- pasma,” are composed of dried perfumes. The lees of unguents are known by the name of “magma. In all these preparations the most powerful perfume is the one that is added the last of all. Unguents keep best in boxes of alabaster, and perfumes when mixed with oil, which conduces all the more to their durability the thicker it is, such as the oil of almonds, for instance. Unguents, too, improve with age; but the sun is apt to spoil them, for which reason they are usually stowed away in a shady place in vessels of lead. When their goodness is being tested, they are placed on the back of the hand, lest the heat of the palm, which is more fleshy, should have a bad effect upon them.

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CHAP. 4. (3.)

THE EXCESSES TO WHICH LUXURY HAS RUN IN UNGUENTS.

These perfumes form the objects of a luxury which may be looked upon as being the most superfluous of any, for pearls and jewels, after all, do pass to a man's representative, and garments have some durability; but unguents lose their odour in an instant, and die away the very hour they are used. The very highest recommendation of them is, that when a female passes by, the odour which proceeds from her may possibly attract the attention of those even who till then are intent upon something else. In price they exceed so large a sum even as four hundred denarii per pound: so vast is the amount that is paid for a luxury made not for our own enjoyment, but for that of others; for the person who carries the perfume about him is not the one, after all, that smells it.

And yet, even here, there are some points of difference that deserve to be remarked. We read in the works of Cicero, that those unguents which smell of the earth are preferable to those which smell of saffron; being a proof, that even in a matter which most strikingly bespeaks our state of extreme corruptness, it is thought as well to temper the vice by a little show of austerity. There are some persons too who look more particularly for consistency in their unguents, to which they accordingly give the name of "spissum; thus showing that they love not only to be sprinkled, but even to be plastered over, with unguents. We have known the very soles even of the feet to be sprinkled with perfumes; a refinement which was taught, it is said, by M. Otho to the Emperor Nero. How, I should like to know, could a perfume be at all perceptible, or, indeed, productive of any kind of pleasure, when placed on that part of the body? We have heard also of a private person giving orders for the walls of the bath-room to be sprinkled with unguents, while the Emperor Caius had the same thing done to his sitting-bath: that this, too, might not be looked upon as the peculiar privilege of a prince, it was afterwards done by one of the slaves that belonged to Nero.

But the most wonderful thing of all is, that this kind of luxurious

gratification should have made its way into the camp even: at all events, the eagles and the standards, dusty as they are, and bristling with their sharpened points, are anointed on festive days. I only wish it could, by any possibility, be stated who it was that first taught us this practice. It was, no doubt, under the corrupting influence of such temptations as these, that our eagles achieved the conquest of the world: thus do we seek to obtain their patronage and sanction for our vices, and make them our precedent for using unguents even beneath the casque.

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CHAP. 5.

WHEN UNGUENTS WERE FIRST USED BY THE ROMANS.

I cannot exactly say at what period the use of unguents first found its way to Rome. It is a well-known fact, that when King Antiochus and Asia were subdued, an edict was published in the year of the City 565, in the censorship of P. Licinius Crassus and L. Julius Cæsar, forbidding any one to sell exotics; for by that name unguents were then called. But, in the name of Hercules! at the present day, there are some persons who even go so far as to put them in their drink, and the bitterness produced thereby is prized to a high degree, in order that by their lavishness on these odours they may thus gratify the senses of two parts of the body at the same moment. It is a well-known historical fact, that L. Plotius, the brother of L. Plancus, who was twice consul and censor, after being proscribed by the Triumvirs, was betrayed in his place of concealment at Salernum by the smell of his unguents, a disgrace which more than outweighed all the guilt attending his proscription. For who is there that can be of opinion that such men as this do not richly deserve to come to a violent end?

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CHAP. 6.

THE PALM-TREE.

In other respects, Egypt is the country that is the best suited of all for the production of unguents; and next to it, Campania, from its abundance of roses.

(4.) Judæa, too, is greatly renowned for its perfumes, and even still more so for its palm-trees, the nature of which I shall take this opportunity of enlarging upon. There are some found in Europe also. They are not uncommon in Italy, but are quite barren there. The palms on the coast of Spain bear fruit, but it is sour. The fruit of those of Africa is sweet, but quickly becomes vapid and loses its flavour; which, however is not the case with the fruit of those that grow in the East. From these trees a wine is made, and bread by some nations, and they afford an aliment for numerous quadrupeds. It will be with very fair reason then, that we shall confine our description to the palm-tree of foreign countries. There are none in Italy that grow spontaneously, nor, in fact, in any other part of the world, with the exception of the warm countries: indeed, it is only in the very hottest climates that this tree will bear fruit.

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CHAP. 7.

THE NATURE OF THE PALM-TREE.

The palm-tree grows in a light and sandy soil, and for the most part of a nitrous quality. It loves the vicinity of flowing water; and as it is its nature to imbibe the whole of the year, there are some who are of opinion that in a year of drought it will receive injury from being manured even, if the manure is not first mixed with running water: this, at least, is the idea entertained by some of the Assyrians.

The varieties of the palm are numerous. First of all, there are those which do not exceed the size of a shrub; they are mostly barren, though sometimes they are known to produce fruit; the branches are short, and the tree is well covered with leaves all round. In many places this tree is used as a kind of rough-cast, as it were, to protect the walls of houses against damp. The palms of greater height form whole forests, the trunk of the tree being protected all round by pointed leaves, which are arranged in the form of a comb; these, it must be understood, are wild palms, though sometimes, by some wayward fancy or other, they are known to make their appearance among the cultivated varieties. The other kinds are tall, round, and tapering; and being furnished with dense and projecting knobs or circles in the bark, arranged in regular gradation, they are found easy of ascent by the people in the East; in order to do which, the climber fastens a loop of osier round his body and the trunk, and by this contrivance ascends the tree with astonishing rapidity. All the foliage is at the summit, and the fruit as well; this last being situate, not among the leaves, as is the case with other trees, but hanging in clusters from shoots of its own among the branches, and partaking of the nature both of the grape and the apple. The leaves terminate in a sharp edge, like that of a knife, while the sides are deeply indented-a peculiarity which first gave the idea of a troop of soldiers presenting face on two sides at once; at the present day they are split asunder to form ropes and wythes for fastening, as well as light umbrellas for covering the head.

The more diligent enquirers into the operations of Nature state

that all trees, or rather all plants, and other productions of the earth, belong to either one sex or the other; a fact which it may be sufficient to notice on the present occasion, and one which manifests itself in no tree more than in the palm. The male tree blossoms at the shoots; the female buds without blossoming, the bud being very similar to an ear of corn. In both trees the flesh of the fruit shows first, and after that the woody part inside of it, or, in other words, the seed: and that this is really the case, is proved by the fact, that we often find small fruit on the same shoot without any seed in it at all. This seed is of an oblong shape, and not rounded like the olive-stone. It is also divided down the back by a deep indentation, and in most specimens of this fruit there is exactly in the middle a sort of navel, as it were, from which the root of the tree first takes its growth. In planting this seed it is laid on its anterior surface, two being placed side by side, while as many more are placed above; for when planted singly, the tree that springs up is but weak and sickly, whereas the four seeds all unite and form one strong tree. The seed is divided from the flesh of the fruit by several coats of a whitish colour, some of which are attached to the body of it; it lies but loosely in the inside of the fruit, adhering only to the summit by a single thread.

The flesh of this fruit takes a year to ripen, though in some places, Cyprus for instance, even if it should not reach maturity, it is very agreeable, for the sweetness of its flavour: the leaf of the tree too, in that island, is broader than elsewhere, and the fruit rounder than usual: the body of the fruit however, is never eaten, but is always spit out again, after the juice has been extracted. In Arabia, the palm fruit is said to have a sickly sweet taste, although Juba says that he prefers the date found among the Arabian Scenitæ, and to which they give the name of dablan," before those of any other country for flavour. In addition to the above particulars, it is asserted that in a forest of natural growth the female trees will become barren if they are deprived of the males, and that many female trees may be seen surrounding a single male with downcast heads and a foliage that seems to be bowing caressingly towards it; while the male tree, on the other hand, with leaves all bristling and erect, by its exhalations, and even the very sight of it and the dust from off it, fecundates the others: if the male tree, too, should happen to be cut down, the

female trees, thus reduced to a state of widowhood, will at once become barren and unproductive. So well, indeed, is this sexual union between them understood, that it has been imagined even that fecundation may be ensured through the agency of man, by means of the blossoms and the down gathered from off the male trees, and, indeed, sometimes by only sprinkling the dust from off them on the female trees.

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CHAP. 8.

HOW THE PALM-TREE IS PLANTED.

Palm-trees are also propagated by planting; the trunk is first divided with certain fissures two cubits in length which communicate with the pith of the tree, and is then buried in the earth. A slip also torn away from the root will produce a sucker with vitality, and the same may be obtained from the more tender among the branches. In Assyria, the tree itself is sometimes laid level, and then covered over in a moist soil; upon which it will throw out roots all over, but it will grow only to be a number of shrubs, and never a tree: hence it is that they plant nurseries, and transplant the young trees when a year old, and again when two years old, as they thrive all the better for being transplanted; this is done in the spring season in other countries, but in Assyria about the rising of the Dog-star. In those parts they do not touch the young trees with the knife, but merely tie up the foliage that they may shoot upwards, and so attain considerable height. When they are strong they prune them, in order to increase their thickness, but in so doing leave the branches for about half a foot; indeed, if they were cut off at any other place, the operation would kill the parent tree. We have already mentioned that they thrive particularly well in a saltish soil; hence, when the soil is not of that nature, it is the custom to scatter salt, not exactly about the roots, but at a little distance off. There are palm-trees in Syria and in Egypt which divide into two trunks, and some in Crete into three and as many as five even. Some of these trees bear immediately at the end of three years, and in Cyprus, Syria, and Egypt, when they are four years old; others again at the end of five years: at which period the tree is about the height of a man. So long as the tree is quite young the fruit has no seed within, from which circumstance it has received the nickname of the “eunuch.”

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CHAP. 9.

THE DIFFERENT VARIETIES OF PALM-TREES, AND THEIR CHARACTERISTICS.

There are numerous varieties of the palm-tree. In Assyria, and throughout the whole of Persis, the barren kinds are made use of for carpenters' work, and the various appliances of luxury. There are whole forests also of palm-trees adapted for cutting, and which, after they are cut, shoot again from the root; the pith of them towards the top, which is usually called the brain of the tree, is sweet to the taste, and the tree will live even after it has been extracted, which is the case with no other kind. The name of this tree is "chammereps;" it has a broader and softer leaf than the others, which is extremely useful for various kinds of wickerwork; these trees are very numerous in Crete, and even more so in Sicily. The wood of the palm-tree, when ignited, burns both brightly and slowly. In some of those that bear fruit, the seed of the fruit is shorter than in others, while in some, again, it is longer; in some it is softer than in others, and in some harder; in some it is osseous and crescent-shaped; polished with a tooth, superstition employs the stone as an antidote against charms and fascination. This stone is enclosed in several coats, more or less in number; sometimes they are of a thick texture, and sometimes very thin.

Hence it is that we find nine and forty different kinds of palm-trees, if any one will be at the trouble of enumerating all their various barbarous names, and the different wines that are extracted from them. The most famous of all, are those which, for the sake of distinction, have received the name of "royal" palms, because they were preserved solely by the kings of Persia; these used to grow nowhere but at Babylon, and there only in the garden of Bagöus, that being the Persian for an eunuch, several of whom have even reigned over that country! This garden was always carefully retained within the precincts of the royal court.

In the southern parts of the world, the dates known as "syagri, hold the highest rank, and next after them those that are called

"margarides." These last are short, white, and round, and bear a stronger resemblance to grapes than to dates; for which reason it is that they have received their name, in consequence of their close resemblance to "margaritæ," or pearls. It is said that there is only one tree that bears them, and that in the locality known as Chora. The same is the case also with the tree that bears the syagri. We have heard a wonderful story too, relative to this last tree, to the effect that it dies and comes to life again in a similar manner to the phoenix, which, it is generally thought, has borrowed its name from the palm-tree, in consequence of this peculiarity; at the moment that I am writing this, that tree is still bearing fruit. As for the fruit itself, it is large, hard, and of a rough appearance, and differing in taste from all other kinds, having a sort of wild flavour peculiar to itself, and not unlike that of the flesh of the wild boar; it is evidently this circumstance from which it has derived its name of "syagrus."

In the fourth rank are the dates called "sandalides," from their resemblance to a sandal in shape. It is stated, that on the confines of Æthiopia there are but five of these trees at the most, no less remarkable for the singular lusciousness of their fruit, than for their extreme rarity. Next to these, the dates known as "caryotæ" are the most esteemed, affording not only plenty of nutriment, but a great abundance of juice; it is from these that the principal wines are made in the East; these wines are apt to affect the head, a circumstance from which the fruit derives its name. But if these trees are remarkable for their abundance and fruitfulness, it is in Judæa that they enjoy the greatest repute; not, indeed, throughout the whole of that territory, but more particularly at Hiericus, although those that grow at Archelais, Phaselis, and Livias, vallies in the same territory, are highly esteemed. The more remarkable quality of these is a rich, unctuous juice; they are of a milky consistency, and have a sort of vinous flavour, with a remarkable sweetness, like that of honey. The Nicolaän dates are of a similar kind, but somewhat drier; they are of remarkable size, so much so, indeed, that four of them, placed end to end, will make a cubit in length. A less fine kind, but of sister quality to the caryotæ for flavour, are the "adelphides," hence so called; these come next to them in sweetness, but still are by no means their equals. A third kind, again, are the patetæ, which abound in juice to

excess, so much so, indeed, that the fruit bursts, in its excess of liquor, even upon the parent tree, and presents all the appearance of having been trodden under foot.

There are numerous kinds of dates also, of a drier nature, which are long and slender, and sometimes of a curved shape. Those of this sort which we consecrate to the worship of the gods are called "chydæi by the Jews, a nation remarkable for the contempt which they manifest of the divinities. Those found all over Thebais and Arabia are dry and small, with a shrivelled body: being parched up and scorched by the constant heat, they are covered with what more nearly resembles a shell than a skin. In Æthiopia the date is quite brittle even, so great is the driness of the climate; hence the people are able to knead it into a kind of bread, just like so much flour. It grows upon a shrub, with branches a cubit in length: it has a broad leaf, and the fruit is round, and larger than an apple. The name of this date is "coïx." It comes to maturity in three years, and there is always fruit to be found upon the shrub, in various stages of maturity. The date of Thebais is at once packed in casks, with all its natural heat and freshness; for without this precaution, it quickly becomes vapid; it is of a poor, sickly taste, too, if it is not exposed, before it is eaten, to the heat of an oven.

The other kinds of dates appear to be of an ordinary nature, and are generally known as "tragemata;" but in some parts of Phœnicia and Cilicia, they are commonly called "balani," a name which has been also borrowed by us. There are numerous kinds of them, which differ from one another in being round or oblong; as also in colour, for some of them are black, and others red-indeed it is said that they present no fewer varieties of colour than the fig: the white ones, however, are the most esteemed. They differ also in size, according to the number which it requires to make a cubit in length; some, indeed, are no larger than a bean. Those are the best adapted for keeping which are produced in salt and sandy soils, Sudca, and Cyrenaica in Africa, for instance: those, however, of Egypt, Cyprus, Syria, and Seleucia in Assyria, will not keep: hence it is that they are much used for fattening swine and other animals. It is a sign that the fruit is either spoilt or old, when the white protuberance disappears, by which it has adhered to the cluster. Some of the soldiers of

Alexander's army were choked by eating green dates; and a similar effect is produced in the country of the Gedrosi, by the natural quality of the fruit; while in other places, again, the same results arise from eating them to excess. Indeed, when in a fresh state, they are so remarkably luscious, that there would be no end to eating them, were it not for fear of the dangerous consequences that would be sure to ensue.

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CHAP. 10. (5.)

THE TREES OF SYRIA: THE PISTACIA, THE COT- TANA, THE DAMASCENA, AND THE MYXA.

In addition to the palm, Syria has several trees that are pe- culiar to itself. Among the nut-trees there is the pistacia, well known among us. It is said that, taken either in food or drink, the kernel of this nut is a specific against the bite of serpents. Among figs, too, there are those known as "ca- ricæ," together with some smaller ones of a similar kind, the name of which is "cottana." There is a plum, too, which grows upon Mount Damascus, as also that known as the "myxa;" these last two are, however, now naturalized in Italy. In Egypt, too, they make a kind of wine from the myxa.

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CHAP. 11.

THE CEDAR. TREES WHICH HAVE ON THEM THE FRUIT OF THREE YEARS AT ONCE.

Phœnicia, too, produces a small cedar, which bears a strong resemblance to the juniper. Of this tree there are two varieties; the one found in Lycia, the other in Phœnicia. The difference is in the leaf: the one in which it is hard, sharp, and prickly, being known as the oxycedros, a branchy tree and rugged with knots. The other kind is more esteemed for its powerful odour. The small cedar produces a fruit the size of a grain of myrrh, and of a sweetish taste. There are two kinds of the larger cedar also; the one that blossoms bears no fruit, while, on the other hand, the one that bears fruit has no blossom, and the fruit, as it falls, is being continually replaced by fresh. The seed of this tree is similar to that of the cypress. Some persons give this tree the name of "cedrelates." The resin produced from it is very highly praised, and the wood of it lasts for ever, for which reason it is that they have long been in the habit of using it for making the statues of the gods. In a temple at Rome there is a statue of Apollo Sosianus in cedar, originally brought from Seleucia. There is a tree similar to the cedar, found also in Arcadia; and there is a shrub that grows in Phrygia, known as the "cedrus."

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CHAP. 12. (6.)

THE TEREBINTH.

Syria, too, produces the terebinth, the male tree of which bears no fruit, and the female consists of two different varieties; one of these bears a red fruit, the size of a lentil, while the other is pale, and ripens at the same period as the grape. This fruit is not larger than a bean, is of a very agreeable smell, and sticky and resinous to the touch. About Ida in Troas, and in Macedonia, this tree is short and shrubby, but at Damascus, in Syria, it is found of very considerable size. Its wood is remarkably flexible, and continues sound to a very advanced age: it is black and shining. The blossoms appear in clusters, like those of the olive-tree, but are of a red colour; the leaves are dense, and closely packed. It produces follicules, too, from which issue certain insects like gnats, as also a kind of resinous liquid which oozes from the bark.

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CHAP. 13.

THE SUMACH-TREE.

The male sumach-tree of Syria is productive, but the female is barren. The leaf resembles that of the elm, though it is a little longer, and has a downy surface. The footstalks of the leaves lie always alternately in opposite directions, and the branches are short and slender. This tree is used in the preparation of white skins. The seed, which strongly re- sembles a lentil in appearance, turns red with the grape; it is known by the name of “ros,” and forms a necessary ingredient in various medicaments.”

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CHAP. 14. (7.)

THE TREES OF EGYPT. THE FIG-TREE OF ALEXANDRIA.

Egypt, too, has many trees which are not to be found elsewhere, and the kind of fig more particularly, which fur this reason has been called the Egypitian fig. In leaf this tree resembles the mulberry-tree, as also in size and general appearance. It bears fruit, not upon branches, but upon the trunk itself: the fig is remarkable for its extreme sweetness, and has no seeds in it. This tree is also remarkable for its fruitfulness, which, however, can only be ensured by making incisions in the fruit with hooks of iron, for otherwise it will not come to maturity. But when this has been done, it may he gathered within fur days, immediately upon which another shoots up in its place. Hence it is that in the year it produces seven abundant crops, and throughout all the summer there is an abundance of milky juice in the fruit. Even if the incisions are not made, the fruit will shoot afresh four times during the summer, the new fruit supplanting the old, and forcing it off before it has ripened. The wood, which is of a very peculiar nature, is reckoned among the most useful known. When cut down it is immediately plunged into standing water, such being the means employed for drying it. At first it sinks to the bottom, after which it begins to float, and in a certain length of time the additional moisture sucks it dry, which has the effect of penetrating and soaking all other kinds of wood. It is a sign that it is fit for use when it begins to float.

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CHAP. 15.

THE FIG-TREE OF CYPRUS.

The fig-tree that grows in Crete, and is known there as the Cyprian fig, bears some resemblance to the preceding one; for it bears fruit upon the trunk of the tree, and upon the branches as well, when they have attained a certain degree of thickness. This tree, however, sends forth buds without any leaves, but similar in appearance to a root. The trunk of the tree is similar to that of the poplar, and the leaves to those of the elm. It produces four crops in the year, and germinates the same number of times, but its green fruit will not ripen unless an incision is made in it to let out the milky juice. The sweetness of the fruit and the appearance of the inside are in all respects similar to those of the fig, and in size it is about as large as a sorb-apple.

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CHAP. 16. (8.)

THE CAROB-TREE.

Similar to this is the carob-tree, by the Ionians known as the "ceraunia," which in a similar manner bears fruit front the trunk, this fruit being known by the name of "siliqua," or "pod." For this reason, committing a manifest error, some persons have called it the Egyptian fig; it being the fact that this tree does not grow in Egypt, but in Syria and Ionia, in the vicinity, too, of Cnidos, and in the island of Rhodes. It is always covered with leaves, and bears a white flower with a very powerful odour. It sends forth shoots at the lower part, and is consequently quite yellow on the surface, as the young suckers deprive the trunk of the requisite moisture. When the fruit of the preceding year is gathered, about the rising of the Dog-star, fresh fruit immediately makes its appearance; after which the tree blossoms while the constellation of Arcturus is above the horizon, and the winter imparts nourishment to the fruit.

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CHAP. 17. (9.)

THE PERSIAN TREE. IN WHAT TREES THE FRUITS GERMINATE THE ONE BELOW THE OTHER.

Egypt, too, produces another tree of a peculiar description, the Persian tree, similar in appearance to the pear-tree, but retaining its leaves during the winter. This tree produces without intermission, for if the fruit is pulled to-day, fresh fruit will make its appearance to-morrow: the time for ripening is while the Etesian winds prevail. The fruit of this tree is more oblong than a pear, but is enclosed in a shell and a rind of a grassy colour, like the almond; but what is found within, instead of being a nut as in the almond, is a plum, differing from the almond in being shorter and quite soft. This fruit, although particularly inviting for its luscious sweetness, is productive of no injurious effects. The wood, for its goodness, solidity, and blackness, is in no respect inferior to that of the lotus: people have been in the habit of making statues of it. The wood of the tree which we have mentioned as the "balanus," although very durable, is not so highly esteemed as this, as it is knotted and twisted in the greater part: hence it is only employed for the purposes of shipbuilding.

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CHAP. 18.

THE CUCUS.

On the other hand, the wood of the cucus is held in very high esteem. It is similar in nature to the palm, as its leaves are similarly used for the purposes of texture: it differs from it, however, in spreading out its arms in large branches. The fruit, which is of a size large enough to fill the hand, is of a tawny colour, and recommends itself by its juice, which is a mixture of sweet and rough. The seed in the inside is large and of remarkable hardness, and turners use it for making curtain rings. The kernel is sweet, while fresh; but when dried it becomes hard to a most remarkable degree, so much so, that it can only be eaten after being soaked in water for several days. The wood is beautifully mottled with circling veins, for which reason it is particularly esteemed among the Persians.

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CHAP. 19.

THE EGYPTIAN THORN.

No less esteemed, too, in the same country, is a certain kind of thorn, though only the black variety, its wood being imperishable, in water even, a quality which renders it particularly valuable for making the sides of ships: on the other hand, the white kinds will rot very rapidly. It has sharp, prickly thorns on the leaves even, and bears its seeds in pods; they are employed for the same purposes as galls in the preparation of leather. The flower, too, has a pretty effect when made into garlands, and is extremely useful in medicinal preparations. A gum, also, distils from this tree; but the principal merit that it possesses is, that when it is cut down, it will grow again within three years. It grows in the vicinity of Thebes, where we also find the quercus, the Persian tree, and the olive: the spot that produces it is a piece of woodland, distant three hundred stadia from the Nile, and watered by springs of its own.

(10.) Here we find, too, the Egyptian plum-tree, not much unlike the thorn last mentioned, with a fruit similar to the medlar, and which ripens in the winter. This tree never loses its leaves. The seed in the fruit is of considerable size, but the flesh of it, by reason of its quality, and the great abundance in which it grows, affords quite a harvest to the inhabitants of those parts; after cleaning it, they subject it to pressure, and then make it up into cakes for keeping. There was formerly a woodland district in the vicinity of Memphis, with trees of such enormous size, that three men could not span one with their arms: one of these trees is remarkable, not for its fruit, or any particular use that it is, but for the singular phænomenon that it presents. In appearance it strongly resembles a thorn, and it has leaves which have all the appearance of wings, and which fall immediately the branch is touched by any one, and then immediately shoot again.

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CHAP. 20. (11.)

NINE KINDS OF GUM. THE SARCOCOLLA.

It is universally agreed, that the best gum is that produced from the Egyptian thorn; it is of variegated appearance, of azure colour, clean, free from all admixture of bark, and adheres to the teeth; the price at which it sells is three denarii per pound. That produced from the bitter almond- tree and the cherry is of an inferior kind, and that which is gathered from the plum-tree is the worst of all. The vine, too, produces a gum, which is of the greatest utility in healing the sores of children; while that which is sometimes found on the olive-tree is used for the tooth-ache. Gum is also found on the elm upon Mount Corycus in Cilicia, and upon the juniper, but it is good for nothing; indeed, the gum of the elm found there is apt to breed gnats. From the sarcocolla also — such is the name of a certain tree — a gum exudes that is remarkably useful to painters and medical men; it is similar to incense dust in appearance, and for those purposes the white kind is preferable to the red. The price of it is the same as that mentioned above.

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CHAP. 21.

THE PAPYRUS: THE USE OF PAPER; WHEN IT WAS FIRST INVENTED.

We have not as yet taken any notice of the marsh plants, nor yet of the shrubs that grow upon the banks of rivers: before quitting Egypt, however, we must make some mention of the nature of the papyrus, seeing that all the usages of civilized life depend in such a remarkable degree upon the employment of paper — at all events, the remembrance of past events. M. Varro informs us that paper owes its discovery to the victorious career of Alexander the Great, at the time when Alexandria in Egypt was founded by him; before which period paper had not been used, the leaves of the palm having been employed for writing at an early period, and after that the bark of certain trees. In succeeding ages, public documents were inscribed on sheets of lead, while private memoranda were impressed upon linen cloths, or else engraved on tablets of wax; indeed, we find it stated in Homer, that tablets were employed for this purpose even before the time of the Trojan war. It is generally supposed, too, that the country which that poet speaks of as Egypt, was not the same that is at present understood by that name, for the Sebennytic and the Saitic Nomes, in which all the papyrus is produced, have been added since his time by the alluvion of the Nile; indeed, he himself has stated that the main-land was a day and a night's sail from the island of Pharos, which island at the present day is united by a bridge to the city of Alexandria. In later times, a rivalry having sprung up between King Ptolemy and King Eumenes, in reference to their respective libraries, Ptolemy prohibited the export of papyrus; upon which, as Varro relates, parchment was invented for a similar purpose at Pergamus. After this, the use of that commodity, by which immortality is ensured to man, became universally known.

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CHAP. 22.

THE MODE OF MAKING PAPER.

Papyrus grows either in the marshes of Egypt, or in the sluggish waters of the river Nile, when they have overflowed and are lying stagnant, in pools that do not exceed a couple of cubits in depth. The root lies obliquely, and is about the thickness of one's arm; the section of the stalk is triangular, and it tapers gracefully upwards towards the extremity, being not more than ten cubits at most in height. Very much like a thyrsus in shape, it has a head on the top, which has no seed in it, and, indeed, is of no use whatever, except as a flower employed to crown the statues of the gods. The natives use the roots by way of wood, not only for firing, but for various other domestic purposes as well. From the papyrus itself they construct boats also, and of the outer coat they make sails and mats, as well as cloths, besides coverlets and ropes; they chew it also, both raw and boiled, though they swallow the juice only.

The papyrus grows in Syria also, on the borders of the same lake around which grows the sweet-scented calamus; and King Antiochus used to employ the productions of that country solely as cordage for naval purposes; for the use of spartum had not then become commonly known. More recently it has been understood that a papyrus grows in the river Euphrates, in the vicinity of Babylon, from which a similar kind of paper may easily be produced: still, however, up to the present time the Parthians have preferred to impress their characters upon cloths

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CHAP. 23. (12)

THE NINE DIFFERENT KINDS OF PAPER.

Paper is made from the papyrus, by splitting it with a needle into very thin leaves, due care being taken that they should be as broad as possible. That of the first quality is taken from the centre of the plant, and so in regular succession, according to the order of division. "Hieratica" was the name that was anciently given to it, from the circumstance that it was entirely reserved for the religious books. In later times, through a spirit of adulation, it received the name of "Augusta," just as that of second quality was called "Liviana," from his wife, Livia; the consequence of which was, that the name "hieratica" came to designate that of only third-rate quality. The paper of the next quality was called "amphitheatrica," from the locality of its manufacture. The skilful manufactory that was established by Fannius at Rome, was in the habit of receiving this last kind, and there, by a very careful process of insertion, it was rendered much finer; so much so, that from being a common sort, he made it a paper of first-rate quality, and gave his own name to it: while that which was not subjected to this additional process retained its original name of "amphitheatrica." Next to this is the Saitic paper, so called from the city of that name, where it is manufactured in very large quantities, though of cuttings of inferior quality. The Tæniotic paper, so called from a place in the vicinity, is manufactured from the materials that lie nearer to the outside skin; it is sold, not according to its quality, but by weight only. As to the paper that is known as "emporetica," it is quite useless for writing upon, and is only employed for wrapping up other paper, and as a covering for various articles of merchandize, whence its name, as being used by dealers. After this comes the bark of the papyrus, the outer skin of which bears a strong resemblance to the bulrush, and is solely used for making ropes, and then only for those which have to go into the water.

All these various kinds of paper are made upon a table, moistened with Nile water; a liquid which, when in a muddy state, has the

peculiar qualities of glue. This table being first inclined, the leaves of papyrus are laid upon it lengthwise, as long, indeed, as the papyrus will admit of, the jagged edges being cut off at either end; after which a cross layer is placed over it, the same way, in fact, that hurdles are made. When this is done, the leaves are pressed close together, and then dried in the sun; after which they are united to one another, the best sheets being always taken first, and the inferior ones added afterwards. There are never more than twenty of these sheets to a roll.

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CHAP. 24.

THE MODE OF TESTING THE GOODNESS OF PAPER.

There is a great difference in the breadth of the various kinds of paper. That of best quality is thirteen fingers wide, while the hieratica is two fingers less. The Fanniana is ten fingers wide, and that known as "amphitheatrica," one less. The Saitic is of still smaller breadth, indeed it is not so wide as the mallet with which the paper is beaten; and the emporetica is particularly narrow, being not more than six fingers in breadth.

In addition to the above particulars, paper is esteemed according to its fineness, its stoutness, its whiteness, and its smoothness. Claudius Cæsar effected a change in that which till then had been looked upon as being of the first quality: for the Augustan paper had been found to be so remarkably fine, as to offer no resistance to the pressure of the pen; in addition to which, as it allowed the writing upon it to run through, it was continually causing apprehensions of its being blotted and blurred by the writing on the other side; the remarkable transparency, too, of the paper was very unsightly to the eye. To obviate these inconveniences, a groundwork of paper was made with leaves of the second quality, over which was laid a woof, as it were, formed of leaves of the first. He increased the width also of paper; the width [of the common sort] being made a foot, and that of the size known as "macrocollum," a cubit; though one inconvenience was soon detected in it, for, upon a single leaf being torn in the press, more pages were apt to be spoilt than before. In consequence of the advantages above-mentioned, the Claudian has come to be preferred to all other kinds of paper, though the Augustan is still used for the purposes of epistolary correspondence. The Livian, which had nothing in common with that of first quality, but was entirely of a secondary rank, still holds its former place.

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CHAP. 25.

THE PECULIAR DEFECTS IN PAPER.

The roughness and inequalities in paper are smoothed down with a tooth or shell; but the writing in such places is very apt to fade. When it is thus polished the paper does not take the ink so readily, but is of a more lustrous and shining surface. The water of the Nile that has been originally employed in its manufacture, being sometimes used without due precaution, will unfit the paper for taking writing: this fault, however, may be detected by a blow with the mallet, or even by the smell, when the carelessness has been extreme. These spots, too, may be detected by the eye; but the streaks that run down the middle of the leaves where they have been pasted together, though they render the paper spongy and of a soaking nature, can hardly ever be detected before the ink runs, while the pen is forming the letters; so many are the openings for fraud to be put in practice. The consequence is, that another labour has been added to the due preparation of paper.

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CHAP. 26.

THE PASTE USED IN THE PREPARATION OF PAPER.

The common paper paste is made of the finest flour of wheat mixed with boiling water, and some small drops of vinegar sprinkled in it: for the ordinary workman's paste, or gum, if employed for this purpose, will render the paper brittle. Those, however, who take the greatest pains, boil the crumb of leavened bread, and then strain off the water: by the adoption of this method the paper has the fewest seams caused by the paste that lies between, and is softer than the nap of linen even. All kinds of paste that are used for this purpose, ought not to be older or newer than one day. The paper is then thinned out with a mallet, after which a new layer of paste is placed upon it; then the creases which have formed are again pressed out, and it then undergoes the same process with the mallet as before. It is thus that we have memorials preserved in the ancient handwriting of Tiberius and Caius Gracchus, which I have seen in the possession of Pomponius Secundus, the poet, a very illustrious citizen, almost two hundred years since those characters were penned. As for the handwriting of Cicero, Augustus, and Virgil, we frequently see them at the present day.

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CHAP. 27. (13.)

THE BOOKS OF NUMA.

There are some facts of considerable importance which make against the opinion expressed by M. Varro, relative to the invention of paper. Cassius Hemina, a writer of very great antiquity, has stated in the Fourth Book of his Annals, that Cneius Terentius, the scribe, while engaged in digging on his land in the Janiculum, came to a coffer, in which Numa had been buried, the former king of Rome, and that in this coffer were also found some books of his. This took place in the consulship of Publius Cornelius Cethegus, the son of Lucius, and of M. Bæbius Tamphilus, the son of Quintus, the interval between whose consulship and the reign of Numa was five hundred and thirty-five years. These books were made of paper, and, a thing that is more remarkable still, is the fact that they lasted so many years buried in the ground. In order, therefore, to establish a fact of such singular importance, I shall here quote the words of Hemina himself — "Some persons expressed wonder how these books could have possibly lasted so long a time — this was the explanation that Terentius gave: 'In nearly the middle of the coffer there lay a square stone, bound on every side with cords enveloped in wax; upon this stone the books had been placed, and it was through this precaution, he thought, that they had not rotted. The books, too, were carefully covered with citrus leaves, and it was through this, in his belief, that they had been protected from the attacks of worms.' In these books were written certain doctrines relative to the Pythagorean philosophy; they were burnt by Q. Petilius, the prætor, because they treated of philosophical subjects."

Piso, who had formerly been censor, relates the same facts in the First Book of his Commentaries, but he states in addition, That there were seven books on Pontitical Rights, and seven on the Pythagorean philosophy. Tuditanus, in his Fourteenth Book, says that they contained the decrees of uma: Varro, in the Seventh Book of his "Antiquities of Mankind," states that they were twelve in number; and Antias, in his Second Book, says that there were twelve written

in Latin, on pontifical matters, and as many in Greek, containing philosophical precepts. The same author states also in his Third Book why it was thought proper to burn them.

It is a fact acknowledged by all writers, that the Sibyl brought three books to Tarquinius Superbus, of which two were burnt by herself, while the third perished by fire with the Capitol in the days of Sylla. In addition to these facts, Mucianus, who was three times consul, has stated that he had recently read, while governor of Lycia, a letter written upon paper, and preserved in a certain temple there, which had been written from Troy, by Sarpedon; a thing that surprises me the more, if it really was the fact that even in the time of Homer the country that we call Egypt was not in existence. And why too, if paper was then in use, was it the custom, as it is very well known it was, to write upon leaden tablets and linen cloths? Why, too, has Homer stated that in Lycia tablets were given to Bellerophon to carry, and not a paper letter?

Papyrus, for making paper, is apt to fail occasionally; such a thing happened in the time of the Emperor Tiberius, when there was so great a scarcity of paper that members of the senate were appointed to regulate the distribution of it: had not this been done, all the ordinary relations of life would have been completely disarranged.

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CHAP. 28. (14.)

THE TREES OF ÆTHIOPIA.

Æthiopia, which borders upon Egypt, has in general no remarkable trees, with the exception of the wool-bearing ones, of which we have had occasion to speak in our description of the trees of India and Arabia. However, the produce of the tree of Æthiopia bears a much stronger resemblance to wool, and the follicule is much larger, being very similar in appearance to a pomegranate; as for the trees, they are otherwise similar in every respect. Besides this tree, there are some palms, of which we have spoken already. In describing the islands along the coast of Æthiopia, we have already made mention of their trees and their odoriferous forests.

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CHAP. 29. (15.)

THE TREES OF MOUNT ATLAS. THE CITRUS, AND THE TABLES MADE OF THE WOOD THEREOF.

Mount Atlas is said to possess a forest of trees of a peculiar character, of which we have already spoken. In the vicinity of this mountain is Mauretania, a country which abounds in the citrus, a tree which gave rise to the mania for fine tables, an extravagance with which the women reproach the men, when they complain of their vast outlay upon pearls. There is preserved to the present day a table which belonged to M. Cicero, and for which, notwithstanding his comparatively moderate means, and what is even more surprising still, at that day too, he gave no less than one" million sesterces: we find mention made also of one belonging to Gallus Asinius, which cost one million one hundred thousand sesterces. Two tables were also sold by auction which had belonged to King Juba; the price fetched by one was one million two hundred thousand sesterces, and that of the other something less. There has been lately destroyed by fire, a table which came down from the family of the Cethegi, and which had been sold for the sum of one million four hundred thousand sesterces, the price of a considerable domain, if any one, indeed, could be found who would give so large a sum for an estate.

The largest table that has ever yet been known was one that belonged to Ptolemæus, king of Mauretania; it was made of two semicircumferences joined together down the middle, being four Feet and a half in diameter, and a quarter of a foot in thickness: the most wonderful fact, however, connected with it, was the surprising skill with which the joining had been concealed, and which rendered it more valuable than if it had been by nature a single piece of wood. The largest table that is made of a single piece of wood, is the one that takes its name from Nomius, a freedman of Tiberius Cæsar. The diameter of it is four Feet, short by three quarters of an inch, and it is half a foot in thickness, less the same fraction. While speaking upon this subject, I ought not to omit to mention that the Emperor Tiberius had a table that exceeded four Feet in diameter by two inches and a

quarter, and was an inch and a half in thickness: this, however, was only covered with a veneer of citrus-wood, while that which belonged to his freedman Nomius was so costly, the whole material of which it was composed being knotted wood.

These knots are properly a disease or excrescence of the root, and those used for this purpose are more particularly esteemed which have lain entirely concealed under ground; they are much more rare than those that grow above ground, and that are to be found on the branches also. Thus, to speak correctly, that which we buy at so vast a price is in reality a defect in the tree: of the size and root of it a notion may be easily formed from the circular sections of its trunk. The tree resembles the wild female cypress in its foliage, smell, and the appearance of the trunk. A spot called Mount Ancorarius, in Nearer Mauretania, used formerly to furnish the most esteemed citrus-wood, but at the present day the supply is quite exhausted.

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CHAP. 30.

THE POINTS THAT ARE DESIRABLE OR OTHERWISE IN THESE TABLES.

The principal merit of these tables is to have veins arranged in waving lines, or else forming spirals like so many little whirlpools. In the former arrangement the lines run in an oblong direction, for which reason these are called "tiger" tables; while in the latter the marks are circling and spiral, and hence they are styled "panther" tables. There are some tables also with wavy, undulating marks, and which are more particularly esteemed if these resemble the eyes on a peacock's tail. Next in esteem to these last, as well as those previously mentioned, is the veined wood, covered, as it were, with dense masses of grain, for which reason these tables have received the name of "apiatæ." But the colour of the wood is the quality that is held in the highest esteem of all: that of wine mixed with honey being the most prized, the veins being peculiarly refulgent. Next to the colour, it is the size that is prized; at the present day whole trunks are greatly admired, and sometimes several are united in a single table.

The peculiar defects in these kinds of tables are woodiness, such being the name given to the table when the wood is dull, common-looking, indistinct, or else has mere simple marks upon it, resembling the leaves of the plane-tree; also, when it resembles the veins of the holm-oak or the colour of that tree; and, a fault to which it is peculiarly liable from the effect of heat or wind, when it has flaws in it or hair-like lines resembling flaws; when it has a black mark, too, running through it resembling a murena in appearance, various streaks that look like crow scratches, or knots like poppy heads, with a colour all over nearly approaching to black, or blotches of a sickly hue. The barbarous tribes bury this wood in the ground while green, first giving it a coating of wax. When it comes into the workmen's hands, they put it for seven days beneath a heap of corn, and then take it out for as many more: it is quite surprising how greatly it loses in weight by this process. Shipwrecks have recently taught us also that this wood is dried by the action of sea-water, and

that it thereby acquires a hardness and a degree of density which render it proof against corruption no other method is equally sure to produce these results. These tables are kept best, and shine with the greatest lustre, when rubbed with the dry hand, more particularly just after bathing. As if this wood had been created for the behoof of wine, it receives no injury from it.

(16.) As this tree is one among the elements of more civilized life, I think that it is as well on the present occasion to dwell a little further upon it. It was known to Homer even, and in the Greek it is known by the name of "thyon," or sometimes "thya." He says that the wood of this tree was among the unguents that were burnt for their pleasant odour by Circe, whom he would represent as being a goddess; a circumstance which shows the great mistake committed by those who suppose that perfumes are meant under that name, seeing that in the very same line he says that cedar and larch were burnt along with this wood, a thing that clearly proves that it is only of different trees that he is speaking. Theophrastus, an author who wrote in the age succeeding that of Alexander the Great, and about the year of the City of Rome 440, has awarded a very high rank to this tree, stating that it is related that the raftering of the ancient temples used to be made of this wood, and that the timber, when employed in roofs, will last for ever, so to say, being proof against all decay, — quite incorruptible, in fact. He also says that there is nothing more full of wavy veins than the root of this tree, and that there is no workmanship in existence more precious than that made of this material. The finest kind of citrus grows, he says, in the vicinity of the Temple of Jupiter Hammon; he states also that it is produced in the lower part of Cyre- naica. He has made no mention, however, of the tables that are made of it; indeed, we have no more ancient accounts of them than those of the time of Cicero, from which it would appear that they are a comparatively recent invention.

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CHAP. 31.

THE CITRON-TREE.

There is another tree also which has the same name of “citrus,” and bears a fruit that is held by some persons in particular dislike for its smell and remarkable bitterness; while, on the other hand, there are some who esteem it very highly. This tree is used as an ornament to houses; it requires, however, no further description.

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CHAP. 32. (17.)

THE LOTUS.

Africa, too, at least that part of it which looks towards our shores, produces a remarkable tree, the lotus, by some known as the "celtis," which has also been naturalized in Italy, though it has been somewhat modified by the change of soil. The finest quality of lotus is that found in the vicinity of the Syrtes and among the Nasamones. It is the same size as the pear-tree, although Cornelius Nepos states to the effect that it is but short. The leaves have numerous incisions, just as with those of the holm-oak. There are many varieties of the lotus, which are characterized more particularly by the difference in their respective fruits. The fruit is of about the size of a bean, and its colour is that of saffron, though before it is ripe it is continually changing its tints, like the grape. It has branches thickly set with leaves, like the myrtle, and not, as with us in Italy, like the cherry. In the country to which this tree is indigenous, the fruit of it is so remarkably sweet and luscious, that it has even given its name to a whole territory, and to a nation who, by their singular hospitality, have even seduced strangers who have come among them, to lose all remembrance of their native country. It is said also, that those who eat this fruit are subject to no maladies of the stomach. The fruit which has no stone in the inside is the best: this stone in the other kind seems to be of an osseous nature. A wine is also extracted from this fruit very similar to honied wine; according to Nepos, however, it will not last above ten days; he states also that the berries are chopped up with alica, and then put away in casks for the table. Indeed, we read that armies have been fed upon this food when marching to and fro through the territory of Africa. The wood is of a black colour, and is held in high esteem for making flutes; from the root also they manufacture handles for knives, and various other small articles.

Such is the nature of the tree that is so called in Africa; the same name being also given to a certain herb, and to a stalk that grows in Egypt belonging to the marsh plants. This last plant springs up when

the waters of the Nile have retired after its overflow: its stalk is similar to that of the bean, and its leaves are numerous and grow in thick clusters, but are shorter and more slender than those of the bean. The fruit grows on the head of the plant, and is similar in appearance to a poppy in its indentations and all its other characteristics; within there are small grains, similar to those of millet. The inhabitants lay these heads in large heaps, and there let them rot, after which they separate the grain from the residue by washing, and then dry it; when this is done they pound it, and then use it as flour for making a kind of bread. What is stated in addition to these particulars, is a very singular fact; it is said that when the sun sets, these poppy-heads shut and cover themselves in the leaves, and at sun-rise they open again; an alternation which continues until the fruit is perfectly ripe, and the flower, which is white, falls off.

(18.) Even more than this, of the lotus of the Euphrates, it is said that the head and flower of the plant, at nightfall, sink into the water, and there remain till midnight, so deep in the water, that on thrusting in one's arm, the head cannot be reached: after midnight it commences to return upwards, and gradually becomes more and more erect till sunrise, when it emerges entirely from the water and opens its flower; after which it still continues to rise, until at last it is to be seen raised quite aloft, high above the level of the water. This lotus has a root about the size of a quince, enveloped in a black skin, similar to that with which the chesnut is covered. The substance that lies within this skin is white, and forms very pleasant food, but is better cooked, either in water or upon hot ashes, then in a raw state. Swine fatten upon nothing better than the peelings of this root.

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CHAP. 33. (19.)

THE TREES OF CYENAICA. THE PALIURUS.

The region of Cyrenaica places before the lotus its paliurus, which is more like a shrub in character, and bears a fruit of a redder colour. This fruit contains a nut, the kernel of which is eaten by itself, and is of a very agreeable flavour. The taste of it is improved by wine, and, in fact, the juices are thought to be an improvement to wine. The interior of Africa, as far as the Garamantes and the deserts, is covered with palms, remarkable for their extraordinary size and the lusciousness of their fruit. The most celebrated are those in the vicinity of the Temple of Jupiter Hammon.

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CHAP. 34.

NINE VARIETIES OF THE PUNIC APPLE. BALAUSTIUM.

But the vicinity of Carthage is claimed more particularly as its own by the fruit the name of which is the “Punic apple;” though by some it is called “granatum.” This fruit has been distinguished into a variety of kinds; the name of “apyrenum” being given to the one which has no woody seeds inside, but is naturally whiter than the others, the pips being of a more agreeable flavour, and the membranes by which they are separated not so bitter. Their conformation in other respects, which is very similar to the partitions of the cells in the honeycomb, is much the same in all. Of those that have a kernel there are five kinds, the sweet, the acrid, the mixed, the acid, and the vinous: those of Samos and Egypt are distinguished into those with red, and those with white foliage. The skin, while the fruit is yet sour, is held in high esteem for tanning leather. The flower of this tree is known by the name of “balaustium,” and is very useful for medicinal purposes; also for dyeing cloths a colour which from it has derived its name.

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CHAP. 35. (20.)

THE TREES OF ASIA AND GREECE; THE EPIPACTIS, THE ERICA, THE CNIDIAN GRAIN OR THYMELÆA, PYROSACHNE, CNESTRON, OR CNEORON.

In Asia and Greece are produced the following shrubs, the epipactis, by some known as "elleborine," the leaves of which are of small size, and when taken in drink, are an antidote against poison; just in the same way that those of the erica are a specific against the sting of the serpent.

(21.) Here is also found another shrub, upon which grows the grain of Cnidos, by some known as "linum;" the name of the shrub itself being thymelæa, while others, again, call it "chamelæa, others pyrosachne, others cnestron, and others cneorum; it bears a strong resemblance to the wild olive, but has a narrow leaf, which has a gummy taste in the mouth. The shrub is of about the size of the myrtle; its seed is of the same colour and appearance, but is solely used for medicinal purposes.

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CHAP. 36.

THE TRAGION: TRAGACANTHE.

The island of Crete is the only place that produces the shrub called “tragion.” It is similar in appearance to the terebinth; a similarity which extends to the seed even, said to be remarkably efficacious for healing wounds made by arrows. The same island produces tragacanthe also, with a root which resembles that of the white thorn; it is very much preferred to that which is grown in Media or in Achaia; the price at which it sells is three denarii per pound.

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CHAP. 37.

THE TRAGOS OR SCORPIO; THE MYRICA OR BRYA; THE OSTRYS.

Asia, too, produces the tragos or scorpio, a thorny shrub, destitute of leaves, with red clusters upon it that are employed in medicine. Italy produces the myrica, which some persons call the "tamarix;" and Achaia, the wild brya, remarkable for the circumstance that it is only the cultivated kind that bears a fruit, not unlike the gall-nut. In Syria and Egypt this plant is very abundant. It is to the trees of this last country that we give the name of "unhappy;" but yet those of Greece are more unhappy still, for that country produces the tree known as "ostrya," or, as it is sometimes called, "ostrya," a solitary tree that grows about rocks washed by the water, and very similar in the bark and branches to the ash. It re- sembles the pear-tree in its leaves, which, however, are a little longer and thicker, with wrinkled indentations running down the whole length of the leaf. The seed of this tree resembles barley in form and colour. The wood is hard and solid; it is said, that if it is introduced into a house, it is productive of painful deliveries and of shocking deaths.

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CHAP. 38. (22.)

THE EUONYMOS.

There is no tree productive of a more auspicious presage than one which grows in the Isle of Lesbos, and is known by the name of euonymos. It bears some resemblance to the pomegranate tree, the leaf being in size between the leaf of that and the leaf of the laurel, while in shape and softness it resembles that of the pomegranate tree: it has a white blossom, by which it immediately gives us notice of its dangerous properties. It bears a pod very similar to that of sesame, within which there is a grain of quadrangular shape, of coarse make and poisonous to animals. The leaf, too, has the same noxious effects; sometimes, however, a speedy alvine discharge is found to give relief on such occasions.

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CHAP. 39.

THE TREE CALLED EON.

Alexander Cornelius has called a tree by the name of “eon,” with the wood of which, he says, the ship Argo was built. This tree has on it a mistletoe similar to that of the oak, which is proof against all injury from either fire or water, in the same manner, in fact, as that of no other tree known. This tree, however, appears to have been known to no other author, that I am aware of.

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CHAP. 40.

THE ANDRACHLE.

Nearly all the Greek writers interpret the name of the tree called “andrachle,” as meaning the same as “purslain:” whereas purslain is, in reality, a herb, and, with the difference of a single letter, is called “andrachne.” The andrachne is a wild tree, which never grows in the plain country, and is similar to the arbute tree in appearance, only that its leaves are smaller, and never fall off. The bark, too, is not rough, but might be taken to be frozen all over, so truly wretched is its appearance.

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CHAP. 41.

THE COCCYGIA; THE APHARCE.

Similar, too, in leaf to the preceding tree, is the coccygia, though not so large; it has this peculiarity, that it loses its fruit while still in the downy state — they then call it “pappus” — a thing that happens to no other tree. The apharce is another tree that is similar to the andrachle, and like it, bears twice in the year: just as the grape is beginning to flower the first fruit is ripening, while the second fruit ripens at the commencement of winter; of what nature this fruit is we do not find stated.

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CHAP. 42.

THE FERULA.

We ought to place the ferula also in the number of the exotics, and as making one of the trees. For, in fact, we distinguish the trees into several different kinds: it is the nature of some to have wood entirely in place of bark, or, in other words, on the outside; while, in the interior, in place of wood, there is a fungous kind of pith, like that of the elder; others, again, are hollow within, like the reed. The ferula grows in hot countries and in places beyond sea, the stalk being divided into knotted joints. There are two kinds of it; that which grows upwards to a great height the Greeks call by the name of "narthex," while the other, which never rises far from the ground, is known as the "narthecya." From the joints very large leaves shoot forth, the largest lying nearest to the ground: in other respects it has the same nature as the anise, which it resembles also in its fruit. The wood of no shrub is lighter than this; hence it is very easily carried, and the stalks of it make good walking-sticks for the aged.

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CHAP. 43.

THE THAPSIA.

The seed of the ferula has been by some persons called "thapsia;" deceived, no doubt, by what is really the fact, that the thapsia is a ferula, but of a peculiar kind, with leaves like those of fennel, and a hollow stalk not exceeding a walking-stick in length; the seed is like that of the ferula, and the root of the plant is white. When an incision is made in the thapsia, a milky juice oozes from it, and, when pounded, it produces a kind of juice; the bark even is never thrown away. All these parts of the shrub are poisonous, and, indeed, it is productive of injurious effects to those engaged in digging it up; for if the slightest wind should happen to be blowing towards them from the shrub, the body begins to swell, and erysipelas attacks the face: it is for this reason that, before beginning work, they anoint the face all over with a solution of wax. Still, however, the medical men say that, mixed with other ingredients, it is of considerable use in the treatment of some diseases. It is employed also for the cure of scald-head, and for the removal of black and blue spots upon the skin, as if, indeed, we were really at a loss for remedies in such cases, without having recourse to things of so deadly a nature. These plants, however, act their part in serving as a pretext for the introduction of noxious agents; and so great is the effrontery now displayed, that people would absolutely persuade one that poisons are a requisite adjunct to the practice of the medical art.

The thapsia of Africa is the most powerful of all. Some persons make an incision in the stalk at harvest-time, and bore holes in the root, too, to let the juice flow; after it has become quite dry, they take it away. Others, again, pound the leaves, stalk, and root in a mortar, and after drying the juice in the sun, divide it into lozenges. Nero Cæsar, at the beginning of his reign, conferred considerable celebrity on this plant. In his nocturnal skirmishes it so happened that he received several contusions on the face, upon which he anointed it with a mixture composed of thapsia, frankincense, and wax, and so contrived the next day effectually to give the lie to all rumours, by

appearing with a whole skin. It is a well-known fact, that fire is kept alight remarkably well in the hollow stalk of the ferula, and that for this purpose those of Egypt are the best.

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CHAP. 44. (23.)

THE CAPPARIS OR CYNOSBATON, OTHERWISE OPHIOSTAPHYLE.

In Egypt, too, the capparis is found, a shrub with a wood of much greater solidity. The seed of it is a well-known article of food, and is mostly gathered together with the stalk. It is as well, however, to be on our guard against the foreign kinds; for that of Arabia has certain deleterious properties, that from Africa is injurious to the gums, and that from Marmarica is prejudicial to the womb and causes flatulence in all the organs. That of Apulia, too, is productive of vomiting, and causes derangement in the stomach and intestines. Some persons call this shrub “cynosbaton,” others, again, “ophiostaphyle.”

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CHAP. 45.

THE SARIPHA.

The saripha, too, that grows on the banks of the Nile, is one of the shrub genus. It is generally about two cubits in height, and of the thickness of one's thumb: it has the foliage of the papyrus, and is eaten in a similar manner. The root, in consequence of its extreme hardness, is used as a substitute for charcoal in forging iron.

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CHAP. 46. (24.)

THE ROYAL THORN.

We must take care, also, not to omit a peculiar shrub that is planted at Babylon, and only upon a thorny plant there, as it will not live anywhere else, just in the same manner as the mistletoe will live nowhere but upon trees. This shrub, however, will only grow upon a kind of thorn, which is known as the royal thorn. It is a wonderful fact, but it germinates the very same day that it has been planted. This is done at the rising of the Dog-star, after which it speedily takes possession of the whole tree. They use it in the preparation of wine, and it is for this purpose that it is planted. This thorn grows at Athens also, upon the Long Walls there.

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CHAP. 47.

THE CYTISUS.

The cytisus is also a shrub, which, as a food for sheep; has been extolled with wonderful encomiums by Aristomachus the Athenian, and, in a dry state, for swine as well: the same author, too, pledges his word that a jugerum of very middling land, planted with the cytisus, will produce an income of two thousand sesterces per annum. It is quite as useful as the ervum, but is apt to satiate more speedily: very little of it is necessary to fatten cattle; to such a degree, indeed, that beasts of burden, when fed upon it, will very soon take a dislike to barley. There is no fodder known, in fact, that is productive of a greater abundance of milk, and of better quality; in the medical treatment of cattle in particular, this shrub is found a most excellent specific for every kind of malady. Even more than this, the same author recommends it, when first dried and then boiled in water, to be given to nursing women, mixed with wine, in cases where the milk has failed them: and he says that, if this is done, the infant will be all the stronger and taller for it. In a green state, or, if dried, steeped in water, he recommends it for fowls. Both Democritus and Aristomachus promise us also that bees will never fail us so long as they can obtain the cytisus for food. There is no crop that we know of, of a similar nature, that costs a smaller price. It is sown at the same time as barley, or, at all events, in the spring, in seed like the leek, or else planted in the autumn, and before the winter solstice, in the stalk. When sown in grain, it ought to be steeped in water, and if there should happen to be no rain, it ought to be watered when sown: when the plants are about a cubit in height, they are replanted in trenches a foot in depth. It is transplanted at the equinoxes, while the shrub is yet tender, and in three years it will arrive at maturity. It is cut at the vernal equinox, when the flower is just going off; a child or an old woman is able to do this, and their labour may be had at a trifling rate. It is of a white appearance, and if one would wish to express briefly what it looks like, it is a trifoliated shrub, with small, narrow leaves. It is always given to animals at

intervals of a couple of days, and in winter, when it is dry, before being given to them, it is first moistened with water. Ten pounds of cytisus will suffice for a horse, and for smaller animals in proportion: if I may here mention it by the way, it is found very profitable to sow garlic and onions between the rows of cytisus.

This shrub has been found in the Isle of Cythnus, from whence it has been transplanted to all the Cyclades, and more recently to the cities of Greece, a fact which has greatly increased the supply of cheese: considering which, I am much surprised that it is so rarely used in Italy. This shrub is proof, too, against all injuries from heat, from cold, from hail, and from snow: and, as Hyginus adds, against the depredations of the enemy even, the wood produced being of no value whatever.

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CHAP. 48. (25.)

THE TREES AND SHRUBS OF THE MEDITER- RANEAN. THE PHYCOS, PRASON, OR ZOSTER.

Shrubs and trees grow in the sea as well; those of our sea are of inferior size, while, on the other hand, the Red Sea and all the Eastern Ocean are filled with dense forests. No other language has any name for the shrub which is known to the Greeks as the "phycos," since by the word "alga" a mere herb is generally understood, while the "phycos" is a complete shrub. This plant has a broad leaf of a green colour, which is by some called "prason," and by others is known as "zoster." Another kind, again, has a hairy sort of leaf, very similar to fennel, and grows upon rocks, while that previously mentioned grows in shoaly spots, not far from the shore. Both kinds shoot in the spring, and die in autumn. The phycos which grows on the rocks in the neighbourhood of Crete, is used also for dyeing purple; the best kind being that produced on the north side of the island, which is the case also with sponges of the very best quality. A third kind, again, is similar in appearance to grass; the root of it is knotted, and so is the stalk, which resembles that of a reed.

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CHAP. 49.

THE SEA BRYON.

There is another kind of marine shrub, known by the name of "bryon;" it has the leaf of the lettuce, only that it is of a more wrinkled appearance; it grows nearer land, too, than the last. Far out at sea we find a fir-tree and an oak, each a cubit in height; shells are found adhering to their branches. It is said that this sea-oak is used for dyeing wool, and that some of them even bear acorns in the sea, a fact which has been ascertained by shipwrecked persons and divers. There are other marine trees also of remarkable size, found in the vicinity of Sicyon; the sea-vine, indeed, grows everywhere. The sea-fig is destitute of leaves, and the bark is red. There is a palm-tree also in the number of the sea-shrubs. Beyond the columns of Hercules there is a sea-shrub that grows with the leaf of the leek, and others with those of the carrot, and of thyme. Both of these last, when thrown up by the tide, are transformed into pumice.

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CHAP. 50.

PLANTS OF THE RED SEA.

In the East, it is a very remarkable thing, that immediately after leaving Coptos, as we pass through the deserts, we find nothing whatever growing, with the exception of the thorn that is known as the “thirsty” thorn; and this but very rarely. In the Red Sea, however, there are whole forests found growing, among which more particularly there are plants that bear the laurel-berry and the olive; when it rains also certain fungi make their appearance, which, as soon as they are touched by the rays of the sun, are turned into pumice. The size of the shrubs is three cubits in height; and they are all filled with sea-dogs, to such a degree, that it is hardly safe to look at them from the ship, for they will frequently seize hold of the very oars.

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CHAP. 51.

PLANTS OF THE INDIAN SEA.

The officers of Alexander who navigated the Indian seas, have left an account of a marine tree, the foliage of which is green while in the water; but the moment it is taken out, it dries and turns to salt. They have spoken also of bulrushes of stone bearing a strong resemblance to real ones, which grew along the sea-shore, as also certain shrubs in the main sea, the colour of an ox's horn, branching out in various directions, and red at the tips. These, they say, were brittle, and broke like glass when touched, while, on the other hand, in the fire they would become red-hot like iron, and when cool resume their original colour.

In the same part of the earth also, the tide covers the forests that grow on the islands, although the trees there are more lofty than the very tallest of our planes and poplars! The leaves of these trees resemble that of the laurel, while the blossom is similar to the violet, both in smell and colour: the berries resemble those of the olive, and they, too, have an agreeable smell: they appear in the autumn, and the leaves of the trees never fall off. The smaller ones are entirely covered by the waves, while the summits of those of larger size protrude from the water, and ships are made fast to them; when the tide falls the vessels are similarly moored to the roots. We find the same persons making mention of certain other trees which they saw out at sea, which always retained their leaves, and bore a fruit very similar to the lupine.

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CHAP. 52.

THE PLANTS OF THE TROGLODYTIC SEA; THE HAIR OF ISIS: THE CHARITO-BLEPHARON.

Juba relates, that about the islands of the Troglodytæ there is a certain shrub found out at sea, which is known as the "air of Isis:" he says that it bears a strong resemblance to coral, is destitute of leaves, and if cut will change its colour, becoming quite black and hard, and so brittle as to break if it falls. He speaks also of another marine plant, to which he gives the name of "Charito-blepharon," and which, he says, is particularly efficacious in love-charms. Bracelets and necklaces are made of it. He says also that it is sensible when it is about to be taken, and that it turns as hard as horn, so hard, indeed, as to blunt the edge of iron. If, on the other hand, it is cut before it is sensible of the danger, it is immediately transformed to stone.

SUMMARY. — Remarkable facts, narratives, and observations, four hundred and sixty-eight.

ROMAN AUTHORS QUOTED. — M. Varro, Mucianus, Virgil, Fabianus, Sebosus, Pomponius Mela, Fabius, Procilius, Hyginus, Trogus, Claudius Cæsar, Cornelius Nepos, Sextius Niger who wrote in Greek on Medicine, Cassius Hemina, L. Piso, Tuditanus, Antias.

FOREIGN AUTHORS QUOTED. — Theophrastus, Herodotus, Callisthenes, Isigonus, Clitarchus, Anaximenes, Duris, Nearchus, Onesicritus, Polycritus, Olympiodorus, Diognetus, Cleobulus, Anticlides, Chares of Mitylene, Menæchmus, Dorotheus of Athens, Lycus, Antæus, Ephip- pus, Dion, Adimantus, Ptolemy Lagus, Marsyas of Macedon, Zoilus of Macedon, Democritus, Amphilochus, Alexander Polyhistor, Aristomachus, King Juba, Apollodorus who wrote on Perfumes, Heraclides the physician, Botrys the physician, Archidemus the physician, Dionysius the physician, Democlides the physician, Euphron the physician, Mnesides the physician, Diagoras the physician, Iollas the physician, Heraclides of Tarentum, Xenocrates of Ephesus.

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BOOK XIV. THE NATURAL HISTORY OF THE FRUIT TREES.

CHAPS. 1 & 2. (1.)

THE NATURE OF THE VINE. ITS MODE OF FRUCTIFICATION.

Those which have been hitherto mentioned, are, nearly all of them, exotic trees, which it is impossible to rear in any other than their native soil, and which are not to be naturalized in strange countries. It is now for us to speak of the more ordinary kinds, of all of which Italy may be looked upon as more particularly the parent. Those who are well acquainted with the subject, must only bear in mind that for the present we content ourselves with merely stating the different varieties of these trees, and not the mode of cultivating them, although there is no doubt that the characteristics of a tree depend very considerably upon its cultivation. At this fact I cannot sufficiently express my astonishment, that of some trees all memory has utterly perished, and that the very names of some, of which we find various authors making mention, have wholly disappeared. And yet who does not readily admit that now, when intercommunications have been opened between all parts of the world, thanks to the majestic sway of the Roman empire, civilization and the arts of life have made a rapid progress, owing to the interchange of commodities and the common enjoyment by all of the blessings of peace, while at the same time a multitude of objects which formerly lay concealed, are now revealed for our indiscriminate use?

Still, by Hercules! at the present day there are none to be found who have any acquaintance with much that has been handed down to us by the ancient writers; so much more comprehensive was the diligent research of our forefathers, or else so much more happily employed was their industry. It is a thousand years ago since Hesiod, at the very dawn, so to say, of literature, first gave precepts for the guidance of the agriculturist, an example which has since been followed by no small number of writers. Hence have originated considerable labours for ourselves, seeing that we have not only to

enquire into the discoveries of modern times, but to ascertain as well what was known to the ancients, and this, too, in the very midst of that oblivion which the heedlessness of the present day has so greatly tended to generate. What causes then are we to assign for this lethargy, other than those Feelings which we find actuating the public in general throughout all the world? New manners and usages, no doubt, have now come into vogue, and the minds of men are occupied with subjects of a totally different nature; the arts of avarice, in fact, are the only ones that are now cultivated.

In days gone by, the sway and the destinies of states were bounded by their own narrow limits, and consequently the genius of the people was similarly circumscribed as well, through a sort of niggardliness that was thus displayed by Fortune: hence it became with them a matter of absolute necessity to employ the advantages of the understanding: kings innumerable received the homage of the arts, and in making a display of the extent of their resources, gave the highest rank to those arts, entertaining the opinion that it was through them that they should ensure immortality. Hence it was that due rewards, and the various works of civilization, were displayed in such vast abundance in those times. For these later ages, the enlarged boundaries of the habitable world, and the vast extent of our empire, have been a positive injury. Since the Censor has been chosen for the extent of his property, since the judge has been selected according to the magnitude of his fortune, since it has become the fashion to consider that nothing reflects a higher merit upon the magistrate and the general than a large estate, since the being destitute of heirs has begun to confer upon persons the very highest power and influence, since legacy-hunting has become the most lucrative of all professions, and since it has been considered that the only real pleasures are those of possessing, all the true enjoyments of life have been utterly lost sight of, and all those arts which have derived the name of liberal, from liberty, that greatest blessing of life, have come to deserve the contrary appellation, servility alone being the passport to profit.

This servility each one has his own peculiar way of making most agreeable, and of putting in practice in reference to others, the motives and the hopes of all tending to the one great object, the

acquisition of wealth: indeed, we may everywhere behold men even of naturally excellent qualities preferring to foster the vicious inclinations of others rather than cultivate their own talents. We may therefore conclude, by Hercules! that pleasure has now begun to live, and that life, truly so called, has ceased to be. As to ourselves, however, we shall continue our researches into matters now lost in oblivion, nor shall we be deterred from pursuing our task by the trivial nature of some of our details, a consideration which has in no way influenced us in our description of the animal world. And yet we find that Virgil, that most admirable poet, has allowed this to influence him, in his omission to enlarge upon the beauties of the garden; for, happy and graceful poet as he is, he has only culled what we may call the flower of his subject: indeed, we find that he has only named in all some fifteen varieties of the grape, three of the olive, the same number of the pear, and the citron of Assyria, and has passed over the rest in silence altogether.

(2). With what then ought we to begin in preference to the vine, the superiority in which has been so peculiarly con- ceded to Italy, that in this one blessing we may pronounce her to have surpassed those of all other nations of the earth, with the sole exception of those that bear the various perfumes? and even there, when the vine is in flower, there is not a perfume known which in exquisite sweetness can surpass it. The vine has been justly reckoned by the ancients among the trees, on account of its remarkable size. In the city of Populonium, we see a statue of Jupiter formed of the trunk of a single vine, which has for ages remained proof against all decay; and at Massilia, there is a patera made of the same wood. At Metapontum, the temple of Juno has long stood supported by pillars formed of the like material; and even at the present day we ascend to the roof of the temple of Diana at Ephesus, by stairs constructed, it is said, of the trunk of a single vine, that was brought from Cyprus; the vines of that island often attaining a most remarkable size. There is not a wood in existence of a more lasting nature than this; I am strongly inclined, however, to be of opinion that the material of which these various articles were constructed was the wild vine.

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CHAP. 3.

THE NATURE OF THE GRAPE, AND THE CULTIVATION OF THE VINE.

The cultivated vine is kept down by pruning every year, and all the strength of the tree is drawn as much as possible into the shoots, or else thrown downwards to the sets; indeed, it is only allowed to expand with the view of ensuring an abundant supply of juice, a result which is obtained in various modes according to the peculiarities of the climate and the nature of the soil. In Campania they attach the vine to the poplar: embracing the tree to which it is thus wedded, the vine grasps the branches with its amorous arms, and as it climbs, holds on with its knotted trunk, till it has reached the very summit; the height being sometimes so stupendous that the vintager when hired is wont to stipulate for his funeral pile and a grave at the owner's expense. The vine keeps continually on the increase, and it is quite impossible to separate the two, or rather, I may say, to tear them asunder. Valerianus Cornelius has regarded it as one of the most remarkable facts that could be transmitted to posterity, that single vines have been known to surround villas and country houses with their shoots and creeping tendrils ever on the stretch. At Rome, in the porticoes of Livia, a single vine, with its leaf-clad trellises, protects with its shade the walks in the open air; the fruit of it yields twelve amphoræ of must.

Everywhere we find the vine overtopping the elm even, and we read that Cineas, the ambassador of King Pyrrhus, when admiring the great height of the vines at Aricia, wittily making allusion to the peculiar rough taste of wine, remarked that it was with very good reason that they had hung the parent of it on so lofty a gibbet. There is a tree in that part of Italy which lies beyond the Padus, known as the "rumpotinus," or sometimes by the name of "opulus," the broad circular storeys of which are covered with vines, whose branches wind upwards in a serpentine form to the part where the boughs finally divide, and then, throwing out their tendrils, disperse them in every direction among the straight and finger-like twigs which

project from the branches. There are vines also, about as tall as a man of moderate height, which are supported by props, and, as they throw out their bristling tendrils, form whole vineyards: while others, again, in their inordinate love for climbing, combined with skill on the part of the proprietor, will cover even the very centre of the court-yard with their shoots and foliage. So numerous are the varieties of the vine which even Italy alone presents.

In some of the provinces the vine is able to stand of itself without anything to support it, drawing in its bending branches, and making up in its thickness for its stunted size. In other places, again, the winds will not allow of this mode of culture, as in Africa, for instance, and various parts of the province of Gallia Narbonensis. These vines, being prevented from growing beyond the first branches, and hence always retaining a resemblance to those plants which stand in need of the hoe, trail along the ground just like them, and every here and there suck up the juices from the earth to fill their grapes: it is in consequence of this, that in the interior of Africa the clusters are known to exceed the body of an infant in size. The wine of no country is more acid than those of Africa, but there is nowhere to be found a grape that is more agreeable for its firmness, a circumstance which may very probably have given rise to its name of the "hard grape." As to the varieties of the grape, although they are rendered innumerable by the size, the colour, and the flavour of the berry, they are multiplied even still more by the wines that they produce. In one part they are lustrous with a rich purple colour, while in another, again, they glow with a rosy tint, or else are glossy with their verdant hue. The grapes that are merely white or black are the common sorts. The bumastus swells out in form like a breast, while that known as the "dactylus," has a berry of remarkable length. Nature, too, displays such varieties in these productions of hers, that small grapes are often to be found adhering to the largest vines, but of surpassing sweetness; they are known by the name of "leptorragæ." Some, again, will keep throughout the winter, if care is taken to hang them to the ceiling with a string; while others, again, will keep by virtue of their own natural freshness and vigour, if put into earthen jars, which are then enclosed in dolia, and covered up with the fermenting husks of grapes. Some grapes receive from the

smoke of the blacksmith's forge that remarkable flavour which it is also known to impart to wines: it was the high name of the Emperor Tiberius that brought into such great repute the grapes that had been smoked in the smithies of Africa. Before his time the highest rank at table was assigned to the grapes of Rhætia, and to those growing in the territory of Verona.

Raisins of the sun have the name of "passi," from having been submitted to the influence of the sun. It is not uncommon to preserve grapes in must, and so make them drunk with their own juices; while there are some that are all the sweeter for being placed in must after it has been boiled; others, again, are left to hang on the parent tree till a new crop has made its appearance, by which time they have become as clear and as transparent as glass. Astringent pitch, if poured upon the footstalk of the grape, will impart to it all that body and that firmness which, when placed in dolia or amphoræ, it gives to wine. More recently, too, there has been discovered a vine which produces a fruit that imparts to its wine a strong flavour of pitch: it is the famous grape that confers such celebrity on the territory of Vienne, and of which several varieties have recently enriched the territories of the Arverni, the Sequani, and the Helvii: it was unknown in the time of the poet Virgil, who has now been dead these ninety years.

In addition to these particulars, need I make mention of the fact that the vine has been introduced into the camp and placed in the centurion's hand for the preservation of the supreme authority and command? that this is the high reward which summons the lagging ranks to the eagles raised aloft, and that even in chastisement for faults it tends to reflect honour upon the punishment? It was the vineyard, too, that first afforded a notion, the practical utility of which has been experienced in many a siege. Among the medicinal preparations, too, the vine holds so high a place, that its very wines taken by themselves are efficacious as remedies for disease.

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CHAP. 4. (2.)

NINETY-ONE VARIETIES OF THE VINE.

Democritus, who has declared that he was acquainted with every variety of the grape known in Greece, is the only person who has been of opinion that every kind could be enumerated; but, on the other hand, the rest of the authors have stated that they are quite innumerable and of infinite extent, an assertion the truth of which will be more evident, if we only consider the vast number of wines. I shall not attempt, then, to speak of every kind of vine, but only of those that are the most remarkable, seeing that the varieties are very nearly as numberless as the districts in which they grow. It will suffice, then, to point out those which are the most remarkable among the vines, or else are peculiar for some wonderful property.

The very highest rank is given to the Aminean grape, on account of the body and durability of its wine, which improves with old age. There are five varieties of the Aminean grape; of these, the smaller germana, or "sister" grape, has a smaller berry than the rest, and flowers more strongly, being able to tear up against rain and tempestuous weather; a thing that is not the case with the larger germana, though it is less exposed to danger when attached to a tree than when supported only by a trellis. Another kind, again, has obtained the name of the "gemella," or "twin" grape, because the clusters always grow in couples: the flavour of the wine is extremely rough, but it is remarkable for its strength. Of these several varieties the smaller one suffers from the south wind, but receives nutriment from all the others, upon Mount Vesuvius, for instance, and the hills of Surrentum: in the other parts of Italy it is never grown except attached to trees. The fifth kind is that known as the lanata, or "woolly" grape; so that we need not be surprised at the wool-bearing trees of the Seres or the Indians, for this grape is covered with a woolly down of remarkable thickness. It is the first of the Aminean vines that ripens, but the grape decays with remarkable rapidity.

The second rank belongs to the vines of Nomentum, the wood of which is red, from which circumstance the vines have received from

some the name of “rubellæ.” The grapes of this vine produce less wine than usual, in consequence of the extraordinary quantity of husk and lees they throw off: but the vine is remarkably strong, is well able to stand the frost, and is apt to receive more detriment from drought than from rain, from heat than from cold; hence it is that those are looked upon as the best that are grown in cold and moist localities. That variety which has the smallest grape is con- sidered the most fruitful: the one which has a jagged leaf is less productive.

The vine known as the “apiana,” has received that name from the bee, an insect which is remarkably fond of it: there are two varieties of this vine. This grape, too, is covered in its young state with a kind of down; the main difference between the two varieties is, that the one ripens more rapidly than the other, though this last ripens with considerable quickness. A cold locality is not at all hurtful to them, although there is no grape that ripens sooner: these grapes, however, very soon rot in the rain. The wines produced by this grape are sweet at first, but contract a rough flavour in the course of years. This vine is cultivated more than any other in Etruria. Thus far we have made mention of the more celebrated vines among those which are peculiar and indigenous to Italy; the rest have been introduced from Chios or Thasos.

The small Greek grape is not inferior to the Aminean for the excellence of its quality: the berry is remarkably thin- skinned, and the cluster so extremely small, that it is not worth while cultivating it, except on a soil of remarkable richness. The eugenia, so called from its high qualities, has been introduced into the Alban territory from the hills of Tauromenium: it is found, however, to thrive only there, for if transplanted elsewhere it degenerates immediately: in fact, there is in some vines so strong an attachment to their native soil, that they leave behind them all their high repute, and are never transplanted in their full entirety. This is the case, too, with the Rhætian and the Allobrogian grapes, of which we have made mention above as the pitch-flavoured grape; these are justly deemed excellent in their own coun- try, while elsewhere they are held in no esteem at all. Still, however, in consequence of their remarkable fertility, they make up for quality by abundance: the eugenia thrives in spots which are scorching hot, the Rhætian vine in places of a

more moderate temperature, and the Allobrogian in cold, exposed situations, the fruit being of a black colour, and ripened by the agency of frost.

The wines produced from the vines of which we have hitherto made mention, even though the grapes are black, become, all of them, when old, of a white complexion. The other vines are of no note in particular, though sometimes, thanks to some peculiarity either in the climate or the soil, the wines produced from them attain a mature old age; such, for instance, as the Fecenian vine, and the Biturigian, which blossoms at the same time with it, but has not so many grapes. The blossoms of these last-mentioned vines are not liable to receive injury, both because they are naturally but transitory, and have the power of resisting the action of both wind and storm; still, however, those that grow in cold spots are considered superior to those produced in a warm site, and those found in moist places superior to those grown in dry, thirsty localities.

The vine known as the "visula" * * * * more than abundance of fruit, being unable to endure the extreme variations of the atmosphere, though it is very well able to stand a continuation of either cold or heat. Of this last kind the smaller one is the best, but difficult to please in its choice; in a rich earth it is apt to rot, while in a thin soil it will come to nothing at all: in its fastidiousness it requires a soil of middling quality, and hence it is that it is so commonly found on the hills of the Sabine territory. Its grape is unsightly in appearance, but has a very pleasant flavour: if it is not gathered at the very moment that it is ripe, it will fall, even before it decays. The extreme size of the leaves, and its natural hardi- ness, are its great protection against the disastrous effects of hail.

The grapes known as "helvolæ" are remarkable for the peculiarity of their colour, which is a sort of midway between purple and black, but varies so frequently that it has made some persons give them the name of "varianæ." Of the two sorts of helvolæ, the black is the one generally preferred: they both of them produce every other year, but the wine is best when the vintage has been less abundant.

The vine that is known as the "precia" is also divided into two

varieties, distinguished by the size of the grape. These vines produce a vast quantity of wood, and the grape is very good for preserving in jars; the leaves are similar in appearance to that of parsley. The people of Dyrrhachium hold in high esteem the vine known as the "basilica," the same which in Spain is called the "cocolobis." The grapes of this vine grow in thin clusters, and it can stand great heat, and the south winds. The wine produced from it is apt to fly to the head: the produce of the vine is very large. The people in Spain distinguish two kinds of this vine, the one with the oblong, the other with the round grape; they gather this fruit the very last of all. The sweeter the cocolobis is, the more it is valued; but even if it has a rough taste, the wine will become sweet by keeping, while, on the other hand, that which was sweet at first, will acquire a certain roughness; it is in this last state that the wine is thought to rival that of Alba. It is said that the juice of this grape is remarkably efficacious when drunk as a specific for diseases of the bladder.

The "albuelis" produces most of its fruit at the top of the tree, the visula at the bottom; hence, when planted around the same tree, in consequence of these peculiarities in their nature, they bear between them a two-fold crop. One of the black grape vines has been called the "inerticula," though it might with more propriety have been styled the "sobria;" the wine from it is remarkably good, and more particularly when old; but though strong, it is productive of no ill effects, and, indeed, is the only wine that will not cause intoxication.

The abundance of their produce again recommends other vines to us, and, in the first place, that known as the "helvennaca." Of this vine there are two kinds; the larger, which is by some called the "long" helvennaca, and the smaller kind, which is known as the "emarcum," not so prolific as the first, but producing a wine of more agreeable flavour; it is distinguished by its rounded leaf, but they are both of them of slender make. It is requisite to place forks beneath these vines for the support of their branches, as otherwise it would be quite impossible for them to support the weight of their produce: they receive nutriment from the breezes that blow from the sea, and foggy weather is injurious to them. There is not one among the vines that manifests a greater aversion to Italy, for there it becomes comparatively leafless and stunted, and soon decays, while the wine

which it produces there will not keep beyond the summer: no vine, however, thrives better in a poor soil. Græcinus, who has copied from the works of Cornelius Celsus, gives it as his opinion that it is not that the nature of this vine is repugnant to the climate of Italy, but that it is the mode of cultivating it that is wrong, and the anxiety to force it to put forth its shoots; a mode of treatment, he thinks, which absorbs all its fertility, unless the soil in which it is planted happens to be remarkably rich, and by its support prevents it from being exhausted. It is said that this vine is never carbuncled, a remarkable quality, if, indeed, it really is the fact that there is any vine in existence that is exempt from the natural influences of the climate.

The spionia, by some called the "spinea," is able to bear heat very well, and thrives in the autumn and rainy weather: indeed, it is the only one among all the vines that does well amid fogs, for which reason it is peculiar to the territory of Ravenna. The venicula is one of those that blossom the strongest, and its grapes are particularly well adapted for preserving in jars. The Campanians, however, prefer to give it the name of "scircula," while others, again, call it "stacula." Tarracina has a vine known as the "numisiana;" it has no qualities of its own, but has characteristics just according to the nature of the soil in which it is planted: the wine, however, if kept in the earthen casks of Surrentum, is remarkable for its goodness, that is to say, as far south as Vesuvius. On arriving in that district, we find the Murgentina, the very best among all those that come from Sicily. Some, indeed, call the vine "Pompeiana," and it is more particularly fruitful when grown in Latium, just as the "horconia" is productive nowhere but in Campania. Of a contrary nature is the vine known as the "argeica," and by Virgil called "argitis:" it makes the ground all the more productive, and is remark- ably stout in its resistance to rain and the effects of old age, though it will hardly produce wine every year; it is remarkable for the abundant crops which it bears, though the grapes are held but in small esteem for eating. The vine known as the "metica" lasts well for years, and offers a successful resistance to all changes of weather; the grape is black, and the wine assumes a tawny hue when old.

(3.) The varieties that have been mentioned thus far are those that are generally known; the others belong to peculiar countries or

individual localities, or else are of a mixed nature, the produce of grafting. Thus the vine known as the "Tudernis," is peculiar to the districts of Etruria, and so too is the vine that bears the name of "Florentia." At Arretium the talpona, the etesiaca, and the consemina, are particularly excellent. The talpona, which is a black grape, produces a pale, straw-coloured must: the etesiaca is apt to deceive; the more the wine it produces the better the quality, but it is a remarkable fact, that just as it has reached that point its fecundity ceases altogether. The consemina bears a black grape, but its wine will not keep, though the grape itself is a most excellent keeper; it is gathered fifteen days later than any other kind of grape: this vine is very fruitful, but its grape is only good for eating. The leaves of this tree, like those of the wild vine, turn the colour of blood just before the fall: the same is the case also with some other varieties, but it is a proof that they are of very inferior quality.

The irtiola is a vine peculiar to Umbria and the terri- tories of Mevania and Picenum, while the pumula belongs to Amiternum. In the same districts we find the vine called bannannica, which is very deceptive, though the people are remarkably fond of its fruit. The municipal town of Pompeii has given its name to the Pompeia, although it is to be found in greater abundance in the territory of Clusium. The Tiburina, also, is so called from the municipal town of Tibûr, although it is in this district that they have lately discovered the grape known as the "oleaginea," from its strong resemblance to an olive: this being the very last kind of grape that has been introduced. The Sabines and the Laurentes are the only people acquainted with the vinaciola. As to the vines of Mount Gaurus, I am aware that, as they have been transplanted from the Falernian territory, they bear the name of "Falernian:" but it is a fact that the Falernian vine, when transplanted, rapidly degenerates. Some persons, too, have made out a Tarentine variety, with a grape of remarkable sweetness: the grapes of the "capnios," the "bucconiatis," and the "tarrupia," grow on the hills of Thurii, and are never gathered till after the frost commences. Pisæ enjoys the Parian vine, and Mutina the prusinian, with a black grape, the wine of which turns pale within four years. It is a very remarkable thing, but there is a grape here that turns round with the sun, in its diurnal motion, a

circumstance from which it has received the name of "streptos." In Italy, the Gallic vine is a great favourite, while beyond the Alps that of Picenum is preferred. Virgil has made mention of the Thasian vine, the Mareotis, the lagea, and several other foreign varieties, which are not to be found in Italy.

There are some vines, again, that are remarkable, not for their wine, but for their grapes, such, for instance, as the ambrosia, one of the "duracinus" kind, a grape which requires no potting, but will keep perfectly well if left on the vine, so remarkable is the strength with which it is endowed for withstanding the effects of cold, heat, and stormy weather. The "orthampelos," too, is a vine that requires neither tree nor stay, as it is well able to sustain its own weight. This, however, is not the case with the "dactylis," the stem of which is no thicker than the finger. The "columbina" is one of those with the finest clusters, and still more so is the purple "bimammia;" it does not bear in clusters, but only secondary bunches. There is the tripedanea, too, a name which it owes to the length of its clusters, and the scirpula, with its shrivelled berry; the Rhætica, too, so called in the Maritime Alps, though very different from the grape of that name which is so highly esteemed, and of which we have previously spoken; for in this variety the clusters are small, the grapes lie closely packed, and it produces but a poor wine. It has, however, the thinnest skin of all the grapes, and a single stone, of very diminutive size, which is known as the "Chian;" one or two of the grapes on the cluster are remarkably large. There is also the black Aminean, to which the name of Syriaca is given: the Spanish vine, too, the very best of all those of inferior quality.

The grapes that are known as escariæ, are grown on trellises. Of the duracinus kind, there are those known as the white and the black varieties; the bumastus, too, is similarly distinguished in colour. Among the vines too, that have not as yet been mentioned, there are the Ægian and the Rhodian kinds, as also the uncialis, so called, it would seem, from its grape being an ounce in weight. There is the picina too, the blackest grape known, and the stephanitis, the clusters of which Nature, in a sportive mood, has arranged in the form of a garland, the leaves being interspersed among the grapes; there are the grapes, too, known as the "forenses," and which quickly come to

maturity, recommend themselves to the buyer by their good looks, and are easily carried from place to place.

On the other hand, those known as the “cinerea” are condemned by their very looks, and so are the rabuscula and the asinusca; the produce of the alopecis, which resembles in colour a fox’s tail, is held in less disesteem. The Alexandrina is the name of a vine that grows in the vicinity of Pha- lacra: it is of stunted growth, and has branches a cubit in length; the grape is black, about the size of a bean, with a berry that is soft, and remarkably small: the clusters hang in a slanting direction, and are remarkably sweet; the leaves are small and round, without any division. Within the last seven years there has been introduced at Alba Helvia, in the province of Gallia Narbonensis, a vine which blossoms but a single day, and is consequently proof against all accidents: the name given to it is “Narbonica,” and it is now planted throughout the whole of that province.

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CHAP. 5. (4.)

REMARKABLE FACTS CONNECTED WITH THE CULTURE OF THE VINE.

The elder Cato, who was rendered more particularly illustrious by his triumph and the censorship, and even more so by his literary fame, and the precepts which he has given to the Roman people upon every subject of utility, and the proper methods of cultivation in particular; a man who, by the universal confession, was the first husbandman of his age and without a rival-has mentioned a few varieties only of the vine, the very names of some of which are by this utterly forgotten. His statement on this subject deserves our separate consideration, and requires to be quoted at length, in order that we may make ourselves acquainted with the different varieties of this tree that were held in the highest esteem in the year of the City of Rome 600, about the time of the capture of Carthage and Corinth, the period of his death: it will show too, what great advances civilization has made in the last two hundred and thirty years. The following are the remarks which he has made on the subject of the vine and the grape.

"Where the site is considered to be most favourable to the growth of the vine, and exposed to the warmth of the sun, you will do well to plant the small Aminean, as well as the two eugenia, and the smaller helvia. On the other hand, where the soil is bf a denser nature or more exposed to fogs, the greater Aminean should be planted, or else the Murgentine, or the Apician of Lucania. The other varieties of the grape are, for the most part, adapted to any kind of soil; they are best preserved in a lora. The best for keeping by hanging, are the duracinus kind, the greater Aminean, and the Scantian; these, too, will make excellent raisins for keeping if dried at the blacksmith's forge." There are no precepts in the Latin language on this subject more ancient than these, so near are we to the very commencement of all our practical knowledge! The Aminean grape, of which mention has been made above, is by Varro called the "Scantian."

In our own times we have but few instances of any consummate skill that has been manifested in reference to this subject: the less excuse then should we have for omitting any particular which may

tend to throw a light upon the profits that may be derived from the culture of the vine, a point which on all occasions is regarded as one of primary importance. Acilius Sthenelus, a man of plebeian rank, and the son of a freedman, acquired very considerable repute from the cultivation of a vineyard in the territory of Nomentum, not more than sixty jugera in extent, and which he finally sold for four hundred thousand sesterces. Vetulenus Ægialus too, a freedman as well, acquired very considerable note in the district of Liternum, in Campania, and, indeed, received a more extensive share of the public favour, from the fact that he cultivated the spot which had been the place of exile of Scipio Africanus. The greatest celebrity of all, however, was that which, by the agency of the same Sthenelus, was accorded to Rhemmius Palæmon, who was also equally famous as a learned grammarian. This person bought, some twenty years ago, an estate at the price of six hundred thousand sesterces in the same district of Nomentum, about ten miles distant from the City of Rome. The low price of property in the suburbs, on every side of the City, is well known; but in that quarter in particular, it had declined to a most remarkable extent; for the estate which he purchased had become deteriorated by long-continued neglect, in addition to which it was situate in the very worst part of a by no means favourite locality. Such was the nature of the property of which he thus undertook the cultivation, not, indeed, with any commendable views or intentions at first, but merely in that spirit of vanity for which he was notorious in so remarkable a degree. The vineyards were all duly dressed afresh, and hoed, under the superintendence of Sthenelus; the result of which was that Palæmon, while thus playing the husbandman, brought this estate to such an almost incredible pitch of perfection, that at the end of eight years the vintage, as it hung on the trees, was knocked down to a purchaser for the sum of four hundred thousand sesterces; while all the world was running to behold the heaps upon heaps of grapes to be seen in these vineyards. The neighbours, by way of finding some excuse for their own indolence, gave all the credit of this remarkable success to Palæmon's profound erudition; and at last Annæus Seneca, who both held the highest rank in the learned world, and an amount of power and influence which at last proved too much for him — this same Seneca, who was far from

being an admirer of frivolity, was seized with such vast admiration of this estate, as not to Feel ashamed at conceding this victory to a man who was otherwise the object of his hatred, and who would be sure to make the very most of it, by giving him four times the original cost for those very vineyards, and that within ten years from the time that he had taken them under his management. This was an example of good husbandry worthy to be put in practice upon the lands of Cæcuba and of Setia; for since then these same lands have many a time produced as much as seven culei to the jugerum, or in other words, one hundred and forty amphoræ of must. That no one, however, may entertain the belief that ancient times were surpassed on this occasion, I would remark that the same Cato has stated in his writings, that the proper return was seven culei to the jugerum: all of them so many instances only tending most convincingly to prove that the sea, which in our rashness we trespass upon, does not make a more bounteous return to the merchant, no, not even the merchandize that we seek on the shores of the Red and the Indian Seas, than does a well-tilled homestead to the agriculturist.

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CHAP. 6.

THE MOST ANCIENT WINES.

The wine of Maronea, on the coast of Thrace, appears to have been the most celebrated in ancient times, as we learn from the writings of Homer. I dismiss, however, all the fabulous stories and various traditions which we find relative to its origin, except, indeed, the one which states that Aristæus, a native of the same country, was the first person that mixed honey with wine, natural productions, both of them, of the highest degree of excellence. Homer has stated that the Maronean wine was mixed with water in the proportion of twenty measures of water to one of wine. The wine that is still produced in the same district retains all its former strength, and a degree of vigour that is quite insuperable. Mucianus, who thrice held the consulship, and one of our most recent authors, when in that part of the world was witness himself to the fact, that with one sextarius of this Wine it was the custom to mix no less than eighty sextarii of water: he states, also, that this wine is black, has a strong bouquet, and is all the richer for being old.

The Pramnian wine, too, which Homer has also similarly eulogized, still retains its ancient fame: it is grown in the territory of Smyrna, in the vicinity of the shrine of the Mother of the Gods.

Among the other wines now known, we do not find any that enjoyed a high reputation in ancient times. In the year of the consulship of L. Opimius, when C. Gracchus, the tribune of the people, engaging in sedition, was slain, the growth of every wine was of the very highest quality. In that year, the weather was remarkable for its sereneness, and the ripening of the grape, the "coctura," as they call it, was fully effected by the heat of the sun. This was in the year of the City 633. There are wines still preserved of this year's growth, nearly two hundred years ago; they have assumed the consistency of honey, with a rough taste; for such, in fact, is the nature of wines, that, when extremely old, it is impossible to drink them in a pure state; and they require to be mixed with water, as long keeping renders them intolerably bitter. A very small quantity of the

Opimian wine, mixed with them, will suffice for the seasoning of other wines. Let us suppose, according to the estimated value of these wines in those days, that the original price of them was one hundred sesterces per amphora: if we add to this six per- cent. per annum, a legal and moderate interest, we shall then be able to ascertain what was the exact price of the twelfth part of an amphora at the beginning of the reign of Caius Cæsar, the son of Germanicus, one hundred and sixty years after that consulship. In relation to this fact, we have a remarkable instance, when we call to mind the life of Pom- ponius Secundus, the poet, and the banquet which he gave to that prince — so enormous is the capital that lies buried in our cellars of wine! Indeed, there is no one thing, the value of which more sensibly increases up to the twentieth year, or which decreases with greater rapidity after that period, supposing that the value of it is not by that time greatly enhanced. Very rarely, indeed, up to the present day, has it been known for a single piece of wine to cost a thousand sesterces, except, indeed, when such a sum may have been paid in a fit of extravagance and debauchery. The people of Vienne, it is said, are the only ones who have set a higher price than this upon their "picata," wines, the various kinds of which we have already mentioned; and this, it is thought, they only do, vying with each other, and influenced by a sort of national self-esteem. This wine, drunk in a cool state, is generally thought to be of a colder temperature than any other.

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CHAP. 7. (5.)

THE NATURE OF WINES.

It is the property of wine, when drunk, to cause a Feeling of warmth in the interior of the viscera, and, when poured upon the exterior of the body, to be cool and refreshing. It will not be foreign to my purpose on the present occasion to state the advice which Androcydes, a man famous for his wisdom, wrote to Alexander the Great, with the view of putting a check on his intemperance: “When you are about to drink wine, O king!” said he, “remember that you are about to drink the blood of the earth: hemlock is a poison to man, wine a poison to hemlock.” And if Alexander had only followed this advice, he certainly would not have had to answer for slaying his friends in his drunken fits. In fact, we may Feel ourselves quite justified in saying that there is nothing more useful than wine for strengthening the body, while, at the same time, there is nothing more pernicious as a luxury, if we are not on our guard against excess.

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CHAP. 8. (6.)

FIFTY KINDS OF GENEROUS WINES.

Who can entertain a doubt that some kinds of wine are more agreeable to the palate than others, or that even out of the very same vat there are occasionally produced wines that are by no means of equal goodness, the one being much superior to the other, whether it is that it is owing to the cask, or to some other fortuitous circumstance? Let each person, therefore, constitute himself his own judge as to which kind it is that occupies the pre-eminence. Livia Augusta, who lived to her eighty-second year, attributed her longevity to the wine of Pucinum, as she never drank any other. This wine is grown near a bay of the Adriatic, not far from Mount Timavus, upon a piece of elevated rocky ground, where the sea-breeze ripens a few grapes, the produce of which supplies a few amphoræ: there is not a wine that is deemed superior to this for medicinal purposes. I am strongly of opinion that this is the same wine, the produce of the Adriatic Gulf, upon which the Greeks have bestowed such wonderful encomiums, under the name of Prætetianum.

The late Emperor Augustus preferred the Setinum to all others, and nearly all the emperors that have succeeded him have followed his example, having learnt from actual experience that there is no danger of indigestion and flatulence resulting from the use of this liquor: this wine is grown in the country that lies just above Forum Appii. In former times the Cæcubum enjoyed the reputation of being the most generous of all the wines; it was grown in some marshy swamps, planted with poplars, in the vicinity of the Gulf of Amyclæ. This vineyard has, however, now disappeared, the result of the carelessness of the cultivator, combined with its own limited extent, and the works on the canal which Nero commenced, in order to provide a navigation from Lake Avernus to Ostia.

The second rank belonged to the wine of the Falernian territory, of which the Faustianum was the most choice variety; the result of the care and skill employed upon its cultivation. This, however, has

also degenerated very considerably, in consequence of the growers being more solicitous about quantity than quality. The Falernian vineyards begin at the bridge of Campania, on the left-hand as you journey towards the Urbana Colonia of Sylla, which was lately a township of the city of Capua. As to the Faustian vineyards, they extend about four miles from a village near Cædicix, the same village being six miles from Sinuessa. There is now no wine known that ranks higher than the Falernian; it is the only one, too, among all the wines that takes fire on the application of flame. There are three varieties of it — the rough, the sweet, and the thin. Some persons make the following distinctions: the Caucinum, they say, grows on the summit of this range of hills, the Faustianum on the middle slopes, and the Falernum at the foot: the fact, too, should not be omitted, that none of the grapes that produce these more famous wines have by any means an agreeable flavour.

To the third rank belonged the various wines of Alba, in the vicinity of the City, remarkable for their sweetness, and some- times, though rarely, rough as well: the Surrentine wines, also, the growth of only stayed vines, which are especially recommended to invalids for their thinness and their wholesomeness. Tiberius Cæsar used to say that the physicians had conspired thus to dignify the Surrentinum, which was, in fact, only another name for generous vinegar; while Caius Cæsar, who succeeded him, gave it the name of "noble vappa." Vying in reputation with these are the Massic wines, from the spots which look from Mount Gaurus towards Puteoli and Baiæ. As to the wines of Stata, in the vicinity of Falernum, there is no doubt that they formerly held the very highest rank, a fact which proves very clearly that every district has its own peculiar epochs, just as all other things have their rise and their decadence. The Calenian wines, too, from the same neighbourhood, used to be preferred to those last mentioned, as also the Fundanian, the produce of vines grown on stays, or else attached to shrubs. The wines, too, of Veliternum and Priverna, which were grown in the vicinity of the City, used to be highly esteemed. As to that produced at Signia, it is by far too rough to be used as a wine, but is very useful as an astringent, and is consequently reckoned among the medicines for that purpose.

The fourth rank, at the public banquets, was given by the late Emperor Julius-he was the first, in fact, that brought them into favour, as we find stated in his Letters — to the Mamertine wines, the produce of the country in the vicinity of Messana, in Sicily. The finest of these was the Potulanum, so called from its original cultivator, and grown on the spots that lie nearest to the mainland of Italy. The Tauromenitanum also, a wine of Sicily, enjoys a high repute, and fiaggons of it are occasionally passed off for Mamertinum.

Among the other wines, we find mentioned upon the Upper Sea those of Prætutia and Ancona, as also those known as the "Palmensia," not improbably because the cluster springs from a single shoot. In the interior we find the wines of Cæsena and that known as the Mæcenatian, while in the territory of Verona there are the Rhætian wines, only inferior, in the estimation of Virgil, to the Falernian. Then, too, at the bottom of the Gulf we find the wines of Adria. On the shores of the Lower Sea there are the Latiniensian wines, the Graviscan, and the Statonian: in Etruria, the wines of Luna bear away the palm, and those of Genua in Liguria. Massilia, which lies between the Pyrenees and the Alps, produces two varieties of wine, one of which is richer and thicker than the other, and is used for seasoning other wines, being generally known as "succosum." The repu- tation of the wine of Beterræ does not extend beyond the Gallic territories; and as for the others that are produced in Gallia Narbonensis, nothing can be positively stated, for the growers of that country have absolutely established manufactories for the purposes of adulteration, where they give a dark hue to their wines by the agency of smoke; I only wish I could say, too, that they do not employ various herbs and noxious drugs for the same purpose; indeed, these dealers are even known to use aloes for the purpose of heightening the flavour and improving the colour of their wines.

The regions of Italy that are at a greater distance from the Ausonian Sea, are not without their wines of note, such as those of Tarentum, Servitia, and Consentia, and those, again, of Tempsa, Babia, and Lucania, among which the wines of Thurii hold the pre-eminence. But the most celebrated of all of them, owing to the fact that Messala used to drink it, and was indebted to it for his excellent

health, was the wine of Lagara, which was grown not far from Grumentum. In Campania, more recently, new growths under new names have gained considerable credit, either owing to careful cultivation, or else to some other fortuitous circumstances: thus, for instance, we find four miles from Neapolis the Trebellian, near Capua the Cauline, wine, and the wine of Trebula grown in the territory so called, though but of a common sort: Campania boasts of all these, as well as of her Trifoline wines. As to the wines of Pompeii, they have arrived at their full perfection in ten years, after which they gain nothing by age: they are found also to be productive of headache, which often lasts so long as the sixth hour of the next day.

These illustrations, if I am not greatly mistaken, will go far to prove that it is the land and the soil that is of primary importance, and not the grape, and that it is quite superfluous to attempt to enumerate all the varieties of every kind, seeing that the same vine, transplanted to several places, is productive of features and characteristics of quite opposite natures. The vineyards of Laletanum in Spain are remarkable for the abundance of wine they produce, while those of Tarraco and of Lauron are esteemed for the choice qualities of their wines: those, too, of the Balearic Isles are often put in comparison with the very choicest growths of Italy.

I am by no means unaware that most of my readers will be of opinion that I have omitted a vast number of wines, seeing that every one has his own peculiar choice; so much so, that wherever we go, we hear the same story told, to the effect that one of the freedmen of the late Emperor Augustus, who was remarkable for his judgment and his refined taste in wines, while employed in tasting for his master's table, made this observation to the master of the house where the emperor was staying, in reference to some wine the growth of that particular country: "The taste of this wine," said he, "is new to me, and it is by no means of first-rate quality; the emperor, however, you will see, will drink of no other." Indeed I have no wish to deny that there may be other wines deserving of a very high reputation, but those which I have already enumerated are the varieties upon the excellence of which the world is at present agreed.

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CHAP. 9. (7.)

THIRTY-EIGHT VARIETIES OF FOREIGN WINES.

We will now, in a similar manner, give a description of the varieties found in the parts beyond sea. After the wines mentioned by Homer, and of which we have already spoken, those held in the highest esteem were the wines of Thasos and Chios, and of the latter more particularly the sort known as "Arvisium." By the side of these has been placed the wine of Lesbos, upon the authority of Erasistratus, a famous physician, who flourished about the year of the City of Rome 450. At the present day, the most esteemed of all is the wine of Clazomenæ, since they have learned to season it more sparingly with sea-water. The wine of Lesbos has naturally a taste of sea-water. That from Mount Tmolus is not so much esteemed by itself for its qualities as a wine, as for its peculiar sweetness. It is on account of this that it is mixed with other wines, for the purpose of modifying their harsh flavour, by imparting to them a portion of its own sweetness; while at the same time it gives them age, for immediately after the mixture they appear to be much older than they really are. Next in esteem after these are the wines of Sicyon, Cyprus, Telmessus, Tripolis, Berytus, Tyre, and Sebennys, this last is grown in Egypt, being the produce of three varieties of grape of the very highest quality, known as the Thasian, the æthalus, and the peuce. Next in rank are the hippodamantian wine, the Mystic, the cantharite, the protropum of Cnidos, the wine of the catacecaumene, the Petritan, and the Myconian; as to the Mesogitic, it has been found to give head-ache, while that of Ephesus is far from wholesome, being seasoned with sea-water and defrutum. It is said that the wine of Apamea is remarkably well adapted for making mulsum, like that of Præ- tutia in Italy: for this is a quality peculiar to only certain kinds of wine, the mixture of two sweet liquids being in general not attended with good results. The protagion is quite gone out of date, a wine which the school of Asclepiades has reckoned as next in merit to those of Italy. The physician Apollodorus, in the work which he wrote recommending King Ptolemy what wines in particular to drink

— for in his time the wines of Italy were not generally known — has spoken in high terms of that of Naspercene in Pontus, next to which he places the Oretic, and then the Æneatian, the Leucadian, the Ambraciotic, and the Peparethian, to which last he gives the preference over all the rest, though he states that it enjoyed an inferior reputation, from the fact of its not being considered fit for drinking until it had been kept six years.

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CHAP. 10. (8.)

SEVEN KINDS OF SALTED WINES.

Thus far we have treated of wines, the goodness of which is due to the country of their growth. In Greece the wine that is known by the name of "bion," and which is administered for its curative qualities in several maladies (as we shall have occasion to remark when we come to speak on the subject of Medicine), has been justly held in the very highest esteem. This wine is made in the following manner: the grapes are plucked before they are quite ripe, and then dried in a hot sun: for three days they are turned three times a day, and on the fourth day they are pressed, after which the juice is put in casks, and left to acquire age in the heat of the sun.

The people of Cos mix sea-water in large quantities with their wines, an invention which they first learned from a slave, who adopted this method of supplying the deficiency that had been caused by his thievish propensities. When this is mixed with white must, the mixture receives the name of "leu- cocoum." In other countries again, they follow a similar plan in making a wine called "tethalassomenon." They make a wine also known as "thalassites," by placing vessels full of must in the sea, a method which quickly imparts to the wine all the qualities of old age. In our own country too, Cato has shown the method of making Italian wine into Coan: in addition to the modes of preparation above stated, he tells us that it must be left exposed four years to the heat of the sun, in order to bring it to maturity. The Rhodian wine is similar to that of Cos, and the Phorinean is of a still salter flavour. It is generally thought that all the wines from beyond sea arrive at their middle state of maturity in the course of six or seven years.

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CHAP. 11. (9.)

EIGHTEEN VARIETEIS OF SWEET WINE. RAISIN-WINE AND HEPSEMA.

All the luscious wines have but little aroma: the thinner the wine the more aroma it has. The colours of wines are four, white, brown, blood-coloured, and black. Psythium and melampsythium are varieties of raisin-wine which have the peculiar flavour of the grape, and not that of wine. Seybelites is a wine grown in Galatia, and Aluntium is a wine of Sicily, both of which have the flavour of mulsum. As to siræum, by some known as "hepsema," and which in our language is called "sapa," it is a product of art and not of Nature, being prepared from must boiled down to one-third: when must is boiled down to one-half only, we give it the name of " defrutum." All these mixtures have been devised for the adulteration of honey. As to those varieties which we have previously mentioned, their merits depend upon the grape, and the soil in which it is grown. Next after the raisin-wine of Crete, those of Cilicia and Africa are held in the highest esteem, both in Italy as well as the adjoining provinces. It is well known that it is made of a grape to which the Greeks have given the name of "stica," and which by us is called "apiana:" it is also made of the scirpula. The grapes are left on the vine to dry in the sun, or else are boiled in the dolium. Some persons make this wine of the sweet and early white grape: they leave the grapes to dry in the sun, until they have lost pretty nearly half their weight, after which they crush them and subject them to a gentle pressure. They then draw off the juice, and add to the pulp that is left an equal quantity of well-water, the product of which is raisin-wine of second quality. The more careful makers not only do this, but take care also after drying the grapes to remove the stalks, and then steep the raisins in wine of good quality until they swell, after which they press them. This kind of raisin-wine is preferred to all others: with the addition of water, they follow the same plan in making the wine of second quality.

The liquor to which the Greeks give the name of" aigleucos," is of middle quality, between the sirops and what is properly called wine;

with us it is called “semper mustum.” It is only made by using great precaution, and taking care that the must does not ferment; such being the state of the must in its transformation into wine. To attain this object, the must is taken from the vat and put into casks, which are immediately plunged into water, and there left to remain until the winter solstice is past, and frosty weather has made its appearance. There is another kind, again, of natural aigleucos, which is known in the province of Narbonensis by the name of “dulce,” and more particularly in the district of the Vocontii. In order to make it, they keep the grape hanging on the tree for a considerable time, taking care to twist the stalk. Some, again, make an incision in the bearing shoot, as deep as the pith, while others leave the grapes to dry on tiles. The only grape, however, that is used in these various processes is that of the vine known as the “helvennaca.”

Some persons add to the list of these sweet wines that known as “diachyton.” It is made by drying grapes in the sun, and then placing them for seven days in a closed place upon hurdles, some seven Feet from the ground, care being taken to protect them at night from the dews: on the eighth day they are trodden out: this method, it is said, produces a liquor of exquisite bouquet and flavour. The liquor known as melitites is also one of the sweet wines: it differs from mulsum, in being made of must; to five congii of rough-fla- voured must they put one congius of honey, and one cyathus of salt, and they are then brought to a gentle boil: this mixture is of a rough flavour. Among these varieties, I ought to place what is known as “protropum;” such being the name given by some to the must that runs spontaneously from the grapes before they are trodden out. Directly it flows it is put into flaggons, and allowed to ferment; after which it is left to ripen for forty days in a summer sun, about the rising of the Dog-star.

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CHAP. 12. (10.)

THREE VARIETIES OF SECOND-RATE WINE.

Those cannot properly be termed wines, which by the Greeks are known under the name of “deuteria,” and to which, in common with Cato, we in Italy give the name of “lora,” being made from the husks of grapes steeped in water. Still, however, this beverage is reckoned as making one of the “labourers’” wines. There are three varieties of it: the first is made in the following manner: — After the must is drawn off, one-tenth of its amount in water is added to the husks, which are then left to soak a day and a night, and then are again subjected to pressure. A second kind, that which the Greeks are in the habit of making, is prepared by adding one-third in water of the quantity of must that has been drawn off, and after submitting the pulp to pressure, the result is reduced by boiling to one-third of its original quantity. A third kind, again, is pressed out from the wine-lees; Cato gives it the name of “fæcatum.” None of these beverages, however, will keep for more than a single year.

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CHAP. 13. (11.)

AT WHAT PERIOD GENEROUS WINES WERE FIRST COMMONLY MADE IN ITALY.

While treating of these various details, it occurs to me to mention that of the eighty different kinds throughout the whole earth, which may with propriety be reckoned in the class of generous wines, fully two-thirds are the produce of Italy, which consequently in this respect far surpasses any other country: and on tracing this subject somewhat higher up, the fact suggests itself, that the wines of Italy have not been in any great favour from an early period, their high repute having only been acquired since the six hundredth year of the City.

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CHAP. 14. (12.)

THE INSPECTION OF WINE ORDERED BY KING ROMULUS.

Romulus made libations, not with wine but with milk; a fact which is fully established by the religious rites which owe their foundation to him, and are observed even to the present day. The Posthumian Law, promulgated by King Numa, has an injunction to the following effect:—" Sprinkle not the funeral pyre with wine;" a law to which he gave his sanction, no doubt, in consequence of the remarkable scarcity of that commodity in those days. By the same law, he also pronounced it illegal to make a libation to the gods of wine that was the produce of an unpruned vine, his object being to compel the husbandmen to prune their vines; a duty which they showed themselves reluctant to perform, in consequence of the danger which attended climbing the trees. M. Varro informs us, that Mezentius, the king of Etruria, succoured the Rutuli against the Latini, upon condition that he should receive all the wine that was then in the territory of Latium.

(13.) At Rome it was not lawful for women to drink wine. Among the various anecdotes connected with this subject, we find that the wife of Egnatius Mecenius was slain by her husband with a stick, because she had drunk some wine from the vat, and that he was absolved from the murder by Romulus. Fabius Pictor, in his Book of Annals, has stated that a certain lady, for having opened a purse in which the keys of the wine-cellar were kept, was starved to death by her family: and Cato tells us, that it was the usage for the male relatives to give the females a kiss, in order to ascertain whether they smelt of "temetum;" for it was by that name that wine was then known, whence our word "temulentia," signifying drunkenness. Cn. Domitius, the judge, once gave it as his opinion, that a certain woman appeared to him to have drunk more wine than was requisite for her health, and without the knowledge of her husband, for which reason he condemned her to lose her dower. For a very long time there was the greatest economy manifested at Rome in the use of this article. L. Papirius, the general, who, on one occasion, commanded

against the Samnites, when about to engage, vowed an offering to Jupiter of a small cupfull of wine, if he should gain the victory. In fact, among the gifts presented to the gods, we find mention made of offerings of sextarii of milk, but never of wine.

The same Cato, while on his voyage to Spain, from which he afterwards returned triumphant, would drink of no other wine but that which was served out to the rowers — very different, indeed, to the conduct of those who are in the habit of giving to their guests even inferior wine to that which they drink themselves, or else contrive to substitute inferior in the course of the repast.

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CHAP. 15.

WINES DRUNK BY THE ANCIENT ROMANS.

The wines that were the most esteemed among the ancient Romans were those perfumed with myrrh, as mentioned in the play of Plautus, entitled the "Persian," though we find it there stated that calamus ought to be added to it. Hence it is, that some persons are of opinion that they were particularly fond of aromatites: but Fabius Dossennus quite decides the question, in the following line:— "I sent them good wine, myrrh-wine;" and in his play called "Acharistio," we find these words-" Bread and pearled barley, myrrh — wine too." I find, too, that Scævola and L. Ælius, and Ateius Capito, were of the same opinion; and then we read in the play known as the "Pseudolus:"—" But if it is requisite for him to draw forth what is sweet from the place, has he aught of that?" to which Charinus makes answer," Do you ask the question? He has myrrh wine, raisin wine, defrutum, and honey;" from which it would appear that myrrh wine was not only reckoned among the wines, but among the sweet wines too.

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CHAP. 16. (14.)

SOME REMARKABLE FACTS CONNECTED WITH WINE-LOFTS. THE OPIMIAN WINE.

The fact of the existence of the Opimian wine gives undoubted proof that there were wine-lofts, and that wine was racked off in the year of Rome 633, Italy being already alive to the blessings she enjoyed. Still, however, the several varieties that are now so celebrated were not so in those days; and hence it is that all the wines that were grown at that period have only the one general name of "Opimian" wines, from the then consul Opimius. So, too, for a long time afterwards, and, indeed, so late as the times of our grandfathers, the wines from beyond sea were held in the highest esteem, even though Falernian was already known, a fact which we learn from the line of the Comic writer, "I shall draw five cups of Thasian and two of Falernian."

P. Licinius Crassus, and L. Julius Cæsar, who were Censors in the year from the Building of the City 665, issued an edict forbidding the sale of either Greek or Aminean wine at a higher price than eight asses the quadrantal — for such, in fact, are the exact words of the edict. Indeed, the Greek wines were so highly valued, that not more than a single cup was served to a guest during the repast.

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CHAP. 17.

AT WHAT PERIOD FOUR KINDS OF WINE WERE FIRST SERVED AT TABLE.

M. Varro gives us the following statement as to the wines that were held in the highest esteem at table in his day: “L. Lucullus, when a boy, never saw an entertainment at his father’s house, however sumptuous it might be, at which Greek wine was handed round more than once during the repast: whereas he himself, when he returned from Asia, distributed as a largess among the people more than a hundred thousand congiaria of the same wine. C. Sentius, whom we have seen Prætor, used to say that Chian wine never entered his house until his physician prescribed it to him for the cardiac disease. On the other hand, Hortensius left ten thousand casks of it to his heir.” Such is the statement made by Varro.

(15.) And besides, is it not a well-known fact that Cæsar, when Dictator, at the banquet given on the occasion of his triumph, allotted to each table an amphora of Falernian and a cadus of Chian? On the occasion, too, of his triumph for his victories in Spain, he put before the guests both Chian as well as Falernian; and again, at the banquet given on his third consulship, he gave Falernian, Chian, Lesbian, and Marmertine; indeed, it is generally agreed that this was the first occasion on which four different kinds of wine were served at table. It was after this, then, that all the other sorts came into such very high repute, somewhere about the year of the City 700.

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CHAP. 18. (16.)

THE USES OF THE WILD VINE. WHAT JUICES ARE NATURALLY THE COLDEST OF ALL.

I am not surprised, then, that for these many ages there have been invented almost innumerable varieties of artificial wines, of which I shall now make some mention; they are all of them employed for medicinal purposes. We have already stated in a former Book how omphacium, which is used for unguents, is made. The liquor known as "œnanthinum" is made from the wild vine, two pounds of the flowers of which are steeped in a cadus of must, and are then changed at the end of thirty days. In addition to this, the root and the husks of the grapes are employed in dressing leather. The grapes, too, a little after the blossom has gone off, are singularly efficacious as a specific for cooling the feverish heat of the body in certain maladies, being, it is said, of a nature remarkable for extreme coldness. A portion of these grapes wither away, in consequence of the heat, before the rest, which are thence called solstitial grapes; indeed, the whole of them never attain maturity; if one of these grapes, in an unripe state, is given to a barn-door fowl to eat, it is productive of a dislike to grapes for the future.

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CHAP. 19.

SIXTY-SIX VARIETIES OF ARTIFICIAL WINE.

The first of the artificial wines has wine for its basis; it is called "adynamon," and is made in the following manner. Twenty sextarii of white must are boiled down with half that quantity of water, until the amount of the water is lost by evaporation. Some persons mix with the must ten sextarii of sea-water and an equal quantity of rain-water, and leave the whole to evaporate in the sun for forty days. This beverage is given to invalids to whom it is apprehended that wine may prove injurious.

The next kind of artificial wine is that made of the ripe grain of millet; a pound and a quarter of it with the straw is steeped in two congii of must, and the mixture is poured off at the end of six months. We have already stated how various kinds of wine are made from the tree, the shrub, and the herb, respectively known as the lotus.

From fruit, too, the following wines are made, to the list of which we shall only add some necessary explanations: — First of all, we find the fruit of the palm employed for this pur- pose by the Parthians as well as the Indians, and, indeed. throughout all the countries of the East. A modius of the kind of ripe date called "chyd" is added to three congii of water, and after being steeped for some time, they are subjected to pressure. Sycites is a preparation similarly made from figs: some persons call it "palmiprimum," others, again, "catorchites:" if sweetness is not the maker's object, instead of water there is added the same quantity of husk juice of grapes. Of the Cyprian fig a very excellent vinegar, too, is made, and of that of Alexandria a still superior.

A wine is made, too, of the pods of the Syrian carob, of pears, and of all kinds of apples. That known as" rhoites" is made from pomegranates, and other varieties are prepared from cornels, medlars, sorb apples, dried mulberries, and pinenuts; these last are left to steep in must, and are then pressed; the others produce a sweet liquor of themselves. We shall have occasion before long to show

how Cato has pointed out the method of making myrtites: the Greeks, however, adopt a different method in making it. They first boil tender sprigs of myrtle with the leaves on in white must, and after pounding them, boil down one pound of the mixture in three congii of must, until it is reduced to a couple of congii. The beverage that is prepared in this manner with the berries of wild myrtle is known as "myrtidanum;" it will stain the hands.

Among the garden plants we find wines made of the following kinds: the radish, asparagus, cunila, origanum, parsley- seed, abrotonum, wild mint, rue, catmint, wild thyme, and horehound. A couple of handfuls of these ingredients are put into a cadus of must, as also one sextarius of sapa, and half a sextarius of sea-water. A wine is made of the naphew turnip by adding two drachms of naphew to two sextarii of must. A wine is made also from the roots of squills. Among the flowers, that of the rose furnishes a wine: the leaves are put in a linen cloth and then pounded, after which they are thrown into must with a small weight attached to make them sink to the bottom, the proportion being forty drachms of leaves to twenty sextarii of must; the vessel in which it is kept must not be opened before the end of three months. A wine, too, is made of Gallic nard, and another kind of the wild variety of that plant.

I find, also, that various kinds of aromatites are prepared, differing but very little in their mode of composition from that of the unguents, being made in the first instance, as I have already stated, of myrrh, and then at a later period of Celtic nard, calamus, and aspalathus, of which cakes are made, and are then thrown into either must or sweet wine. Others, again, make these wines of calamus, scented rush, costus, Syrian nard, amomum, cassia, cinnamon, saffron, palm-dates, and foal-foot, all of which are made up into cakes in a similar manner. Other persons, again, put half a pound of nard and malobathrum to two congii of must; and it is in this manner that at the present day, with the addition of pepper and honey, the wines are made by some known as confection wines, and by others as peppered wines. We find mention made of nectarites also, a beverage extracted from a herb known to some as "helenion," to others as "Medica," and to others, again, as symphyton, Idea, Orestion, or nectaria, the root of which is added in the proportion of

forty drachms to six sextarii of must, being first similarly placed in a linen cloth.

As to other kinds of herbs, we find wormwood wine, made of Pontic wormwood in the proportion of one pound to forty sextarii of must, which is then boiled down until it is reduced to one third, or else of slips of wormwood put in wine. In a similar manner, hyssop wine is made of Cilician hyssop, by adding three ounces of it to two congii of must, or else by pounding three ounces of hyssop, and adding them to one congius of must. Both of these wines may be made also in another method, by sowing these plants around the roots of vines. It is in this manner, too, that Cato tells us how to make hellebore wine from black hellebore; and a similar method is used for making scammony wine. The vine has a remarkable propensity of contracting the flavour of any plant that may happen to be growing near it; and hence it is that in the marshy lands of Patavium, the grape has the peculiar flavour of the willow. So, in like manner, we find at Thasos hellebore planted among the vines, or else wild cucumber, or scammony; the wine that is produced from these vines is known by the name of "phthorium," it being productive of abortion.

Wines are made, too, of other herbs, the nature of which will be mentioned in their respective places, the stœchas for instance, the root of gentian, tragoriganum, dittany, foal-foot, daucus, elelisphacus, panax, acorus, conyza, thyme, mandragore, and sweet rush. We find the names mentioned, also, of scyzinum, itæomelis, and lectisphagites, compounds of which the receipt is now lost.

The wines that are made from the shrubs are mostly extracted from the two kinds of cedar, the cypress, the laurel, the juniper, the terebinth, and in Gaul the lentisk. To make these wines, they boil either the berries or the new wood of the shrub in must. They employ, also, the wood of the dwarf olive, the ground-pine, and the germander for a similar purpose, adding at the same time ten drachms of the flower to a congius of must.

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CHAP. 20. (1 7.)

HYDROMELI, OR MELICRATON.

There is a wine also made solely of honey and water. For this purpose it is recommended that rain-water should be kept for a period of five years. Those who shew greater skill, content themselves with taking the water just after it has fallen, and boiling it down to one third, to which they then add one third in quantity of old honey, and keep the mixture exposed to the rays of a hot sun for forty days after the rising of the Dog-star; others, however, rack it off in the course of ten days, and tightly cork the vessels in which it is kept. This beverage is known as “hydromeli,” and with age acquires the flavour of wine. It is nowhere more highly esteemed than in Phrygia.

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CHAP. 21.

OXYMELI.

Vinegar even has been mixed with honey; nothing, in fact, has been left untried by man. To this mixture the name of oxymeli has been given; it is compounded of ten pounds of honey, five semi-sextarii of old vinegar, one pound of sea-salt, and five sextarii of rain-water. This is boiled gently till the mixture has bubbled in the pot some ten times, after which it is drawn off, and kept till it is old; all these wines, however, are condemned by Themison, an author of high authority. And really, by Hercules! the use of them does appear to be somewhat forced, unless, indeed, we are ready to maintain that these aromatic wines are so many compounds taught us by Nature, as well as those that are manufactured of perfumes, or that shrubs and plants have been generated only for the purpose of being swallowed in drink. However, all these particulars, when known, are curious and interesting, and show how successfully the human intellect has pried into every secret.

None of these wines, however, will keep beyond a year, with the sole exception of those which we have spoken of as requiring age; many of these, indeed, there can be no doubt, do not improve after being kept so little as thirty days.

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CHAP. 22. (18.)

TWELVE KINDS OF WINE WITH MIRACULOUS PROPERTIES.

There are some miraculous properties, too, in certain wines. It is said that in Arcadia there is a wine grown which is productive of fruitfulness in women, and of madness in men; while in Achaia, and more especially in the vicinity of Carynia, there is a wine which causes abortion; an effect which is equally produced if a woman in a state of pregnancy happens only to eat a grape of the vine from which it is grown, although in taste it is in no way different from ordinary grapes: again, it is confidently asserted that those who drink the wine of Trœzen never bear children. Thasos, it is said, produces two varieties of wine with quite opposite properties. By one kind sleep is produced, by the other it is prevented. There is also in the same island a vine known as the "theriaca," the wine and grapes of which are a cure for the bites of serpents. The libanian vine also produces a wine with the smell of frankincense, with which they make libations to the gods, while, on the other hand, the produce of that known as "aspendios," is banished from all the altars: it is said, too, that this last vine is never touched by any bird.

The Egyptians call by the name of "Thasian," a certain grape of that country, remarkable for its sweetness and its laxative qualities. On the other hand, there is in Lycia a certain grape which proves astringent to the stomach when relaxed. Egypt has a wine, too, known as "ecbolas," which is productive of abortion. There are some wines, which at the rising of the Dog-star change their nature in the wine-lofts where they are kept, and afterwards recover their original quality. The same is the case, too, with wines when carried across the seas: those that are able to withstand the motion of the waves, appear afterwards to be twice as old as they really are.

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CHAP. 23. (19.)

WHAT WINES IT IS NOT LAWFUL TO USE IN THE SACRED RITES.

As religion is the great basis of the ordinary usages of life, I shall here remark that it is considered improper to offer libations to the gods with any wines which are the produce of an unpruned vine, or of one that has been struck by lightning or near to which a dead man has been hung, or of grapes that have been trodden out by sore Feet, or made of must from husks that have been cut, or from grapes that have been polluted by the fall of any unclean thing upon them. The Greek wines are excluded also from the sacred ministrations, because they contain a portion of water.

The vine itself is sometimes eaten; the tops of the shoots are taken off and boiled, and are then pickled in vinegar and brine.

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CHAP. 24.

How MUST IS USUALLY PREPARED.

It will be as well now to make some mention of the methods used in preparing wines; indeed, several of the Greeks have written separate treatises on this subject, and have made a complete art of it, such, for instance, as Euphronius, Aristomachus, Commiades, and Hicesius. The people of Africa are in the habit of neutralizing such acidity as may be found with gypsum, and in some parts with lime. The people of Greece, on the other hand, impart briskness to their wines when too flat, with potters' earth, pounded marble, salt, or sea-water; while in Italy, again, brown pitch is used for that purpose in some parts, and it is the universal practice both there as well as in the adjoining provinces to season their new wines with resin: sometimes, too, they season them with old wine-lees or vinegar They make various medicaments, also, for this purpose with the must itself. They boil it down till it becomes quite sweet, and has lost a considerable portion of its strength; though thus prepared, they say it will never last beyond a single year. In some places they boil down the must till it becomes sapa, and then mix it with their wines for the purpose of modifying their harshness. Both for these kinds of wines, as, indeed, all others, they always employ vessels which have themselves received an inner coat of pitch; the method of preparing them will be set forth in a succeeding Book.

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CHAP. 25. (20.)

PITH AND RESIN.

Of the trees from which pitch and resin distil, there are some which grow in the East, and others in Europe: the province of Asia, which lies between the two, has also some of both kinds. In the East, the very best commodity of this kind, and of the finest quality, is that produced by the terebinth, and, next to it, that from the lentisk, which is also known as the mastich. The next in quality to these is the juice of the cypress, being of a more acrid flavour than any other. All the above juices are liquid and of a resinous nature only, but that of the cedar is comparatively thick, and of a proper consistency for making pitch. The Arabian resin is of a pale colour, has an acrid smell, and its fumes are stifling to those employed in boiling it. That of Judæa is of a harder nature, and has a stronger smell than that from the terebinth even. The Syrian resin has all the appearance of Attic honey, but that of Cyprus is superior to any other; it is the colour of honey, and is of a soft, fleshy nature. The resin of Colophon is yellower than the other varieties, but when pounded it turns white; it has a stifling smell, for which reason the perfumers do not employ it. That prepared in Asia from the produce of the pitch-tree is very white, and is known by the name of "spagas."

All the resins are soluble in oil; some persons are of opinion also that potters' chalk may be so dissolved: I feel ashamed to avow that the principal esteem in which the resins are held among us is as depilatories for taking the hair off men's bodies.

The method used for seasoning wines is to sprinkle pitch in the must during the first fermentation, which never lasts beyond nine days at the most, so that a bouquet is imparted to the wine, with, in some degree, its own peculiar piquancy of flavour. It is generally considered, that this is done most effectually by the use of raw flower of resin, which imparts a considerable degree of briskness to wine: while, on the other hand, it is thought that crapula itself, if mixed, tends to mitigate the harshness of the wine and subdue its asperity, and when the wine is thin and flat, to give it additional strength and

body. It is in Liguria more particularly, and the districts in the vicinity of the Padus, that the utility is recognized of mixing crapula with the must, in doing which the following rule is adopted: with wines of a strong and generous nature they mix a larger quantity, while with those that are poor and thin they use it more sparingly. There are some who would have the wine seasoned with both crapula and flower of resin at the same time. Pitch too, when used for this purpose, has much the same properties as must when so employed.

In some places, the must is subject to a spontaneous fermentation a second time: when this unfortunately happens it loses all its flavour, and then receives the name of "vappa," a word which is applied as an opprobrious appellation even to worthless men of degenerate spirit: in vinegar, on the other hand, notwithstanding its tart and acrid taste, there are very considerable virtues, and without it we should miss many of the comforts of civilized life.

In addition to what we have already stated, the treatment and preparation of wines are the object of such remarkable attention, that we find some persons employing ashes, and others gypsum and other substances of which we have already spoken, for the purpose of improving its condition: the ashes, however, of the shoots of vines or of the wood of the quercus, are in general preferred for this purpose. It is recommended also, to take sea-water far out at sea, and to keep it in reserve, to be employed for this purpose: at all events, it ought to be taken up in the night and during the summer solstice, while the north-east wind is blowing; but if taken at the time of the vintage, it should be boiled before being used.

The pitch most highly esteemed in Italy for preparing vessels for storing wine, is that which comes from Bruttium. It is made from the resin that distils from the pitch-tree; that which is used in Spain is held in but little esteem, being the produce of the wild pine; it is bitter, dry, and of a disagreeable smell. While speaking of the wild trees in a succeeding Book, we shall make mention of the different varieties of pitch, and the methods used in preparing it. The defects in resin, besides those which we have already mentioned, are a certain degree of acridity, or a peculiar smoky flavour, while the great fault in pitch is the being over-burnt. The ordinary test of its goodness is a certain luminous appearance when broken to pieces; it

ought to stick, too, to the teeth, with a pleasant, tart flavour.

In Asia, the pitch which is most esteemed is that of Mount Ida, in Greece of Pieria; but Virgil gives the preference to the Narycian pitch. The more careful makers mix with the wine black mastich, which comes from Pontus, and resembles bitumen in appearance, as also iris-root and oil. As to coating the vessels with wax, it has been found that the wine is apt to turn acid: it is a better plan to put wine in vessels that have held vinegar, than in those which have previously contained sweet wine or mulsum. Cato recommends that wines should be got *up* — *concinnari* is his word — by putting of lie-ashes boiled down with defrutum, one-fortieth part to the culeus, or else a pound and a half of salt, with pounded marble as well: he makes mention of sulphur also, but only gives the very last place to resin. When the fermentation of the wine is coming to an end, he recommends the addition of the must to which he gives the name of "tortivum," meaning that which is pressed out the very last of all. For the purpose of colouring wine we also add certain substances as a sort of pigment, and these have a tendency to give it a body as well. By such poisonous sophistications is this beverage compelled to suit our tastes, and then we are surprised that it is inju- rious in its effects!

It is a proof that wine is beginning to turn bad, if a plate of lead, on being put in it, changes its colour.

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CHAP. 26.

VINEGAR-LEES OF WINE.

It is a peculiarity of wine, among the liquids, to become mouldy, or else to turn to vinegar. There are whole volumes which treat of the various methods of preventing this.

The lees of wine when dried will take fire and burn without the addition of fuel: the ashes so produced have very much the nature of nitre, and similar virtues; the more so, indeed, the more unctuous they are to the touch.

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CHAP. 27. (21.)

WINE-VESSELS — WINE-CELLARS.

The various methods of keeping and storing wines in the cellar are very different. In the vicinity of the Alps, they put their wines in wooden vessels hooped around; during their cold winters, they even keep lighted fires, to protect the wines from the effects of the cold. It is a singular thing to mention, but still it has been occasionally seen, that these vessels have burst asunder, and there has stood the wine in frozen masses; a miracle almost, as it is not ordinarily the nature of wine to freeze, cold having only the effect of benumbing it. In more temperate climates, they place their wines in dolia, which they bury in the earth, either covering them entirely or in part, according to the temperature. Sometimes, again, they expose their wines in the open air, while at others they are placed beneath sheds for protection from the atmosphere.

The following are among the rules given for the proper management of wines: — One side of the wine-cellar, or, at all events, the windows, ought to face the north-east, or at least due east. All dunghills and roots of trees, and everything of a repulsive smell, ought to be kept at as great a distance as possible, wine being very apt to contract an odour. Fig-trees too, either wild or cultivated, ought not to be planted in the vicinity. Intervals should also be left between the vessels, in order to prevent infection, in case of any of them turning bad, wine being remarkably apt to become tainted. The shape, too, of the vessels is of considerable importance: those that are broad and bellying are not so good. We find it recommended too, to pitch them immediately after the rising of the Dog-star, and then to wash them either with sea or salt water, after which they should be sprinkled with the ashes of tree-shoots or else with potters' earth; they ought then to be cleaned out, and perfumed with myrrh, a thing which ought to be frequently done to the wine-cellars as well. Weak, thin wines should be kept in dolia sunk in the ground, while those in which the stronger ones are kept should be more exposed to the air. The vessels ought on no account to be entirely filled, room being left

for seasoning, by mixing either raisin wine or else defrutum flavoured with saffron; old pitch and sapa are sometimes used for the same purpose. The lids, too, of the dolia ought to be seasoned in a similar manner, with the addition of mastich and Bruttian pitch.

It is strongly recommended never to open the vessels, except in fine weather; nor yet while a south wind is blowing, or at a full moon.

The flower of wine when white is looked upon as a good sign; but when it is red, it is bad, unless that should happen to be the colour of the wine. The vessels, too, should not be hot to the touch, nor should the covers throw out a sort of sweat. When wine very soon flowers on the surface and emits an odour, it is a sign that it will not keep.

As to defrutum and sapa, it is recommended to commence boiling them when there is no moon to be seen, or, in other words, at the conjunction of that planet, and at no other time. Leaden vessels should be used for this purpose, and not copper ones, and walnuts are generally thrown into them, from a notion that they absorb the smoke. In Campania they expose the very finest wines in casks in the open air, it being the opinion that it tends to improve the wine if it is exposed to the action of the sun and moon, the rain and the winds.

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CHAP. 28. (22.)

DRUNKENNESS.

If any one will take the trouble duly to consider the matter, he will find that upon no one subject is the industry of man kept more constantly on the alert than upon the making of wine; as if Nature had not given us water as a beverage, the one, in fact, of which all other animals make use. We, on the other hand, even go so far as to make our very beasts of burden drink wine: so vast are our efforts, so vast our labours, and so boundless the cost which we thus lavish upon a liquid which deprives man of his reason and drives him to frenzy and to the commission of a thousand crimes! So great, however, are its attractions, that a great part of mankind are of opinion that there is nothing else in life worth living for. Nay, what is even more than this, that we may be enabled to swallow all the more, we have adopted the plan of diminishing its strength by pressing it through filters of cloth, and have devised numerous inventions whereby to create an artificial thirst. To promote drinking, we find that even poisonous mixtures have been invented, and some men are known to take a dose of hemlock before they begin to drink, that they may have the fear of death before them to make them take their wine: others, again, take powdered pumice for the same purpose, and various other mixtures, which I should Feel quite ashamed any further to enlarge upon.

We see the more prudent among those who are given to this habit have themselves parboiled in hot-baths, from whence they are carried away half dead. Others there are, again, who cannot wait till they have got to the banqueting couch, no, not so much as till they have got their shirt on, but all naked and panting as they are, the instant they leave the bath they seize hold of large vessels filled with wine, to show of, as it were, their mighty powers, and so gulp down the whole of the contents only to vomit them up again the very next moment. This they will repeat, too, a second and even a third time, just as though they had only been begotten for the purpose of wasting wine, and as if that liquor could not be thrown away without having

first passed through the human body. It is to encourage habits such as these that we have introduced the athletic exercises of other countries, such as rolling in the mud, for instance, and throwing the arms back to show off a brawny neck and chest. Of all these exercises, thirst, it is said, is the chief and primary object.

And then, too, what vessels are employed for holding wine! carved all over with the representations of adulterous intrigues, as if, in fact, drunkenness itself was not sufficiently capable of teaching us lessons of lustfulness. Thus we see wines quaffed out of impurities, and inebriety invited even by the hope of a reward, — invited, did I say? — may the gods forgive me for saying so, purchased outright. We find one person induced to drink upon the condition that he shall have as much to eat as he has previously drunk, while another has to quaff as many cups as he has thrown points on the dice. Then it is that the roving, insatiate eyes are setting a price upon the matron's chastity; and yet, heavy as they are with wine, they do not fail to betray their designs to her husband. Then it is that all the secrets of the mind are revealed; one man is heard to disclose the provisions of his will, another lets fall some expression of fatal import, and so fails to keep to himself words which will be sure to come home to him with a cut throat. And how many a man has met his death in this fashion! Indeed, it has become quite a common proverb, that "in wine there is truth."

Should he, however, fortunately escape all these dangers, the drunkard never beholds the rising sun, by which his life of drinking is made all the shorter. From wine, too, comes that pallid hue, those drooping eyelids, those sore eyes, those tremulous hands, unable to hold with steadiness the overflowing vessel, condign punishment in the shape of sleep agitated by Furies during the restless night, and, the supreme reward of inebriety, those dreams of monstrous lustfulness and of forbidden delights. Then on the next day there is the breath reeking of the wine-cask, and a nearly total obliviousness of everything, from the annihilation of the powers of the memory. And this, too, is what they call "seizing the moments of life! whereas, in reality, while other men lose the day that has gone before, the drinker has already lost the one that is to come.

They first began, in the reign of Tiberius Claudius, some forty

years ago, to drink fasting, and to take whets of wine before meals; an outlandish fashion, however, and only patronized by physicians who wished to recommend themselves by the introduction of some novelty or other.

It is in the exercise of their drinking powers that the Parthians look for their share of fame, and it was in this that Alcibiades among the Greeks earned his great repute. Among ourselves, too, Novellius Torquatus of Mediolanum, a man who held all the honours of the state from the prefecture to the pro-consulate, could drink off three congii at a single draught, a feat from which he obtained the surname of "Tricongius:" this he did before the eyes of the Emperor Tiberius, and to his extreme surprise and astonishment, a man who in his old age was very morose, and indeed very cruel in general; though in his younger days he himself had been too much addicted to wine. Indeed it was owing to that recommendation that it was generally thought that L. Piso was selected by him to have the charge and custody of the City of Rome; he having kept up a drinking-bout at the residence of Tiberius, just after he had become emperor, two days and two nights without intermission. In no point, too, was it generally said that Drusus Cæsar took after his father Tiberius more than this. Torquatus had the rather uncommon glory — for this science, too, is regulated by peculiar laws of its own — of never being known to stammer in his speech, or to relieve the stomach by vomiting or urine, while engaged in drinking. lie was always on duty at the morning guard, was able to empty the largest vessel at a single draught, and yet to take more ordinary cups in addition than any one else; he was always to be implicitly depended upon, too, for being able to drink without taking breath and without ever spitting, or so much as leaving enough at the bottom of the cup to make a plash upon the pavement; thus showing himself an exact observer of the regulations which have been made to prevent all shirking on the part of drinkers.

Tergilla reproaches Cicero, the son of Marcus Cicero, with being in the habit of taking off a couple of congii at a single draught, and with having thrown a cup, when in a state of drunkenness, at M. Agrippa; such, in fact, being the ordinary results of intoxication. But it is not to be wondered at that Cicero was desirous in this respect to

eclipse the fame of M. Antonius, the murderer of his father; a man who had, before the time of the younger Cicero, shown himself so extremely anxious to maintain the superiority in this kind of qualifica- tion, that he had even gone so far as to publish a book upon the subject of his own drunkenness. Daring in this work to speak in his own defence, he has proved very satisfactorily, to lay thinking, how many were the evils he had inflicted upon the world through this same vice of drunkenness. It was but a short time before the battle of Actium that he vomited forth this book of his, from which we have no great difficulty in coming to the conclusion, that drunk as lie already was with the blood of his fellow-citizens, the only result was that he thirsted for it all the more. For, in fact, such is the infallible characteristic of drunkenness, the more a person is in the habit of drinking, the more eager he is for drink; and the remark of the Scythian ambassador is as true as it is well known — the more the Parthians drank, the thirstier they were for it.

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CHAP. 29.

LIQUORS WITH THE STRENGTH OF WINE MADE FROM WATER AND CORN.

The people of the Western world have also their intoxicating drinks, made from corn steeped in water. These beverages are prepared in different ways throughout Gaul and the provinces of Spain; under different names, too, though in their results they are the same. The Spanish provinces have even taught us the fact that these liquors are capable of being kept till they have attained a considerable age. Egypt, too, has invented for its use a very similar beverage made from corn; indeed, in no part of the world is drunkenness ever at a loss. And then, besides, they take these drinks unmixed, and do not dilute them with water, the way that wine is modified; and yet, by Hercules! one really might have supposed that there the earth produced nothing but corn for the people's use. Alas! what wondrous skill, and yet how misplaced! means have absolutely been discovered for getting drunk upon water even.

There are two liquids that are peculiarly grateful to the human body, wine within and oil without; both of them the produce of trees, and most excellent in their respective kinds. Oil, indeed, we may pronounce an absolute necessary, nor has mankind been slow to employ all the arts of invention in the manufacture of it. How much more ingenious, however, man has shown himself in devising various kinds of drink will be evident from the fact, that there are no less than one hundred and ninety-five different kinds of it; indeed, if all the varieties are reckoned, they will amount to nearly double that number. The various kinds of oil are much less numerous — we shall proceed to give an account of them in the following Book.

SUMMARY. — Remarkable facts, narratives, and observations, five hundred and ten.

ROMAN AUTHORS QUOTED. — Cornelius Valerianus, Virgil, Celsus, Cato the Censor, Saserna, father and son, Scrofa, M. Varro, D. Silanus, Fabius Pictor, Trogus, Hyginus, Flaccus Verrius, Græcinus, Julius Atticus, Columella, Massurius Sabinus, Fenestella,

Tergilla, Maccius Plautus, Flavius, Dossennus, Scævola, Ælius, Ateius Capito, cotta Messalinus, L. Piso, Pompeius Lenæus, Fabianus, Sextius Niger, Vibius Rufus.

FOREIGN AUTHORS QUOTED. — Hesiod, Theophrastus, Aristotle, Democritus, King Hiero, King Attalus Philometor, Archytas, Xenophon, Amphilochus of Athens, Anaxipolis of Thasos, Apollodorus of Lemnos, Aristophanes of Miletus, Antigonus of Cymæ, Agathocles of Chios, Apollonius of Pergamus, Aristander of Athens, Botrys of Athens, Bacchius of Miletus, Bion of Soli, Chærea of Athens, Chæristus of Athens, Diodorus of Priene, Dion of Colophon, Epigenes of Rhodes, Euagon of Thasos, Euphronius of Athens, Androtion who wrote on agriculture, Æschrion who wrote on agriculture, Lysimachus who wrote on agriculture, Dionysius who translated Mago, Diophanes who made an Epitome of the work of Dionysius, Asclepiades the Physician. Onesicritus, King Juba.

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BOOK XV. THE NATURAL HISTORY OF THE FRUIT-TREES.

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CHAP. 1. (1.)

THE OLIVE. — HOW LONG IT EXISTED ONLY IN GREECE. AT WHAT PERIOD IT WAS FIRST INTRODUCED INTO ITALY, SPAIN, AND AFRICA.

THEOPHRASTUS, one of the most famous among the Greek writers, who flourished about the year 440 of the City of Rome, has asserted that the olive does not grow at a distance of more than forty miles from the sea. Fenestella tells us that in the year of Rome 173, being the reign of Tarquinius Priscus, it did not exist in Italy, Spain, or Africa; whereas at the present day it has crossed the Alps even, and has been introduced into the two provinces of Gaul and the middle of Spain. In the year of Rome 505, Appius Claudius, grandson of Appius Claudius Cæcus, and L. Junius being consuls, twelve pounds of oil sold for an as; and at a later period, in the year 680, M. Seius, son of Lucius, the curule ædile, regulated the price of olive oil at Rome, at the rate of ten pounds for the as, for the whole year. A person will be the less surprised at this, when he learns that twenty-two years after, in the third consulship of Cn. Pompeius, Italy was able to export olive oil to the provinces.

Hesiod, who looked upon an acquaintance with agriculture as conducive in the very highest degree to the comforts of life, has declared that there was no one who had ever gathered fruit from the olive-tree that had been sown by his own hands, so slow was it in reaching maturity in those times; whereas, now at the present day, it is sown in nurseries even, and if transplanted will bear fruit the following year.

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CHAP. 2.

THE NATURE OF THE OLIVE, AND OF NEW OLIVE OIL.

Fabianus maintains that the olive will grow neither in very cold climates, nor yet in very hot ones. Virgil has mentioned three varieties of the olive, the orchites, the radius, and the posia; and says that they require no raking or pruning, nor, in fact, any attention whatever. There is no doubt that in the case of these plants, soil and climate are the things of primary importance; but still, it is usual to prune them at the same time as the vine, and they are improved by lopping between them every here and there. The gathering of the olive follows that of the grape, and there is even a greater degree of skill required in preparing oil than in making wine; for the very same olives will frequently give quite different results. The first oil of all, produced from the raw olive before it has begun to ripen, is considered preferable to all the others in flavour; in this kind, too, the first droppings of the press are the most esteemed, diminishing gradually in goodness and value; and this, whether the wicker-work basket is used in making it, or whether, following the more recent plan, the pulp is put in a stick strainer, with narrow spikes and interstices. The riper the berry, the more unctuous the juice, and the less agreeable the taste. To obtain a result both abundant and of excellent flavour, the best time to gather it is when the berry is just on the point of turning black. In this state it is called “druppa” by us, by the Greeks, “drypetis.”

In addition to these distinctions, it is of importance to observe whether the berry ripens in the press or while on the branch; whether the tree has been watered, or whether the fruit has been nurtured solely by its own juices, and has imbibed nothing else but the dews of heaven.

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CHAP. 3. (2.)

OLIVE OIL: THE COUNTRIES IN WHICH IT IS PRODUCED, AND ITS VARIOUS QUALITIES.

It is not with olive oil as it is with wine, for by age it acquires a bad flavour, and at the end of a year it is already old. This, if rightly understood, is a wise provision on the part of Nature: wine, which is only produced for the drunkard, she has seen no necessity for us to use when new; indeed, by the fine flavour which it acquires with age, she rather invites us to keep it; but, on the other hand, she has not willed that we should be thus sparing of oil, and so has rendered its use common and universal by the very necessity there is of using it while fresh.

In the production of this blessing as well, Italy holds the highest rank among all countries, and more particularly the territory of Venafrum, that part of it in especial which produces the Licinian oil; the qualities of which have conferred upon the Licinian olive the very highest renown. It is our unguents which have brought this oil into such great esteem, the peculiar odour of it adapting itself so well to the full developement of their qualities; at the same time its delicate flavour equally enlists the palate in its behalf. In addition to this, birds will never touch the berry of the Licinian olive.

Next to Italy, the contest is maintained, and on very equal terms, between the territories of Istria and of Bætica. The next rank for excellence is claimed by the other provinces of our Empire, with the exception of Africa, the soil of which is better adapted for grain. That country Nature has given exclusively to the cereals; of oil and wine she has all but deprived it, securing it a sufficient share of renown by its abundant harvests. As to the remaining particulars connected with the olive, they are replete with erroneous notions, and I shall have occasion to show that there is no part of our agricultural economy upon which people have been more generally mistaken.

(3.) The olive is composed of a stone, oil, flesh, and amurca: the last being a bitter liquid, principally composed of water; hence it is that in seasons of drought it is less plentiful, and more abundant

when rains have prevailed. The oil is a juice peculiar to the olive, a fact more particularly stated in reference to its unripe state, as we have already mentioned when speaking of omphacium. This oil continues on the increase up to the rising of Arcturus, or in other words, the sixteenth day before the calends of October; after which the increase is in the stone and the flesh. When drought has been followed by abundant rains, the oil is spoilt, and turns to amurca. It is the colour of this amurca that makes the olive turn black; hence, when the berry is just beginning to turn that colour, there is but little amurca in it, and before that period none at all. It is an error then, on the part of persons, to suppose that that is the commencement of maturity, which is in reality only the near approach of corruption. A second error, too, is the supposition that the oil increases proportionably to the flesh of the berry, it being the fact that the oil is all the time undergoing a change into flesh, and the stone is growing larger and larger within. It is for this reason more particularly, that care is taken to water the tree at this period; the real result of all this care and attention, as well as of the fall of copious rains, being, that the oil in reality is absorbed as the berry increases in size, unless fine dry weather should happen to set in, which naturally tends to contract the volume of the fruit. According to Theophrastus, heat is the sole primary cause of the oleaginous principle; for which reason it is, that in the presses, and in the cellars even, great fires are lighted to improve the quality of the oil.

A third error arises from misplaced economy: to spare the expense of gathering, people are in the habit of waiting till the berry falls from the tree. Others, again, who wish to follow a middle course in this respect, beat the fruit off with poles, and so inflict injury on the tree and ensure loss in the succeeding year; indeed, there was a very ancient regulation in existence relative to the gathering of the olive-" Neither pull nor beat the olive-tree." Those who would observe a still greater degree of precaution, strike the branches lightly with a reed on one side of them; but even then the tree is reduced to bearing fruit but once in two years, in consequence of the injury done to the buds. Not less injurious, however, are the results of waiting till the berries fall from the tree; for, by remaining on it beyond the proper time, they deprive the crop that is coming on of its due share of nutriment,

by occupying its place: a clear proof of which is, that if they are not gathered before the west winds prevail, they are found to have acquired renewed strength, and are all the later before they fall.

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CHAP. 4.

FIFTEEN VARIETIES OF OLIVES.

The first olive that is gathered after the autumn is that known as the "posia," the berry of which, owing to a vicious method of cultivation, and not any fault on the part of Nature, has the most flesh upon it. Next to this is the orchites, which contains the greatest quantity of oil, and then, after that, the radius. As these are of a peculiarly delicate nature, the heat very rapidly takes effect upon them, and the amurca they contain causes them to fall. On the other hand, the gathering of the tough, hard-skinned olive is put off so late as the month of March, it being well able to resist the effects of moisture, and, consequently, very small. Those varieties known as the Licinian, the Cominian, the Contian, and the Sergian, by the Sabines called the "royal" olive, do not turn black before the west winds prevail, or, in other words, before the sixth day before the ides of February. At this period it is generally thought that they begin to ripen, and as a most excellent oil is extracted from them, experience would seem to give its support to a theory which, in reality, is altogether wrong. The growers say that in the same degree that cold diminishes the oil, the ripeness of the berry augments it; whereas, in reality, the goodness of the oil is owing, not to the period at which the olives are gathered, but to the natural properties of this peculiarvariety, in which the oil is remarkably slow in turning to amurca.

A similar error, too, is committed by those who keep the olives, when gathered, upon a layer of boards, and do not press the fruit till it has thrown out a sweat; it being the fact that every hour lost tends to diminish the oil and increase the amurca: the consequence is, that, according to the ordinary computation, a modius of olives yields no more than six pounds of oil. No one, however, ever takes account of the quantity of amurca to ascertain, in reference to the same kind of berry, to what extent it increases daily in amount. Then, again, it is a very general error among practical persons to suppose that the oil increases proportionably to the increased size of the berry; and more

particularly so when it is so clearly proved that such is not the case, with reference to the variety known as the royal olive, by some called majorina, and by others phaulia; this berry being of the very largest size, and yet yielding a minimum of juice. In Egypt, too, the berries, which are remarkably meaty, are found to produce but very little oil; while those of Decapolis, in Syria, are so extremely small, that they are no bigger than a caper; and yet they are highly esteemed for their flesh. It is for this reason that the olives from the parts beyond sea are preferred for table to those of Italy, though, at the same time, they are very inferior to them for making oil.

In Italy, those of Picenum and of Sidicina are considered the best for table. These are kept apart from the others and steeped in salt, after which, like other olives, they are put in amurca, or else boiled wine; indeed, some of them are left to float solely in their own oil, without any adventitious mode of preparation, and are then known as colymbades: sometimes the berry is crushed, and then seasoned with green herbs to flavour it. Even in an unripe state the olive is rendered fit for eating by being sprinkled with boiling water; it is quite surprising, too, how readily it will imbibe sweet juices, and retain an adventitious flavour from foreign substances. With this fruit, as with the grape, there are purple varieties, and the posia is of a complexion approaching to black. Besides those already mentioned, there are the superba and a remarkably luscious kind, which dries of itself, and is even sweeter than the raisin: this last variety is extremely rare, and is to be found in Africa and in the vicinity of Emerita in Lusi- tania. The oil of the olive is prevented from getting thick and rancid by the admixture of salt. By making an incision in the bark of the tree, an aromatic odour may be imparted to the oil. Any other mode of seasoning, such, for instance, as those used with reference to wine, is not at all gratifying to the palate; nor do we find so many varieties in oil as there are in the produce of the grape, there being, in general, but three different degrees of goodness. In fine oil the odour is more penetrating, but even in the very best it is but short- lived.

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CHAP. 5. (4.)

THE NATURE OF OLIVE OIL.

It is one of the properties of oil to impart warmth to the body, and to protect it against the action of cold; while at the same time it promotes coolness in the head when heated. The Greeks, those parents of all vices, have abused it by mak- ing it minister to luxury, and employing it commonly in the gymnasium: indeed, it is a well-known fact that the gover- nors of those establishments have sold the scrapings of the oil used there for a sum of eighty thousand sesterces. The majesty of the Roman sway has conferred high honour upon the olive: crowned with it, the troops of the Equestrian order are wont to defile upon the ides of July; it is used, too, by the victor in the minor triumphs of the ovation. At Athens, also, they are in the habit of crowning the conqueror with olive; and at Olympia, the Greeks employ the wild olive for a similar purpose.

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CHAP. 6. (5.)

THE CULTURE OF THE OLIVE: ITS MODE OF PRESERVATION. THE METHOD OF MAKING OLIVE OIL.

We will now proceed to mention the precepts given by Cato in relation to this subject. Upon a warm, rich soil, he recommends us to sow the greater radius, the Salentina, the orehites, the posia, the Sergian, the Cominian, and the albicera; but with a remarkable degree of prudence he adds, that those varieties ought to be planted in preference which are considered to thrive best in the neighbouring localities. In a cold and meagre soil he says that the Licinian olive should be planted; and he informs us that a rich or hot soil has the effect, in this last variety, of spoiling the oil, while the tree becomes exhausted by its own fertility, and is liable to be attacked by a sort of red moss. He states it as his opinion that the olive grounds ought to have a western aspect, and, indeed, he approves of no other.

(6.) According to him, the best method of preserving olives is to put the orchites and the posia, while green, in a strong brine, or else to bruise them first, and preserve them in mastich oil. The more bitter the olive, he says, the better the oil; but they should be gathered from the ground the very moment they fall, and washed if they are dirty. He says that three days will be quite sufficient for drying them, and that if it is frosty weather, they should be pressed on the fourth, care being taken to sprinkle them with salt. Olives, he informs us, lose oil by being kept in a boarded store-room, and deteriorate in quality; the same being the case, too, if the oil is left with the amurca and the pulp, or, in other words, the flesh of the olive that forms the residue and becomes the dregs. For this reason, he recommends that the oil should be poured off several times in the day, and then put into vessels or caul- drons of lead, for copper vessels will spoil it, he says. All these operations, however, should be carried on with presses heated and tightly closed, and exposed to the air as little as possible — for which reason he recommends that wood should never be cut there, the most convenient fuel for the fires being the stones of the berries. From the cauldron the oil should be poured into vats, in order

that the pulp and the amurca may be disengaged in a solidified form: to effect which object the vessels should be changed as often as convenient, while at the same time the osier baskets should be carefully cleaned with a sponge, that the oil may run out in as clean and pure a state as possible. In later times, the plan has been adopted of invariably crushing the olives in boiling water, and at once putting them whole in the press — a method of effectually extracting the amurca — and then, after crushing them in the oil-press, sub- jecting them to pressure once more. It is recommended, that not more than one hundred modii should be pressed at one time: the name given to this quantity is "factus," while the oil that flows out at the first pressure is called the "flos." Four men, working at two presses day and night, ought to be able to press out three factuses of olives.

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CHAP. 7. (7.)

FORTY-EIGHT VARIETIES OF ARTIFICIAL OILS. THE CICUS-TREE OR CROTON, OR SILI, OR SESAMUM.

In those times artificial oils had not been introduced, and hence it is, I suppose, that we find no mention made of them by Cato; at the present day the varieties are very numerous. We will first speak of those which are produced from trees, and among them more particularly the wild olive. This olive is small, and much more bitter than the cultivated one, and hence its oil is only used in medicinal preparations: the oil that bears the closest resemblance to it is that extracted from the chamelæa, a shrub which grows among the rocks, and not more than a palm in height; the leaves and berries being similar to those of the wild olive. A third oil is that made of the fruit of the cicus, a tree which grows in Egypt in great abundance; by some it is known as croton, by others as sili, and by others, again, as wild sesamumn: it is not so very long since this tree was first introduced here. In Spain, too, it shoots up with great rapidity to the size of the olive-tree, having a stem like that of the ferula, the leaf of the vine, and a seed that bears a resemblance to a small pale grape. Our people are in the habit of calling it "ricinus," from the resemblance of the seed to that insect. It is boiled in water, and the oil that swims on the surface is then skimmed off: but in Egypt, where it grows in a greater abundance, the oil is extracted without employing either fire or water for the purpose, the seed being first sprinkled with salt, and then subjected to pressure: eaten with food this oil is repulsive, but it is very useful for burning in lamps.

Amygdalinum, by some persons known as "metopium," is made of bitter almonds dried and beaten into a cake, after which they are steeped in water, and then beaten again. An oil is extracted from the laurel also, with the aid of olive oil. Some persons use the berries only for this purpose, while others, again, employ the leaves and the outer skin of the berries: some add storax also, and other odoriferous substances. The best kind for this purpose is the broad-leaved or wild laurel, with a black berry. The oil, too, of the black myrtle is of a

similar nature; that with the broad leaf is reckoned also the best. The berries are first sprinkled with warm water, and then beaten, after which they are boiled: some persons take the more tender leaves, and boil them in olive oil, and then subject them to pressure, while others, again, steep them in oil, and leave the mixture to ripen in the sun. The same method is also adopted with the cultivated myrtle, but the wild variety with small berries is generally preferred; by some it is known as the oxymyrsine, by others as the chamæmyrsine, and by others, again, as the acoron, from its strong resemblance to that plant, it being short and branching.

An oil is made, too, from the citrus, and from the cypress; also, from the walnut, and known by the name of "caryinon," and from the fruit of the cedar, being generally known as "pisselæon." Oil is extracted from the grain of Cnidos, the seed being first thoroughly cleaned, and then pounded; and from mastich also. As to the oil called "cyprinum," and that extracted from the Egyptian berry, we have already mentioned the mode in which they are prepared as perfumes. The Indians, too, are said to extract oils from the chesnut, sesamum, and rice, and the Ichthyophagi from fish. Scarcity of oil for the supply of lamps sometimes compels us to make it from the berries of the planetree, which are first steeped in salt and water.

Œnanthinum, again, is made from the œnanthe, as we have already stated when speaking of perfumes. In making gleucinum, must is boiled with olive-oil at a slow heat; some persons, however, do not employ fire in making it, but leave a vessel, filled with oil and must, surrounded with grape husks, for two and twenty days, taking care to stir it twice a day: by the end of that period the whole of the must is imbibed by the oil. Some persons mix with this not only sampsuchum, but perfumes of still greater price: that, too, which is used in the gymnasia is scented with perfumes as well, but those of the very lowest quality. Oils are made, too, from aspalathus, from calamus, balsamum, cardamum, melilot, Gallic nard, panax, sampsuchum, helenium, and root of cinnamomum, the plants being first left to steep in oil, and then pressed. In a similar manner, too, rhodinum is made from roses, and juncinum from the sweet rush, bearing a remarkable resemblance to rose-oil: other oils, again, are extracted from henbane, lupines, and narcissus. Great quantities of

oil are made in Egypt, too, of radish seed, or else of a common grass known there as chortinon. Sesamum also yields an oil, and so does the nettle, its oil being known as “enidinum.” In other countries, too, an oil is extracted from lilies left to steep in the open air, and subjected to the influence of the sun, moon, and frosts. On the borders of Cappadocia and Galatia, they make an oil from the herbs of the country, known as “Selgicum,” remarkably useful for strengthening the tendons, similar, in fact, to that of Iguvium in Italy. From pitch an oil is extracted, that is known as pissinum;” it is made by boiling the pitch, and spreading fleeces over the vessels to catch the steam, and then wringing them out: the most approved kind is that which comes from Bruttium, the pitch of that country being remarkably rich and resinous: the colour of this oil is yellow.

There is an oil that grows spontaneously in the maritime parts of Syria, known to us as “elæomeli;” it is an unctuous substance which distils from certain trees, of a thicker consistency than honey, but somewhat thinner than resin; it has a sweet flavour, and is employed for medicinal purposes. Old olive oil is of use for some kinds of maladies; it is thought to be particularly useful, too, in the preservation of ivory from decay: at all events, the statue of Saturn, at Rome, is filled with oil in the interior.

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CHAP. 8. (8.)

AMURCA.

But it is upon the praises of amurca more particularly, that Cato has enlarged. He recommends that vats and casks for keeping oil should be first seasoned with it, to prevent them from soaking up the oil; and he tells us that threshing-floors should be well rubbed with it, to keep away ants, and to prevent any chinks or crannies from being left. The mortar, too, of walls, he says, ought to be seasoned with it, as well as the roofs and floors of granaries; and he recommends that wardrobes should be sprinkled with amurca as a preservative against wood-worms and other noxious insects. He says, too, that all grain of the cereals should be steeped in it, and speaks of it as efficacious for the cure of maladies in cattle as well as trees, and as useful even for ulcerations in the inside and upon the face of man. We learn from him, also, that thongs, all articles made of leather, sandals, and axletrees used to be anointed with boiled amurca; which was employed also to preserve copper vessels against verdigrease, and to give them a better colour; as also for the seasoning of all utensils made of wood, as well as the earthen jars in which dried figs were kept, or of sprigs of myrtle with the leaves and berries on, or any other articles of a similar nature: in addition to which, he asserts that wood which has been steeped in amurca will burn without producing a stifling smoke.

According to M. Varro, an olive-tree which has been licked by the tongue of the she-goat, or upon which she has browsed when it was first budding, is sure to be barren. Thus much in reference to the olive and the oils.

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CHAP. 9. (9.)

THE VARIOUS KINDS OF FRUIT-TREES AND THEIR NATURES. FOUR VARIETIES OF PINE-NUTS.

The other fruits found on trees can hardly be enumerated, from their diversity in shape and figure, without reference to their different flavours and juices, which have again been modified by repeated combinations and graftings.

(10.) The largest fruit, and, indeed, the one that hangs at the greatest height, is the pine-nut. It contains within a number of small kernels, enclosed in arched beds, and covered with a coat of their own of rusty iron-colour; Nature thus manifesting a marvellous degree of care in providing its seeds with a soft receptacle. Another variety of this nut is the terentina, the shell of which may be broken with the fingers; and hence it becomes a prey to the birds while still on the tree. A third, again, is known as the "sappinia," being the produce of the cultivated pitch-tree: the kernels are enclosed in a skin more than a shell, which is so remarkably soft that it is eaten together with the fruit. A fourth variety is that known as the "pityis;" it is the produce of the pinaster, and is remarkable as a good specific for coughs. The kernels are sometimes boiled in honey among the Taurini, who then call them "aquiceli." The conquerors at the Isthmian games are crowned with a wreath of pine-leaves.

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CHAP. 10. (11.)

THE QUINCE. FOUR KINDS OF CYDONIA, AND FOUR VARIETIES OF THE STRUTHEA.

Next in size after these are the fruit called by us “cotonea,” by the Greeks “Cydonia,” and first introduced from the island of Crete. These fruit bend the branches with their weight, and so tend to impede the growth of the parent tree. The varieties are numerous. The chrysomelum is marked with indentations down it, and has a colour inclining to gold; the one that is known as the “Italian” quince, is of a paler complexion, and has a most exquisite smell: the quinces of Neapolis, too, are held in high esteem. The smaller varieties of the quince which are known as the “struthea,” have a more pungent smell, but ripen later than the others; that called the “musteum,” ripens the soonest of all. The cotoneum engrafted on the strutheum, has produced a peculiar variety, known as the “Mulvianum,” the only one of them all that is eaten raw. At the present day all these varieties are kept shut up in the antechambers of great men, where they receive the visits of their courtiers; they are hung, too, upon the statues that pass the night with us in our chambers.

There is a small wild quince also, the smell of which, next to that of the strutheum, is the most powerful; it grows in the hedges.

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CHAP. 11.

SIX VARIETIES OF THE PEACH.

Under the head of apples, we include a variety of fruits, although of an entirely different nature, such as the Persian apple, for instance, and the pomegranate, of which, when speaking of the tree, we have already enumerated nine varieties. The pomegranate has a seed within, enclosed in a skin; the peach has a stone inside. Some among the pears, also, known as "libralia," show, by their name, what a remarkable weight they attain.

(12.) Among the peaches the palm must be awarded to the duracinus: the Gallic and the Asiatic peach are distinguished respectively by the names of the countries of their origin. They ripen at the end of autumn, though some of the early. kinds are ripe in the summer. It is only within the last thirty years that these last have been introduced; originally they were sold at the price of a denarius a piece. Those known as the "supernatia" come from the country of the Sabines, but the "popularia" grow everywhere. This is a very harmless fruit, and a particular favourite with invalids: some, in fact, have sold before this as high as thirty sesterces apiece, a price that has never been exceeded by any other fruit. This, too, is the more to be wondered at, as there is none that is a worse keeper: for, when it is once plucked, the longest time that it will keep is a couple of days; and so sold it must be, fetch what it may.

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CHAP. 12. (13).

TWELVE KINDS OF PLUMS.

Next comes a vast number of varieties of the plum, the parti-coloured, the black, the white, the barley plum — so called, because it is ripe at barley-harvest — and another of the same colour as the last, but which ripens later, and is of a larger size, generally known as the "asinina," from the little esteem in which it is held. There are the onychina, too, the cerina, — more esteemed, and the purple plum: the Armenian, also an exotic from foreign parts, the only one among the plums that recommends itself by its smell. The plum-tree grafted on the nut exhibits what we may call a piece of impudence quite its own, for it produces a fruit that has all the appearance of the parent stock, together with the juice of the adopted fruit: in consequence of its being thus compounded of both, it is known by the name of "nuci-pruna." Nut-prunes, as well as the peach, the wild plum, and the cerina, are often put in casks, and so kept till the crop comes of the following year. All the other varieties ripen with the greatest rapidity, and pass off just as quickly. More recently, in Bætica, they have begun to introduce what they call "malina," or the fruit of the plum engrafted on the apple-tree, and "amygdalina," the fruit of the plum engrafted on the almond-tree, the kernel found in the stone of these last being that of the almond; indeed, there is no specimen in which two fruits have been more ingeniously combined in one.

Among the foreign trees we have already spoken of the Damascene plum, so called from Damascus, in Syria, but introduced long since into Italy; though the stone of this plum is larger than usual, and the flesh smaller in quantity. This plum will never dry so far as to wrinkle; to effect that, it needs the sun of its own native country. The myxa, too, may be mentioned, as being the fellow-countryman of the Damascene: it has of late been introduced into Rome, and has been grown engrafted upon the sorb.

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CHAP. 13.

THE PEACH.

The name of "Persica," or "Persian apple," given to this fruit, fully proves that it is an exotic in both Greece as well as Asia, and that it was first introduced from Persis. As to the wild plum, it is a well-known fact that it will grow anywhere; and I am, therefore, the more surprised that no mention has been made of it by Cato, more particularly as he has pointed out the method of preserving several of the wild fruits as well. As to the peach-tree, it has been only introduced of late years, and with considerable difficulty; so much so, that it is perfectly barren in the Isle of Rhodes, the first resting-place that it found after leaving Egypt.

It is quite untrue that the peach which grows in Persia is poisonous, and produces dreadful tortures, or that the kings of that country, from motives of revenge, had it transplanted in Egypt, where, through the nature of the soil, it lost all its evil properties — for we find that it is of the "persea" that the more careful writers have stated all this, a totally different tree, the fruit of which resembles the red myxa, and, indeed, cannot be successfully cultivated anywhere but in the East. The learned have also maintained that it was not introduced from Persis into Egypt with the view of inflicting punishment, but say that it was planted at Memphis by Perseus; for which reason it was that Alexander gave orders that the victors should be crowned with it in the games which he instituted there in honour of his ancestor: indeed, this tree has always leaves and fruit upon it, growing immediately upon the others. It must be quite evident to every one that all our plums have been introduced since the time of Cato.

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CHAP. 14. (14.)

THIRTY DIFFERENT KINDS OF POMES. AT WHAT PERIOD FOREIGN FRUITS WERE FIRST INTRODUCED INTO ITALY, AND WHENCE.

There are numerous varieties of pomes. Of the citron we have already made mention when describing its tree; the Greeks gave it the name of "Medica," from its native country. The jujube-tree and the tuber are equally exotics; indeed, they have, both of them, been introduced only of late years into Italy; the latter from Africa, the former from Syria. Sextus Papinius, whom we have seen consul, introduced them both in the latter years of the reign of Augustus, produced from slips which he had grown within his camp. The fruit of the jujube more nearly resembles a berry than an apple: the tree sets off a terrace remarkably well, and it is not uncommon to see whole woods of it climbing up to the very roofs of the houses.

Of the tuber there are two varieties; the white, and the one called "syricum," from its colour. Those fruits, too, may be almost pronounced exotic which grow nowhere in Italy but in the territory of Verona, and are known as the wool-fruit. They are covered with a woolly down; this is found, it is true, to a very considerable extent, on both the strutheum variety of quince and the peach, but still it has given its name to this particular fruit, which is recommended to us by no other remarkable quality.

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CHAP. 15.

THE FRUITS THAT HAVE BEEN MOST RECENTLY INTRODUCED.

Why should I hesitate to make some mention, too, of other varieties by name, seeing that they have conferred everlasting remembrance on those who were the first to introduce them, as having rendered some service to their fellow-men? Unless I am very much mistaken, an enumeration of them will tend to throw some light upon the ingenuity that is displayed in the art of grafting, and it will be the more easily understood that there is nothing so trifling in itself from which a certain amount of celebrity cannot be ensured. Hence it is that we have fruits which derive their names from Matius, Cestius, Mallius, and Scandius. Appius, too, a member of the Claudian family, grafted the quince on the Scandian fruit, in consequence of which the produce is known as the Appian. This fruit has the smell of the quince, and is of the same size as the Scandian apple, and of a ruddy colour. Let no one, however, imagine that this name was merely given in a spirit of flattery to an illustrious family, for there is an apple known as the Sceptian, which owes its name to the son of a freedman, who was the first to introduce it: it is remarkable for the roundness of its shape. To those already mentioned, Cato adds the Quirinian and the Scantian varieties, which last, he says, keep remarkably well in large vessels. The latest kind of all, however, that has been introduced is the small apple known as the Petisian, remarkable for its delightful flavour: the Amerinian apple, too, and the little Greek have conferred renown on their respective countries.

The remaining varieties have received their name from various circumstances — the apples known as the "gemella" are always found hanging in pairs upon one stalk, like twins, and never growing singly. That known as the "syricum" is so called from its colour, while the "melapium" has its name from its strong resemblance to the pear. The "musteum" was so called from the rapidity with which it ripens; it is the melimelum of the present day, which derives its appellation from its flavour, being like that of honey. The "orbiculatum," again, is so called from its shape, which is exactly

spherical — the circumstance of the Greeks having called it the "epiroticum" proves that it came originally from Epirus. The orthomastium has that peculiar appellation from its resemblance to a teat; and the "spadonium" of the Belgæ is so nicknamed from the total absence of pips. The melofolium has one leaf, and occasionally two, shooting from the middle of the fruit. That known as the "pannuceum" shrivels with the greatest rapidity; while the "pulmoneum" has a lumpish, swollen appearance.

Some apples are just the colour of blood, owing to an original graft of the mulberry; but they are all of them red on the side which is turned towards the sun. There are some small wild apples also, remarkable for their fine flavour and the peculiar pungency of their smell. Some, again, are so remarkably sour, that they are held in disesteem; indeed their acidity is so extreme, that it will even take the edge from off a knife. The worst apples of all are those which from their mealiness have received the name of "farinacea;" they are the first, however, to ripen, and ought to be gathered as soon as possible.

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CHAP. 16. (15.)

FORTY-ONE VARIETIES OF THE PEAR.

A similar degree of precocity has caused the appellation of "superbum" to be given to one species of the pear: it is a small fruit, but ripens with remarkable rapidity. All the world are extremely partial to the Crustumian pear; and next to it comes the Falernian, so called from the drink which it affords, so abundant is its juice. This juice is known by the name of "milk" in the variety which, of a black colour, is by some called the pear of Syria. The denominations given to the others vary according to the respective localities of their growth. Among the pears, the names of which have been adopted in our city, the Decimian pear, and the Pseudo- Decimian — an offshoot from it — have conferred considerable renown upon the name of those who introduced them. The same is the case, too, with the variety known as the "Dolabellian," remarkable for the length of its stalk, the Pomponian, surnamed the mammosum, the Licerian, the Sevian, the Turranian, a variety of the Sevian, but distinguished from it by the greater length of the stalk, the Favonian, a red pear, rather larger than the superbum,together with the Laterian and the Anician, which come at the end of autumn, and are pleasant for the acidity of their flavour. One variety is known as the "Tiberian," from its having been a particular favourite with the Emperor Tiberius; it is more coloured by the sun, and grows to a larger size, otherwise it would be identical with the Licerian variety.

The following kinds receive their respective names from their native countries: the Amerinian, the latest pear of all, the Picentine, the Numantine, the Alexandrian, the Numidian, the Greek, a variety of which is the Tarentine, and the Signine, by some called "testaceum," from its colour, like earthenware; a reason which has also given their respective names to the "onychine" and the "purple" kinds. Then, again, we have the "myrapium," the "laureum," and the "nardinum," so called from the odour they emit; the "hordearium," from the season at which it comes in; and the "ampullaceum," so called from its long narrow neck. Those, again, that are known as the

“Coriolanian” and the “Brut. tian,” owe their names to the places of their origin; added to which we have the cucurbitinum, and the “acidulum,” so named from the acidity of its juice. It is quite uncertain for what reason their respective names were given to the varieties known as the “barbaricum” and the “Venerium,” which last is known also as the “coloratum;” the royal pear too, which has a remarkably short stalk, and will stand on its end, as also the patricium, and the voconium, a green oblong kind. In addition to these, Virgil has made mention of a pear called the “volema,” a name which he has borrowed from Cato, who makes mention also of kinds known as the “sementivum” and the “musteum.”

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CHAP. 17.

VARIOUS METHODS OF GRAFTING TREES. EXPIATIONS FOR LIGHTNING.

This branch of civilized life has long since been brought to the very highest pitch of perfection, for man has left nothing untried here. Hence it is that we find Virgil speaking of grafting the nut-tree on the arbutus, the apple on the plane, and the cherry on the elm. Indeed, there is nothing further in this department that can possibly be devised, and it is a long time since any new variety of fruit has been discovered. Religious scruples, too, will not allow of indiscriminate grafting; thus, for instance, it is not permitted to graft upon the thorn, for it is not easy, by any mode of expiation, to avoid the disastrous effects of lightning; and we are told that as many as are the kinds of trees that have been engrafted on the thorn, so many are the thunderbolts that will be hurled against that spot in a single flash.

The form of the pear is turbinated; the later kinds remain on the parent tree till winter, when they ripen with the frost; such, for instance, as the Greek variety, the ampullaceum, and the laureum; the same, too, with apples of the Amerinian and the Scandian kinds. Apples and pears are prepared for keeping just like grapes, and in as many different ways; but, with the exception of plums, they are the only fruit that are stored in casks. Apples and pears have certain vinous properties, and like wine these drinks are forbidden to invalids by the physicians. These fruits are sometimes boiled up with wine and water, and, so make a preserve that is eaten with bread; a preparation which is never made of any other fruit, with the exception of the quinces, known as the “cotoneum” and the “strutheum.”

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CHAP. 18. (16.)

THE MODE OF KEEPING VARIOUS FRUITS AND GRAPES.

For the better preserving of fruits it is universally recommended that the storeroom should be situate in a cool, dry spot, with a well-boarded floor, and windows looking towards the north; which in fine weather ought to be kept open. Care should also be taken to keep out the south wind by window panes, while at the same time it should be borne in mind that a north-east wind will shrivel fruit and make it unsightly. Apples are gathered after the autumnal equinox; but the gathering should never begin before the sixteenth day of the moon, or before the first hour of the day. Windfalls should always be kept separate, and there ought to be a layer of straw, or else mats or chaff, placed beneath. They should, also, be placed apart from each other, in rows, so that the air may circulate freely between them, and they may equally gain the benefit of it. The Amerinian apple is the best keeper, the melimelum the very worst of all.

(17.) Quinces ought to be stored in a place kept perfectly closed, so as to exclude all draughts; or else they should be boiled in honey or soaked in it. Pomegranates are made hard and firm by being first put in boiling sea-water, and then left to dry for three days in the sun, care being taken that the dews of the night do not touch them; after which they are hung up, and when wanted for use, washed with fresh water. M. Varro recommends that they should be kept in large vessels filled with sand: if they are not ripe, he says that they should be put in pots with the bottom broken out, and then buried in the earth, all access to the air being carefully shut, and care being first taken to cover the stalk with pitch. By this mode of treatment, he assures us, they will attain a larger size than they would if left to ripen on the tree. As for the other kinds of pomes, he says that they should be wrapped up separately in fig-leaves, the windfalls being carefully excluded, and then stored in baskets of osier, or else covered over with potters' earth.

Pears are kept in earthen vessels pitched inside; when filled, the vessels are reversed and then buried in pits. The Tarentine pear,

Varro says, is gathered very late, while the Anician keeps very well in raisin wine. Sorb apples, too, are similarly kept in holes in the ground, the vessel being turned upside down, and a layer of plaster placed on the lid: it should be buried two feet deep, in a sunny spot; sorbs are also hung, like grapes, in the inside of large vessels, together with the branches.

Some of the more recent authors are found to pay a more scrupulous degree of attention to these various particulars, and recommend that the gathering of grapes or pomes, which are intended for keeping, should take place while the moon is on the wane, after the third hour of the day, and while the weather is clear, or dry winds prevail. In a similar manner, the selection, they say, ought to be made from a dry spot, and the fruit should be plucked before it is fully ripe, a moment being chosen while the moon is below the horizon. Grapes, they say, should be selected that have a strong, hard mallets-talk, and after the decayed berries have been carefully removed with a pair of scissors, they should be hung up inside of a large vessel which has just been pitched, care being taken to close all access to the south wind, by covering the lid with a coat of plaster. The same method, they say, should be adopted for keeping sorb apples and pears, the stalks being carefully covered with pitch; care should be taken, too, that the vessels are kept at a distance from water.

There are some persons who adopt the following method for preserving grapes. They take them off together with the branch, and place them, while still upon it, in a layer of plaster, taking care to fasten either end of the branch in a bulb of squill. Others, again, go so far as to place them within vessels containing wine, taking care, however, that the grapes, as they hang, do not touch it. Some persons put apples in plates of earth, and then leave them to float in wine, a method by which it is thought that a vinous flavour is imparted to them: while some think it a better plan to preserve all these kinds of fruit in millet. Most people, however, content themselves with first digging a hole in the ground, a couple of feet in depth; a layer of sand is then placed at the bottom, and the fruit is arranged upon it, and covered with an earthen lid, over which the earth is thrown. Some persons again even go so far as to give their grapes a coating

of potters' chalk, and then hang them up when dried in the sun; when required for use, the chalk is removed with water. Apples are also preserved in a similar manner; but with them wine is employed for getting off the chalk. Indeed, we find a very similar plan pursued with apples of the finest quality; they have a coating laid upon them of either plaster or wax; but they are apt, if not quite ripe when this was done, by the increase in their size to break their casing. When apples are thus prepared, they are always laid with the stalk downwards. Some persons pluck the apple together with the branch, the ends of which they thrust into the pith of elder, and then bury it in the way already pointed out. There are some who assign to each apple or pear its separate vessel of clay, and after care- fully pitching the cover, enclose it again in a larger vessel: occasionally, too, the fruit is placed on a layer of flocks of wool, or else in baskets, with a lining of chaff and clay. Other persons follow a similar plan, but use earthen plates for the purpose; while others, again, employ the same method, but dig a hole in the earth, and after placing a layer of sand, lay the fruit on top of it, and then cover the whole with dry earth. Persons, too, are sometimes known to give quinces a coating of Pontic wax, and then plunge them in honey. Columella informs us, that fruit is kept by being carefully put in earthen vessels, which then receive a coating of pitch, and are placed in wells or cisterns to sink to the bottom. The people of maritime Liguria, in the vicinity of the Alps, first dry their grapes in the sun, and wrap them up in bundles of rushes, which are then covered with plaster. The Greeks follow a similar plan, but substitute for rushes the leaves of the plane- tree, or of the vine itself, or else of the fig, which they dry for a single day in the shade, and then place in a cask in alternate layers with husks of grapes. It is by this method that they preserve the grapes of Cos and Berytus, which are inferior to none in sweetness. Some persons, when thus pre- paring them, plunge the grapes into lie-ashes the moment they take them from the vine, and then dry them in the sun; they then steep them in warm water, after which they put them to dry again in the sun: and last of all, as already mentioned, wrap them up in bundles formed of layers of leaves and grape husks. There are some who prefer keeping their grapes in sawdust, or else in shavings of the fir-tree, poplar, and ash: while others think it the best plan to

hang them up in the granary, at a careful distance from the apples, directly after the gathering, being under the impression that the very best cover- ing for them as they hang is the dust that naturally arises from the floor. Grapes are effectually protected against the attacks of wasps by being sprinkled with oil spirted from the mouth. Of palm-dates we have already spoken.

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CHAP. 19. (18.)

TWENTY-NINE VARIETIES OF THE FIG.

Of all the remaining fruits that are included under the name of "pomes," the fig is the largest: some, indeed, equal the pear, even, in size. We have already mentioned, while treating of the exotic fruits, the miraculous productions of Egypt and Cyprus in the way of figs. The fig of Mount Ida is red, and the size of an olive, rounder however, and like a medlar in flavour; they give it the name of Alexandrian in those parts. The stem is a cubit in thickness; it is branchy, has a tough, pliant wood, is entirely destitute of all milky juice, and has a green bark, and leaves like those of the linden tree, but soft to the touch. Onesicritus states that in Hyrcania the figs are much sweeter than with us, and that the trees are more prolific, seeing that a single tree will bear as much as two hundred and seventy modii of fruit. The fig has been introduced into Italy from other countries, Chalcis and Chios, for instance, the varieties being very numerous: there are those from Lydia also, which are of a purple colour, and the kind known as the "mamillana," which is very similar to the Lydian. The callistruthiæ are very little superior to the last in flavour; they are the coldest by nature of all the figs. As to the African fig, by many people preferred to any other, it has been made the subject of very considerable discussion, as it is a kind that has been introduced very recently into Africa, though it bears the name of that country. As to the fig of Alexandria, it is a black variety, with the cleft inclining to white; it has had the name given to it of the "delicate" fig: the Rhodian fig, too, and the Tiburtine, one of the early kinds, are black. Some of them, again, bear the name of the persons who were the first to introduce them, such, for instance, as the Livian and the Pompeian figs: this last variety is the best for drying in the sun and keeping for use, from year to year; the same is the case, too, with the marisca, and the kind which has a leaf spotted all over like the reed. There is also the Herculanean fig, the albicerata, and the white aratia, a very large variety, with an extremely diminutive stalk.

The earliest of them all is the porphyritis, which has a stalk of remarkable length: it is closely followed by the popularis, one of the very smallest of the figs, and so called from the low esteem in which it is held: on the other hand, the chelidonia is a kind that ripens the last of all, and to- wards the beginning of winter. In addition to these, there are figs that are at the same time both late and early, as they bear two crops in the year, one white and the other black, ripening at harvest-time and vintage respectively. There is another late fig also, that has received its name from the singular hardness of its skin; one of the Chalcidian varieties bears as many as three times in the year. It is at Tarentum only that the remarkably sweet fig is grown which is known by the name of "ona."

Speaking of figs, Cato has the following remarks: "Plant the fig called the 'marisca' on a chalky or open site, but for the African variety, the Herculanean, the Saguntine, the winter fig and the black Telanian with a long stalk, you must select a richer soil, or else a ground well manured." Since his day there have so many names and kinds come up, that even on taking this subject into consideration, it must be apparent to every one how great are the changes which have taken place in civilized life.

There are winter figs, too, in some of the provinces, the Mœsian, for instance; but they are made so by artificial means, such not being in reality their nature. Being a small variety of the fig-tree, they cover it up with manure at the end of autumn, by which means the fruit on it is overtaken by winter while still in a green state: then when the weather, becomes milder the fruit is uncovered along with the tree, and so restored to light. Just as though it had come into birth afresh, the fruit imbibes the heat of the new sun with the greatest avidity — a different sun, in fact, to that which originally gave it life — and so ripens along with the blossom of the coming crop; thus attaining maturity in a year not its own, and this in a country, too, where the greatest cold prevails.

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CHAP. 20.

HISTORICAL ANECDOTES CONNECTED WITH THE FIG.

The mention by Cato of the variety which bears the name of the African fig, strongly recalls to my mind a remarkable fact connected with it and the country from which it takes its name.

Burning with a mortal hatred to Carthage, anxious, too, for the safety of his posterity, and exclaiming at every sitting of the senate that Carthage must be destroyed, Cato one day brought with him into the Senate-house a ripe fig, the produce of that country. Exhibiting it to the assembled senators, "I ask you," said he, "when, do you suppose, this fruit was plucked from the tree?" All being of opinion that it had been but lately gathered, — Know then," was his reply, "that this fig was plucked at Carthage but the day before yesterday — so near is the enemy to our walls." It was immediately after this occurrence that the third Punic war commenced, in which Carthage was destroyed, though Cato had breathed his last, the year after this event. In this trait which are we the most to admire? was it ingenuity and foresight on his part, or was it an accident that was thus aptly turned to advantage? which, too, is the most surprising, the extraordinary quickness of the passage which must have been made, or the bold daring of the man? The thing, however, that is the most astonishing of all — indeed, I can conceive nothing more truly marvellous — is the fact that a city thus mighty, the rival of Rome for the sovereignty of the world during a period of one hundred and twenty years, owed its fall at last to an illustration drawn from a single fig!

Thus did this fig effect that which neither Trebia nor Thrasimenus, not Cannæ itself, graced with the entombment of the Roman renown, not the Punic camp entrenched within three miles of the city, not even the disgrace of seeing Hannibal riding up to the Colline Gate, could suggest the means of accomplishing. It was left for a fig, in the hand of Cato, to show how near was Carthage to the gates of Rome!

In the Forum even, and in the very midst of the Comitium of Rome, a fig-tree is carefully cultivated, in memory of the

consecration which took place on the occasion of a thunderbolt which once fell on that spot; and still more, as a memorial of the fig-tree which in former days overshadowed Romulus and Remus, the founders of our empire, in the Lupercal Cave. This tree received the name of "ruminalis," from the circumstance that under it the wolf was found giving the breast — *rumis* it was called in those days — to the two infants. A group in bronze was afterwards erected to consecrate the remembrance of this miraculous event, as, through the agency of Attus Navius the augur, the tree itself had passed spontaneously from its original locality to the Comitium in the Forum. And not without some direful presage is it that that tree has withered away, though, thanks to the care of the priesthood, it has been since replaced.

There was another fig-tree also, before the temple of Saturn, which was removed on the occasion of a sacrifice made by the Vestal Virgins, it being found that its roots were gradually undermining the statue of the god Silvanus. Another one, accidentally planted there, flourished in the middle of the Forum, upon the very spot, too, in which, when from a direful presage it had been foreboded that the growing empire was about to sink to its very foundations, Curtius, at the price of an inestimable treasure — in other words, by the sacrifice of such unbounded virtue and piety — redeemed his country by a glorious death. By a like accident, too, a vine and an olive-tree have sprung up in the same spot, which have ever since been carefully tended by the populace for the agreeable shade which they afford. The altar that once stood there was afterwards removed by order of the deified Julius Cæsar, upon the occasion of the last spectacle of gladiatorial combats which he gave in the Forum.

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CHAP. 21.

CAPRIFICATION.

The fig, the only one among all the pomes, hastens to maturity by the aid of a remarkable provision of Nature. (19.) The wild-fig, known by the name of "caprificus," never ripens itself, though it is able to impart to the others the principle of which it is thus destitute; for we occasionally find Nature making a transfer of what are primary causes, and being generated from decay. To effect this purpose the wild fig-tree produces a kind of gnat. These insects, deprived of all sustenance from their parent tree, at the moment that it is hastening to rottenness and decay, wing their flight to others of kindred though cultivated kind. There feeding with avidity upon the fig, they penetrate it in numerous places, and by thus making their way to the inside, open the pores of the fruit. The moment they effect their entrance, the heat of the sun finds admission too, and through the inlets thus made the fecundating air is introduced. These insects speedily consume the milky juice that constitutes the chief support of the fruit in its infant state, a result which would otherwise be spontaneously effected by absorption: and hence it is that in the plantations of figs a wild fig is usually allowed to grow, being placed to the windward of the other trees in order that the breezes may bear from it upon them. Improving upon this discovery, branches of the wild fig are sometimes brought from a distance, and bundles tied together are placed upon the cultivated tree. This method, however, is not necessary when the trees are growing on a thin soil, or on a site exposed to the north-east wind; for in these cases the figs will dry spontaneously, and the clefts which are made in the fruit effect the same ripening process which in other instances is brought about by the agency of these insects. Nor is it requisite to adopt this plan on spots which are liable to dust, such, for instance, as is generally the case with fig-trees planted by the side of much-frequented roads: the dust having the property of drying up the juices of the fig, and so absorbing the milky humours. There is this superiority, however, in an ad. vantageous site over the methods of ripening by the agency of

dust or by caprification, that the fruit is not so apt to fall; for the secretion of the juices being thus prevented, the fig is not so heavy as it would otherwise be, and the branches are less brittle.

All figs are soft to the touch, and when ripe contain grains in the interior. The juice, when the fruit is ripening, has the taste of milk, and when dead ripe, that of honey. If left on the tree they will grow old; and when in that state, they distil a liquid that flows in tears like gum. Those that are more highly esteemed are kept for drying, and the most approved kinds are put away for keeping in baskets. The figs of the island of Ebusus are the best as well as the largest, and next to them are those of Marrucinum. Where figs are in great abundance, as in Asia, for instance, huge jars are filled with them, and at Ruspina, a city of Africa, we find casks used for a similar purpose: here, in a dry state, they are extensively used instead of bread, and indeed as a general article of provision. Cato, when laying down certain definite regulations for the support of labourers employed in agriculture, recommends that their supply of food should be lessened just at the time when the fig is ripening: it has been a plan adopted in more recent times, to find a substitute for salt with cheese, by eating fresh figs. To this class of fruit belong, as we have already mentioned, the cottana and the carica, together with the cavnea, which was productive of so bad an omen to M. Crassus at the moment when he was embarking for his expedition against the Parthians, a dealer happening to be crying them just at that very moment. L. Vitellius, who was more recently appointed to the censorship, introduced all these varieties from Syria at his country-seat at Alba, having acted as legatus in that province in the latter years of the reign of Tiberius Cæsar.

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CHAP. 22. (20.)

THREE VARIETIES OF THE MEDLAR.

The medlar and the sorb ought in propriety to be ranked under the head of the apple and the pear. Of the medlar there are three varieties, the anthedon, the setania, and a third of inferior quality, which bears a stronger resemblance to the anthedon, and is known as the Gallic kind. The setania is the largest fruit, and the palest in colour; the woody seed in the inside of it is softer, too, than in the others, which are of smaller size than the setania, but superior to it in the fragrance of their smell, and in being better keepers. The tree itself is one of very ample dimensions: the leaves turn red before they fall: the roots are numerous, and penetrate remarkably deep, which renders it almost impossible to grub it up. This tree did not exist in Italy in Cato's time.

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CHAP. 23. (21).

FOR VARIETIES OF THE SORB.

There are four varieties of the sorb: there being some that have all the roundness of the apple, while others are conical like the pear, and a third sort are of an oval shape, like some of the apples: these last, however, are apt to be remarkably acid. The round kind is the best for fragrance and sweetness, the others having a vinous flavour; the finest, however, are those which have the stalk surrounded with tender leaves. A fourth kind is known by the name of “torminalis:” it is only employed, however, for remedial pur- poses. The tree is a good bearer, but does not resemble the other kinds, the leaf being nearly that of the plane-tree; the fruit, too, is particularly small. Cato speaks of sorbs being preserved in boiled wine.

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CHAP. 24. (22.)

NINE VARIETIES OF THE NUT.

The walnut, which would almost claim precedence of the sorb in size, yields the palm to it in reference to the esteem in which they are respectively held; and this, although it is so favourite an accompaniment of the Fescennine songs at nuptials. This nut, taken as a whole, is very considerably smaller than the pine nut, but the kernel is larger in proportion. Nature, too, has conferred upon it a peculiar honour, in protecting it with a two-fold covering, the first of which forms a hollowed cushion for it to rest upon, and the second is a woody shell. It is for this reason that this fruit has been looked upon as a symbol consecrated to marriage, its offspring being thus protected in such manifold ways: an explanation which bears a much greater air of probability than that which would derive it from the rattling which it makes when it bounds from the floor. The Greek names that have been given to this fruit fully prove that it, like many others, has been originally introduced from Persis; the best kinds being known in that language by the names of "Persicum," and "basilicon;, these, in fact, being the names by which they were first known to us. It is generally agreed, too, that one peculiar variety has derived its name of "caryon," from the headache which it is apt to produce by the pungency of its smell.

The green shell of the walnut is used for dyeing wool, and the nuts, while still small and just developing themselves, are employed for giving a red hue to the hair: a discovery owing to the stains which they leave upon the hands. When old, the nut becomes more oleaginous. The only difference in the several varieties consists in the relative hardness or brittleness of the shell, it being thin or thick, full of compartments or smooth and uniform. This is the only fruit that Nature has enclosed in a covering formed of pieces soldered together; the shell, in fact, forming a couple of boats, while the kernel is divided into four separate compartments by the intervention of a ligneous membrane.

In all the other kinds, the fruit and the shell respectively are of one

solid piece, as we find the case with the hazel — nut, and another variety of the nut formerly known as “Abellina,” from the name of the district in which it was first produced: it was first introduced into Asia and Greece from Pontus, whence the name that is sometimes given to it — the “Pontic nut.” This nut, too, is protected by a soft beard, but both the shell and the kernel are round, and formed of a single piece: these nuts are sometimes roasted. In the middle of the kernel we find a germen or navel.

A third class of nuts is the almond, which has an outer covering, similar to that of the walnut, but thinner, with a second coat in the shape of a shell. The kernel, however, is unlike that of the walnut, in respect of its broad, flat shape, its firmness, and the superior tastiness of its flavour. It is a matter of doubt whether this tree was in existence in Italy in the time of Cato; we find him speaking of Greek nuts, but there are some persons who think that these belong to the walnut class. He makes mention, also, of the hazel-nut, the calva, and the Prænestine nut, which last he praises beyond all others, and says that, put in pots, they may be kept fresh and green by burying them in the earth.

At the present day, the almonds of Thasos and those of Alba are held in the highest esteem, as also two kinds that are grown at Tarentum, one with a thin, brittle shell, and the other with a harder one: these last are remarkably large, and of an oblong shape. There is the almond known as the “mollusk,” also, which breaks the shell of itself. There are some who would concede a highly honourable interpretation to the name given to the walnut, and say that “juggles” means the “glens,” or” acorn of Jove.” It is only very lately that I heard a man of consular rank declare, that he then had in his possession walnut-trees that bore two crops in the year.

Of the pistachio, which belongs also to the nut class, we have already spoken in its appropriate place: Vitellius introduced this tree into Italy at the same time as the others that we mentioned; and Flaccus Pompeius, a Roman of Equestrian rank, who served with him, introduced it at the same period into Spain.

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CHAP. 25. (23.)

EIGHTEEN VARIETIES OF THE CHESNUT.

We give the name of nut, too, to the chesnut, although it would seem more properly to belong to the acorn tribe. The chesnut has its armour of defence in a shell bristling with prickles like the hedge-hog, an envelope which in the acorn is only partially developed. It is really surprising, however, that Nature should have taken such pains thus to conceal an object of so little value. We sometimes find as many as three nuts beneath a single outer shell. The skin of the nut is limp and flexible: there is a membrane, too, which lies next to the body of the fruit, and which, both in this and in the walnut, spoils the flavour if not taken off, Chesnuts are the most pleasant eating when roasted: they are sometimes ground also, and are eaten by women when fasting for religious scruples, as bearing some resemblance to bread. It is from Sardes that the chesnut was first introduced, and hence it is that the Greeks have given it the name of the "Sardian acorn;" for the name "Dios balanon" was given at a later period, after it had been considerably improved by cultivation.

At the present day there are numerous varieties of the chesnut. Those of Tarentum are a light food, and by no means difficult of digestion; they are of a flat shape. There is a rounder variety, known as the "balanitis;" it is very easily peeled, and springs clean out of the shell, so to say, of its own accord. The Salarian chesnut has a smooth outer shell, while that of Tarentum is not so easily handled. The Corellian is more highly esteemed, as is the Etereian, which is an offshoot from it produced by a method upon which we shall have to enlarge when we come to speak of grafting. This last has a red skin, which causes it to be preferred to the three-cornered chesnut and our black common sorts, which are known as "coctivæ." Tarentum and Neapolis in Campania are the most esteemed localities for the chesnut: other kinds, again, are grown to feed pigs upon, the skin of which is rough and folded inwards, so as to penetrate to the heart of the kernel.

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CHAP. 26. (24.)

THE CAROB.

The carob, a fruit of remarkable sweetness, does not ap- pear to be so very dissimilar to the chesnut, except that the skin is eaten as well as the inside. It is just the length of a finger, and about the thickness of the thumb, being sometimes of a curved shape, like a sickle. The acorn cannot be reckoned in the number of the fruits; we shall, therefore, speak of it along with the trees of that class.

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CHAP. 27.

TE FLESHY FRUITS. THE MULBERRY.

The other fruits belong to the fleshy kind, and differ both in the shape and the flesh. The flesh of the various berries, of the mulberry, and of the arbute, are quite different from one another — and then what a difference, too, between the grape, which is only skin and juice, the myxa plum, and the flesh of some berries, such as the olive, for instance! In the flesh of the mulberry there is a juice of a vinous flavour, and the fruit assumes three different colours, being at first white, then red, and ripe when black. The mulberry blossoms one of the very last, and yet is among the first to ripen: the juice of the fruit, when ripe, will stain the hands, but that of the unripe fruit will remove the marks. It is in this tree that human ingenuity has effected the least Improvement of all; there are no varieties here, no modifications effected by grafting, nor, in fact, any other improvement except that the size of the fruit, by careful management, has been increased. At Rome, there is a distinction made between the mulberries of Ostia and those of Tusculum. A variety grows also on brambles, but the flesh of the fruit is of a very different nature.

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CHAP. 28.

THE FRUIT OF THE ARBUTUS.

The flesh of the ground-strawberry is very different to that of the arbute-tree, which is of a kindred kind: indeed, this is the only instance in which we find a similar fruit growing upon a tree and on the ground. The tree is tufted and bushy; the fruit takes a year to ripen, the blossoms of the young fruit flowering while that of the preceding year is arriving at maturity. Whether it is the male tree or the female that is unproductive, authors are not generally agreed.

This is a fruit held in no esteem, in proof of which it has gained its name of "unedo," people being generally content with eating but one. The Greeks, however, have found for it two names— "comaron" and "memecylon," from which it would appear that there are two varieties. It has also with us another name besides that of "unedo," being known also as the "arbutus." Juba states that in Arabia this tree attains the height of fifty cubits.

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CHAP. 29.

THE RELATIVE NATURES OF BERRY FRUITS.

There is a great difference also among the various acinus fruits. First of all, among the grapes, we find considerable difference in respect to their firmness, the thinness or thickness of the skin, and the stone inside the fruit, which in some varieties is remarkably small, and in others even double in number: these last producing but very little juice. Very different, again, are the berries of the ivy and the elder; as also those in the pomegranate, these being the only ones that are of an angular shape. These last, also, have not a membrane for each individual grain, but one to cover them all in common, and of a pale colour. All these fruits consist, too, of juice and flesh, and those more particularly which have but small seeds inside.

There are great varieties, too, among the berry fruits; the berry of the olive being quite different from that of the laurel, the berry of the lotus from that of the cornel, and that of the myrtle from the berry of the lentisk. The berry, however, of the aquifolium and the thorn is quite destitute of juice.

The cherry occupies a middle place between the berry and the acinus fruit: it is white at first, which is the case also with nearly all the berries. From white, some of the berries pass to green, the olive and the laurel, for instance; while in the mulberry, the cherry, and the cornel, the change is to red; and then in some to black, as with the mulberry, the cherry, and the olive, for instance.

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CHAP. 30. (25.)

NINE VARIETIES OF THE CHERRY.

The cherry did not exist in Italy before the period of the victory gained over Mithridates by L. Lucullus, in the year of the City 680. He was the first to introduce this tree from Pontus, and now, in the course of one hundred and twenty years, it has travelled beyond the Ocean, and arrived in Bri- tannia even. The cherry, as we have already stated, in spite of every care, it has been found impossible to rear in Egypt. Of this fruit, that known as the "Apronian is the reddest variety, the Lutatian being the blackest, and the Cæcilian perfectly round. The Junian cherry has an agreeable flavour, but only, so to say, when eaten beneath the tree, as they are so remarkably delicate that they will not bear carrying. The highest rank, however, has been awarded to the duracinus variety, known in Campania as the "Plinian" cherry, and in Belgica to the Lusitanian cherry, as also to one that grows on the banks of the Rhenus. This last kind has a third colour, being a mixture of black, red, and green, and has always the appearance of being just on the turn to ripening. It is less than five years since the kind known as the "laurel- cherry" was introduced, of a bitter but not unpleasant flavour, the produce of a graft upon the laurel. The Macedonian cherry grows on a tree that is very small, and rarely exceeds three cubits in height; while the chamæcerasus is still smaller, being but a mere shrub. The cherry is one of the first trees to recompense the cultivator with its yearly growth; it loves cold localities and a site exposed to the north. The fruit are sometimes dried in the sun, and preserved, like olives, in casks.

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CHAP. 31. (26.)

THE CORNEL. THE LENTISK.

The same degree of care is expended also on the cultivation of the cornel and the lentisk; that it may not be thought, forsooth, that there is anything that was not made for the craving appetite of man! Various flavours are blended to- gether, and one is compelled to please our palates by the aid of another — hence it is that the produce of different lands and various climates are so often mingled with one another. For one kind of food it is India that we summon to our aid, and then for another we lay Egypt under contribution, or else Crete, or Cyrene, every country, in fact: no, nor does man stick at poisons even, if he can only gratify his longing to devour everything: a thing that will be still more evident when we come to treat of the nature of herbs.

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CHAP. 32. (27.)

THIRTEEN DIFFERENT FLAVOURS OF JUICES.

While upon this subject, it may be as well to state that there are no less than thirteen different flavours belonging in common to the fruits and the various juices: the sweet, the luscious, the unctuous, the bitter, the rough, the acrid, the pungent, the sharp, the sour, and the salt; in addition to which, there are three other kinds of flavours of a nature that is truly singular. The first of these last kinds is that flavour in which several other flavours are united, as in wine, for instance; for in it we are sensible of the rough, the pungent, and the luscious, all at the same moment, and all of them flavours that belong to other substances. The second of these flavours is that in which we are sensible at the same instant of a flavour that belongs to another substance, and yet of one that is peculiar to the individual object of which we are tasting, such as that of milk, for instance: indeed, in milk we cannot correctly say that there is any pronounced flavour that is either sweet, or unctuous, or luscious, a sort of smooth taste in the mouth being predominant, which holds the place of a more decided flavour. The third instance is that of water, which has no flavour whatever, nor, indeed, any flavouring principle; but still, this very absence of flavour is considered as constituting one of them, and forming a peculiar class of itself; so much so, indeed, that if in water any taste or flavouring principle is detected, it is looked upon as impure.

In the perception of all these various flavours the smell plays a very considerable part, there being a very great affinity between them. Water, however, is properly quite inodorous: and if the least smell is to be perceived, it is not pure water. It is a singular thing that three of the principal elements of Nature — water, air, and fire — should have neither taste nor smell, nor, indeed, any flavouring principle whatever.

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CHAP. 33. (28.)

THE COLOUR AND SMELL OF JUICES.

Among the juices, those of a vinous flavour belong to the pear, the mulberry, and the myrtle, and not to the grape, a very singular fact. An unctuous taste is detected in the olive, the laurel, the walnut, and the almond; sweetness exists in the grape, the fig, and the date; while in the plum class we find a watery juice. There is a considerable difference, too, in the colours assumed by the various juices. That of the mulberry, the cherry, the cornel, and the black grape resembles the colour of blood, while in the white grape the juice is white. The humour found in the summit of the fig is of a milky nature, but not so with the juice found in the body of the fruit. In the apple it is the colour of foam, while in the peach it is perfectly colourless, and this is the case, too, with the duracinus, which abounds in juice; for who can say that he has ever detected any colour in it?

Smell, too, presents its own peculiar marvels; in the apple it is pungent, and it is weak in the peach, while in the sweet fruits we perceive none at all: so, too, the sweet wines are inodorous, while the thinner ones have more aroma, and are much sooner fit for use than those of a thicker nature. The odoriferous fruits are not pleasing to the palate in the same degree, seeing that the flavour of them does not come up to their smell: hence it is that in the citron we find the smell so extremely penetrating, and the taste sour in the highest degree. Sometimes the smell is of a more delicate nature, as in the quince, for instance; while the fig has no odour whatever.

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CHAP. 34.

THE VARIOUS NATURES OF FRUIT.

Thus much, then, for the various classes and kinds of fruit: it will be as well now to classify their various natures within a more limited scope. Some fruits grow in a pod which is sweet itself, and contains a bitter seed: whereas in most kinds of fruit the seed is agreeable to the palate, those which grow in a pod are condemned. Other fruits are berries, with the stone within and the flesh without, as in the olive and the cherry: others, again, have the berry within and the stone without, the case, as we have already stated, with the berries that grow in Egypt.

Those fruits, known as "pomes," have the same characteristics as the berry fruits; in some of them we find the body of the fruit within and the shell without, as in the nut, for example; others, again, have the meat of the fruit without and the shell within, the peach and the plum, for instance: the refuse part being thus surrounded with the flesh, while in other fruits the flesh is surrounded by the refuse part. nuts are enclosed in a shell, chesnuts in a skin; in chesnuts the skin is taken off, but in medlars it is eaten with the rest. Acorns are covered with a crust, grapes with a husk, and pomegranates with a skin and an inner membrane. The mulberry is composed of flesh and juice, while the cherry consists of juice and skin. In some fruits the flesh separates easily from the woody part, the walnut and the date, for instance; in others it adheres, as in the case of the olive and the laurel berry: some kinds, again, partake of both natures, the peach, for example; for in the duracinus kind the flesh adheres to the stone, and cannot be torn away from it, while in the other sorts they are easily separated. In some fruits there is no stone or shell either within or without, one variety of the date, for instance. In some kinds, again, the shell is eaten, just the same as the fruit; this we have already mentioned as being the case with a variety of the almond found in Egypt. Some fruits have on the outside a twofold refuse covering, the chesnut, the almond, and the walnut, for example. Some, again, are composed of three separate parts — the body of the fruit, then a

woody shell, and inside of that a kernel, as in the peach.

Some fruits grow closely packed together, such as grapes and sorbs: these last, just like so many grapes in a cluster, cling round the branch and bend it downwards with their weight. On the other hand, some fruits grow separately, at a distance from one another; this is the case with the peach. Some fruits are enclosed in a sort of matrix, as with the grains of the pomegranate: some hang down from a stalk, such as the pear, for instance: others hang in clusters, grapes and dates, for example. Others, again, grow upon stalks and bunches united: this we find the case with the berries of the ivy and the elder. Some adhere close to the branches, like the laurel berry, while other varieties lie close to the branch or hang from it, as the case may be: thus we find in the olive some fruit with short stalks, and others with long. Some fruits grow with a little calyx at the top, the pomegranate, for example, the medlar, and the lotus of Egypt and the Euphrates.

Then, too, as to the various parts of fruit, they are held in different degrees of esteem according to their respective recommendations. In the date it is the flesh that is usually liked, in those of Thebais it is the crust; the grape and the caryota date are esteemed for their juice, the pear and the apple for their firmness, the melimelum for its soft meat, the mulberry for its cartilaginous consistency, and nuts for their kernels. Some fruits in Egypt are esteemed for their skin; the carica, for instance. This skin, which in the green fig is thrown away as so much refuse peeling, when the fig is dried is very highly esteemed. In the papyrus, the ferula, and the white thorn the stalk itself constitutes the fruit, and the shoots of the fig-tree are similarly employed.

Among the shrubs, the fruit of the caper is eaten along with the stalk; and in the carob, what is the part that is eaten but so much wood? Nor ought we to omit one peculiarity that exists in the seed of this fruit — it can be called neither flesh, wood, nor cartilage, and yet no other name has been found for it.

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CHAP. 35. (29).

THE MYRTLE.

The nature of the juices that are found in the myrtle are particularly remarkable, for it is the only one of all the trees, the berries of which produce two kinds of oil as well as of wine, besides myrtidanum, of which we have already spoken. The berry of this was also put to another use in ancient times, for before pepper was known it was employed in place of it as a seasoning; so much so, indeed, that a name has been derived from it for the highly-seasoned dish which to this day is known by the name of “myrtatum.” It is by the aid of these berries, too, that the flavour of the flesh of the wild boar is improved, and they generally form one of the ingredients in the flavouring of our sauces.

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CHAP. 36.

HISTORICAL ANECDOTES RELATIVE TO THE MYRTLE.

This tree was seen for the first time in the regions of Europe, which commence on this side of the Ceraunian mountains, growing at Circeii, near the tomb of Elpenor there: it still retains its Greek name, which clearly proves it to be an exotic. There were myrtles growing on the site now occupied by Rome, at the time of its foundation; for a tradition exists to the effect that the Romans and the Sabines, after they had intended fighting, on account of the virgins who had been ravished by the former, purified themselves, first laying down their arms, with sprigs of myrtle, on the very same spot which is now occupied by the statues of Venus Cluacina; for in the ancient language "cluere" means to purify.

This tree is employed, too, for a species of fumigation; being selected for that purpose, because Venus, who presides over all unions, is the tutelary divinity of the tree. I am not quite sure, too, whether this tree was not the very first that was planted in the public places of Rome, the result of some ominous presage by the augurs of wondrous import. For at the Temple of Quirinus, or, in other words, of Romulus himself, one of the most ancient in Rome, there were formerly two myrtle-trees, which grew for a long period just in front of the temple; one of these was called the Patrician tree, the other the Plebeian. The Patrician myrtle was for many years the superior tree, full of sap and vigour; indeed, so long as the Senate maintained its superiority, so did the tree, being of large growth, while the Plebeian tree presented a meagre, shrivelled appearance. In later times, however, the latter tree gained the superiority, and the Patrician myrtle began to fail just at the period of the Marsic War, when the power of the Senate was so greatly weakened: and little by little did this once majestic tree sink into a state of utter exhaustion and sterility. There was an ancient altar also, consecrated' to Venus Myrtea, known at the present day by the name of Murcia.

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CHAP. 37.

ELEVEN VARIETIES OF THE MYRTLE.

Cato makes mention of three varieties of the myrtle, the black, white, and the conjugula, perhaps so called from its reference to conjugal unions, and belonging to the same species as that which grew where Cluacina's statues now stand: at the present day the varieties are differently distinguished into the cultivated and the wild myrtle, each of which includes a kind with a large leaf. The kind known as "oxymyrsine," belongs only to the wild variety: ornamental gardeners classify several varieties of the cultivated kind; the "Tarentine," they speak of as a myrtle with a small leaf, the myrtle of this country as having a broad leaf, and the hexasticha as being very thickly covered with leaves, growing in rows of six: it is not, however, made any use of. There are two other kinds, that are branchy and well covered. In my opinion, the conjugula is the same that is now called the Roman myrtle. It is in Egypt that the myrtle is most odoriferous.

Cato has taught us how to make a wine from the black myrtle, by drying it thoroughly in the shade, and then putting it in must: he says, also, that if the berries are not quite dry, it will produce an oil. Since his time a method has been discovered of making a pale wine from the white variety; two sextarii of pounded myrtle are steeped in three semi-sextarii of wine, and the mixture is then subjected to pressure.

The leaves also are dried by themselves till they are capable of being reduced to a powder, which is used for the treatment of sores on the human body: this powder is of a slightly corrosive nature, and is employed also for the purpose of checking the perspiration. A thing that is still more re- markable, this oil is possessed of a certain vinous flavour, being, at the same time, of an unctuous nature, and remarkably efficacious for improving wines. When this is done, the wine strainer is dipped in the oil before it is used, the result of which is that it retains the lees of the wine, and allows nothing but the pure liquor to escape, while at the same time it accompanies the wine and causes a marked improvement in its flavour.

Sprigs of myrtle, if carried by a person when travelling on foot, are found to be very refreshing on a long journey. Rings, too, made of myrtle which has never been touched by iron, are an excellent specific for swellings in the groin.

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CHAP. 38.

THE MYRTLE USED AT ROME IN OVATIONS.

The myrtle has played its part, also, in the successes of war. Posthumius Tubertus, who gained a victory over the Sabines in his consulship, was the first person who entered the City enjoying the honour of an ovation, for having achieved this success with ease and without bloodshed; upon which occasion he made his entry crowned with the myrtle of Venus Victrix, and thereby rendered her tree an object of regard to our enemies even. Ever since this occasion, the wreath of those who have enjoyed an ovation has been made of myrtle, with the exception of M. Crassus, who, on his victory over the fugitive slaves and Spartacus, made his entry crowned with laurels. Massurius informs us, also, that some generals, on the occasion of a triumph even, have worn a wreath of myrtle in the triumphal car. L. Piso states that Papirius Maso, who was the first to enjoy a triumph for a victory over the Marsi — it was on the Alban Mount — was in the habit of attending at the games of the Circus, wearing a wreath of myrtle: he was the maternal grandfather of the second Scipio Africanus. Marcus Valerius wore two wreaths, one of laurel, the other of myrtle; it was in consequence of a vow which he had made to that effect.

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CHAP. 39. (30.)

THE LAUREL; THIRTEEN VARIETIES OF IT.

The laurel is especially consecrated to triumphs, is remarkably ornamental to houses, and guards the portals of our emperors and our pontiffs: there suspended alone, it graces the palace, and is ever on guard before the threshold. Cato speaks of two varieties of this tree, the Delphic and the Cyprian. Pompeius Lenæus has added another, to which he has given the name of "mustax," from the circumstance of its being used for putting under the cake known by the name of "mustaceum." He says that this variety has a very large leaf, flaccid, and of a whitish hue; that the Delphic laurel is of one uniform colour, greener than the other, with berries of very large size, and of a red tint approaching to green. He says, too, that it is with this laurel that the victors at Delphi are crowned, and warriors who enjoy the honours of a triumph at Rome. The Cyprian laurel, he says, has a short leaf, is of a blackish colour, with an imbricated edge, and crisped.

Since his time, however, the varieties have considerably augmented. There is the tinus for instance, by some considered as a species of wild laurel, while others, again, regard it as a tree of a separate class; indeed, it does differ from the laurel as to the colour, the berry being of an azure blue. The royal laurel, too, has since been added, which has of late begun to be known as the "Augustan:" both the tree, as well as the leaf, are of remarkable size, and the berries have not the usual rough taste. Some say, however, that the royal laurel and the Augustan are not the same tree, and make out the former to be a peculiar kind, with a leaf both longer and broader than that of the Augustan. The same authors, also, make a peculiar species of the bacalia the commonest laurel of all, and the one that bears the greatest number of berries. With them, too, the barren laurel is the laurel of the triumphs, and they say that this is the one that is used by warriors when enjoying a triumph — a thing that surprises me very much; unless, indeed, the use of it was first introduced by the late Emperor Augustus, and it is to be considered as the progeny of that

laurel, which, as we shall just now have occasion to mention, was sent to him from heaven; it being the smallest of them all, with a crisped short leaf; and very rarely to be met with.

In ornamental gardening we also find the taxa employed, with a small leaf sprouting from the middle of the leaf, and forming a fringe, as it were, hanging from it; the spadonia, too, without this fringe, a tree that thrives remarkably well in the shade: indeed, however dense the shade may be, it will soon cover the spot with its shoots. There is the chamædaphne, also, a shrub that grows wild; the Alexandrian laurel, by some known as the Idean, by others as the "hypoglottion," by others as the "carpophyllon," and by others, again, as the "hypelates." From the root it throws out branches three quarters of a foot in length; it is much used in ornamental gardening, and for making wreaths, and it has a more pointed leaf than that of the myrtle, and superior to it in softness, whiteness, and size: the seed, which lies between the leaves, is red. This last kind grows in great abundance on Mount Ida and in the vicinity of Heraclea in Pontus: it is only found, however, in mountainous districts.

The laurel, too, known as the daphnoides, is a variety that has received many different names: by some it is called the Pelasgian laurel, by others the euthalon, and by others the stephanon Alexandri. This is also a branchy shrub, with a thicker and softer leaf than that of the ordinary laurel: if tasted, it leaves a burning sensation in the mouth and throat: the berries are red, inclining to black. The ancient writers have remarked, that in their time there was no species of laurel in the island of Corsica. Since then, however, it has been planted there, and has thrived well.

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CHAP. 40.

HISTORICAL ANECDOTES CONNECTED WITH THE LAUREL.

This tree is emblematical of peace: when a branch of it is extended, it is to denote a truce between enemies in arms. For the Romans more particularly it is the messenger of joyful tidings, and of victory: it accompanies the despatches of the general, and it decorates the lances and javelins of the soldiers and the fasces which precede their chief. It is of this tree that branches are deposited on the lap of Jupiter All-good and All-great, so often as some new victory has imparted uni- versal gladness. This is done, not because it is always green, nor yet because it is an emblem of peace — for in both of those respects the olive would take the precedence of it — but because it is the most beauteous tree on Mount Parnassus, and was pleasing for its gracefulness to Apollo even; a deity to whom the kings of Rome sent offerings at an early period, as we learn from the case of L. Brutus. Perhaps, too, honour is more particularly paid to this tree because it was there that Brutus earned the glory of asserting his country's liberties, when, by the direction of the oracle, he kissed that laurel-bearing soil. Another reason, too, may be the fact, that of all the shrubs that are planted and received in our houses, this is the only one that is never struck by lightning. It is for these reasons, in my opinion, that the post of honour has been awarded to the laurel more particularly in triumphs, and not, as Massurius says, because it was used for the purposes of fumigation and purification from the blood of the enemy.

In addition to the above particulars, it is not permitted to defile the laurel and the olive by applying them to profane uses; so much so, indeed, that, not even for the propitiation of the divinities, should a fire be lighted with them at either altar or shrine. Indeed, it is very evident that the laurel protests against such usage by crackling as it does in the fire, thus, in a manner, giving expresssion to its abhorrence of such treatment. The wood of this tree when eaten is good as a specific for internal maladies and affections of the sinews.

It is said that when it thundered, the Emperor Tiberius was in the

habit of putting on a wreath of laurel to allay his apprehensions of disastrous effects from the lightning. There are also some remarkable facts connected with the laurel in the history of the late Emperor Augustus: once while Livia Drusilla, who afterwards on her marriage with the Emperor assumed the name of Augusta, at the time that she was affianced to him, was seated, there fell into her lap a hen of remarkable whiteness, which an eagle let fall from aloft without its receiving the slightest injury: on Livia viewing it without any symptoms of alarm, it was discovered that miracle was added to miracle, and that it held in its beak a branch of laurel covered with berries. The aruspices gave orders that the hen and her progeny should be carefully preserved, and the branch planted and tended with religious care. This was accordingly done at the country-house belonging to the Cæsars, on the Flaminian Way, near the banks of the Tiber, eight miles from the City; from which circumstance that road has since received the title "Ad gallinas." From the branch there has now arisen, wondrous to relate, quite a grove: and Augustus Cæsar afterwards, when celebrating a triumph, held a branch of it in his hand and wore a wreath of this laurel on his head; since which time all the succeeding emperors have followed his example. Hence, too, has originated the custom of planting the branches which they have held on these occasions, and we thus see groves of laurel still existing which owe their respective names to this circumstance. It was on the above occasion, too, that not improbably a change was effected in the usual laurel of the triumph. The laurel is the only one among the trees that in the Latin language has given an appellation to a man, and it is the only one the leaf of which has a distinct name of its own, — it being known by the name of "laurea." The name of this tree is still retained by one place in the city of Rome, for we find a spot on the Aventine Mount still known by the name of "Loretum," where formerly a laurel-grove existed. The laurel is employed in purifications, and we may here mention, incidentally, that it will grow from slips — though Democritus and Theophrastus have expressed their doubts as to that fact.

We shall now proceed to speak of the forest trees.

SUMMARY. — Remarkable facts, narratives, and observations, one hundred and twenty.

ROMAN AUTHORS QUOTED. — Fenestella, Fabianus, Virgil, Corn. Valerianus, Celsus, Cato the Censor, Saserna father and son, Scrofa, M. Varro, D. Silanus, Fabius Pictor, Trogus, Hyginus, Flaccus Verrius, Græcinus, Atticus Julius, Columella, Massurius Sabinus, Tergilla, Cotta Messalinus, L. Piso, Pompeius Lenæus, Maccius Plautus, Flavius, Dossenus, Scævola, Ælius, Ateius Capito, Sextius Niger, Vibius Rufus.

FOREIGN AUTHORS QUOTED. — Aristotle, Democritus, King Hiero, King Attalus Philometor, Archytas, Xenophon, Amphilochus of Athens, Anaxipolis of Thasos, Apollodorus of Lemnos, Aristophanes of Miletus, Antigonus of Cymæ, Agathocles of Chios, Apollonius of Pergamus, Aristander of Athens, Bacchius of Miletus, Bion of Soli, Chæreas of Athens, Chæristus of Athens, Diodorus of Priene, Dion of Colophon, Epigenes of Rhodes, Euagon of Thasos, Euphronius of Athens, Androtion who wrote on Agriculture, Æschrion who wrote on Agriculture, Lysimachus who wrote on Agriculture, Dionysius who translated Mago, Diophanes who made an Epitome of the work of Dionysius, Asclepiades the Physician, Erasistratus the Physician, Commiades who wrote on the preparation of Wines, Aristomachus who wrote on the same subject, Hicesius who wrote on the same subject, Themiso the Physician, Onesicritus, King Juba.

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BOOK XVI. THE NATURAL HISTORY OF THE FOREST TREES.

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CHAP. I.

COUNTRIES THAT HAVE NO TREES.

WE have given the precedence in this account to the fruit-trees and others which, by their delicious juices, first taught man to give a relish to his food and the various aliments requisite for his sustenance, whether it is that they spontaneously produce these delightful flavours, or whether we have imparted them by the methods of adoption and intermarriage, thus bestowing a favour, as it were, upon the very beasts and birds. The next thing, then, would be to speak of the glandi- ferous trees, the trees which proffered the earliest nutriment to the appetite of man, and proved themselves his foster- mothers in his forlorn and savage state — did I not feel myself constrained on this occasion to make some mention of the surprise which I have felt on finding by actual experience what is the life of mortals when they inhabit a country that is without either tree or shrub.

(1.) I have already stated that in the East many nations that dwell on the shores of the ocean are placed in this necessitous state; and I myself have personally witnessed the condition of the Chauci, both the Greater and the Lesser, situate in the regions of the far North. In those climates a vast tract of land, invaded twice each day and night by the overflowing waves of the ocean, opens a question that is eternally proposed to us by Nature, whether these regions are to be looked upon as belonging to the land, or whether as forming a portion of the sea?

Here a wretched race is found, inhabiting either the more elevated spots of land, or else eminences artificially constructed, and of a height to which they know by experience that the highest tides will never reach. Here they pitch their cabins; and when the waves cover the surrounding country far and wide, like so many mariners on board ship are they: when, again, the tide recedes, their condition is that of so many shipwrecked men, and around their cottages they pursue the fishes as they make their escape with the receding tide. It is not their lot, like the adjoining nations, to keep any flocks for

sustenance by their milk, nor even to maintain a warfare with wild beasts, every shrub, even, being banished afar. With the sedge and the rushes of the marsh they make cords, and with these they weave the nets employed in the capture of the fish; they fashion the mud, too, with their hands, and drying it by the help of the winds more than of the sun, cook their food by its aid, and so warm their entrails, frozen as they are by the northern blasts; their only drink, too, is rainwater, which they collect in holes dug at the entrance of their abodes: and yet these nations, if this very day they were vanquished by the Roman people, would exclaim against being reduced to slavery! Be it so, then — Fortune is most kind to many, just when she means to punish them.

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CHAP. 2.

WONDERS CONNECTED WITH TREES IN THE NORTHERN REGIONS.

Another marvel, too, connected with the forests! They cover all the rest of Germany, and by their shade augment the cold. But the highest of them all are those not far distant from the Chauci already mentioned, and more particularly in the vicinity of the two lakes there. The very shores are lined with oaks, which manifest an extraordinary eagerness to attain their growth: undermined by the waves or uprooted by the blasts, with their entwining roots they carry vast forests along with them, and, thus balanced, stand upright as they float along, while they spread afar their huge branches like the rigging of so many ships. Many is the time that these trees have struck our fleets with alarm, when the waves have driven them, almost purposely it would seem, against their prows as they stood at anchor in the night; and the men, destitute of all remedy and resource, have had to engage in a naval combat with a forest of trees!

(2.) In the same northern regions, too, is the Hercynian Forest, whose gigantic oaks, uninjured by the lapse of ages, and contemporary with the creation of the world, by their near approach to immortality surpass all other marvels known. Not to speak of other matters that would surpass all belief, it is a well-known fact that their roots, as they meet together, up-heave vast hills; or, if the earth happens not to accumulate with them, rise aloft to the very branches even, and, as they contend for the mastery, form arcades, like so many portals thrown open, and large enough to admit of the passage of a squadron of horse.

(3.) All these trees, in general, belong to the glandiferous class, and have ever been held in the highest honour by the Roman people.

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CHAP. 3. (4.)

THE ACORN OAK. THE CIVIC CROWN.

It is with the leaves of this class of trees that our civic crown is made, the most glorious reward that can be bestowed on military valour, and, for this long time past, the emblem of the imperial clemency; since the time, in fact, when, after the impiety of civil war, it was first deemed a meritorious action not to shed the blood of a fellow-citizen. Far inferior to this in rank are the mural crown, the vallar, and the golden one, superior though they may be in the value of the material: inferior, too, in merit, is the rostrate crown, though ennobled, in recent times more particularly, by two great names, those of M. Varro, who was presented with it by Pompeius Magnus, for his great achievements in the Piratic War, and of M. Agrippa, on whom it was bestowed by Cæsar, at the end of the Sicilian War, which was also a war against pirates.

In former days the beaks of vessels, fastened in front of the tribunal, graced the Forum, and seemed, as it were, a crown placed upon the head of the Roman people itself. In later times, however, they began to be polluted and trodden under foot amid the seditious movements of the tribunes, the public interest was sacrificed to private advantage, each citizen sought solely his own advancement, and everything looked upon as holy was abandoned to profanation — still, from amid all this, the Rostra emerged once again, and passed from beneath the feet of the citizens to their heads. Augustus presented to Agrippa the rostrate crown, while he himself received the civic crown at the hands of all mankind.

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CHAP. 4.

THE ORIGIN OF THE PRESENTATION OF CROWNS.

In ancient times crowns were presented to none but a divinity, hence it is that Homer awards them only to the gods of heaven and to the entire army; but never to an individual, however great his achievements in battle may have been. It is said, too, that Father Liber was the first of all who placed a crown on his head, and that it was made of ivy. In succeeding times, those engaged in sacrifices in honour of the gods began to wear them, the victims being decked with wreaths as well. More recently, again, they were employed in the sacred games; and at the present day they are bestowed on such occasions, not upon the victor, indeed, but upon his country, which receives, it is proclaimed, this crown at his hands. Hence arose the usage of conferring wreaths upon warriors when about to enjoy a triumph, for them to consecrate in the temples: after which it became the custom to present them at our games. It would be a lengthy matter, and, indeed, foreign to the purpose of this work, to enter upon a discussion who was the first Roman that received each kind of crown; in fact, they were acquainted with none but such as were given as the reward of military prowess. It is a well-known fact, however, that this people has more varieties of crowns than those of all other nations put together.

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CHAP. 5.

PERSONS PRESENTED WITH A CROWN OF LEAVES.

Romulus presented Hostus Hostilius with a crown of leaves, for being the first to enter Fidense. This Hostus was the grandfather of King Tullus Hostilius. P. Decius the elder, the military tribune, was presented with a crown of leaves by the army which had been saved by his valour, under the command of Cornelius Cossus, the consul, in the war with the Samnites. This crown was made at first of the leaves of the holm oak, but afterwards those of the æsculus were preferred, as being a tree sacred to Jupiter: this, however, was soon employed indifferently with the quercus, according as each might happen to present itself, the honourable distinction given to the acorn being the only thing observed. Rigorous laws were, however, enacted, to maintain the lofty glories of this wreath, by which it was placed upon an equality even with the supreme honours of the wreath that is given by Greece in presence of Jove himself, and to receive which the exulting city of the victor is wont to break a passage through its very walls. These laws are to the effect that the life of a fellow-citizen must be preserved, and an enemy slain; that the spot where this takes place must have been held by the enemy that same day; that the person saved shall admit the fact, other witnesses being of no use at all; and that the person saved shall have been a Roman citizen.

To preserve an ally merely, even though it should be the life of a king that is so saved, confers no right to this high reward, nor is the honour at all increased, even if it is the Roman general that has been thus preserved, it being the intention of the framers of the law that it should be the status of the citizen that is everything. When a man has received this wreath, it is his privilege to wear it for the rest of his life. When he makes his appearance at the celebration of the games, it is customary for the Senate even to rise from their seats, and he has the right of taking his seat next to the senators. Exemption, too, from all civic duties is conferred upon him as well as his father and his father's father. Siccius Dentatus, as we have already mentioned on an appropriate occasion, received fourteen civic crowns, and Manlius

Capitolinus six, one, among the rest, for having saved the life of his general, Servilius. Scipio Africanus declined to accept the civic crown for having saved the life of his father at the battle of Trebia. Times these, right worthy of our everlasting admiration, which accorded honour alone as the reward of exploits so mighty, and which, while other crowns were recommended by being made of gold, disdained to set a price upon the safety of a citizen, and loudly proclaimed thereby that it is unrighteous to save the life of a man for motives of lucre.

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CHAP. 6. (5.)

THIRTEEN VARIETIES OF THE ACORN.

It is a well-known fact that acorns at this very day constitute the wealth of many nations, and that, too, even amid these times of peace. Sometimes, also, when there is a scarcity of corn they are dried and ground, the meal being employed for making a kind of bread. Even to this very day, in the provinces of Spain, we find the acorn introduced at table in the second course: it is thought to be sweeter when roasted in the ashes. By the law of the Twelve Tables, there is a provision made that it shall be lawful for a man to gather his acorns when they have fallen upon the land of another.

The varieties of the glandiferous trees are numerous, and they are found to differ in fruit, locality, sex, and taste; the acorn of the beech having one shape, that of the quercus another, and that, again, of the holm-oak another. The various species also, among themselves, offer a considerable number of varieties. In addition to this, some of these trees are of a wild nature, while the fruits of others are of a less acrid flavour, owing to a more careful cultivation. Then, too, there is a difference between the varieties which grow on the mountains and those of the plains; the males differ from the females, and there are considerable modifications in the flavour of their fruit. That of the beech is the sweetest of all; so much so, that, according to Cornelius Alexander, the people of the city of Chios, when besieged, supported themselves wholly on mast. The different varieties cannot possibly be distinguished by their respective names, which vary according to their several localities. The quercus and the robur we see growing everywhere, but not so with the æsculus; while a fourth kind, known as the cerrus, is not so much as known throughout the greater part of Italy. We shall distinguish them, therefore, by their characteristic features, and when circumstances render it necessary, shall give their Greek names as well.

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CHAP. 7. (6.)

THE BEECH.

The acorn of the beech is similar in appearance to a kernel, enclosed in a shell of triangular shape. The leaf is thin and one of the very lightest, is similar in appearance to that of the poplar, and turns yellow with remarkable rapidity. From the middle of the leaf, and upon the upper side of it, there mostly shoots a little green berry, with a pointed top. The beech is particularly agreeable to rats and mice; and hence it is, that where this tree abounds, those creatures are sure to be plentiful also. The leaves are also very fattening for dormice, and good for thrushes too. Almost all trees bear an average crop but once in two years; this is the case with the beech more particularly.

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CHAP. 8.

THE OTHER ACORNS-WOOD FOR FUEL.

The other trees that bear acorns, properly so called, are the robur, the æsculus, the cerrus, the holm-oak, and the corktree: it is contained in a rivelled calyx, which embraces more or less of it, according to the several varieties. The leaves of these trees, those of the holm-oak excepted, are weighty, pulpy, long, and jagged at the edges, and they do not turn yellow before they fall, as with the beech: they are also longer or shorter, as the case may be.

There are two kinds of holm-oak: one of them, which belongs to Italy, has a leaf not very unlike that of the olive; some of the Greeks give it the name of "milax," and in our provinces it is known as the aquifolia. The acorn of these two kinds is shorter and more slender than in the others: Homer calls it "acylos," and by that name distinguishes it from the ordinary acorn: it is generally said that the male tree of the holm-oak bears no fruit.

The best acorn, and the very largest, is that which grows upon the quercus, and the next to it is the fruit of the aæscu- lus: that of the robur, again, is diminutive, and the fruit of the cerrus has a meagre, wretched look, being enclosed in a calyx covered with prickles, like the outer coat of the chesnut. With reference to the acorn of the quercus, that which grows upon the female tree is sweeter and more tender, while that of the male is more solid and compact. The acorn, however, of the latifolia is the most esteemed, an oak so called from the remarkable broadness of its leaves. The acorns differ also among themselves in size, and the comparative fineness of the outer shell; as also in the circumstance that some have beneath the shell a rough coat of a rusty colour, while in others a white flesh immediately presents itself. Those, too, are more particularly esteemed, the two extremities of the nut of which, taken lengthwise, are as hard as a stone: and it is considered preferable that this peculiarity should present itself rather in the shell than in the flesh: in either case, however, it only exists in the fruit of the male tree. In some kinds, again, the acorn is oval, in others round; while in others it is of a

more pointed form. The colour, too, varies considerably, according as it is blacker or whiter; this last being held in the highest esteem. The extremities of the acorn are bitter, but the flesh in the middle of it is sweet; another difference, too, consists in the comparative length or shortness of the stalk.

As for the trees themselves, the one that bears the acorn of largest size is known as the "hemeris;" a small tree with a thick bushy foliage all around it, and often hollowed at the place where the branch is joined to the trunk. The quercus has a stronger wood, and less susceptible of decay: this also is a very branchy tree, but is much taller than the last, while the trunk is considerably thicker. The ægilops, however, is the highest of them all, and is much attached to wild, uncultivated spots. Next to this in height is the latifolia, but its wood is far from being so useful either for building purposes or for charcoal. When rough-hewn it is very apt to spoil, hence it is that it is generally used in an unhewn state. As charcoal, it is considered only economical in smelting copper; for the moment the workman ceases to blow, the fire dies out, and hence it requires to be repeatedly rekindled; while at the same time it gives out great quantities of sparks. The best charcoal is that obtained from the wood of young trees. Square billets of wood, newly cut, are piled compactly together with clay, and built up in the form of a chimney; the pile is then set fire to, and incisions are made in the coat of clay as it gradually hardens, by the aid of long poles, for the purpose of letting the moisture of the wood evaporate.

The worst kind of all, however, both for timber and for making charcoal, is the oak known as the "haliphlœos," the bark of which is remarkably thick, and the trunk of considerable size, but mostly hollow and spongy: it is the only one of this species that rots while the tree is still alive. In addition to this, it is very frequently struck by lightning, although it is not so remarkably lofty in height: for this reason it is not considered lawful to employ its wood for the purposes of sacrifice. It is but rarely that it bears any acorns, and when it does they are bitter: no animal will touch them, with the sole exception of swine, and not even they, if they can get any other food. An additional reason also for its exclusion from all religious ceremonials, is the circumstance that the fire is very apt to go out in

the middle of the sacrifice when the wood of it is used for fuel.

The acorn of the beech, when given to swine, makes them brisk and lively, and renders the flesh tender for cooking, and light and easy of digestion; while, on the other hand, that of the holm oak has the effect of making them thin, pallid, meagre, and lumpish. The acorn of the quercus is of a broad shape, and is the heaviest as well as the sweetest of them all. According to Nigidius, the acorn of the cerrus occupies the next rank to this, and, indeed, there is no acorn that renders the flesh of swine more firm, though at the same time it is apt to impart a certain degree of hardness. The same author assures us also, that the acorn of the holm oak is a trying diet for swine, unless it is given in very small quan- tities at a time. He says, too, that this acorn is the last to fall, and that the flesh of swine, if fed upon the acorns of the æsculus, the robur, or the cork-tree, will be of a spongy nature.

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CHAP. 9.

THE GALL-NUT.

All the glandiferous trees produce the gall-nut as well: they only bear acorns, however, in alternate years. The gallnut of the hemeris is considered the choicest of all, and the best adapted for the preparation of leather: that of the latifolia closely resembles it, but is somewhat lighter, and not by any means so highly approved. This last tree produces the black gall-nut also — for there are two varieties of it — this last being deemed preferable for dyeing wool.

(7.) The gall-nut begins to grow just as the sun is leaving the sign of Gemini, and always bursts forth in its entirety in a single night. The white variety grows, too, in a single day, but if the heat happens to overtake it, it shrinks immediately, and never arrives at its proper size, which is about that of a bean. The black gall-nut will remain green for a longer period, and sometimes attains the size of an apple even. The best kind is that which comes from Commagene, and the most inferior are those produced by the robur: it may easily be tested by means of certain holes in it which admit of the passage of the light.

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CHAP. 10.

OTHER PRODUCTIONS ON THESE TREES BESIDES THE ACORN.

The robur, in addition to its fruit, has a great number of other productions: it bears the two varieties of the gall-nut, and a production which closely resembles the mulberry, except that it differs from it in being dry and hard: for the most part it bears a resemblance to a bull's head, and in the inside there is a fruit very similar to the stone of the olive. Little balls also are found growing on the robur, not unlike nuts in appearance, and containing within them a kind of soft wool, which is used for burning in lamps; for it will keep burning without oil, which is the case also with the black gall-nut. It bears another kind, too, of little ball, covered with hair, but used for no purpose: in spring, however, this contains a juice like honey. In the hollows formed by the union of the trunk and branches of this tree there are found also small round balls, which adhere bodily to the bark, and not by means of a stalk: at the point of junction they are white, but the rest of the body is spotted all over with black: inside they are of a scarlet colour, but on opening them they are found to be empty, and are of a bitter taste.

Sometimes, too, the robur bears a kind of pumice, as well as little balls, which are formed of the leaves rolled up; upon the veins of the leaves, too, there are watery pustules, of a whitish hue, and transparent while they are soft; in these a kind of gnat is produced, and they come to maturity just in the same way that the ordinary gall-nut does.

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CHAP. 11. (8.)

CACHRYS.

The robur bears cachrys, too; such being the name given to a small round ball that is employed in medicine for its caustic properties. It grows on the fir likewise, the larch, the pitch-tree, the linden, the nut-tree, and the plane, and remains on the tree throughout the winter, after the leaves have fallen. It contains a kernel very similar to that of the pinenut, and increases in size during the winter. In spring the ball opens throughout, and it finally drops when the leaves are beginning to grow.

Such is the multiplicity of the products borne by the robur in addition to its acorns; and not only these, but mushrooms as well, of better or worse quality, the most recent stimulants that have been discovered for the appetite; these last are found growing about its roots. Those of the quercus are the most highly esteemed, while those of the robur, the cypress, and the pine are injurious. The robur produces mistletoe also, and, if we may believe Hesiod, honey as well: indeed, it is a well-known fact, that a honey-like dew falling from heaven, as we have already mentioned, deposits itself upon the leaves of this tree in preference to those of any other. It is also well known that the wood of this tree, when burnt, produces a nitrous ash.

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CHAP. 12.

THE KERMES BERRY.

The helm oak, however, by its scarlet berry alone challenges competition with all these manifold productions. This grain appears at first sight to be a roughness on the surface of the tree, as it were, a small kind of the aquifolia variety of holm oak, known as the cusculium. To the poor in Spain it furnishes the means of paying one half of their tribute. We have already, when speaking of the purple of the murex, mentioned the best methods adopted for using it. It is produced also in Galatia, Africa, Pisidia, and Cilicia: the most inferior kind is that of Sardinia.

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CHAP. 13.

AGARIC.

It is in the Gallic provinces more particularly that the glandiferous trees produce agaric; such being the name given to a white fungus which has a strong odour, and is very useful as an antidote. It grows upon the top of the tree, and gives out a brilliant light at night: this, indeed, is the sign by which its presence is known, and by the aid of this light it may be gathered during the night. The ægilops is the only one among the glandiferous trees that bears a kind of dry cloth, covered with a white mossy shag, and this, not only attached to the bark, but hanging down from the branches as well, a cubit even in length: this substance has a strong odour, as we have already stated, when speaking of the perfumes.

The cork is but a very small tree, and its acorn is of the very worst quality, and rarely to be found as well: the bark is its only useful product, being remarkably thick, and if removed it will grow again. When straitened out, it has been known to form planks as much as ten feet square. This substance is employed more particularly attached as a buoy to the ropes of ships' anchors and the drag-nets of fishermen. It is employed also for the bungs of casks and as a material for the winter shoes of females; for which reason the Greeks not inappropriately call them "the bark of a tree."

There are some writers who speak of it as the female of the holm oak; and in the countries where the holm does not grow, they substitute for it the wood of the cork-tree, more particularly in cartwrights' work, in the vicinity of Elis and Lacedæmon for instance. The cork-tree does not grow throughout the whole of Italy, and in no part whatever of Gaul.

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CHAP. 14. (9.)

TREES OF WHICH THE BARK IS USED.

The bark also of the beech, the lime, the fir, and the pitch-tree is extensively used by the peasantry. Panniers and baskets are made of it, as also the large flat hampers which are employed for the carriage of corn and grapes: roofs of cottages, too, are made of this material. When a spy has been sent out he often leaves information for his general, written upon fresh bark, by cutting letters in the parts of it that are the most juicy. The bark of the beech is also employed for religious purposes in certain sacred rites. This tree, however, when deprived of its bark, will not survive.

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CHAP. 15. (10.)

SHINGLES.

The best shingles are those made of the wood of the robur; the next best being those furnished by the other glandiferous trees and the beech. Those most easily made are cut from the wood of the resinous trees, but they do not last, with the exception of those made of pine. Cornelius Nepos informs us, that Rome was roofed solely with shingles down to the time of the war with Pyrrhus, a period of four hundred and seventy years. It is well known that it was remarkable for the fine forests in its vicinity. Even at the present day, the name of Jupiter Fagutalus points out in what locality there stood a grove of beeches; the Querquetulan Gate shows where the quercus once stood, and the Viminal Hill is the spot where the "vimen" was sought in ancient times. In many other parts, too, there were groves to be found, and sometimes as many as two. Q. Hortensius, the Dictator, on the secession of the plebeians to the Janiculum, passed a law in the Æsculetum, that what the plebeians had enacted should be binding upon every Roman citizen.

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CHAP. 16.

THE PINE.

In those days they regarded as exotics, because they did not exist in the vicinity of the City, the pine and the fir, as well as all the other varieties that produce pitch; of which we shall now proceed to speak, in order that the method of seasoning wine, from the very first, may be fully known. Whereas there are several among the trees already mentioned in Asia or the East, that produce pitch, in Europe there are but six varieties of kindred trees that supply it. In this number there are the pine and the pinaster, which have long thin leaves like hair, and pointed at the end. The pine yields the least resin of them all: in the pine nut, indeed, of which we have previously spoken, it is sometimes to be found, but hardly in sufficient quantities to warrant us in reckoning the pine among the resinous trees.

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CHAP. 17.

THE PINASTER.

The pinaster is nothing else but a wild pine: it rises to a surprising height, and throws out branches from the middle, just as the pine does from the top. This tree yields a more copious supply of resin than the pine: the mode in which this is done we shall set forth on a future occasion. It grows also in flat countries. Many people think that this is the same tree that grows along the shores of Italy, and is known as the “tibulus;” but this last is slender, and more com- pact than the pine; it is likewise free from knots, and hence is used in the construction of light gallies; they are both almost entirely destitute of resin.

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CHAP. 18.

THE PITCH-TREE: THE FIR.

The pitch-tree loves the mountain heights and cold localities. This is a funereal tree, and, as an emblem of death, is placed before the door of the deceased, and is left to grow in the vicinity of the funeral pile. Still, however, it is now some time since it was admitted into our gardens, in consequence of the facility with which it is clipped into various shapes. It gives out considerable quantities of resin, which is intermingled with white granulations like pearls, and so similar in appearance to frankincense, that when mixed, it is impossible to distinguish them; hence the adulterations we find practised in the Seplasia. All this class of trees have a short bristly leaf, thick and hard, like that of the cypress. The branches of the pitch-tree are of moderate size, and extend from almost the very root of the tree, adhering to the sides like so many arms: the same is the case with the fir, the wood of which is held in great esteem for ship-building.

This tree grows upon the summits of lofty mountains, as though, in fact, it had an antipathy to the sea, and it does not at all differ from the pitch-tree in appearance: the wood is also very highly esteemed for the construction of rafters, and many other appliances of life. A flow of resin, which in the pitch-tree constitutes its great merit, is looked upon as a defect in the fir, though it will generally exude in some small quantity on exposure of the wood, to the action of the sun. On the other hand, the wood which in the fir-tree is remarkably fine, in the pitch-tree is only used for making shingles, vats, and a few other articles of joiners' work.

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CHAP. 19.

THE LARCH: THE TORCH-TREE.

The fifth kind of resinous tree has the same localities, and is very similar in appearance; it is known as the larch. The wood of this tree is far more valuable, being unimpaired by time, and proof against all decay; it is of a reddish colour, and of an acrid smell. Resin flows from this wood in still greater quantities; it is of the colour of honey, more viscous than the other varieties, and never turns hard.

A sixth variety is the torch-tree, properly so called, which gives out more resin than any of the others, with the exception of the pitch-tree; but its resin is more liquid than that of this last. The wood, too, of this tree is more particularly employed for kindling fires and giving torch-light in religious ceremonials. Of this tree it is the male only that bears what is known to the Greeks by the name of "syce," remarkable for its extremely powerful odour. When the larch is changed into the torch-tree, it is a proof that it is in a diseased state.

The wood of all these trees, when set fire to, gives out immoderate volumes of sooty smoke, and sputters every now and then with a sudden crackling noise, while it sends out red-hot charcoal to a considerable distance — with the sole exception of that of the larch, which will neither burn nor char, nor, in fact, suffer any more from the action of fire than a stone. All these trees are evergreens, and are not easily distinguished by the foliage, even by those who are best acquainted with them, so nearly related are they to one another. The pitch- tree, however, is not so high as the larch; which, again, is stouter, and has a smoother back, with a more velvety leaf, more unctuous to the touch, thicker, and more soft and flexible. The pitch-tree, again, has a leaf more sparsely scattered and drier; it is thinner also, and of a colder nature, rougher all over in appearance, and covered with a resinous deposit: the wood of this tree is most like that of the fir. The larch, when the roots are once burnt, will not throw out fresh shoots, which the pitch-tree will do, as was found to be the case in the island of Lesbos, after the Pyrrhæan grove had been burnt there.

In the same species too, the variety of sex is found to constitute a considerable difference: the male is the shorter tree; and has a harder wood; while the female is taller, and bears a leaf more unctuous to the feel, smooth and free from all rigidity. The wood of the male tree is hard and awry, and consequently not so well suited for carpenters' work; while that of the female is softer, as may be very easily perceived on the application of the axe, a test, in fact, which, in every variety, immediately shows us which trees are males; the axe in such case meeting with a greater resistance, falling with a louder noise, and being withdrawn from the wood with considerably greater difficulty: the wood of the male tree is more parched too, and the root is of a blacker hue. In the vicinity of Mount Ida, in Troas, the circumstance whether the tree grows in the mountain districts or on the sea-shore, makes another considerable difference. In Macedonia and Arcadia, and in the neighbourhood of Elis, the names of the several varieties have been totally altered, and it has not been agreed by authors which name ought to be given to each: we have, therefore, contented ourselves with employing the Roman denominations solely.

The fir is the largest of them all, the female being the taller of the two; the wood, too, is softer and more easily worked. This tree is of a rounder form than the others, and its leaves are closely packed and feathered, so as not to admit of the passage of rain; the appearance, too, of the tree is altogether more cheerful. From the branches of these different varieties, with the sole exception of the larch, there hang numbers of scaly nuts of compact shape, like so many catkins. The nuts found upon the male fir have a kernel in the fore-part, which is not the case with those on the female tree. In the pitch-tree, again, these kernels, which are very small and black, occupy the whole of the catkin, which is smaller and more slender than in the other varieties; hence it is that the Greeks call this tree by the name of phthirophoron. In this tree, too, the nuts on the male are more compressed, and less moist with resin.

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CHAP. 20.

THE YEW.

Not to omit any one of them, the yew is similar to these other trees in general appearance. It is of a colour, however, but slightly approaching to green, and of a slender form; of sombre and ominous aspect, and quite destitute of juice: it is the only one, too, among them all, that bears a berry. In the male tree the fruit is injurious; indeed, in Spain more particularly, the berries contain a deadly poison. It is an ascertained fact that travellers' vessels, made in Gaul of this wood, for the purpose of holding wine, have caused the death of those who used them. Sextius says, that in Greece this tree is known by the name of "smilax, "and that in Arcadia it is possessed of so active a poison, that those who sleep beneath it, or even take food there, are sure to meet their death from it. There are authors, also, who assert that the poisons which we call at the present day "toxica," and in which arrows are dipped, were formerly called taxica, from this tree. It has been discovered, also, that these poisonous qualities are quite neutralized by driving a copper nail into the wood of the tree.

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CHAP. 21. (11.)

METHODS OF MAKING TAR — HOW CEDRIUM IS MADE.

In Europe, tar is extracted from the torch-tree by the agency of fire; it is employed for coating ships and for many other useful purposes. The wood of the tree is chopped into small billets, and then put into a furnace, which is heated by fires lighted on every side. The first steam that exudes flows in the form of water into a reservoir made for its reception: in Syria this substance is known as “cedrium;” and it possesses such remarkable strength, that in Egypt the bodies of the dead, after being steeped in it, are preserved from all corruption.

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CHAP. 22.

METHODS BY WHICH THICK PITCH IS PREPARED.

The liquid that follows is of a thicker consistency, and constitutes pitch, properly so called. This liquid, thrown again into a brazen cauldron, and mixed with vinegar, becomes still thicker, and when left to coagulate, receives the name of "Bruttian" pitch. It is used, however, only for pitching the insides of dolia and other vessels, it differing from the other kinds in being more viscous, of a redder colour, and more unctuous than is usually the case. All these varieties of pitch are prepared from the pitch-tree, by putting red-hot stones, with the resinous wood, in troughs made of strong oak; or if these troughs are not attainable, by piling up billets of the wood in the method employed for the manufacture of charcoal. It is this pitch that is used for seasoning wine, being first pounded and reduced to a fine powder: it is of a blacker colour, too, than the other sort. The same resin, if boiled gently with water, and then strained off, becomes viscous, and assumes a red colour; it is then known as "distilled" pitch:" for making this, the refuse portions of the resin and the bark of the tree are generally selected.

Another method is adopted for the manufacture of that used as crapula. Raw flower of resin is taken, direct from the tree, with a plentiful sprinkling of small, thin chips of the wood. These are then pounded down and passed through a sieve, after which they are steeped in water, which is heated till it comes to a boil. The unctuous portion that is extracted from this is the best resin: it is but rarely to be met with, and then only in a few places in Italy, in the vicinity of the Alps: it is in considerable request for medicinal purposes. For this, they generally boil a congius of white resin to two congii of rain-water: some persons, however, think it better to boil it without water for one whole day by a slow fire, taking care to use a vessel of white copper. Some, again, are in the habit of boiling the resin of the terebinth in a flat pan placed upon hot ashes, and prefer it to any other kind. The resin of the mastich is held in the next degree of estimation.

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CHAP. 23. (12.)

HOW THE RESIN CALLED ZOPISSA IS PREPARED.

We must not omit, too, that the Greeks call by the name of zopissa the pitch mixed with wax which has been scraped from off the bottoms of sea-going ships; for there is nothing, in fact, that has been left untried by mankind. This composition is found much more efficient for all those purposes in which pitch and resin are employed, in consequence of the superior hardness which has been imparted to it by the sea-salt.

The pitch-tree is opened on the side that faces the sun, not by means of an incision, but of a wound made by the removal of the bark: this opening being generally two feet in width and one cubit from the ground, at the very least. The body of the tree, too, is not spared in this instance, as in others, for even the very chips from off it are considered as having their use; those, however, from the lower part of the tree are looked upon as the best, the wood of the higher parts giving the resin a bitter taste. In a short time all the resinous juices of the entire tree come to a point of confluence in the wound so inflicted: the same process is adopted also with the torch-tree. When the liquid ceases to flow, the tree is opened in a similar manner in some other part, and then, again, elsewhere: after which the whole tree is cut down, and the pith of it is used for burning.

So, too, in Syria they take the bark from off the terebinth; and, indeed, in those parts they do not spare even the root or branches, although in general the resin obtained from those parts is held in disesteem. In Macedonia they subject the whole of the male larch to the action of fire, but of the female only the roots. Theopompus has stated in his writings that in the territory of the Apolloniates there is found a kind of mineral pitch, not inferior to that of Macedonia. The best pitch everywhere is that obtained from trees planted on sunny spots with a north-east aspect; while that which is produced from more shaded localities has a disagreeable look and a repulsive odour. Pitch, too, that is produced amid the cold of winter is of inferior quality, being in smaller quantity, too, and comparatively colourless.

Some persons are of opinion that in mountainous localities this liquid is produced in the greatest abundance, and that it is of superior colour and of a sweeter taste and has a finer smell so long as it remains in a state of resin; but that when, on the other hand, it is subjected to boiling, it yields a smaller quantity of pitch, because so much of it goes off in a serous shape. They say that the resinous trees, too, that grow on mountains are thinner than those that are found on plains, but that they are apt, both of them, to be unproductive in clear, dry weather.

Some trees, too, afford a flow of resinous juice the year after the incision is made, some, again, in the second year, and others in the third. The wound so made is filled with resin, but not with bark, or by the cicatrization of the outer coat; for the bark in this tree never unites. Among these varieties some authors have made the sappium to constitute a peculiar kind, because it is produced from the seed of a kindred variety, as we have already stated when speaking of the nuts of trees; and they have given the name of tæda to the lower parts of the tree; although in reality this tree is nothing else but a pitch-tree, which by careful cultivation has lost some small portion of its wild character. The name “sappinus” is also given to the timber of these trees when cut, as we shall have occasion to mention hereafter.

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CHAP. 24. (13.)

TREES THE WOOD OF WHICH IS HIGHLY VALUED. FOUR VARIETIES OF THE ASH.

It is for the sake of their timber that Nature has created the other trees, and more particularly the ash, which yields it in greater abundance. This is a tall, tapering tree, with a feather-like leaf: it has been greatly ennobled by the encomiums of Homer, and the fact that it formed the spear of Achilles: the wood of it is employed for numerous purposes. The ash which grows upon Mount Ida, in Troas, is so extremely like the cedar, that, when the bark is removed, it will deceive a purchaser.

The Greeks have distinguished two varieties of this tree, the one long and without knots, the other short, with a harder wood, of a darker colour, and a leaf like that of the laurel. In Macedonia they give the name of "bumelia" to an ash of remarkably large size, with a wood of extreme flexibility. Some authors have divided this tree into several varieties, ac- cording to the localities which it inhabits, and say that the ash of the plains has a spotted wood, while that of the mountain ash is more compact. Some Greek writers have stated hat the leaf of the ash is poisonous to beasts of burden, but harmless to all the animals that ruminate The leaves of his tree in Italy, however, are not injurious to beasts of burden even; so far from it, in fact, that nothing has been found to act as so good a specific for the bites of serpents as to drink the juice extracted from the leaves, and to apply them to the wounds. So great, too, are the virtues of this tree, that no serpent will ever lie in the shadow thrown by it, either in the morning or the evening, be it ever so long; indeed, they will always keep at the greatest possible distance from it. We state the fact from ocular demonstration, that if a serpent and a lighted fire are placed within a circle formed of the leaves of the ash, the reptile will rather throw itself into the fire than encounter the leaves of the tree. By a wonderful provision of Nature, the ash has been made to blossom before the serpents leave their holes, and the fall of its leaf does not take place till after they have retired for the winter.

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CHAP. 25. (14.)

TWO VARIETIES OF THE LINDEN-TREE.

In the linden-tree the male and the female are totally different. In the male the wood is hard and knotty, of a redder hue, and with a stronger smell; the bark, too, is thicker, and, when taken off, has no flexibility. The male bears neither seed nor blossom as the female does, the trunk of which is thicker, and the wood white and of excellent quality. It is a singular thing, but no animal will touch the fruit of this tree, although the juice of the leaves and the bark is sweet. Between the bark and the wood there are a number of thin coats, formed by the union of numerous fine membranes; of these they make those bands which are known to us as “tiliæ.” The finer membranes are called “philyræ,” and are rendered famous by the honourable mention that the ancients have made of them as ribbons for wreaths and garlands. The wood of this tree is proof against the attacks of worms: it is of moderate height only, but of very considerable utility.

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CHAP. 26. (15.)

TEN VARIETIES OF THE MAPLE.

The maple, which is pretty nearly of the same size as the lime, is inferior to the citrus only for the beauty of its wood when employed for cabinet work, and the exquisite finish it admits of. There are numerous varieties of this tree; the light maple, remarkable for the extreme whiteness of its wood, is known as the “Gallic” maple in Italy beyond the Padus, being a native of the countries beyond the Alps. Another kind is covered with wavy spots running in all directions. In consequence of its superior beauty it has received its name, from its strong resemblance to the marks which are seen in the tail of the peacock; the finest kinds are those which grow in Istria and Rhætia. An inferior sort of maple is known as “crassivenium.”

The Greeks distinguish the varieties according to their respective localities. The maple of the plains, they say, is white, and not wavy; they give it the name of “glinon.” On the other hand, the mountain maple, they say, is of a more variegated appearance, and harder, the wood of the male tree being more particularly so, and the best adapted for spe- cimens of elegant workmanship. A third kind, again, according to the Greeks, is the zygia, with a red wood, which is easily split, and a pale, rough bark. Other authors, however, prefer to make of this last a peculiar species, and give it in Latin the name of “carpinus.”

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CHAP. 27. (16.)

BERUSCUM: MOLLUSCUM; THE STAPHYLODENDRON.

But the most beautiful feature of all in the maple is what is known as bruscum, and, even more particularly so, the molluscum. These are both of them tuberosities of this tree, the bruscum presenting veins more violently contorted, while those of the molluscum are disposed in a more simple and uniform manner: indeed, if this last were of sufficiently large size to admit of tables being made of it, there is no doubt that it would be preferred to the wood of the citrus even. At the present day, however, we find it but little used except for the leaves of tablets, or as a veneer for couches. Tuberosities are also found on the alder, but as much inferior to those already mentioned, as the alder itself is to the maple. In the maple the male tree is the first to blossom. The trees that frequent dry spots are preferred to those that grow in watery localities, which is the case also with the ash.

There is found in the countries beyond the Alps a tree, the wood of which is very similar to that of the white maple, and which is known as the staphylodendron. This tree bears a pod in which there is found a kernel, which has the flavour of the hazel-nut.

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CHAP. 28.

THREE VARIETIES OF THE BOX-TREE.

One of the most highly esteemed of all the woods is the box, but it is seldom veined, and then only the wood of the root. In other respects, it is a wood, so to say, of quiet and unpretending appearance, but highly esteemed for a certain degree of hardness and its pallid hue: the tree, too, is very extensively employed in ornamental gardening. There are three varieties of it: the Gallic box, which is trained to shoot upwards in a pyramidal form, and attains a very considerable height; the oleaster, which is condemned as being utterly worthless, and emits a disagreeable odour; and a third, known as the "Italian" box, a wild variety, in my opinion, which has been improved by cultivation. This last spreads more than the others, and forms a thick hedge: it is an evergreen, and is easily clipped.

The box-tree abounds on the Pyrenean range, the mountains of Cytorus, and the country about Berecynthus. The trunk grows to the largest size in the island of Corsica, and its blossom is by no means despicable; it is this that causes the honey there to be bitter. The seed of the box is held in aversion by all animals. That which grows upon Mount Olympus in Macedonia is not more slender than the other kinds, but the tree is of a more stunted growth. It loves spots exposed to the cold winds and the sun: in fire, too, it manifests all the hardness of iron; it gives out no flame, and is of no use whatever for the manufacture of charcoal.

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CHAP. 29. (17.)

FOUR VARIETIES OF THE ELM.

Midway between the preceding ones and the fruit-trees stands the elm, partaking of the nature of the former in its wood, and being akin to the latter in the friendship which it manifests for the vine. The Greeks distinguish two varieties of this tree: the mountain elm, which is the larger of the two, and that of the plains, which is more shrubby. Italy gives the name of “Atinia” to the more lofty kinds, and gives the preference to those which are of a dry nature and will not grow in damp localities. Another variety is the Gallic elm, and a third, the Italian, with leaves lying closer together, and springing in greater numbers from a single stalk. A fourth kind is the wild elm. The Atinia does not produce any samara, that being the name given to the seed of the elm. All the elms will grow from slips or cuttings, and all of them, with the exception of the Atinia, may be propagated from seed.

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CHAP. 30. (18.)

THE, NATURES OF THE VARIOUS TREES ACCORDING TO THEIR LOCALITIES: THE MOUNTAIN TREES, AND THE TREES OF THE PLAIN.

Having now made mention of the more remarkable trees, it remains for me to state some general facts connected with them all. The cedar, the larch, the torch-tree, and the other resinous trees prefer mountainous localities: the same is the case also with the aquifolia, the box, the holm-oak, the juniper, the terebinth, the poplar, the wild mountain-ash, and the yoke-elm. On the Apennines there is also found a shrub known as the "cotinus," famous for imparting to cloth a purple colour like that of the murex. The fir, the robur, the chesnut, the lime, the holm-oak, and the cornel will grow equally well on mountain or in valley; while the maple, the ash, the service, the linden, and the cherry, more particularly prefer a watery spot on the slope of a hilly declivity. It is not often that we see the plum, the pomegranate, the olive, the walnut, the mulberry, or the elder, growing on an elevated site: the cornel, too, the hazel, the quercus, the wild ash, the maple, the ash, the beech, and the yoke-elm, descend to the plains; while the elm, the apple, the pear, the laurel, the myrtle, the blood-red shrub, the holm-oak, and the brooms that are employed in dyeing cloths, all of them aspire to a more elevated locality.

The sorb, and even still more the birch are fond of a cold site; this last is a native of Gaul, of singular whiteness and slender shape, and rendered terrible as forming the fasces of the magistracy. From its flexibility it is employed also in making circlets and the ribs of panniers. In Gaul, too, they extract a bitumen from it by boiling. To a cold site, also, belongs the thorn, which affords the most auspicious torches of all for the nuptial ceremony; from the circumstance, as Massurius assures us, that the shepherds, on the occasion of the rape of the Sabine women, made their torches of the wood of this tree: at the present day, however, the woods of the yoke-elm and the hazel are more generally employed for this purpose.

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CHAP. 31.

TREES WHICH GROW ON A DRY SOIL: THOSE WHICH ARE *FOUND* IN WET LOCALITIES: THOSE WHICH ARE FOUND IN BOTH INDIFFERENTLY.

The cypress, the walnut, the chesnut, and the laburnum, are averse to water. This last tree is also a native of the Alps, and far from generally known: the wood is hard and white, and the flowers, which are a cubit in length, no bee will ever touch. The shrub, too, known as Jupiter's beard, manifests an equal dislike to water: it is often clipped, and is employed in ornamental gardening, being of a round, bushy form, with a silvery leaf. The willow, the alder, the poplar, the siler, and the privet, so extensively employed for making tallies, will only grow in damp, watery places; which is the case also with the vaccinium, grown in Italy for drugging our slaves, and in Gaul for the purpose of dyeing the garments of slaves a purple colour. All those trees which are common to the mountains and the plains, grow to a larger size, and are of more comely appearance when grown on the plains, while those found on the mountains have a better wood and more finely veined, with the exception of the apple and the pear.

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CHAP. 32. (19.)

DIVISION OF TREES INTO VARIOUS SPECIES.

In addition to these particulars, some of the trees lose their leaves, while others, again, are evergreens. Before, however, we treat of this distinction, it will be necessary first to touch upon another. There are some trees that are altogether of a wild nature, while there are others, again, that are more civilized, such being the names by which man has thought fit to distinguish the trees. Indeed, these last, which by their fruits or some other beneficial property, or else by the shade which they afford, show themselves the benefactors of man, are not inappropriately called “civilized” trees.

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CHAP. 33. (20.)

TREES WHICH DO NOT LOSE THEIR FOLIAGE. THE RHODODOENDRON. TREES WHICH DO NOT LOSE THE WHOLE OF THEIR FOLIAGE. PLACES IN WHICH THERE ARE NO TREES.

Belonging to this last class, there are the following trees which do not lose their leaves: the olive, the laurel, the palm, the myrtle, the cypress, the pine, the ivy, the rhododendron, and, although it may be rather called a herb than a tree, the savin. The rhododendron, as its name indicates, comes from Greece. By some it is known as the nerium, and by others as the rhododaphne. It is an evergreen, bearing a strong resemblance to the rose-tree, and throwing out numerous branches from the stem; to beasts of burden, goats, and sheep it is poisonous, but for man it is an antidote against the venom of serpents.

(21.) The following among the forest-trees do not lose their haves: the fir, the larch, the pinaster, the juniper, the cedar, the terebinth, the box, the holm-oak, the aquifolia, the cork, the yew, and the tamarisk. A middle place between the evergreens and those which are not so, is occupied by the an- drachle in Greece, and by the arbutus in all parts of the world; as they lose all their leaves with the exception of those on the top of the tree. Among certain of the shrubs, too, the bramble and the calamus, the leaves do not fall. In the territory of Thurii, where Sybaris formerly stood, from the city there was a single oak to be seen that never lost its leaves, and never used to bud before midsummer: it is a singular thing that this fact, which has been so often alluded to by the Greek writers, should have been passed over in silence by our own. Indeed, so remarkable are the virtues that we find belonging to some localities, that about Memphis in Egypt, and at Ele- phantina, in Thebais, the leaves fall from none of the trees, not the vine even.

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CHAP. 34. (22.)

THE NATURE OF THE LEAVES WHICH WITHER AND FALL.

All the trees, with the exception of those already men- tioned — a list which it would be tedious to enumerate-lose their leaves, and it has been observed that the leaf does not dry up and wither unless it is thin, broad, and soft; while, on the other hand, the leaves that do not fall are those which are fleshy, thick, and narrow. It is an erroneous theory that the leaf does not fall in those trees the juices of which are more unctuous than the rest; for who could make out that such is the case with the holm-oak, for instance? Timæus, the mathematician, is of opinion that the leaves fall while the sun is passing through the sign of Scorpio, being acted upon by the influences of that luminary, and a certain venom which exists in the atmosphere: but then we have a right to wonder how it is that, the same reasons existing, the same influence is not exercised equally on all.

The leaves of most trees fall in autumn, but in some at a later period, remaining on the tree till the approach of winter, it making no difference whether they have germinated at an earlier period or a later, seeing that some that are the very first to bud are among the last to lose their leaves — the almond, the ash, and the elder, for instance: the mulberry, on the other hand, buds the last of all, and loses its leaves among the very first. The soil, too, exercises a very considerable influence in this respect: the leaves falling sooner where it is dry and thin, and more particularly when the tree is old: indeed, there are many trees that lose them before the fruit is ripe, as in the case of the late fig, for instance, and the winter pear: on the pomegranate, too, the fruit, when ripe, beholds nothing but the trunk of the parent tree. And not even upon those trees which always retain their foliage do the same leaves always remain, for as others shoot up beneath them, the old leaves gradually wither away: this takes place about the solstices more particularly.

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CHAP. 35.

TREES WHICH HAVE LEAVES OF VARIOUS COLOURS; TREES WITH LEAVES OF VARIOUS SHAPES. THREE VARIETIES OF THE POPLAR.

The leaves continue the same upon every species of tree, with the exception of the poplar, the ivy, and the croton, which we have already mentioned as being called the “cicus.”

(23.) There are three kinds of poplar; the white, the black, and the one known as the Libyan poplar, with a very diminutive leaf, and extremely black; much esteemed also for the fungi which grow from it. The white poplar has a parti- coloured leaf, white on the upper side and green beneath. This poplar, as also the black variety, and the croton, have a rounded leaf when young, as though it had been described with a pair of compasses, but when it becomes older the leaf throws out angular projections. On the other hand, the leaf of the ivy, which is angular at first, becomes rounder, the older the tree. From the leaves of the poplar there falls a very thick down; upon the white poplar, which, it is said, has a greater quantity of leaves than the others, this down is quite white, resembling locks of wool. The leaves of the pomegranate and the almond are red.

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CHAP. 36.

LEAVES WHICH TURN ROUND EVERY YEAR.

We find a most remarkable and, indeed, a marvellous peculiarity existing in the elm, the lime, the olive, the white poplar, and the willow; for immediately after the summer solstice the leaves of these trees turn completely round; indeed, we have no sign which indicates with greater certainty that that period has past.

(24.) These trees also present in their leaves the same difference that is to be observed in those of all the rest: the underside, which looks towards the ground, is of a green, grassy colour, and has a smooth surface; while the veins, the callous skin, and the articulations, lie upon the upper face, the veins making incisions in the parts beneath, like those to be seen upon the human hand. The leaf of the olive is whiter above, and not so smooth; the same is the case, too, with that of the ivy. The leaves of all trees turn every day towards the sun, the object being that the under side may be warmed by its heat. The upper surface of them all has a down upon it, in however small quantity it may be; in some countries this down is used as a kind of wool.

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CHAP. 37.

THE CARE BESTOWED ON THE LEAVES OF THE PALM, AND THE USES TO WHICH THEY ARE APPLIED.

We have already said that in the East strong ropes are made of the leaves of the palm, and that they are improved by lying in the water. Among ourselves, too, the leaves of the palm are generally plucked immediately after harvest, the best being those that have no divisions in them. These leaves are left to dry under cover for four days, after which they are spread out in the sun, and left out in the open air all night, till they have become quite white and dry: after this they are split before they are put to any use.

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CHAP. 38.

REMARKABLE FACTS CONNECTED WITH LEAVES.

The broadest leaves are those of the fig, the vine, and the plane; while those of the myrtle, the pomegranate, and the olive are narrow. The leaf of the pine and the cedar is fine and resembles hair, while that of the holly and one variety of the holm oak is prickly-indeed, in the juniper, we find a thorn in place of a leaf. The leaf of the cypress and the tamarisk is fleshy, and that of the alder is remarkable for its thickness. In the reed, the willow, and the palm, the leaf is long, and in the latter tree it is double as well: that of the pear is rounded, and it is pointed in the apple. In the ivy the leaf is angular, and in the plane divided. In the pitch-tree and the fir the leaf is indented like the teeth of a comb; while in the robur it is sinuous on the whole of the outer margin: in the bramble it has a spiny surface. In some plants the leaf has the property of stinging, the nettle for instance; while in the pine, the pitch-tree, the fir, the larch, the cedar, and the holly, it is prickly. In the olive and the holm-oak it has a short stalk, in the vine a long one: in the poplar the stalk of the leaf is always quivering, and the leaves of this tree are the only ones that make a crackling noise when coming in contact with another.

In one variety of the apple-tree we find a small leaf protruding from the very middle of the fruit, sometimes, indeed, a couple of them. Then, again, in some trees the leaves are arranged all round the branches, and in others at the extremities of them, while in the robur they are found upon the trunk itself. They are sometimes thick and close, and at others thinly scattered, which is more particularly the case where the leaf is large and broad. In the myrtle they are symmetrically arranged, in the box, concave, and, upon the apple, scattered without any order or regularity. In the apple and the pear we find several leaves issuing from the same stalk, and in the elm and the cytisus they are covered with ramified veins. To the above particulars Cato adds that the leaves of the poplar and the quercus should not be given to cattle after they have fallen and become withered, and he recommends the leaves of the fig, the holm-oak, and

the ivy for oxen: the leaves, too, of the reed and the laurel are sometimes given them to eat. The leaves of the service-tree fall all at once, but in the others only by degrees. Thus much in reference to the leaves.

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CHAP. 39. (25.)

THE NATURAL ORDER OF THE PRODUCTION OF PLANTS.

The following is the order in which the operations of Nature take place throughout the year. The first is fecundation, which takes place when the west wind begins to prevail, generally about the sixth day before the ides of February. By the agency of this wind all the productions of the earth are impregnated; to such an extent, indeed, that the mares even in Spain are impregnated by it, as we have already stated. This is the generating principle of the universe, and it receives its name of Favonius, as some think, from our word "fovere," which means "to warm and cherish:" it blows from due west at the opening of the spring. The peasantry call this period of the year the "time of heat," because Nature is then longing to receive the seeds of her various productions, and is imparting life to everything that is planted. The vegetables conceive on various days, each according to its respective nature: some immediately, as with animals, others, again, more slowly, carrying with them for a longer period the produce of their conception, a state which has from that circumstance obtained the name of "germination." When the plant flowers, it may be said to bring forth, and the flower makes its appearance by bursting its little capsule, which has acted to it as an uterus. The period of training and education is the growth of the fruit. This, as well as that of germination, is a laborious process.

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CHAP. 40.

TREES WHICH NEVER BLOSSOM. THE JUNIPER

The appearance of the blossom bespeaks the arrival of the spring and the birth anew of the year; this blossom is the very pride and delight of the trees. Then it is that they show themselves quite renewed, and altogether different from what they really are; then it is that they quite revel in the contest with each other which shall excel in the various hues and tints which they display. This merit has, however, been denied to many of them; for they do not all blossom, and there are certain sombre trees which do not participate in this joyous season of the year. The holm-oak, the pitch-tree, the larch, and the pine are never bedecked with blossoms, and with them there is no particular forerunner sent forth to announce the yearly birth of their respective fruits. The same is the case, too, with the cultivated and the wild fig, which immediately present their fruit in place of any blossom. Upon the fig, too, it is remarkable that there are abortive fruit to be seen which never ripen.

The juniper, also, is destitute of blossom; some writers, however, distinguish two varieties of it, one of which blossoms but bears no fruit, while the other has no blossom, but presents the berries immediately, which remain on the tree for so long a period as two years: this assertion, however, is utterly fallacious, and all the junipers always present the same sombre appearance. So, too, in life, the fortunes of many men are ever without their time of blossoming.

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CHAP. 41.

THE FECUNDATION OF TREES. GERMINATION: THE APPEARANCE OF THE FRUIT.

All trees germinate, however, even those which do not blossom. In this respect there is a very considerable difference in relation to the various localities; for in the same species we find that the tree, when planted in a marshy spot, will germinate earlier than elsewhere; next to that, the trees that grow on the plains, and last of all those that are found in the woods: the wild pear, too, is naturally later in budding than the other pears. At the first breath of the west wind the cornel buds, and close upon it the laurel; then, a little before the equinox, we find the lime and the maple germinating. Among the earlier trees, too, are the poplar, the elm, the willow, the alder, and the nut-trees. The plane buds, too, at an early period.

Others, again, germinate at the beginning of spring, the holly, for instance, the terebinth, the paliurus, the chesnut, and the glandiferous trees. On the other hand, the apple is late in budding, and the cork-tree the very last of all. Some trees germinate twice, whether it is that this arises from some exuberant fertility of the soil, or from the inviting temperature of the atmosphere; this takes place more particularly in the several varieties of the cereals. Excessive germination, however, has a tendency to weaken and exhaust the tree.

Besides the spring budding, some trees have naturally another budding, which depends upon the influence of their own respective constellations, a theory which we shall find an opportunity of more conveniently discussing in the next Book but one. The winter budding takes place at the rising of the Eagle, the summer at that of the Dog-star, and a third budding again at that of Arcturus. Some persons think that these two buddings are common to all trees, but that they are to be remarked more particularly in the fig, the vine, and the pomegranate; seeing that, when this is the case, the crop of figs, in Thessaly and Macedonia more particularly, is remarkably abundant: but it is in Egypt more especially that illustrations of this

vast abundance are to be met with. All the trees in general, when they have once begun to germinate, proceed continuously with it; the robur, however, the fir-tree, and the larch germinate intermittently, ceasing thrice, and as many times beginning to bud again, and hence it is that they shed the scales of their bark three several times; a thing that takes place with all trees during the period of germination, the outer coat of the tree bursting while it is budding.

With these last trees the first budding takes places at the beginning of spring, and lasts about fifteen days; and they germinate a second time when the sun is passing through the sign of Gemini: hence it is that we see the points of the first buds pushed upwards by those beneath, a joint marking the place where they unite. The third germination of these trees takes place at the summer solstice, and lasts no more than seven days: at this period we may very distinctly detect the articulations by which the buds are joined to one another as they grow. The vine is the only tree that buds twice; the first time when it first puts forth the grape, and the second time when the grape comes to maturity. In the trees which do not blossom there is only the budding, and then the gradual ripen- ing of the fruit. Some trees blossom while they are budding, and pass rapidly through that period; but the fruit is slow in coming to maturity, as in the vine, for instance. Other trees, again, blossom and bud but late, while the fruit comes to maturity with great rapidity, the mulberry, for example, which is the very last to bud of all the cultivated trees, and then only when the cold weather is gone: for this reason it has been pronounced the wisest among the trees. But in this, the germination, when it has once begun, bursts forth all over the tree at the very same moment; so much so, indeed, that it is accomplished in a single night, and even with a noise that may be audibly heard.

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CHAP. 42.

IN WHAT ORDER THE TREES BLOSSOM.

Of the trees which, as we have already stated, bud in winter at the rising of the Eagle, the almond blossoms the first of all, in the month of January namely, while by March the fruit is well developed. Next to it in blossoming is the plum of Armenia, and then the tuber and the early peach, the first two being exotics, and the latter forced by the agency of cultivation. Among the forest trees, the first that blossoms in the course of nature is the elder, which has the most pith of any, and the male cornel, which has none at all. Among the cultivated trees we next have the apple, and immediately after — so much so, indeed, that it would almost appear that they blossom simultaneously — the pear, the cherry, and the plum. Next to these is the laurel, and then the cypress, and after that the pomegranate and the fig: the vine, too, and the olive are budding when these last trees are in flower, the period of their conception being the rising of the Vergiliæ, that being their constellation. As for the vine, it blossoms at the summer solstice, and the olive begins to do so a little later. All blossoms remain on the trees seven days, and never fall sooner; some, indeed, fall later, but none remain on more than twice seven days. The blossoms are always off before the eighth day of the ides of July, the period of the prevalence of the Etesian winds.

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CHAP. 43. (26.)

AT WHAT PERIOD EACH TREE BEARS FRUIT. THE CORNEL.

Upon some trees the fruit does not follow immediately upon the fall of the blossom. The cornel about the summer solstice puts forth a fruit that is white at first, and after that the colour of blood. The female of this tree, after autumn, bears a sour berry, which no animal will touch; its wood, too, is spongy and quite useless, while, on the other hand, that of the male tree is one of the very strongest and hardest woods known: so great a difference do we find in trees belonging to the same species. The terebinth, the maple, and the ash produce their seed at harvest-time, while the nut-trees, the apple, and the pear, with the exception of the winter or the more early kinds, bear fruit in autumn. The glandiferous trees bear at a still later period, the setting of the Vergiliæ, with the exception of the æsculus, which bears in the autumn only; while some kinds of the apple and the pear, and the cork-tree, bear fruit at the beginning of winter.

The fir puts forth blossoms of a saffron colour about the summer solstice, and the seed is ripe just after the setting of the Vergiliæ. The pine and the pitch-tree germinate about fifteen days before the fir, but their seed is not ripe till after the setting of the Vergiliæ.

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CHAP. 44.

TREES WHICH BEAR THE WHOLE YEAR. TREES WHICH HAVE ON THEM THE FRUIT OF THREE YEARS.

The citron-tree, the juniper, and the holm-oak are looked upon as having fruit on them the whole year through, and upon these trees we see the new fruit hanging along with that of the preceding year. The pine, however, is the most remarkable of them all; for it has upon it at the same moment the fruit that is hastening to maturity, the fruit that is to come to maturity in the ensuing year, and the fruit that is to ripen the next year but one. Indeed, there is no tree that is more eager to develope its resources; for in the same month in which a nut is plucked from it, another will ripen in the same place; the arrangement being such, that there is no month in which the nuts of this tree are not ripening. Those nuts which split while still upon the tree, are known by the name of azaniæ; they are productive of injury to the others, if not removed.

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CHAP. 45.

TREES WHICH BEAR NO FRUIT: TREES LOOKED UPON AS ILL-OMENED.

The only ones among all the trees that bear nothing whatever, not so much as any seed even, are the tamarisk, which is used only for making brooms, the poplar, the alder, the Atinian elm, and the alaternus, which has a leaf between that of the holm-oak and the olive. Those trees are regarded as sinister, and are considered inauspicious, which are never propagated from seed, and bear no fruit. Cremutius informs us, that this tree, being the one upon which Phyllis hanged herself, is never green. Those trees which produce a gum open of themselves after germination: the gum never thickens until after the fruit has been removed.

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CHAP. 46.

TREES WHICH LOSE THEIR FRUIT OR FLOWERS MOST READILY.

Young trees are unproductive so long as they are growing. The fruits which fall most readily before they come to maturity are the date, the fig, the almond, the apple, the pear, and the pomegranate, which last tree is also very apt to lose its blossom through excessive dews and hoar frosts. For this reason it is, too, that the growers bend the branches of the pomegranate, lest, from being straight, they may receive and retain the moisture that is so injurious to them. The pear and the almond, even if it should not rain, but a south wind happen to blow or the weather become cloudy, are apt to lose their blossoms, and their first fruit as well, if, after the blossom has fallen, there is a continuance of such weather. But it is the willow that loses its seed the most speedily of all, long, indeed, before it is ripe; hence it is that Homer has given it the epithet of "fruit- losing." Succeeding ages, however, have given to this term an interpretation conformable to their own wicked practices, it being a well-known fact that the seed of the willow has the effect of producing barrenness in females. In this respect, however, Nature has employed her usual foresight, bestowing but little care upon the seed of a tree which is produced so easily, and propagated by slips. There is, however, it is said, one variety of willow, the seed of which arrives at maturity: it is found in the Isle of Crete, at the descent from the grotto of Jupiter: the seed is unsightly and ligneous, and in size about as large as a chick-pea.

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CHAP. 47.

TREES WHICH ARE UNPRODUCTIVE IN CERTAIN PLACES.

Certain trees also become unproductive, owing to some fault in the locality, such, for instance, as a coppice-wood in the island of Paros, which produces nothing at all: in the Isle of Rhodes, too, the peach-trees never do anything more than blossom. This distinction may arise also from the sex; and when such is the case, it is the male tree that never produces. Some authors, however, making a transposition, assert that it is the male trees only that are prolific. Barrenness may also arise from a tree being too thickly covered with leaves.

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CHAP. 48.

THE MODE IN WHICH TREES BEAR.

Some among the fruit-trees bear on both the sides of the branches and the summit, the pear, for instance, the fig-tree, and the myrtle. In other respects the trees are pretty nearly of a similar nature to the cereals, for in them we find the ear growing from the summit, while in the leguminous varieties the pod grows from the sides. The palm, as we have already stated, is the only one that has fruit hanging down in bunches enclosed in capsules.

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CHAP. 49.

TREES IN WHICH THE FRUIT APPEARS BEFORE THE LEAVES.

The other trees, again, bear their fruit beneath the leaves, for the purpose of protection, with the exception of the fig, the leaf of which is very large, and gives a great abundance of shade; hence it is that we find the fruit placed above it; in addition to which, the leaf makes its appearance after the fruit. There is said to be a remarkable peculiarity connected with one species of fig that is found in Cilicia, Cyprus, and Hellas; the fruit grows beneath the leaves, while at the same time the green abortive fruit, that never reaches maturity, is seen growing on the top of them. There is also a tree that produces an early fig, known to the Athenians by the name of " prodro- mos." In the Laconian varieties of this fruit more particularly, we find trees that bear two crops in the year.

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CHAP. 50. (27.)

TREES THAT BEAR TWO CROPS IN A YEAR. TREES THAT BEAR THREE CROPS.

In the island of Cea there are wild figs that bear three times in one year. By the first crop the one that succeeds is summoned forth, and by that the third. It is by the agency of this last crop that caprification is performed. In the wild fig, too, the fruit grows on the opposite side of the leaves. There are some pears and apples, too, that bear two crops in the year, while there are some early varieties also. The wild apple bears twice in the year, its second crop coming on after the rising of Arcturus, in sunny localities more particularly. There are vines, too, that will even bear three times in the year, a circumstance that has procured for them the name of "frantic" vines. On these we see grapes just ripening, others beginning to swell, and others, again, in blossom, all at the same moment.

M. Varro informs us, that there was formerly at Smyrna, near the Temple of the Mother of the Gods, a vine that bore two crops in the year, as also an apple-tree of a similar nature in the territory of Consentia. This, however, is constantly to be witnessed in the territory of Tacapa, in Africa, of which we shall have to speak more fully on another occasion, so remarkable is the fertility of the soil. The cypress also bears three times in the year, for its berries are gathered in the months of January, May, and September, being all three of different size.

There are also certain peculiarities observed in the different modes in which the trees bear their fruit, the arbutus and the quercus being most fruitful in the upper part, the walnut and the marisca fig in the lower. All trees, the older they grow, the more early they bear, and this more particularly in sunny spots and where the soil is not over-rich. All the forest-trees are slower in bringing their fruit to maturity; and indeed, in some of them the fruit never becomes fully ripe. Those trees, too, about the roots of which the earth is ploughed or broken and loosened, bring their fruit to maturity more speedily than those in which this has been neglected; by this process they are also

rendered more fruitful.

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CHAP. 51.

WHICH TREES BECOME OLD WITH THE GREATEST RAPIDITY, AND WHICH MOST SLOWLY.

There are great differences also in trees in respect to age. The almond and the pear are the most fruitful when old, which is the case also with the glandiferous trees and a certain species of fig. Others, again, are most prolific when young, though the fruit is later in coming to maturity, a thing particularly to be observed in the vine; for in those that are old the wine is of better quality, while the produce of the younger trees is given in greater abundance. The apple-tree becomes old very early, and the fruit which it produces when old is of inferior quality, being of smaller size and very liable to be attacked by maggots: indeed, these insects will breed in the tree itself. The fig is the only one of all the fruit-trees that is submitted to any process with the view of expediting the ripening of the fruit, a marvellous thing, indeed, that a greater value should be set upon produce that comes out of its proper season! All trees which bear their fruit before the proper time become prematurely old; indeed, some of them wither and die all of a sudden, being utterly exhausted by the too favourable influence of the weather, a thing that happens to the vine more particularly.

(28.) On the other hand, the mulberry becomes aged but very slowly, and is never exhausted by its crops. Those trees, too, the wood of which is variegated, arrive at old age but slowly, — the palm, the maple, and the poplar, for instance.

(29.) Trees grow old more rapidly when the earth is ploughed and loosened about the roots; forest trees at a later period. Speaking in general terms, we may say that care employed in the culture of trees seems to promote their fertility, while increased fertility accelerates old age. Hence it is that the carefully tended trees are the first to blossom, and the first to bud; in a word, are the most precocious in every respect: but all natural productions which are in any way weakened are more susceptible of atmospheric influences.

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CHAP. 52.

TREES WHICH BEAR VARIOUS PRODUCTS. CRATÆGUM.

Many trees bears more than one production, a fact which we have already mentioned when speaking of the glandiferous trees. In the number of these there is the laurel, which bears its own peculiar kind of grape, and more particularly the barren laurel, which bears nothing else; for which reason it is looked upon by some persons as the male tree. The filbert, too, bears catkins, which are hard and compact, but of no use whatever.

(30.) But it is the box-tree that supplies us with the greatest number of products, not only its seed, but a berry also, known by the name of cratægum; while on the north side it produces mistletoe, and on the south hyphear; two products of which I shall shortly have to speak more at length. Sometimes, indeed, this tree has all four of these products growing upon it at the same moment.

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CHAP. 53.

DIFFERENCES IN TREES IN RESPECT OF THE TRUNKS AND BRANCHES.

Some trees are of a simple form, and have but a single trunk rising from the root, together with numerous branches; such as the olive, for instance, the fig, and the vine; others again are of a shrubby nature, such as the paliurus, the myrtle, and the filbert; which last, indeed, is all the better, and the more abundant its fruit, the more numerous its branches. In some trees, again, there is no trunk at all, as is the case with one species of box, and the lotus of the parts beyond sea. Some trees are bifurcated, while there are some that branch out into as many as five parts. Others, again, divide in the trunk but have no branches, as in the case of the elder; while others have no division in the trunk but throw out branches, such as the pitch-tree, for instance.

In some trees the branches are symmetrically arranged, the pitch-tree and the fir, for example; while with others they are dispersed without any order or regularity, as in the robur, the apple, and the pear. In the fir the branches are thrown out from the trunk straight upwards, pointing to the sky, and not drooping downwards from the sides of the trunk. It is a singular thing, but this tree will die if the ends of its branches are cut, though, if taken off altogether, no bad effect is produced. If it is cut, too, below the place where the branches were, the part of the tree which is left will continue to live; but if, on the other hand, the top only of the tree is removed, the whole of it will die.

Some trees, again, throw out branches from the roots, the elm for example; while others are branchy at the top, the pine for instance, and the lotus or Grecian bean, the fruit of which, though wild, resembles the cherry very closely, and is called the lotus at Rome, on account of its sweetness. For sheltering houses these trees are more particularly esteemed, as they throw out their branches to a considerable distance, from a short trunk, thus affording a very extensive shade, and very frequently encroaching upon the neighbouring mansions. There is no tree, however, the shade

afforded by which is less long-lived than this, and when it loses its leaves in winter, it affords no shelter from the sun. No tree has a more sightly bark, or one which has greater attractions for the eye; or branches which are longer, stouter, or more numerous; indeed, one might almost look upon them as forming so many trees. The bark of it is used for dyeing skins, and the root for colouring wool.

The branches of the apple-tree have a peculiar conformation; knots are formed which resemble the muzzles of wild beasts, several smaller ones being united to a larger.

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CHAP. 54.

THE BRANCHES OF TREES.

Some of the branches are barren, and do not germinate; this takes place either from a natural deficiency of strength, or else some injury received in consequence of having been cut, and the cicatrix impeding the natural functions. The same that the branch is in the trees that spread out, is the eye in the vine, and the joint in the reed. All trees are naturally the thickest in the parts that are nearest the ground. The fir, the larch, the palm, the cypress, and the elm, and, indeed, every tree that has but a single trunk, develope themselves in their remarkable height. Among the branchy trees the cherry is sometimes found to yield a beam forty cubits in length by two in thickness throughout. Some trees divide into branches from the very ground, as in the apple-tree, for example.

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CHAP. 55. (31.)

THE BARK OF TREES.

In some trees the bark is thin, as in the laurel and the lime; in others, again, it is thick, as in the robur; in some it is smooth, as in the apple and the fig, while in the robur and the palm it is rough: in all kinds it becomes more wrinkled when the tree is old. In some trees the bark bursts spontaneously, as in the vine for instance, while in others it falls off even, as we see in the apple and the arbutus. In the cork-tree and the poplar, the bark is substantial and fleshy; in the vine and the reed it is membraneous. In the cherry it is similar to the coats of the papyrus, while in the vine, the lime, and the fir, it is composed of numerous layers. In others, again, it is single, the fig and the reed for instance.

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CHAP. 56.

THE ROOTS OF TREES.

There are great differences, too, in the roots of trees. In the fig, the robur, and the plane, they are numerous; in the apple they are short and thin, while in the fir and the larch they are single; and by this single root is the tree supported, although we find some small fibres thrown out from it laterally They are thick and unequal in the laurel and the olive, in which last they are branchy also; while in the robur they are solid and fleshy. The robur, too, throws its roots downwards to a very considerable depth. Indeed, if we are to believe Virgil, the æsculus has a root that descends as deep into the earth as the height to which the trunk ascends in the air. The roots of the olive, the apple, and the cypress, creep almost upon the very surface: in some trees they run straight and horizontally, as in the laurel and the olive; while in others they have a sinuous course — the fig for example. In some trees the roots are bristling with small filaments, as in the fir, and many of the forest trees; the mountaineers cut off these fine filaments, and weave with them very handsome flasks, and various other articles.

Some writers say that the roots of trees do not descend below the level to which the sun's heat is able to penetrate; which, of course, depends upon the nature of the soil, whether it happens to be thin or dense. This, however, I look upon as a mistake: and, in fact, we find it stated by some authors that a fir was transplanted, the roots of which had penetrated eight cubits in depth, and even then the whole of it was nut dug up, it being torn asunder. The citrus has a root that goes the very deepest of all, and is of great extent; next after it come the plane, the robur, and the various glandiferous trees. In some trees, the laurel for instance, the roots are more tenacious of life the nearer they are to the surface: hence, when the trunk withers, it is cut down, and the tree shoots again with redoubled vigour. Some think that the shorter the roots are, the more rapidly the tree decays; a supposition which is plainly contradicted by the fig, the root of which is among the very largest, while the tree becomes aged at a remarkably early

period. I regard also as incorrect what some authors have stated, as to the roots of trees diminishing when they are old; for I once saw an ancient oak, uprooted by a storm, the roots of which covered a jugerum of ground.

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CHAP. 57.

TREES WHICH HAVE GROWN SPONTANEOUSLY FROM THE GROUND.

It is a not uncommon thing for trees when uprooted to receive new strength when replanted, the earth about their roots forming a sort of cicatrix there. This is particularly the case with the plane, which, from the density of its branches, presents a remarkably broad surface to the wind: when this happens, the branches are cut off, and the tree, thus lightened, is replaced in its furrow: this, too, has also been done before now with the walnut, the olive, and many others.

(32.) We have many instances cited also of trees falling to the ground without there being any storm or other perceptible cause, but merely by way of portentous omen, and then rising again of themselves. A prodigy of this nature happened to the citizens of Rome during their wars with the Cimbri: at Nuceria, in the grove consecrated to Juno, an elm inclined to such a degree, even after the top had been cut off, as to overhang the altar there, but it afterwards recovered itself to such an extent as to blossom immediately: it was from that very moment, too, that the majesty of the Roman people began to flourish once again after it had been laid low by disaster and defeat. A similar circumstance is said to have taken place also at Philippi, where a willow, which had fallen down, and the top of which had been taken off, rose again; and at Stagira, in the Museum there, where the same thing occurred to a white poplar; all which events were looked upon as favourable omens. But what is most wonderful of all, is the fact that a plane, at Antandros, resumed its original position even after its sides had been rough-hewn all round with the adze, and took root again: it was a tree fifteen cubits long, and four ulnæ in thickness.

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CHAP. 58.

HOW TREES GROW SPONTANEOUSLY — DIVERSITIES IN THEIR NATURE, THE SAME TREES NOT GROWING EVERYWHERE.

The trees which we owe to Nature are produced in three different ways; spontaneously, by seed sown, or by a slip which throws out a root. Art has multiplied the methods of reproduction, as we shall have occasion to state in its own appropriate Book at present our sole subject is the operations of Nature, and the manifold and marvellous methods she adopts. The trees, as we have already stated, do not all of them grow in every locality, nor will they live, many of them, when transplanted: this happens sometimes through a natural antipathy on the part of the tree, sometimes through an innate stubbornness, but more frequently through the weakness of the variety so transplanted, either the climate being unfavourable, or the soil repulsive to it.

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CHAP. 59.

PLANTS THAT WILL NOT GROW IN CERTAIN PLACES.

Balsamum will grow nowhere but [in Judæa]: and the citron of Assyria refuses to bear fruit in any other country. The palm, too, will not grow everywhere, and even if it does grow in some places, it will not bear: sometimes, indeed, it may make a show and promise of bearing, but even then its fruit comes to nothing, it seeming to have borne them thus far in spite of itself. The cinnamon shrub has not sufficient strength to acclimatize itself in the countries that lie in the vicinity of Syria. Amomum, too, and nard, those most delicate of perfumes, will not endure the carriage from India to Arabia, nor yet conveyance by sea; indeed, King Seleucus did make the attempt, but in vain. But what is more particularly wonderful, is the fact that most of the trees by care may be prevailed upon to live when transplanted; for sometimes the soil may be so managed as to nourish the foreigner and give support to the stranger plant; climate, however, can never be changed. The pepper-tree will live in Italy, and cassia in the northern climates even, while the incense-tree has been known to live in Lydia: but how are we to impart to these productions the requisite warmth of the sun, in order to make all the crude juices go off by evaporation, and ripen the resins that distil from them?

Nearly as great a marvel, too, is the fact that the nature of the tree may be modified by circumstances, and yet the tree itself be none the less vigorous in its growth. Nature originally gave the cedar to localities of burning heat, and yet we find it growing in the mountains of Lycia and Phrygia. She made the laurel, too, averse to cold, and yet there is no tree that grows in greater abundance on Mount Olympus. At the city of Panticapæum, in the vicinity of the Cimmerian Bosporus, King Mithridates and the inhabitants of the place used every possible endeavour, with a view to certain religious ceremonies, to cultivate the myrtle and the laurel: they could not succeed, however, although trees abound there which require a hot climate, such as the pomegranate and the fig, as well as apples and pears of the most approved quality. In the same country, too, the

trees that belong to the colder climates, such as the pine, the fir, and the pitch-tree, refuse to grow. But why go search for instances in Pontus? In the vicinity of Rome itself it is only with the greatest difficulty that the cherry and the chesnut will grow, and the peach-tree, too, at Tusculum: the Greek nut, too, is grown there from grafts only at a cost of considerable labour, while Tarracina abounds with whole woods of it.

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CHAP. 60. (33.)

THE CYPRESS.

The cypress is an exotic, and has been reckoned one of the trees that are naturalized with the greatest difficulty; so much so, indeed, that Cato has expatiated upon it at greater length and more frequently than any of the others. This tree is naturally of a stubborn disposition, bears a fruit that is utterly useless, a berry that causes a wry face when tasted, and a leaf that is bitter: it also gives out a disagreeable pungent smell, and its shade is far from agreeable. The wood that it furnishes is but scanty, so much so indeed, that it may be almost regarded as little more than a shrub. This tree is sacred to Pluto, and hence it is used as a sign of mourning placed at the entrance of a house: the female tree is for a long time barren. The pyramidal appearance that it presents has caused it not to be rejected, but for a long time it was only used for marking the intervals between rows of pines: at the present day, however, it is clipped and trained to form hedge-rows, or else is thinned and lengthened out in the various designs employed in ornamental gardening, and which represent scenes of hunting, fleets, and various other objects: these it covers with a thin small leaf, which is always green.

There are two varieties of the cypress; the one tapering and pyramidal, and which is known as the female; while the male tree throws its branches straight out from the body, and is often pruned and employed as a rest for the vine. Both the male and the female are permitted to throw out their branches, which are cut and employed for poles and props, being worth, after thirteen years' growth, a denarius a-piece. In respect of income, a plantation of cypress is remarkably profitable, so much so, indeed, that it was a saying in old times that a cypress-wood is a dowry for a daughter. The native country of this tree is the island of Crete, although Cato calls it Tarentine, Tarentum being the first place, I suppose, in which it was naturalized: in the island of Ænaria, also, if the cypress is cut down, it will grow again from the root. But, in the Isle of Crete, in whatever place the earth is moved, this tree will shoot up of its own natural

vigour, and immediately appear above the soil; indeed, in that island there is no occasion even to solicit the soil, for it grows spontaneously there, on the mountains of Ida more particularly, and those known as the White Mountains. On the very summit of these elevations, from which the snows never depart, we find the cypress growing in great abundance; a thing that is truly marvellous-seeing that, in other countries, it will only grow in warm localities; from which it would appear to have a great dislike to its native climate.

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CHAP. 61.

THAT THE EARTH OFTEN BEARS PRODUCTIONS WHICH IT HAS NEVER BORNE BEFORE.

It is not only the quality of the soil and the unchanging influences of the climate that affect the nature of trees, but wet and showery weather also, temporarily at least. Indeed, the torrents very often bring down with them seeds, and sometimes we find those of unknown kinds even floating along. This took place in the territory of Cyrenaica, at the period when laser was first grown there, as we shall have occasion to mention when we speak of the nature of the various herbs. A forest, too, sprang up in the vicinity of the city of Cyrene, just after a shower of rain, of a dense, pitchy nature, about the year of the City of Rome 430.

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CHAP. 62. (34.)

THE IVY-TWENTY VARIETIES OF IT.

It is said that the ivy now grows in Asia, though Theophrastus has denied that such is the fact, and asserts that it grows nowhere in India, except upon Mount Meros. He says, too, that Harpalus used every possible exertion to naturalize it in Media, but to no purpose; and that Alexander, in consequence of the rarity of this plant, had himself crowned with it, after the example of Father Liber, when returning victorious with his army from India: and at the present day even, it is used to decorate the thyrsus of that god, and the casques and bucklers employed by the nations of Thrace in their sacred ceremonials. The ivy is injurious to all trees and plants, and makes its way through tombs and walls; it forms a haunt much frequented by serpents, for its refreshing coolness; so that it is a matter for astonishment that there should have been such remarkable veneration for this plant.

The two principal kinds in the ivy, as in other plants, are the male tree and the female. The male is said to have a larger trunk than the female, and a leaf that is harder and more unctuous, with a flower nearly approaching to purple: indeed, the flower of both the male and female tree strongly resembles the wild-rose, were it not destitute of smell. Each of these kinds of ivy is divided into three other varieties: the white ivy, the black, and a third known as the helix." These varieties are again subdivided into others, as there is one in which the fruit only is white, and another in which it is only the leaf that is so. In those which have a white fruit, the berry in some cases is closely packed and large, the clusters, which are known as "corymbi," being of a spherical form. So, too, with the selenitium, which has a smaller berry, and fewer clusters; and the same is the case with the black ivy. One kind has a black seed, and another a seed of a saffron colour — it is this last that poets use for their chaplets, and the leaves of it are not so black as in the other kinds: by some it is known as the ivy of Nysa, by others as that of Bacchus: it is the one that among the black varieties has the largest clusters of all. Some of the Greek writers

even distinguish in this last kind two varieties, according to the colour of the berries, the erythranum and the chrysocarpus.

It is the helix, however, that has the most peculiarities of all, and in the appearance of the leaf more particularly, which is small, angular, and of a more elegant shape, the leaf in all the other kinds being plain and simple. It differs, too, in the distance between the joints, and in being barren more especially, as it never bears fruit. Some authors, however, think that this difference exists solely in respect of age and not of kind, and are of opinion that what is the helix when young, becomes the ordinary ivy when old. This, however, is clearly proved to be an error upon their part, for we find more varieties of the helix than one, and three in particular — that of a grass-green colour, which is the most abundant of all, the kind with a white leaf, and a third, which is parti-coloured, and known as the Thracian helix. In that of a grass-green colour, the leaves are smaller, more closely packed together, and symmetrically arranged; while in the other kinds the features are altogether different. In the parti-coloured kind, also, one variety has a smaller leaf than usual, similarly arranged, and lying closer together, while in the other none of these features are observed. The leaves, too, are either greater or smaller and differ in the disposition of the spots upon them, and in the white helix some of them are whiter than others: the grass-green variety, however, is the one that grows to the greatest height.

The white helix is in the habit of killing trees by depriving them of their juices, and increases to such a degree of density as to be quite a tree itself. Its characteristics are, a very large, broad, leaf, and projecting buds, which in all the other kinds are bent inwards; its clusters, too, stand out erect. Although, too, all the ivies have arms that throw out a root, those of this variety are particularly branchy and strong; next to it in strength, are those of the black ivy.

It is a peculiarity of the white ivy to throw out arms from the middle of the leaves, with which it invariably embraces any object that may be on either side of it; this is the case, too, with walls, even though it should not be able to clasp them. If the trunk is cut across in ever so many places, it will still live and thrive, having as many fresh roots as it has arms, by means of which it ensures safety and impunity, while at the same time it sucks and strangles the trees to

which it clings. There are great differences also in the fruit of both the white ivy and the black; for in some of them the berry is so bitter that birds will not touch it. There. is an ivy also which grows upright, and stands without any support; being the only one that does so among all the varieties, it has thence obtained the distinctive name of "cissos." The chamæcissos, on the other hand, is never found except creeping upon the ground.

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CHAP. 63. (35.)

THE SMILAX.

Very similar to the ivy is a plant which first came from Cilicia, but is now more commonly found in Greece, and known by the name of smilax. It has numerous thick stalks covered with joints, and thorny branches of a shrub-like form: the leaf resembles that of the ivy, but is not angular, while from the foot-stalk it throws out tendrils; the flower is white, and has the smell of the lily. It bears clusters like those of the wild vine and not the ivy, and of a reddish colour. The larger berries contain three stones, the smaller but one only: these berries are black and hard. This plant is looked upon as ill-omened, and is consequently banished from all sacred rites, and is allowed to form no part of chaplets; having received this mournful character from the maiden Smilax, who upon her love being slighted by the youth Crocus, was transformed into this shrub. The common people, being mostly ignorant of this, not unfrequently take it for ivy, and pollute their festivities with its presence; for who, in fact, is unaware that the ivy is used as a chaplet by poets, as also by Father Liber and Silenus? Tablets are made of the wood of the smilax, and it is a peculiarity of this wood to give out a slight sound, if held close to the ear. It is said that ivy is remarkably efficacious for testing wine, and that a vessel made of this wood will let the wine pass through it, while the water will remain behind, if there has been any mixed with it.

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CHAP. 64. (36.)

WATER PLANTS: THE RUSH: TWENTY-EIGHT VARIETIES OF THE REED.

Among those plants which thrive best in cold localities, it will be only proper to mention the aquatic shrubs. In the first rank, we find the reed, equally indispensable for the emergencies of war and peace, and used among the appliances of luxury even. The northern nations make use of reeds for roofing their houses, and the stout thatch thus formed will last for centuries even; in other countries, too, they make light vaulted ceilings with them. Reeds are employed, too, for writing upon paper, those of Egypt more particularly, which have a close affinity to the papyrus: the most esteemed, however, are the reeds of Cnidos, and those which grow in Asia, on the margin of the Anaitic Lake there.

The reed of our country is naturally of a more fungous nature, being formed of a spongy cartilage, which is hollow within, and covered by a thin, dry, woody coat without; it easily breaks into splinters, which are remarkably sharp at the edge. In other respects, it is of a thin, graceful shape, articulated with joints, and tapering gradually towards the top, which ends in a thick, hairy tuft. This tuft is not without its uses, as it is employed for filling the beds used in taverns, in place of feathers; or else, when it has assumed a more ligneous consistency, it is pounded, as we see done among the Belgæ, and inserted between the joints of ships, to close the seams, a thing that it does most effectually, being more tenacious than glue, and adhering more firmly than pitch.

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CHAP. 65.

REEDS USED FOR ARROWS, AND FOR THE PURPOSE OF WRITING.

It is by the aid of the reed that the nations of the East decide their wars; fixing in it a barbed point, they inflict a wound from which the arrow cannot be withdrawn. By the addition of feathers they accelerate the flight of this instrument of death, and the weapon, if it breaks in the wound, furnishes the combatants with a weapon afresh. With these missiles the warriors darken the very rays of the sun. It is for this reason more particularly that they desire a clear and serene sky, and hold in abhorrence all windy and rainy weather, which has the effect of compelling them, in spite of themselves, to be at peace with one another.

If a person were carefully to enumerate the peoples of Æthiopia, Egypt, Arabia, India, Scythia, Bactria, and Sarmatia, together with all the numerous peoples of the East, and the vast realms of the Parthians, he would find that fully one-half of mankind throughout the whole world live under a dominion imposed by the agency of the arrow. It was their surpassing excellence in this arm that so ennobled the warriors of Crete, though in this respect, as well as in all others, Italy has gained the mastery; there being no reed in existence better adapted for making arrows than that found in the Rhenus, a river of the territory of Bononia: filled with a greater quantity of pith than any of the others, it is light, and easily cleaves the air, while at the same time it has sufficient weight to resist the action of the wind; an advantage that is not possessed in an equal degree by those employed among the Belgæ. These advantages, however, are possessed by the most approved kinds that are found in Crete, although those of India are preferred; in the opinion of some persons, however, these last are of a totally different nature, for by adding a point to them, the natives are able to use them as lances even. Indeed, we find that in India the reed grows to the thickness of a tree, a fact which is proved by the specimens which are everywhere to be seen in our temples. The Indians assure us that in this plant, too, there is the distinction of male and female; the body of the male being more compact, and that

of the female of a larger size. In addition to this, if we can credit the fact, a single compartment between the joints is sufficiently large to answer the purposes of a boat. These reeds are found more particularly on the banks of the river Acesines.

In every variety of the reed a single root gives birth to numerous stems, and if cut down, they will shoot again with increased fecundity. The root, which is naturally tenacious of life, is also jointed as well as the stem. The reeds of India are the only ones in which the leaves are short; but in all the varieties these leaves take their rise at the joints, and surround the stem with a fine tissue about half way upwards to the next joint, and then leave the stem and droop downwards. The reed, as well as the calamus, although rounded, has two sides, which throw out leaves alternately from above the joints, in such a way that when one springs from the right side, the next issues from the joint above it on the left, and so in turns. Branches, too, shoot occasionally from the stem, being themselves reeds of diminutive growth.

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CHAP. 60.

FLUTE REEDS: TET REEDOF ORCHOMENTFS; REEDS USED FOR FOWLING AND FISHING.

The varieties of the reed are numerous. Some are more compact than others, thicker at the joints, and with a shorter interval between them; while others, again, are less compact, with longer intervals between the joints, and not so straight. Another kind of reed is quite hollow; it is known as the "syringia," and is particularly useful for making flutes, having neither pith in it nor any fleshy substance. The reed of Or- chomenus has a passage in it open from one end to the other, and is known as the auleticon; this last is best for making pipes, the former for the syrinx. There is another reed, the wood of which is thicker, and the passage very contracted, being entirely filled with a spongy kind of pith. One kind, again, is shorter, and another longer, the one thinner, the other more thick. That known as the donax, throws out the most shoots, and grows only in watery localities; indeed, this is a point which constitutes a very considerable difference, those reeds being greatly preferred which grow in a dry soil. The archer's reed forms a peculiar species, as we have already stated; but that of Crete has the longest intervals between the joints, and when subjected to heat is capable of being rendered perfectly pliable at pleasure. The leaves, too, constitute different varieties, not only by their number, but their colour also. The reed of Laconia is spotted, and throws out a greater number of shoots at the lower extremities; being very similar in nature, it is thought, to the reeds that we find growing about stagnant waters, and unlike those of the rivers, in being covered with leaves of considerable length; which, climbing upwards, embrace the stem to a considerable distance above the joints. There is also an obliquely-spreading reed, which does not shoot upwards to any height, but spreads out like a shrub, keeping close to the earth; this reed is much sought by animals when young, and is known by some persons as the elegia. There is in Italy, too, a substance found in the marsh-reeds, called by the name of adarca: it is only to be found issuing from the cuter skin, below the

flossy head of the plant, and is particularly beneficial to the teeth, having, in fact, an equal degree of pungency with mustard.

The terms of admiration in which they are spoken of by the ancients compels me to enter into some more minute details relative to the reed-beds of Lake Orchomenus. Characias was the name given there to a reed of stout and compact quality, while a thinner one was known as the plotias; this last was to be found growing on the floating islands there, while the former grew upon the banks that were covered by the waters of the lake. A third kind again, which had the name of "auleticon," was the same that is now known as the musical pipe reed. This reed used to take nine years to grow, as it was for that period that the waters of the lake were continually on the increase; it used to be looked upon as a prodigy of evil omen, if at the end of its rise its waters remained overflowing so long as a couple of years; a thing that was observed at the period of the Athenian disasters at Cheronæa, and on various other occasions. This lake has the name of Lebaida, at the part where the river Cephisus enters it.

When this inundation has lasted so long as a year, the reed is found large enough to be available for the purposes of fowling: at this period it used to be called zeugites. On the other hand, when the waters subsided at an earlier period, the reeds were known as bombyciæ, being of a more slender form. In this variety, too, the leaf of the female plant was broader and whiter than that of the others, while that upon which there was little or no down bore the name of the eunuch reed. The stem of this last variety was used for the manufacture of concert flutes. I must not here pass by in silence the marvellous care which the ancients lavished upon these instruments, a thing which will, in some measure, plead as an apology for the manufacture of them at the present day of silver in preference. The reed used to be cut, as it was then looked upon as being in the best condition, at the rising of Arcturus; an usage which prevailed down to the time of Antigenides, the musician, and while flute-playing was of a more simple style. Being thus prepared, the reeds became fit for use in the course of a few years. At that period even the reed required considerable seasoning to render it pliable, and to be instructed, as it were, in the proper modulation of its sounds; the mouthpiece and

stops being naturally contracted, and so producing a music better adapted to the theatrical taste of the day. But in later times, when the music became more varied, and luxury began to exercise its influence upon the musical taste, it became the general usage to cut the reeds before the summer solstice, and to make them fit for use at the end of three months; the stops and mouth-piece being found, when the reeds were cut at that period, to be more open and better adapted for the modifications of sound: it is in this state that the reed is used for similar purposes at the present day. In those times it was a very general persuasion also, that every pipe ought to have the tongue of its own mouth-piece cut from the same reed as itself, and that a section from the part nearest the root was best adapted to form the left-handed flute, and from the part adjoining the top the right-handed one: those reeds, too, were considered immeasurably superior, which had been washed by the waters of Cephisus itself.

At the present day the sacrificial pipes used by the Tuscans are made of box-wood, while those employed at the games are made of the lotus, the bones of the ass, or else silver. The fowler's reeds of the best quality are those of Panormus, and the best reeds for fishing-rods come from Abarita in Africa.

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CHAP. 67.

THE VINE-DRESSERS' REED.

The reed is employed in Italy more particularly, as a sup- port for the vine. Cato recommends that it should be planted in a damp situation, the soil being first turned up with a double mattock, and a distance of three feet left between the young layers; he says, too, that the wild asparagus from which the cultivated species is produced, may be planted together with it, as they agree particularly well together.

(37.) He says also that the willow may be planted in its vicinity, than which there is no aquatic plant of more general utility, although the poplar may be preferred for the training of the vine, and the support of the Cæcuban grape; although, too, the alder affords a more efficient protection by the hedges it forms, and, planted in the very water, makes a rampart along the banks in defence of the adjoining country against the violence of the rivers when they overflow; when cut down, too, this last tree is useful for the innumerable suckers which it throws out.

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CHAP. 68.

THE WILLOW: EIEGT VARIETIES OF IT.

Of the willow, too, there are several varieties. One of them throws out its branches to a considerable height; and these, coupled together, serve as perches for the vine, while the bark around the tree itself is used for withes. Others, again, of a more pliable nature, supply a flexible twig, which is used for the purpose of tying; while others throw out osiers of remarkable thinness, adapted by their suppleness and graceful slenderness for the manufacture of wicker-work. Others, again, of a stouter make, are used for weaving panniers, and many other utensils employed in agriculture; while from a whiter willow the bark is peeled off, and, being remarkably tractable, admits of various utensils being made of it, which require a softer and more pliable material than leather: this last is also found particularly useful in the construction of those articles of luxury, reclining chairs. The willow, when cut, continues to thrive, and, indeed, throws out more thickly from the top, which, when closely clipped, bears a stronger resemblance to a closed fist than the top of a stump. It is a tree, which, in my opinion, deserves to be placed by no means in the lowest rank of trees; for there is none that will yield a more certain profit, which can be cultivated at less expense, or which is less liable to be influenced by changes in the weather.

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CHAP. 69.

TREES IN ADDITION TO THE WILLOW, WHICH ARE OF USE IN MAKING WITHES.

Cato considers the culture of the willow as deserving to hold the third rank in estimation, and he gives it precedence to the cultivation of the olive, tillage for corn, or laying out land for pasture. It is not, however, because the willow is the only tree that produces withes; for they may be procured also from the broom, the poplar, the elm, the blood-red cornel, the birch, and the reed itself when split, or else the leaves of that plant, as we know to be the case in Liguria. The vine, also, will furnish them; the bramble, too, with the thorns removed, as well as the twisted hazel. It is a very singular thing, that a wood after it has been beaten and pounded should be found all the stronger for making withes, but such is a striking peculiarity that exists in the willow. The Greek red willow is split for this purpose: while the willow of Ameria is whiter but more brittle, for which reason it is used in an uncut state for tying. In Asia there are three varieties known of the willow; the black willow, which is best adapted for making withes, the white willow, employed for various agricultural purposes, and a third, which is shorter than the others, and known as the helix.

With us, also, there is the same number of denominations given to as many varieties of the willow; one being known as the viminal or purple willow, another as the nitelina, from its resemblance to the colour of the nitela, thinner in the trunk than the preceding one, and the third as the Gallic kind, being the thinnest of them all.

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CHAP. 70.

RUSHES: CANDLE-RUSHES: RUSHES FOR THATCHING.

The rush, so frail in form, and growing in marshy spots, cannot be reckoned as belonging to the shrubs, nor yet to the brambles or the stalk plants; nor, indeed, in strict justice, to any of the classes of plants except one that is peculiarly its own. It is extensively used for making thatch and matting, and, with the outer coat taken off, for making candles and funeral torches. In some places, however, the rush is more hard and firm: thus, for instance, it is employed not only by the sailors on the Padus for making the sails of boats, but for the purposes of sea-fishing as well, by the fishermen of Africa, who, in a most preposterous manner, hang the sails made of it behind the masts. The people, too, of Mauritania thatch their cottages with rushes; indeed, if we look somewhat closely into the matter, it will appear that the rush is held in pretty nearly the same degree of estimation there as the papyrus is in the inner regions of the world.

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CHAP. 71.

THE ELDER: THE BRAMBLE.

Of a peculiar nature, too, though to be reckoned among the water-plants, is the bramble, a shrub-like plant, and the elder, which is of a spongy nature, though not resembling giant fennel, from having upon it a greater quantity of wood. It is a belief among the shepherds that if they cut a horn or trumpet from the wood of this tree, it will give all the louder sound if cut in a spot where the shrub has been out of hearing of the crowing of the cock. The bramble bears mulberries, and one variety of it, known as the cynosbatos, bears a flower similar to the rose. There is a third variety, known to the Greeks as the Idæan bramble, from the place where it grows: it is slighter than the others, with smaller thorns, and not so hooked. Its flower, mixed with honey, is employed as an ointment for sore eyes and erysipelas: and an infusion of it in water is used for diseases of the stomach.

The elder bears a small black berry, which contains a viscous juice, employed more particularly for staining the hair. The berries, too, are boiled in water and eaten.

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CHAP. 72. (38.)

THE JUICES OF TREES.

There is a juice in the bark of trees, which must be looked upon as their blood, though it is not of a similar nature in all. In the fig it is of a milky consistency, and has the peculiar property of curdling milk, and so forming cheese. In the cherry-tree this juice is gummy, in the elm clammy, in the apple viscous and fatty, while in the vine and the pear it is watery. The more viscous this humour is, the more long-lived the tree. In a word, we find in the bodies of trees-as with all other beings that are animated-skin, blood, flesh, sinews, veins, bones, and marrow; the bark serving them in place of skin. It is a singular fact connected with the mulberry-tree, that when the medical men wish to extract its juice, if the incision is lightly made, by a blow with a stone, and at the second hour of the day in spring, the juice will flow: but if, on the other hand, a wound is inflicted to any depth, it has all the, appearance of being dried up.

Immediately beneath the bark in most trees there is a fatty substance, which, from its colour, has obtained the name of alburnum: it is soft, and is the very worst part of the wood, and in the robur even will very easily rot, being particularly liable to wood-worm, for which reason it is invariably removed. Beneath this fat lies the flesh of the tree, and then under that, its bones, or, in other words, the choicest part of the wood. Those trees which have a dry wood, the olive, for instance, bear fruit every other year only: this is more the case with them than with those the wood of which is of a fleshy nature, such as the cherry, for instance. It is not all trees, too, that have this fat and flesh in any abundance, the same as we find to be the case among the more active animals. The box, the cornel, and the olive have none at all, nor yet any marrow, and a very small proportion, too, of blood. In the same way, too, the service-tree has no bones, and the elder no flesh, while both of them have marrow in the greatest abundance. Reeds, too, have hardly any flesh.

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CHAP. 73.

TE VEINS AND FIBRES OF TREES.

In the flesh of some trees we find both fibres and veins: they are easily distinguished. The veins are larger, while the fibres are of whiter material, and are to be found in those woods more particularly which are easily split. Hence it is that if the ear is applied to the extremity of a beam of wood, however long, a tap with a graver even upon the other end may be distinctly heard, the sound penetrating by the passages which run straight through it: by these means it is that we ascertain whether timber runs awry, or is interrupted by knots. The tuberosities which we find on trees resemble the kernels that are formed in flesh: they contain neither veins nor fibres, but only a kind of tough, solid flesh, rolled up in a sort of ball: it is these tuberosities that are the most esteemed parts in the citrus and the maple. As to the other kinds of wood which are employed for making tables, the trees are split into planks lengthwise, and the parts are then selected along which the fibres run, and properly rounded; for the wood would be too brittle to use if it were cut in segments crosswise. in the beech, the grain of the fibrous part runs crosswise; hence it is that the ancients held in such high esteem all vessels made with the wood of it. Manius Curius made oath, on one occasion, that he had not touched an article of all the spoil except a single oil cruet of beech, to use for sacrificing. Wood is always put lengthwise into the water to season, as that part which was nearest the root will sink to a greater depth than the other. In some wood there is fibre, without veins, and merely consisting of filaments slightly knit together: wood of this nature is remarkably fissile. Other wood, again, is more easily broken across than split, such as the wood of those trees that have no fibre, the olive and the vine, for instance: on the other hand, in the fig-tree, the whole of the body consists of flesh. The holm-oak, the cornel, the robur, the cytisus, the mulberry, the ebony, the lotus, and the other trees which we have mentioned as being destitute of marrow, consist entirely of bone. All these woods are of a blackish colour, with the exception of the cornel, of which glossy yellow hunting-spears are

made, marked with incisions for their further embellishment. In the cedar, the juniper, and the larch, the wood is red.

(39.) In Greece the female larch furnishes a wood which is known as ægis, and is just the colour of honey. This wood has been found to be proof against decay, and forms the pannels used by painters, being never known to gape or split; the portion thus employed is that which lies nearest to the pith. In the fir-tree this part is called “leuson” by the Greeks. In the cedar, too, the hardest part is the wood that lies nearest to the sap: after the slimys pith has been carefully removed, it has a similar degree of hardness to the bones in the bodies of animals. It is said, too, that in Greece the inner part of the elder is remarkably firm: indeed, those whose business it is to make hunting spears, prefer this material to all others, it being a wood composed wholly of skin and bone.

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CHAP. 74.

THE FELLING OF TREES.

The proper time for felling trees that are wanted for barking, the round, tapering trees, for instance, that are employed in temples and for other purposes, is at the period of germination: for at other times it is quite impossible to detach the bark from the rotten wood that adheres to it, while the wood itself assumes a blackish hue. Squared logs, and wood from which the bark has been lopped, are generally cut in the period that intervenes between the winter solstice and the prevalence of the west winds; or else, if it is necessary to anticipate that period, at the setting of Arcturus and before that of the Lyre, the very earliest period being the summer solstice: the days of these respective constellations will be mentioned in the appropriate place.

In general it is looked upon as quite sufficient to use all due precaution that a tree is not rough-hewn before it has borne its yearly crop. The robur, if cut in spring, is subject to the attacks of wood-worm, but if cut in winter, will neither rot nor warp: otherwise it is very liable to bend and become awry, as well as to crack; the same is the case, too, with the cork-tree, even if cut down at the proper time. The state of the moon, too, is of infinite importance, and it is generally recommended that trees should be cut only between the twentieth and the thirtieth days of the month. It is generally agreed, however, by all, that it is the very best time for felling timber, when the moon is in conjunction with the sun, a day which is called by some persons the interlu- nium, and by others the moon's silence. At all events, it was under these circumstances that Tiberius Cæsar gave orders for the larches to be cut in Rhætia, that were required for the purpose of rebuilding the bridge of the Naumachia after it had been destroyed by fire. Some persons say that the moon ought not only to be in conjunction, but below the horizon as well, a thing that can only happen in the night. If the conj unction should chance to fall on the very day of the winter solstice, the timber, they say, that is then felled will be of everlasting duration; the next best being the timber that is cut when the conjunction coincides with the constellations

previously mentioned. There are some, too, who add the rising of the Dog-star as a favourable time, and say that it was at this period that the timber was cut which was employed in building the Forum of Augustus.

Wood which is intended for timber ought to be cut neither when too young nor too old. Some persons, too — and the practice is by no means without its utility — cut round the tree as far as the pith, and then leave the timber standing, so that all the juices may be enabled to escape. Going back to ancient times, it is a remarkable fact, that in the first Punic War the fleet commanded by Duillius was on the water within sixty days from the time the timber was cut: and, what is still more so, Piso relates that King Hiero had two hundred and twenty ships wholly constructed in forty-five days: in the second Punic War, too, the fleet of Scipio was at sea the fortieth day after the axe had been put to the tree. Such is the energy and dispatch that can be displayed on occasions of emergency.

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CHAP. 75.

TE OPINION OF CATO ON THE FELLING OF TIMBER.

Cato, a man of consummate authority in all practical matters, expresses himself in relation to timber to the following effect:— “For making presses, employ the wood of the sappinus in preference. When you root up the elm, the pine, the nut- tree, or, indeed, any other kind of tree, mind and do so when the moon is on the wane, after midday, and when there is no south wind blowing. The proper time for cutting a tree is when the seed is ripe, but be careful not to draw it away or plane it while the dew is falling.” He then proceeds to say—” Never touch the timber, except when the moon is on the change, or else at the end of the second quarter: at those periods you may either root up the tree, or fell it as it stands. The next seven days after the full moon are the best of all for grubbing up a tree. Be particularly careful, too, not to rough- hew timber, or, indeed, to cut or touch it, unless it is perfectly dry; and by no means while it is covered with frost or dew.”

The Emperor Tiberius used also to observe the changes of the moon for cutting his hair. M. Varro has recommended that the hair should be cut at full moon only, if we would avoid baldness.

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CHAP. 76.

THE SIZE OF TREES: THE NATURE OF WOOD: THE SAPPINUS.

From the larch, and still more the fir, after it has been cut, a liquid flows for a considerable period: these are the loftiest and straightest of all the trees. The fir is preferred for making the masts and sailyards of ships, on account of its comparative lightness. It is a common feature with these trees, in common with the pine, to have four rows of veins running along the wood, or else two, or sometimes only one. The heart of these trees is peculiarly well adapted for joiners' work, and the best wood of all is that which has four layers of veins, it being softer than the rest: men of experience in these matters can instantly form a judgment of the quality from the bark. That part in the fir which is nearest to the ground is free from knots: when soaked in river water in the way we have already mentioned, and then barked, the wood of this part is known as sappinus; while that of the upper part, which is harder and knotty, goes by the name of "fusterna." In trees, the side which looks towards the northeast is the most robust, and it is universally the case, that those which grow in moist and damp localities are of inferior quality, while in those which grow in warm and sunny spots, the wood is more compact and durable; hence it is, that at Rome the fir is preferred that grows on the shores of the Tyrrhenian Sea to that of the shores of the Adriatic.

There are also considerable differences in the qualities of these trees according to the country of their growth: the most esteemed are those of the Alps and the Apennines; in Gaul, those of Jura and Mount Vogesus; those also of Corsica, Bithynia, Pontus, and Macedonia; while the firs of Ænea and Arcadia are of inferior quality. Those, however, of Parnassus and Eubœa are the worst of all, the trees being branchy and knotted, and the wood very apt to rot. As for the cedar, those of Crete, Africa, and Syria are the most esteemed. Wood, if well rubbed with oil of cedar, is proof against wood-worm and decay. The juniper, too, has the same virtues as the cedar; in Spain it grows to a very considerable size, in the territory of the Vacæi more particularly: the heart of this tree, too, is universally

more firm and solid than cedar even. A general fault in all wood is that known as cross-grain, which is formed by contortions of the knots and veins. In the wood of some trees there are to be found knurs, like those in marble; these knurs are remarkably hard, and offer a resistance like that of a nail, to the great injury of the saw: in some cases, also, they are formed accidentally, from either a stone, or the branch of another tree lodging there, and being absorbed in the body of the tree.

In the Forum at Megara there long stood a wild olive upon which warriors who had distinguished themselves by their martial powers had been in the habit of suspending their arms. In the lapse of time the bark of this tree had closed, and quite concealed these arms from view. Upon it, however, depended the fate of the city; for it had been announced by an oracle, that when a tree there should bring forth arms, the fall of the city would be close at hand: and such, in fact, was the result, when the tree was cut down and greaves and helmets were found within the wood. It is said that stones found under these circumstances have the property of preventing abortion.

(40.) It is generally thought that the largest tree that has ever been seen, was the one that was exhibited at Rome, by Tiberius Cæsar, as an object of curiosity, upon the bridge of the Naumachia previously mentioned. It had been brought thither along with other timber, and was preserved till the construction of the amphitheatre of the Emperor Nero: it was a log of larch, one hundred and twenty feet long, and of an uniform thickness of a couple of feet. From this fact we can form an estimate of the original height of the tree; indeed, measured from top to bottom it must have been originally of a length that is almost incredible. In our own time, too, in the porticos of the Septa, there was a log which had been left there by M. Agrippa, as being equally an object of curiosity, having been found too large to be used in the building of the vote office there: it was twenty feet shorter than the one previously mentioned, and a foot-and-a-half in thickness. There was a fir, too, that was particularly admired, when it formed the mast of the ship, which brought from Egypt, by order of the Emperor Caius, the obelisk that was erected in the Vaticanian Circus, with the four blocks of stone intended for its base. It is beyond all doubt that there has been seen nothing on the sea more

wonderful than this ship: one hundred and twenty thousand modii of lentils formed its ballast; and the length of it took up the greater part of the left side of the harbour at Ostia. It was sunk at that spot by order of the Emperor Claudius, three moles, each as high as a tower, being built upon it; they were constructed with cement which the same vessel had conveyed from Puteoli. It took the arms of four men to span the girth of this tree, and we not unfrequently hear of the price of masts for such purposes, as being eighty thousand sesterces or more: rafts, too, of this wood are sometimes put together, the value of which is forty thousand. In Egypt and Syria, it is said, the kings, for want of fir, used to employ cedar for building their ships: the largest cedar that we find mentioned is said to have come from Cyprus, where it was cut to form the mast of a galley of eleven tiers of oars that belonged to Demetrius: it was one hundred and thirty feet in length, and took three men to span its girth. The pirates of Germany navigate their seas in vessels formed of a single tree hollowed out: some of these will hold as many as thirty men.

Of all woods, the most compact, and consequently the hea- viest, are the ebony and the box, both of them of a slender make. Neither of these woods will float in water, nor, indeed, will that of the cork tree, if the bark is removed; the same is the case, too, with the wood of the larch. Of the other woods, the driest is that of the tree known at Rome as the lotus, and next, that of the robur, when the white sap has been removed. The wood of the robur is dark, and that of the cytisus still more so, approaching, in fact, the nearest of all to the colour of ebony; though there are not wanting writers who assert that the wood of the Syrian terebinth is darker. An artist of the name of Thericles is highly spoken of for his skill in turning goblets from the wood of the terebinth: and, indeed, that fact is a proof of the goodness of the wood. Terebinth is the only wood that requires to be rubbed with oil, and is im- proved thereby. Its colour is imitated remarkably well with the walnut and the wild pear, which have its peculiar tint imparted to them by being boiled in colouring liquid. The wood of all the trees of which we have here made mention is firm and compact. Next after them comes the cornel, although it can hardly be looked upon as timber, in consequence of its remarkable slimness; the wood of it, in fact, is used for hardly any other purpose than the spokes of wheels,

or else for making wedges for splitting wood, and pins or bolts, which have all the hardness of those of iron. Besides these, there are the holm-oak, the wild and the cultivated olive, the chesnut, the yoke-elm, and the poplar. This last is mottled similarly to the maple, and would be used for joiners' work if wood could be good for anything when the branches are so often lopped: that acting upon the tree as a sort of castration, and depriving it of its strength. In addition to these facts, most of these trees, but the robur more particularly, are so extremely hard, that it is quite impossible to bore the wood till it has been soaked in water; and even then, a nail once driven home cannot be drawn out again. On the other hand, a nail has no hold in cedar. The wood of the lime is the softest of all, and, as it would appear, the hottest by nature; a proof of this, they say, is the fact that it will turn the edge of the adze sooner than any other wood. In the number, also, of the trees that are hot by nature, are the mulberry, the laurel, the ivy, and all those woods from which fire is kindled by attrition.

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CHAP. 77.

METHODS OF OBTAINING FIRE FROM WOOD.

This is a method which has been employed by the outposts of armies, and by shepherds, on occasions when there has not been a stone at hand to strike fire with. Two pieces of wood are rubbed briskly together, and the friction soon sets them on fire; which is caught on dry and inflammable substances, fun- guses and leaves being found to ignite the most readily. There is nothing superior to the wood of the ivy for rubbing against, or to that of the laurel for rubbing with. A species of wild vine, too — not the same as the labrusca — which climbs up other trees like the ivy, is highly approved of. The coldest woods of all are those of the aquatic trees; but they are the most flexible also, and for that reason the best adapted for the construction of bucklers. On an incision being made in them, they will contract immediately, and so close up their wounds, at the same time rendering it more difficult for the iron to penetrate: in the number of these woods are the fig, the willow, the lime, the birch, the elder, and both varieties of the poplar.

The lightest of all these woods, and consequently the most useful, are the fig and the willow. They are all of them employed, however, in the manufacture of baskets and other utensils of wicker-work; while, at the same time, they possess a degree of whiteness and hardness which render them very well adapted for carving. The plane has considerable flexibility, but it is moist and slimy like the alder. The elm, too, the ash, the mulberry, and the cherry, are flexible, but of a drier nature; the wood, however, is more weighty. The elm is the best of all for retaining its natural toughness, and hence it is more particularly employed for socket beams for hinges, and cases for the pannelling of doors, being proof against warping. It is requisite, however, that the beam to receive the hinge should be inverted when set up, the top of the tree answering to the lower hinge, the root to the upper. The wood of the palm and the cork-tree is soft, while that of the apple and the pear is compact. Such, however, is not the case with the maple, its wood being brittle, as, in fact, all veined woods

are. In every kind of tree, the varieties in the wood are still more augmented by the wild trees and the males. The wood, too, of the barren tree is more solid than that of the fruit-bearing ones, except in those species in which the male trees bear fruit, the cypress and the cornel, for instance.

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CHAP. 78.

TREES WHICH ARE PROOF AGAINST DECAY: TREES WHICH NEVER SPLIT.

The following trees are proof against decay and the other- wise injurious effects of age — the cypress, the cedar, the ebony, the lotus, the box, the yew, the juniper, and both the wild and cultivated olive. Among the others, the larch, the robur, the cork-tree, the chesnut, and the walnut are also remarkably durable. The cedar, cypress, olive, and box are never known to split or crack spontaneously.

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CHAP. 79.

HISTORICAL FACTS CONNECTED WITH THE DURABILITY OF WOOD.

Of all the woods, the ebony, the cypress, and the cedar are considered to be the most durable, a good proof of which is to be seen in the timber of which the Temple of Diana at Ephesus is built: it being now four hundred years since it was erected, at the joint expense of the whole of Asia; and, what is a well-known fact, the roof is wholly constructed of planks of cedar. As to the statue of the goddess, there is some doubt of what wood it is made; all the writers say that it is ebony, with the exception of Mucianus, who was three times consul, one of the very latest among the writers that have seen it; he declares that it is made of the wood of the vine, and that it has never been changed all the seven times that the temple has been rebuilt. He says, too, that it was Endæus who made choice of this wood, and even goes so far as to mention the artist's name, a thing that really surprises me very much, seeing that he attributes to it an antiquity that dates before the times of Father Liber, and of Minerva even. He states, also, that, by the aid of numerous apertures, it is soaked with nard, in order that the moist nature of that drug may preserve the wood and keep the seams close together: I am rather surprised, however, that there should be any seams in the statue, considering the very moderate size it is. He informs us, also, that the doors are made of cypress, and that the wood, which has now lasted very nearly four hundred years, has all the appearance of new. It is worthy of remark, too, that the wood of these doors, after the pieces had been glued together, was left to season four years before they were put up: cypress was made choice of from the circumstance that it is the only kind of wood that maintains its polish to all future time.

And have we not the statue of Vejovis, also, made of cypress, still preserved in the Capitol, where it was consecrated in the year of the City 661? The Temple of Apollo, too, at Utica, is equally celebrated: there we may see beams of cedar still in existence, and in just the same condition in which they were when erected at the first building of that city, eleven hundred and seventy-eight years ago. At

Saguntum, too, in Spain, there is a temple of Diana, which was brought thither by the original founders of the place, from the island of Zacynthus, in the year 200 before the taking of Troy, Bocchus says — It is preserved beneath the town, they say. Hannibal, being induced thereto by feelings of religious veneration, spared this temple, and its beams, made of juniper, are still in existence at this very day. But the most memorable instance of all is that of the temple which was dedicated to the same goddess at Aulis, several ages before the Trojan War: of what wood, however, it was originally built is a fact that has been long lost in oblivion. Speaking in general terms, we may say that those woods are of the greatest durability which are the most odoriferous.

Next to those woods of which we have just spoken, that of the mulberry is held in the highest degree of esteem, and it will even turn black when old. There are some trees, again, that are more durable than others, when employed for certain purposes. The wood of the elm lasts the best in the open air, that of the robur when buried in the ground, and that of the quercus when exposed to the action of water: indeed, the wood of this last, if employed in works above ground, is apt to split and warp. The wood of the larch thrives best in the midst of moisture; the same is the case, too, with that of the black alder. The wood of the robur spoils by exposure to the action of sea-water. The beech and the walnut are far from disapproved of for constructions under water, and, in fact, these are the principal woods, too, that are used for works under ground: the same is the case, also, with the juniper; which is equally serviceable when exposed to the atmosphere. The woods of the beech and the cirrus very quickly deteriorate, and that of the æsculus will not withstand the action of water. On the other hand, the alder, when driven into the ground in marshy localities, is of everlasting duration, and able to support the very heaviest weights. The wood of the cherry is strong, while those of the elm and the ash are pliable, though apt to warp: these last will still retain their flexibility, and be less liable to warp, if the wood is left to stand and dry upon the trunk after the pith has been cut around. It is said that the larch, when used for sea-going ships, is liable to the attacks of the teredo, as, in fact, all the woods are, with the exception of the wild and cultivated olive. It is a fact, too, that

there are some woods that are more liable to spoil in the sea, and others in the ground.

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CHAP. 80. (41.)

VARIETIES OF THE TEREDO.

There are four kinds of insects that attack wood. The teredo has a head remarkably large in proportion to the other part of the body, and gnaws away the wood with its teeth: its attacks, however, are confined solely to the sea, and it is generally thought that this is the only insect that is properly so called. The wood-worm that prevails on the land is known as the " tinea," while those which resemble a gnat in appearance are called "thripes." The fourth kind of wood-worm belongs to the maggot class; some of them being engendered by the corruption of the juices of the wood itself, and others being produced, just as in the trees, by the worm known as the cerastes. When this worm has eaten away enough of the wood to enable it to turn round, it gives birth to another. The generation of these insects is prevented, however, by the bitterness that exists in some woods, the cypress, and the hardness of others, the box, for instance.

It is said, too, that the fir, if barked about the time of budding, and at the period of the moon already mentioned, will never spoil in water. The followers of Alexander the Great have left a statement that, at Tylos, an island in the Red Sea, there are trees, of which ships are built, the wood of which has been found uninjured at the end of two hundred years, even if it has been under water all that time. They say, also, that in the same island there is a certain shrub, about the thickness of a walking-stick only, and spotted like a tiger's skin: it is very heavy, and will break like glass if it happens to fall upon a hard substance.

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CHAP. 81. (42.)

THE WOODS USED IN BUILDING.

We have in Italy some woods that are apt to split of themselves: to prevent this, architects recommend that they should be first seasoned in manure and then dried, in order to render them proof against the action of the atmosphere. The woods of the fir and larch are well adapted, even when used transversely, for the support of heavy burdens; while the robur and the olive are apt to bend and give way under a weight. The wood of the poplar and the palm are also strong, but this last will bend, though in a manner different from the others; for, while in all other instances the wood bends downwards, in the palm it bends in the contrary direction, and forms an arch. The woods of the pine and the cypress are proof against decay and all attacks of wood-worm. The walnut is easily warped, but we sometimes see beams even made of it. It gives warning, however, before it breaks, by a loud cracking noise; such was the case at Antandros, at the public baths there — the bathers took the alarm upon hearing the beams crack, and made their escape. The pine, the pitch-tree, and the alder are employed for making hollow pipes for the conveyance, of water, and when buried in the earth will last for many years. If, however, they are not well covered over, they will very soon rot; and the resistance they offer to decay will increase in a most surprising degree if the outer surface as well is left in contact with the water.

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CHAP. 82.

CARPENTERS' WOODS.

The wood of the fir is strongest in a vertical position: it is remarkably well adapted for the pannels of doors, and all kinds of in-door joiners' work, whether in the Grecian, the Campanian, or the Sicilian style. The shavings of this wood when briskly planed, always curl up in circles like the tendrils of the vine. This wood, too, unites particularly well with glue: it is used in this state for making vehicles, and is found to split sooner in the solid parts than in a place where the pieces have been glued together.

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CHAP. 83. (43.)

WOODS UNITED WITH GLUE.

Glue, too, plays one of the principal parts in all veneering and works of marqueterie. For this purpose, the workmen usually employ wood with a threaded vein, to which they give the name of "ferulea," from its resemblance to the grain of the giant fennel, this part of the wood being preferred from its being dotted and wavy. In every variety there are some woods to be found that will not take the glue, and which refuse to unite either with wood of the same kind or of any other; the wood of the robur for example. Indeed, it is mostly the case that substances will not unite unless they are of a similar nature; a stone, for instance, cannot be made to adhere to wood. The wood of the service-tree, the yoke-elm, the box, and, in a less degree, the lime, have a particular aversion to uniting with the cornel. All the yielding woods which we have already spoken of as flexible readily adapt themselves to every kind of work; and in addition to them, the mulberry and the wild fig. Those which are moderately moist are easily sawn and cut, but dry woods are apt to give way beyond the part that is touched by the saw; while, on the other hand, the green woods, with the exception of the robur and the box, offer a more obstinate resistance, filling the intervals between the teeth of the saw with sawdust, and rendering its edge uniform and inert; it is for this reason that the teeth are often made to project right and left in turns, a method by which the saw-dust is discharged. The ash is found the most pliable wood of all for working; and, indeed, for making spears it is better even than the hazel, being lighter than the cornel, and more pliable than the wood of the service-tree. The Gallic variety is so supple, that it is employed in the construction of vehicles even. The elm would rival the trunk of the vine for some purposes, were it not that its weight is so much against it.

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CHAP. 8.

VENEERING.

The wood, too, of the beech is easily worked, although it is brittle and soft. Cut into thin layers of veneer, it is very flexible, but is only used for the construction of boxes and desks. The wood, too, of the holm-oak is cut into veneers of remarkable thinness, the colour of which is far from unsightly; but it is more particularly where it is exposed to friction that this wood is valued, as being one to be depended upon; in the axle-trees of wheels, for instance; for which the ash is also employed, on account of its pliancy, the holm-oak for its hardness, and the elm, for the union in it of both those qualities. There are also various workman's tools made of wood, which, though but small, are still remarkably useful; in this respect, it is said that the best materials for making auger handles are the wild olive, the box, the holm-oak, the elm, and the ash. Of the same woods also mallets are made; the larger ones, however, are made of the pine and the holm- oak. These woods, too, have a greater degree of strength and hardness if cut in season than when hewn prematurely; indeed, it has been known for hinge-jambs, made of olive, a wood of remarkable hardness, after having remained a considerable time on the spot, to put out buds like a growing plant. Cato recommends levers to be made of holly, laurel, or elm; and Hyginus speaks highly of the yoke-elm, the holm-oak, and the cerrus, for the handles of agricultural implements.

The best woods for cutting into layers, and employing as a veneer for covering others, are the citrus, the terebinth, the different varieties of the maple, the box, the palm, the holly, the holm-oak, the root of the elder, and the poplar. The alder furnishes also, as already stated, a kind of tuberosity, which is cut into layers like those of the citrus and the maple. In all the other trees the tuberosities are of no value whatever. It is the central part of trees that is most variegated, and the nearer we approach to the root the smaller are the spots and the more wavy. It was in this appearance that originated that requirement of luxury which displays itself in covering one tree with another, and

bestowing upon the more common woods a bark of higher price. In order to make a single tree sell many times over, laminæ of veneer have been devised; but that was not thought sufficient — the horns of animals must next be stained of different colours, and their teeth cut into sections, in order to decorate wood with ivory, and, at a later period, to veneer it all over. Then, after all this, man must go and seek his materials in the sea as well! For this purpose he has learned to cut tortoise-shell into sections; and of late, in the reign of Nero, there was a monstrous invention devised of destroying its natural appearance by paint, and making it sell at a still higher price by a successful imitation of wood.

It is in this way that the value of our couches is so greatly enhanced; it is in this way, too, that they bid the rich lustre of the terebinth to be outdone, a mock citrus to be made that shall be more valuable than the real one, and the grain of the maple to be feigned. At one time luxury was not content with wood; at the present day it sets us on buying tortoiseshell in the guise of wood.

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CHAP. 85. (44.)

THE AGE OF TREES. A TREE THAT WAS PLANTED BY THE FIRST SCIPIO AFRICANUS. A TREE AT ROME FIVE HUNDRED YEARS OLD.

The life of some trees might really be looked upon as of infinite duration, if we only think of the dense wilds and inaccessible forests in some parts of the world. In relation, however, to those, the date of which is still within the memory of man, there are some olive-trees still in existence at Liternum, which were planted by the hand of the first Scipio Africanus, as also a myrtle there of extraordinary size; beneath them there is a grotto, in which, it is said, a dragon keeps watch over that hero's shade. There is a lotus tree in the open space before the Temple of Lucina at Rome, which was built in the year of the City 379, a year in which the republic had no magistrates. How much older the tree is than the temple, is a matter of doubt; but that it is older is quite certain, for it was from that same grove that the goddess Lucina derived her name; the tree in question is now about four hundred and fifty years old. The lotus tree, which is known as the Capillata, is still older than this, though it is uncertain what is its age; it received that name from the circumstance of the Vestal Virgins suspending locks of their hair from it.

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CHAP. 86.

TREES AS OLD AS THE CITY.

There is another lotus in the Vulcanal, which Romulus erected with the tenth part of the spoil taken from the enemy: according to Massurius, it is generally considered to be as old as the City. The roots of this tree penetrate as far as the Forum of Cæsar, right across the meeting-places of the municipalities. There was a cypress of equal age growing with it till towards the latter part of Nero's reign, when it fell to the ground, and no attempts were made to raise it again.

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CHAP. 87.

TREES IN THE SUBURBAN DISTRICTS OLDER THAN THE CITY.

Still older than the City is the holm-oak that stands on the Vaticanian Hill: there is an inscription in bronze upon it, written in Etruscan characters, which states that even in those days it was an object of religious veneration. The foundation of the town of Tibur, too, dates many years before that of the City of Rome: there are three holm-oaks there, said to be more ancient than Tiburnus even, who was the founder of that place; the tradition is that in their vicinity he was inaugurated. Tradition states also that he was a son of Amphiaraüs, who died before Thebes, one generation before the period of the Trojan war.

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CHAP. 88.

TREES PLANTED BY AGAMEMNON THE FIRST YEAR OF THE TROJAN WAR: OTHER TREES WHICH DATE FROM THE TIME THAT THE PLACE WAS CALLED ILIUM, ANTERIOR TO THE TROJAN WAR.

There are some authors, too, who state that a plane-tree at Delphi was planted by the hand of Agamemnon, as also another at Caphyæ, a sacred grove in Arcadia. At the present day, facing the city of Ilium, and close to the Hellespont, there are trees growing over the tomb of Protesilaiis there, which, in all ages since that period, as soon as they have grown of sufficient height to behold Ilium, have withered away, and then begun to flourish again. Near the city, at the tomb of Ilus, there are some oaks which are said to have been planted there when the place was first known by the name of Ilium.

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CHAP. 89.

TREES PLANTED AT ARGOS BY HERCULES: OTHERS PLANTED BY APOLLO. A TREE MORE ANCIENT THAN ATHENS ITSELF.

At Argos an olive-tree is said to be still in existence, to which Argus fastened Io, after she had been changed into a cow. In the vicinity of Heraclea in Pontus, there are certain altars called after Jupiter surnamed Stratios; two oaks there were planted by Hercules. In the same country, too, is the port of Amycus, rendered famous by the circumstance that King Bcbryx was slain there. Since the day of his death his tomb has been covered by a laurel, which has obtained the name of the "frantic laurel," from the fact that if a portion of it is plucked and taken on board ship, discord and quarrel- ling are the inevitable result, until it has been thrown overboard. We have already made mention of Aulocrene, a district through which you pass in going from Apamia into Phrygia: at this place they show a plane upon which Marsyas was hanged, after he had been conquered by Apollo, it having been chosen even in those days for its remarkable height. At Delos, also, there is a palm to be seen which dates from the birth of that divinity, and at Olympia there is a wild olive, from which Hercules received his first wreath: at the present day it is preserved with the most scrupulous veneration. At Athens, too, the olive produced by Minerva, is said still to exist.

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CHAP. 90.

TREES WHICH ARE THE MOST SHORT-LIVED.

On the other hand, the pomegranate, the fig, and the apple are remarkably short-lived; the precocious trees being still more so than the later ripeners, and those with sweet fruit than those with sour: among the pomegranates, too, that variety which bears the sweetest fruit lives the shortest time. The same is the case, too, with the vine, and more particularly the more fruitful varieties. Græcinus informs us that vines have lasted so long as sixty years. It appears, also, that the aquatic trees die the soonest. The laurel, the apple, and the pomegranate age rapidly, it is true, but then they throw out fresh shoots at the root. The olive must be looked upon, then, as being one of the most long-lived, for it is generally agreed among authors that it will last two hundred years.

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CHAP. 91.

TREES THAT HAVE BEEN RENDERED FAMOUS BY REMARKABLE EVENTS.

In the territory about the suburbs of Tusculum, upon a hill known by the name of Corne, there is a grove which has been consecrated to Diana by the people of Latium from time immemorial; it is formed of beeches, the foliage of which has all the appearance of being trimmed by art. Passienus Crispus, the orator, who in our time was twice consul, and afterwards became still more famous as having Nero for his step-son, on marrying his mother Agrippina, was passionately attached to a fine tree that grew in this grove, and would often kiss and embrace it: not only would he lie down, too, beneath it, but he would also moisten its roots with wine. In the vicinity of this grove there is a holm-oak, likewise of very considerable celebrity, the trunk of which is no less than thirty-four feet in circumference; giving birth to ten other trees of remarkable size, it forms of itself a whole forest.

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CHAP. 92.

PLANTS THAT HAVE NO PECULIAR SPOT FOR THEIR GROWTH: OTHERS THAT GROW UPON TREES, AND WILL NOT GROW IN THE GROUND. NINE VARIETIES OF THEM: CADYTAS, POLYPODION, PHAULIAS, HIPPOPHÆSTON.

It is a well-known fact that trees are killed by ivy. The mistletoe also has a similar influence, although it is generally thought that its injurious effects are not so soon perceptible: and, indeed, this plant, apart from the fruit that it bears, is looked upon as by no means the least remarkable. There are certain vegetable productions which cannot be propagated in the ground, and which grow nowhere but on trees; having no domicile of their own, they live upon others; such, for instance, is the case with the mistletoe, and a herb that grows in Syria, and is known as the " cadytas." This last entwines around not only trees, but brambles even; in the neighbourhood of Tempe, too, in Thessaly, there is found a plant which is called "polypodion; the dolichos is found also, and wild thyme. After the wild olive has been pruned there springs up a plant that is known as "phaulias; while one that grows upon the fuller's thistle is called the "hippophæston;" it has a thin, hollow stem, a small leaf, and a white root, the juice of which is considered extremely beneficial as a purgative in epilepsy.

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CHAP. 93.

THREE VARIETIES OF MISTLETOE. THE NATURE OF MISTLETOE AND SIMILAR PLANTS.

There are three varieties of the mistletoe. That which grows upon the fir and the larch has the name of stelis in Eubœa; and there is the hyphear of Arcadia. It grows also upon the quercus, the robur, the holm-oak, the wild plum, and the terebinth, but upon no other tree. It is most plentiful of all upon the quercus, and is then known as "adasphear." In all the trees, with the exception of the holmoak and the quercus, there is a considerable difference in its smell and pungency, and the leaf of one kind has a disagreeable odour; both varieties, however, are sticky and bitter. The hyphear is the best for fattening cattle with; it begins, however, by purging off all defects, after which it fattens all such animals as have been able to withstand the purging. It is generally said, however, that those animals which have any radical malady in the intestines cannot withstand its drastic effects. This method of treatment is generally adopted in the summer for a period of forty days.

Besides the above, there is yet another difference in the mistletoe; that which grows upon the trees which lose their leaves, loses its leaves as well; while, on the other hand, that which grows upon evergreens always retains its leaves. In whatever way the seed may have been sown, it will never come to anything, unless it has been first swallowed and then voided by birds, the wood-pigeon more particularly, and the thrush: such being the nature of the plant, that it will not come to anything unless the seed is first ripened in the crop of the bird. It never exceeds a single cubit in height, and is always green and branchy. The male plant is fruitful, the female barren; sometimes, indeed, the male even bears no berry.

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CHAP. 94.

THE METHOD OF MAKING BIRDLIME.

Birdlime is made of the berries of the mistletoe, which are gathered at harvest, and while in an unripe state; for if the rainy season comes on, though they increase in size, the viscous juice is apt to lose its virtues. They are then dried, and when brought to a state of perfect aridity, are first pounded, and then put in water, in which they are left to rot for twelve days; this being, in fact, the only thing that finds improve- ment in decay. After this, they are again beaten in running water with a mallet, and after losing the outer coat there is only the viscous inner pulp remaining. This substance is birdlime; and after it has been thinned by the addition of walnut oil, it is found particularly useful for catching birds, it being quite sufficient if they only touch it with the wings.

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CHAP. 95.

HISTORICAL FACTS CONNECTED WITH THE MISTLETOE.

Upon this occasion we must not omit to mention the admiration that is lavished upon this plant by the Gauls. The Druids — for that is the name they give to their magicians — held nothing more sacred than the mistletoe and the tree that bears it, supposing always that tree to be the robur. Of itself the robur is selected by them to form whole groves, and they perform none of their religious rites without employing branches of it; so much so, that it is very probable that the priests themselves may have received their name from the Greek name for that tree. In fact, it is the notion with them that everything that grows on it has been sent immediately from heaven, and that the mistletoe upon it is a proof that the tree has been selected by God himself as an object of his especial favour.

The mistletoe, however, is but rarely found upon the robur; and when found, is gathered with rites replete with religious awe. This is done more particularly on the fifth day of the moon, the day which is the beginning of their months and years, as also of their ages, which, with them, are but thirty years. This day they select because the moon, though not yet in the middle of her course, has already considerable power and influence; and they call her by a name which signifies, in their language, the all-healing. Having made all due preparation for the sacrifice and a banquet beneath the trees, they bring thither two white bulls, the horns of which are bound then for the first time. Clad in a white robe the priest ascends the tree, and cuts the mistletoe with a golden sickle, which is received by others in a white cloak. They then immolate the victims, offering up their prayers that God will render this gift of his propitious to those to whom he has so granted it. It is the belief with them that the mistletoe, taken in drink, will impart fecundity to all animals that are barren, and that it is an antidote for all poisons. Such are the religious feelings which we find entertained towards trifling objects among nearly all nations.

SUMMARY. — Remarkable facts, narratives, and observations,

one thousand one hundred and thirty-five.

ROMAN AUTHORS QUOTED. — M. Varro, Fetialis, Nigidius, Cornelins Nepos, Hyginus, Massurius, Cato, Mucianus, L. Piso, Trogus, Calpurnius Bassus, Cremutius, Sextius Niger, Cornelius Bocchus, Yitruvius, Græcinus.

FOREIGN AUTHORS QUOTED. — Alexander Polyhistor, Hesiod, Theophrastus, Democritus, Homer, Timæus the mathematician.

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BOOK XVII. THE NATURAL HISTORY OF THE CULTIVATED TREES.

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CHAP. 1. (1.)

TREES WHICH HAVE BEEN SOLD AT ENORMOUS PRICES.

WE have described the trees which grow spontaneously on land and in the sea, and it now remains for us to speak of those which owe their formation, properly speaking, rather than birth, to art and the inventive genius of man. Here, however, I cannot but express my surprise, that after the state of penury in which man lived, as already described, in primitive times, holding the trees of the forest in common with the wild beasts, and disputing with them the possession of the fruits that fell, and with the fowls of the air that of the fruits as they hung on the tree, luxury has now attached to them prices so enormous.

The most famous instance, in my opinion, of this excess, was that displayed by L. Crassus and Cneius Domitius Ahenobarbus. Crassus was one of the most celebrated of the Roman orators; his house was remarkable for its magnificence, though in some measure surpassed even by that of Q. Catulus, also upon the Palatine Hill; the same Catulus, who, in conjunction with C. Marius, defeated the Cimbri. But by far the finest house of all that period, it was universally acknowledged, was that of C. Aquilius, a Roman of Equestrian rank, situate upon the Viminal Hill; a house, indeed, that conferred a greater degree of celebrity upon him than even his acquaintance with the civil law. This, however, did not prevent Crassus being reproached with the magnificence of his. Crassus and Domitius, members, both of them, of the most illus- trious families, after holding the consulship, were appointed jointly to the censorship, in the year from the building of the City 662, a period of office that was fruitful in strife, the natural result of their dissimilarity of character. On one occasion, Cneius Domitius, naturally a man of hasty temper, and inflamed besides by a hatred that rivalry only tends to stimulate, gravely rebuked Crassus for living, and he a Censor too, in a style of such magnificence, and in a house for which, as he said, he himself would be ready to pay down ten millions of sesterces. Crassus, a man who united to singular presence of mind great readiness of wit, made

answer that, deducting six trees only, he would accept the offer; upon which Domitius replied, that upon those terms he would not give so much as a single denarius for the purchase. "*Well* then, Domitius," was the rejoinder of Crassus, "which of the two is it that sets a bad example, and deserves the reproof of the censorship; I, who live like a plain man in a house that has come to me by inheritance, or you, who estimate six trees at a value of ten millions of sesterces?" These trees were of the lotus kind, and by the exuberance of their branches afforded a most delightful shade. Cæcina Largus, one of the grandees of Rome, and the owner of the house, used often to point them out to me in my younger days; and, as I have already made mention of the remarkable longevity of trees, I would here add, that they were in existence down to the period when the Emperor Nero set fire to the City, one hundred and eighty years after the time of Crassus; being still green and with all the freshness of youth upon them, had not that prince thought fit to hasten the death of the very trees even.

Let no one, however, imagine that the house of Crassus was of no value in other respects, or that, from the rebuke of Domitius, there was nothing about it worthy of remark with the exception of these trees. There were to be seen erected in the atrium four columns of marble from Mount Hymettus, which in his ædileship he had ordered to be brought over for the decoration of the stage; and this at a time, too, when no public buildings even as yet possessed any pillars made of that material. Of such recent date is the luxury and opulence which we now enjoy, and so much greater was the value which in those days trees were supposed to confer upon a property! A pretty good proof of which, was the fact that Domitius even, with all his enmity, would not keep to the offer he had made, if the trees were not to be included in the bargain.

The trees have furnished surnames also to the ancients, such, for instance, as that of Fronditius to the warrior who swam across the Volturnus with a wreath of leaves on his head, and distinguished himself by his famous exploits in the war against Hannibal; and that of Stolo to the Licinian family, such being the name given by us to the useless suckers that shoot from trees; the best method of clearing away these shoots was discovered by the first Stolo, and hence his name. The ancient laws also took the trees under their protection; and

by the Twelve Tables it was enacted, that he who should wrongfully cut down trees belonging to another person, should pay twenty-five asses for each. Is it possible then to imagine that they, who estimated the fruit-trees at so low a rate as this, could ever have supposed that so exorbitant a value would be put upon the lotus as that which I have just mentioned? And no less mar- vellous, too, are the changes that have taken place in the value of fruit; for at the present day we find the fruit alone of many of the trees in the suburbs valued at no less a sum than two thousand sesterces; the profits derived from a single tree thus being more than those of a whole estate in former times. It was from motives of gain that the grafting of trees and the propagation thereby of a spurious offspring was first devised, so that the growth of the fruits even might be a thing interdicted to the poor. We shall, therefore, now proceed to state in what way it is that such vast revenues are derived from these trees, and with that object shall set forth the true and most approved methods of cultivation; not taking any notice of the more common methods, or those which we find generally adopted, but considering only those points of doubt and uncertainty, in relation to which practical men are most apt to find themselves at a loss: while, at the same time, to affect any scrupulous exactness in cases where there is no necessity for it, will be no part of our purpose. In the first place, however, we will consider in a general point of view, those influences of soil as well as weather which are exercised upon all the trees in common.

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CHAP. 2. (2.)

THE INFLUENCE OF WEATHER UPON THE TREES: WHAT IS THE PROPER SITUATION FOR THE VINE.

Trees are fond of a site more particularly that faces the north-east; the breezes rendering their foliage more thick and exuberant, and imparting additional solidity to the wood. This is a point, however, upon which most people are very greatly deceived; thus in vineyards, for instance, the props ought not to be placed in such a position as to shelter the stems from the wind in that quarter, it being only against the northern blasts that this precaution should be taken. Nay, even more than this — if the cold weather only comes on in due season, it contributes very materially to the strengthening of the trees, and promotes the process of germination; while, on the other hand, if at that period the southern breezes should caress them, they will grow weak and languid, and more particularly so, if the blossom is just coming on. If rainy weather, too, should happen to follow close upon blossoming, the total destruction of the fruit is the necessary result: indeed, if the weather should be only cloudy, or south winds happen to prevail, it is quite sufficient to ensure the loss of the fruit in the almond and the pear. Rains, if prevalent about the rising of the Vergiliæ, are most injurious to the vine and the olive, as it is at that season that germination is commencing with them; indeed, this is a most critical four days for the olive, being the period at which the south wind, as we have already stated, brings on its dark and lowering clouds. The cereals, too, ripen more unfavourably when south winds prevail, though at the same time it proceeds with greater rapidity. All cold, too, is injurious to vegetation, which comes with the northern winds, or out of the proper season. It is most advantageous to all plants for north-east winds to prevail throughout the winter.

In this season, too, showers are very necessary, and the reason is self-evident — the trees, being exhausted by the fruit they have borne, and weakened by the loss of their leaves, are, of course, famished and hungry; and it is the showers that constitute their

aliment. Experience has led us to believe that there is nothing more detrimental than a warm winter; for it allows the trees, the moment they have parted with their fruits, to conceive again, or, in other words, to germinate, and then exhaust themselves by blossoming afresh. And what is even worse than this, should there be several years of such weather in succession, even the trees themselves will die; for there can be little doubt that the effort must of necessity be injurious, when they put forth their strength, and are at the same time deprived of their natural sustenance. The poet then, who has said that serene winters are to be desired, certainly did not express those wishes in favour of the trees. And no more does rain, if prevalent at the summer-solstice, conduce to the benefit of the vine: while, at the same time, to say that a dusty winter produces a luxuriant harvest, is certainly the mistake of a too fertile imagination. It is a thing greatly to be wished, too, both in behalf of the trees as well as the cereals, that the snows should lie for a considerable time upon the ground; the reason being that they check the escape of the spirit of the earth by evaporation, and tend to throw it back again upon the roots of the plants, adding greatly to their strength thereby; and not only this, but they afford a gradual supply of moisture as well, that is both pure and of remarkable lightness, from the fact that snow is only the foam of the waters of heaven. Hence it is that the moisture of snow does not drench and engulph everything all at once, but gradually trickles downwards, in proportion to the thirst of the plant, nurturing it as though from the breast, instead of producing an inundation. The earth, too, ferments under this influence, and becomes filled with her own emanations: not exhausted by the seeds in her bosom, swollen as they are with milk, she smiles in the warm and balmy hours, when the time comes for opening it. It is in this way, more particularly, that corn fattens apace, except, indeed, in those climates in which the atmosphere is always warm, Egypt for example; for there the continuance of the same temperature and the force of habit are productive of the same effects as the modifications of temperature in other countries.

At the same time it is equally necessary in every climate that there should be no noxious influence in existence. Thus, for instance, in the greater part of the world, that precocious germination which has

been encouraged by the indulgent temperature of the weather, is sure to be nipped by the intense colds that ensue. Hence it is that late winters are so injurious, and such they prove to the trees of the forest even; indeed, these last are more particularly exposed to the ill effects of a late winter, oppressed as they are by the density of their foliage, and human agency being unable to succour them; for it would be quite impossible to cover the more tender forest trees with wisps of straw. Rains, then, are favourable to vegetation-first of all, during the winter season, and next, just previously to germination; the third period for them being that of the formation of the fruit, though not immediately, and only, in fact, when the produce of the tree shows itself strong and healthy.

Those trees which are the slowest in bringing their fruits to maturity, and require a more prolonged supply of nutriment, receive benefit also from late rains, such as the vine, the olive, and the pomegranate, for instance. These rains, however, are required at different seasons by the different trees, some of them coming to maturity at one period and some at another; hence it is that we see the very same rain productive of injury to some trees and beneficial to others, even when they are of the very same species, as in the pear for instance: for the winter pear stands in need of rain at one period, and the early pear at another, though at the same time they, all of them, require it in an equal degree. Winter precedes the period of germination, and it is this fact that makes the north-east wind more beneficial than the south, and renders the parts that lie in the interior preferable to those near the coast,-the former being generally the coldest,-mountainous districts better than level ones, and rain at night better than showers in the day. Vegetation, too, receives a greater degree of benefit from the water when the sun does not immediately soak it up.

Connected, too, with this subject is the question of the best situation for planting vines, and the trees which support them. Virgil condemns a western aspect, while there are some persons, again, who prefer it to an easterly one: I find, however, that most authors approve of the south, though I do not think that any abstract precepts can be given in relation to the point. The most careful attention on

the part of the cultivator ought to be paid to the nature of the soil, the character of the locality, and the respective influences of climate. The method of giving to the vine a southern aspect, as practised in Africa and * * * * is injurious to the tree, as well as unhealthy for the cultivator, from the very circumstance that the country itself lies under a southern meridian: hence it is, that he who selects for his plants there a western or a northerly aspect, will combine on the most advantageous terms the benefits of soil with those of climate. When Virgil condemns a western aspect, there can be no doubt that he includes in his censure a northern aspect as well: and yet, in Cisalpine Italy, where most of the vineyards have an aspect to the north, it has been found by experience that there are none that are more prolific.

The winds are also a very important consideration. In the provinces of Gallia Narbonensis, and in Liguria and part of Etruria, it is considered a proof of great want of skill to plant the vine on a site that lies in the teeth of the wind Circius, while, on the other hand, it is a mark of prudence to catch its breezes in an oblique direction; it is this wind, in fact, that modifies the heat in those countries, though at the same time it is usually so violent, as to sweep away the roofs of the houses.

(3.) There are some persons who employ a method of making the question of weather dependent upon the nature of the soil; thus in the case of a vineyard, for instance, in a dry locality, they give it an eastern or a northern aspect; but where it is planted on a humid site, it is made to face the south. From the varieties of the vine also, they borrow various modifications in reference to site; taking care to plant the early vine in a cold locality, in order that the fruit may ripen before the frosts come on; while such fruit trees and vines as have an antipathy to dews are exposed to the east, that the sun may carry off their humidity at the earliest moment. On the other hand, such as manifest a partiality to dews are planted with a western or even a northern aspect, to give them an opportunity of enjoying them all the longer. Others, again, borrowing their notions pretty nearly from Nature, have recommended that vines and trees should be planted facing the north-east; indeed Democritus is of opinion, that by so

doing the fruit will be all the more odoriferous.

(4.) We have already spoken, in the Second Book, of the points of the north-east and other winds, and shall have occasion in the succeeding one to make mention of several more of the heavenly phænomena. In the mean time, however, we may observe that it would appear to be a manifest proof of the salubrity of a north-east site, that the leaves are always the first to fall in the trees that have an aspect towards the south. A similar reason exists, too, in the maritime districts; in certain localities the sea breezes are detrimental, though in most they are nutritious. For some plants, again, it is pleasant to behold the sea at a distance, while at the same time they will gain nothing by approaching closer to its saline exhalations. The same, too, is the influence exercised by rivers and lakes; they will either scorch the vegetation by the fogs they emit, or else modify by their coolness the excess of heat. We have already mentioned the plants that thrive in the shade, and in the cold even; but in all these matters experience will be found the best of guides.

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CHAP. 3.

WHAT SOILS ARE TO BE CONSIDERED THE BEST.

Next after the influences of the heavens, we have to treat of those of the earth, a task that is in no way more easy than the previous one. It is but rarely that the same soil is found suited to trees as well as corn: indeed, the black earth which prevails in Campania is not everywhere found suited to the vine, nor yet that which emits light exhalations, or the red soil that has been so highly praised by many. The cretaceous earth that is found in the territory of Alba Pompeia, and an argillaceous soil, are preferred to all others for the vine, although, too, they are remarkably rich, a quality that is generally looked upon as not suited to that plant. On the other hand, again, the white sand of the district of Ticinum, the black sand of many other places, and the red sand as well, even though mixed with a rich earth, will prove unproductive.

The very signs, also, from which we form our judgment are often very deceptive; a soil that is adorned with tall and graceful trees is not always a favourable one, except, of course, for those trees. What tree, in fact, is there that is taller than the fir? and yet what other plant could possibly exist in the same spot? Nor ought we always to look upon verdant pastures as so many proofs of richness of soil; for what is there that enjoys a greater renown than the pastures of Germany? and yet they consist of nothing but a very thin layer of turf, with sand immediately beneath. Nor yet is the soil which produces herbage of large growth always to be looked upon as humid; no, by Hercules! no more than a soil is to be looked upon as unctuous and rich, which adheres to the fingers — a thing that is proved in the case of the argillaceous earths. The earth when thrown back into the hole from which it has just been dug will never fill it, so that it is quite impossible by that method to form any opinion as to its density or thinness. It is the fact, too, that every soil, without exception, will cover iron with rust. Nor yet can we determine the heaviness or lightness of soils in relation to any fixed and ascertained weight: for what are we to understand as the standard weight of earth? A soil,

too, that is formed from the alluvion of rivers is not always to be recommended, for there are some crops that decay all the sooner in a watery soil; indeed, those soils even of this description which are highly esteemed, are never found to be long good for any kind of vegetation but the willow.

Among other proofs of the goodness of soil, is the comparative thickness of the stem in corn. In Laborium, a famous champaign country of Campania, the stalk is of such remarkable thickness, that it may be used even to supply the place of wood: and yet this very soil, from the difficulty that is everywhere experienced in cultivating it, and the labour required in working it, may be almost said to give the husbandman more trouble by its good qualities than it could possibly have done by reason of any defects. The soil, too, that is generally known as charcoal earth, appears susceptible of being improved by being planted with a poor meagre vine: and tufa, which is naturally rough and friable, we find recommended by some authors. Virgil, too, does not condemn for the vine a soil which produces fern: while a salted earth is thought to be much better entrusted with the growth of vegetation than any other, from the fact of its being comparatively safe from noxious insects breeding there. Declivities, too, are far from unproductive, if a person only knows how to dig them properly; and it is not all champaign spots that are less accessible to the sun and wind than is necessary for their benefit. We have already alluded to the fact, that there are certain vines which find nutriment in hoar frosts and fogs.

In every subject there are certain deep and recondite secrets, which it is left to the intelligence of each to penetrate. Do awe not, for instance, find it the fact, that soils which have long offered opportunities for a sound judgment being formed on their qualities have become totally altered? In the vicinity of Larissa, in Thessaly, a lake was drained; and the consequence was, that the district became much colder, and the olive-trees which had formerly borne fruit now ceased to bear. When a channel was cut for the Hebrus, near the town of Ænos, the place was sensible of its nearer approach, in finding its vines frost-bitten, a thing that had never happened before; in the vicinity, too, of Philippi, the country having been drained for cultivation, the nature of the climate became entirely altered. In the

territory of Syracuse, a husbandman, who was a stranger to the place, cleared the soil of all the stones, and the consequence was, that he lost his crops front the accumulation of mud; so that at last he was obliged to carry the stones back again. In Syria again, the ploughshare which they use is narrow, and the furrows are but very superficial, there being a rock beneath the soil that in summer scorches up the seeds.

Then, too, the effects of excessive cold and heat in various places are similar; thus, for instance, Thrace is fruitful in corn, by reason of the cold, while Africa and Egypt are so in consequence of the heat that prevails there. At Chalcia, an island belonging to the Rhodians, there is a certain place which is so remarkably fertile, that after reaping the barley that has been sown at the ordinary time, and gathering it in, they immediately sow a fresh crop, and reap it at the same time as the other corn. A gravelly soil is found best suited for the olive in the district of Venafrum, while one of extreme richness is required for it in Bætica. The wines of Pucinum are ripened upon a rock, and the vines of Cæcubum are moistened by the waters of the Pomptine marshes; so great are the differences that have been detected by human experience in the various soils. Cæsar Vopiscus, when pleading a cause before the Censors, said that the fields of Rosia are the very marrow of Italy, and that a stake, left in the ground there one day, would be found covered by the grass the next: the soil, however, is only esteemed there for the purposes of pasturage. Still, however, Nature has willed that we should not remain uninstructed, and has made full admission as to existing defects in soil, even in cases where she has failed to give us equal information as to its good qualities: we shall begin, therefore, by speaking of the defects that are found in various soils.

(5.) If it is the wish of a person to test whether a soil is bitter, or whether it is thin and meagre, the fact may be easily ascertained from the presence of black and undergrown herbs. If, again, the herbage shoots up dry and stunted, it shows that the soil is cold, and if sad and languid, that it is moist and slimy. The eye, too, is able to judge whether it is a red earth or whether it is argillaceous, both of them extremely difficult to work, and apt to load the harrow or ploughshare with enormous clods; though at the same time it should

be borne in mind that the soil which entails the greatest amount of labour is not always productive of the smallest amount of profit. So, too, on the other hand, the eye can distinguish a soil that is mixed with ashes or with white sand, while earth that is sterile and dense may be easily detected by its peculiar hardness, at even a single stroke of the mattock.

Cato, briefly and in his peculiar manner, characterizes the defects that exist in the various soils. “Take care,” he says, “where the earth is rotten not to shake it either with carts or by driving cattle over it.” Now what are we to suppose that this term “rotten” means, as applied to a soil, about which he is so vastly apprehensive as to almost forbid our setting foot upon it? Let us only form a comparison ‘by thinking what it is that constitutes rottenness in wood, and we shall find that the faults which are held by him in such aversion are the being arid, full of holes, rough, white, mouldy, worm eaten, in fact, just like pumice-stone; and thus has Cato said more in a single word than we could have possibly found means to express in a description, however long. Indeed, if we could find means of expressing the various defects that exist in soils, we should find that there are some of them that are old, not with age (for age cannot be concerned in relation to the earth), but of their own nature, and are hence unfruitful and powerless for every purpose from the first. The same writer, too, considers that as the very best of soils, which, situate at the foot of a declivity, runs out into a champaign country, taking a southward direction; such, in fact, being the aspect of the whole of Italy: he says also, that the earth generally known as black earth is of a tender nature, and is consequently the most easily worked and the best for cereals. If we only appreciate with due care the signification of this word “tender,” we shall find that it expresses its intended meaning remarkably well, and that in this word is comprised every quality that is desirable for the purposes of cultivation. In a tender soil we shall find fertility combined with moderation, a softness and a pliancy easily adapted to cultivation, and an equal absence of humidity and of dryness. Earth of this nature will shine again after the plough-share has passed through it, just as Homer, that great fountain-head of all genius, has described it sculptured by the Divinity upon the arms [of Achilles], adding, too, a thing that is truly

marvellous, that it was of a blackish hue, though gold was the material in which it was wrought. This, too, is that kind of earth, which, when newly turned up, attracts the ravenous birds that follow the plough-share, the ravens even going so far as to peck at the heels of the ploughman.

We may in this place appropriately make mention of an opinion that has been pronounced by an Italian writer also with reference to a matter of luxury. Cicero, that other luminary of literature, has made the following remark: "Those unguents which have a taste of earth are better," says he, "than those which smack of saffron;" it seeming to him more to the purpose to express himself by the word " taste" than "smell." And such is the fact, no doubt; that soil is the best which has the flavour of a perfume. If the question should be put to us, what is this odour of the earth that is held in such estimation, our answer is, that it is the same that is often to be recognized at the moment of sunset, without the necessity even of turning up the ground, at the spots where the extremities of the rainbow have been observed to meet the earth; as also when, after long-continued drought, the rain has soaked the ground. Then it is that the earth exhales this divine odour, that is so peculiarly its own, and to which, imparted to it by the sun, there is no perfume, however sweet, that can possibly be compared. It is this odour that the earth, when turned up, ought to emit, and which, when once found, can never deceive a person; and this will be found the best criterion for judging of the quality of the soil. Such, too, is the odour that is usually perceived on land newly cleared, when an ancient forest has been just cut down; its excellence is a thing that is universally admitted.

For the culture of the cereals, too, the same land is generally looked upon as the more improved the oftener it has been allowed to rest from cultivation, a thing that is not the case with vineyards; for which reason all the greater care is required in the selection of their site, if we would not have the opinions of those to appear well founded who entertain the notion that the soil of Italy is already worn out. In other kinds of soil the work of cultivation depends entirely upon the weather; as, for instance, in those which cannot be ploughed just after rain, because the natural exuberance of the earth renders it viscous and cloggy. On the other hand, in Byza- cium, a district of

Africa, and a champaign country of such singular fertility as to render grain one hundred and fifty fold, the soil is such, that in time of drought, not even bulls are able to plough it; while, on another occasion, just after a shower of rain, one poor ass, with an old woman to guide it, is quite sufficient, as ourselves we have witnessed, to do the plough- ing. But as to amending one soil by the agency of another, as some persons recommend, by throwing rich earth over one that is poor and thin, or by laying a soaking light soil over one that is humid and unctuous, it is a labour of perfect madness. What can a man possibly hope for who cultivates such a soil as this?

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CHAP. 4. (6.)

THE EIGHT KINDS OF EARTH BOASTED OF BY THE GAULS AND GREEKS.

There is another method, which has been invented both in Gaul and Britain, of enriching earth by the agency of itself, being * * * * and that kind known as marl. This soil is looked upon as containing a greater amount of fecundating principles, and acts as a fat in relation to the earth, just as we find glands existing in the body, which are formed by a condensation of the fatty particles into so many kernels. (7.) This mode of proceeding, too, has not been overlooked by the Greeks; indeed, what subject is there that they have not touched upon? They call by the name of leucargillon a white argillaceous earth which is used in the territory of Megara, but only where the soil is of a moist, cold nature.

It is only right that I should employ some degree of care and exactness in treating of this marl, which tends so greatly to enrich the soil of the Gallic provinces and the British islands. There were formerly but two varieties known, but more recently, with the progress of agricultural knowledge, several others have begun to be employed; there being, in fact, the white, the red, the columbine, the argillaceous, the tufaceous, and the sandy marls. It has also one of these two peculiarities, it is either rough or greasy to the touch; the proper mode of testing it being by the hand. Its uses, too, are of a twofold nature — it is employed for the production of the cereals only, or else for the enrichment of pasture land as well. The tufaceous kind is nutrimental to grain, and so is the white; if found in the vicinity of springs, it is fertile to an immeasurable extent; but if it is rough to the touch, when laid upon the land in too large a quantity, it is apt to burn up the soil. The next kind is the red marl, known as acaunumarga, consisting of stones mingled with a thin sandy earth. These stones are broken upon the land itself, and it is with considerable difficulty during the earlier years that the stalk of the corn is cut, in consequence of the presence of these stones; however,

as it is remarkably light, it only costs for carriage one-half of the outlay required in using the other varieties. It is laid but very thinly on the surface, and it is generally thought that it is mixed with salt. Both of these varieties, when once laid on the land, will fertilize it for fifty years, whether for grain or for hay. (8.) Of the marls that are found to be of an unctuous na- ture, the best is the white. There are several varieties of it: the most pungent and biting being the one already mentioned. Another kind is the white chalk that is used for cleaning silver; it is taken from a considerable depth in the ground, the pits being sunk, in most instances, as much as one hundred feet. These pits are narrow at the mouth, but the shafts enlarge very considerably in the interior, as is the case in mines; it is in Britain more particularly that this chalk is employed. The good effects of it are found to last full eighty years; and there is no instance known of an agriculturist laying it twice on the same land during his life. A third variety of white marl is known as glisomarga; it consists of fullers' chalk mixed with an unctuous earth, and is better for promoting the growth of hay than grain; so much so, in fact, that between harvest and the ensuing seed-time there is cut a most abundant crop of grass. While the corn is growing, however, it will allow no other plant to grow there. Its effects will last so long as thirty years; but if laid too thickly on the ground, it is apt to choke up the soil, just as if it had been covered with Signine cement. The Gauls give to the columbine marl in their language the name of eglecopala; it is taken up in solid blocks like stone, after which it is so loosened by the action of the sun and frost, as to split into laminæ of extreme thinness; this kind is equally beneficial for grass and grain. The sandy marl is employed if there is no other at hand, and on moist slimy soils, even when other kinds can be procured.

The Ubii are the only people that we know of, who, having an extremely fertile soil to cultivate, employ methods of enriching it; wherever the land may happen to be, they dig to a depth of three feet, and, taking up the earth, cover the soil with it in other places a foot in thickness; this method, however, to be beneficial, requires to be renewed at the end of every ten years. The Ædui and the Pictones have rendered their lands remarkably fertile by the aid of limestone, which is also found to be particularly beneficial to the olive and the

vine. Every marl, however, requires to be laid on the land immediately after ploughing, in order that the soil may at once imbibe its properties; while at the same time, it requires a little manure as well, as it is apt, at first, to be of too acrid a nature, at least where it is not pasture land that it is laid upon; in addition to which, by its very freshness it may possibly injure the soil, whatever the nature of it may be; so much so, indeed, that the land is never fertile the first year after it has been employed. It is a matter of consideration also for what kind of soil the marl is required; if the soil is moist, a dry marl is best suited for it; and if dry, a rich unctuous marl. If, on the other hand, the land is of a medium quality, chalk or columbine marl is the best suited for it.

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CHAP. 5. (9.)

THE EMPLOYMENT OF ASHES.

The agriculturists of the parts of Italy beyond the river Padus, are such admirers of ashes for this purpose, that they even prefer it as a manure to the dung of beasts of burden; indeed, they are in the habit of burning dung for this purpose, on account of its superior lightness. They do not, however, use them indiscriminately upon the same soil, nor do they employ ashes for promoting the growth of shrubs, nor, in fact, of some of the cereals, as we shall have occasion to mention hereafter. There are some persons who are of opinion also that dust imparts nutriment to grapes, and cover them with it while they are growing, taking care to throw it also upon the roots of the vines and other trees. It is well known that this is done in the province of Gallia Narbonensis, and it is a fact even better ascertained that the grape ripens all the sooner for it; indeed, the dust there contributes more to its ripeness than the heat of the sun.

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CHAP. 6.

MANURE.

There are various kinds of manure, the use of which is of very ancient date. In the times of Homer even, the aged king is represented as thus enriching the land by the labour of his own hands. Tradition reports that King Augeas was the first in Greece to make use of it, and that Hercules introduced the practice into Italy; which country has, however, immortalized the name of its king, Stercutus, the son of Faunus, as claiming the honour of this invention. M. Varro assigns the first rank for excellence to the dung of thrushes kept in aviaries, and lauds it as being not only good for land, but excellent food for oxen and swine as well; indeed, he goes so far as to assert that there is no food that they will grow fat upon more speedily. We really have some reason to augur well of the manners of the present day, if it is true that in the days of our ancestors there were aviaries of such vast extent as to be able to furnish manure for the fields.

Columella gives the second rank to pigeon manure, and the next to that of the poultry-yard; but he condemns that of the aquatic birds. Some authors, again, are agreed in regarding the residue of the human food as the very best of all manures; while others would only employ the superfluous portion of our drink, mixing with it the hair that is to be found in the curriers' workshops. Some, however, are for employing this liquid by itself, though they would mix water with it once more, and in larger quantities even than when originally mixed with the wine at our repasts; there being a double share of noxious qualities to correct, not only those originally belonging to the wine, but those imparted to it by the human body as well. Such are the various methods by which we vie with each other in imparting nutriment to the earth even.

Next to the manures above mentioned, the dung of swine is highly esteemed, Columella being the only writer that condemns it. Some, again, speak highly of the dung of all quadrupeds that have been fed on cytisus, while there are others who prefer that of pigeons. Next to

these is the dung of goats, and then of sheep; after which comes that of oxen, and, last of all, of the beasts of burden. Such were the distinctions that were established between the various manures among the ancients, such the precepts that they have left us, and these I have here set forth as being not the mere subtle inventions of genius, but because their utility has been proved in the course of a long series of years. In some of the provinces, too, which abound more particularly in cattle, by rea- son of their prolific soil, we have seen the manure passed through a sieve like so much flour, and perfectly devoid, through lapse of time, of all bad smell or repulsive look, being changed in its appearance to something rather agreeable than otherwise. In more recent times it has been found that the olive thrives more particularly in soil that has been manured with the ashes of the lime-kiln. To the ancient rules Varro has added, that corn land should be manured with horsedung, that being the lightest manure of all, while meadow land, he says, thrives better with a manure of a more heavy nature, and supplied by beasts that have been fed upon barley; this last tending more particularly to the better growth of grass. Some persons, indeed, prefer the dung of the beasts of burden to that of oxen even, the manure of the sheep to that of the goat, and the manure of the ass to all others, the reason being that that animal masticates the most slowly of them all. Experience, however, has pronounced against these dicta of Varro and Columella; but it is universally agreed by all writers that there is nothing more beneficial than to turn up a crop of lupines, before they have podded, with either the plough or the fork, or else to cut them and bury them in heaps at the roots of trees and vines. It is thought, also, that in places where no cattle are kept, it is advantageous to manure the earth with stubble or even fern. " You can make manure," Cato says, "of litter, or else of lupines, straw, beanstalks, or the leaves of the holm-oak and quercus. Pull up the wallwort from among the crops of corn, as also the hemlock that grows there, together with the thick grass and sedge that you find growing about the willow-plots; of all this, mixed with rotten leaves, you may make a litter for sheep and oxen. If a vine should happen to be but poor and meagre, prune the shoots of it, and plough them in round about it." The same author says, also, "When you are going to sow corn in a field, fold your sheep there

first.”

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CHAP. 7.

COPS WHICH TEND TO IMPROVE THE LAND: CROPS WHICH EXHAUST IT.

Cato says, also, that there are some crops which tend to nourish the earth: thus, for instance, corn land is manured by the lupine, the bean, and the vetch; while, on the other hand, the chick-pea exercises a contrary influence, both because it is pulled up by the roots and is of a salt nature; the same is the case, too, with barley, fenugreek, and fitches, all of which have a tendency to burn up corn land, as, in fact, do all those plants which are pulled up by the roots. Take care, too, not to plant stone-fruits on corn land. Virgil is of opinion, also, that corn land is scorched by flax, oats, and poppies.

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CHAP. 8.

THE PROPER MODE OF USING MANURE.

It is recommended, also, that the dung-heap should be kept in the open air, in a spot deep sunk and well adapted to receive the moisture: it should be covered, too, with straw, that it may not dry up with the sun, care being taken to drive a stake of robur into the ground, to prevent serpents from breeding there. It is of the greatest consequence that the manure should be laid upon the land while the west winds prevail, and during a dry moon. Most persons, however, misunderstand this precept, and think this should be done when the west winds are just beginning to blow, and in the month of February only: it being really the fact that most crops require manuring in other months as well. At whatever period, however, it may be thought proper to manure the land, the greatest care should be taken that the wind is blowing due west at the time, and that the moon is on the wane, and quite dry. Such precautions as these will increase in a most surprising degree the fertilizing effects of manure.

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CHAP. 9. (10.)

THE MODES IN WHICH TREES BEAR.

Having now treated at sufficient length of the requisite conditions of the weather and the soil, we shall proceed to speak of those trees which are the result of the care and inventive skill of man. Indeed, the varieties of them are hardly less numerous than of those which are produced by Nature, so abundantly have we testified our gratitude in return for her numerous bounties. For these trees, we find, are reared either from seed, or else by transplanting, by layers, by slips torn from the stock, by cuttings, by grafting, or by cutting into the trunk of the tree. But as to the story that the leaves of the palm are planted by the Babylonians, and so give birth to a tree, I am really surprised that Trogus should have ever believed it. Some of the trees are reproduced by several of the methods above enumerated, others, again, by all of them.

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CHAP. 10.

PLANTS WHICH ARE PROPAGATED BY SEED.

It is Nature herself that has taught us most of these methods, and more particularly that of sowing seed, as it was very soon evident how the seed on falling to the ground revived again in germination. Indeed, there are some trees that are capable of being propagated in no other way, the chesnut and the walnut, for instance; with the sole exception, of course, of such as are employed for coppice wood. By this method, too, as well as the others, some trees are propagated, though from a seed of a different nature, such, for instance, as the vine, the apple, and the pear; the seed being in all these cases in the shape of a pip, and not the fruit itself, as in that of the chesnut and the walnut. The medlar, too, can also be propagated by the agency of seed. All trees, however, that are grown by this method are very slow in coming to maturity, degenerate very rapidly, and must often be renewed by grafting: indeed, the chesnut even sometimes requires to be grafted.

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CHAP. 11.

TREES WHICH NEVER DEGENERATE.

On the other hand, there are some trees which have the property of never degenerating, in whatever manner they are reproduced, the cypress, palm, and laurel, for instance: for we find that the laurel is capable of being propagated in several ways. We have already made mention of the various kinds of laurel; those known as the Augustan, the baccalis, and the tinus are all reproduced in a similar manner. The berries are gathered in the month of January, after they have been dried by the north-east winds which then prevail; they are then kept separate and exposed to the action of the air, being liable to ferment if left in a heap. After this, they are first seasoned with smoke, and then steeped in urine, preparatory to sowing. Some persons put them in baskets of osier, and tread them down with the feet in running water, until the outer skin is removed, as it is found that the moisture which they contain is detrimental to them, and prevents them from germinating. A trench is then dug, about a palm in depth, and somewhere about twenty of the berries are then put into it, being laid in a heap: this is usually done in the month of March. These kinds of laurel admit of being propagated from layers also; but the triumphal laurel can be reproduced from cuttings only.

All the varieties of the myrtle are produced in Campania from the berry only, but at Rome from layers. Democritus, however, says that the Tarentine myrtle may be re-produced another way. They take the largest berries and pound them lightly so as not to crush the pips: with the paste that is thus made a rope is covered, and put lengthwise in the ground; the result of which is that a hedge is formed as thick as a wall, with plenty of slips for transplanting. In the same way, too, they plant brambles to make a hedge, by first covering a rope of rushes with a paste made of bramble-berries. In case of necessity, it is possible at the end of three years to transplant the suckers of the laurel and the myrtle that have been thus re-produced.

With reference to the plants that are propagated from seed, Mago treats at considerable length of the nut-trees-he says that the almond

should be sown in a soft argillaceous earth, upon a spot that looks towards the south-that it thrives also in a hard, warm soil, but that in a soil which is either unctuous or moist, it is sure to die, or else to bear no fruit. He recom- mends also for sowing those more particularly which are of a curved shape like a sickle, and the produce of a young tree, and he says that they should be steeped for three days in diluted manure, or else the day before they are sown in honey and water. He says, also, that they should be put in the ground with the point downwards, and the sharp edge towards the north-east; and that they should be sown in threes and placed triangularly, at the distance of a palm from each other, care being taken to water them for ten days, until such time as they have germinated.

Walnuts when sown are placed lengthwise, lying upon the sides where the shells are joined; and pine nuts are mostly put, in sevens, into perforated pots, or else sown in the same way as the berries are in the laurels which are re-produced by seed. The citron is propagated from pips as well as layers, and the sorb from seed, by sucker, or by slip: the citron, however, requires a warm site, the sorb a cold and moist one.

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CHAP. 12.

PROPAGATION BY SUCKERS.

Nature, too, has taught us the art of forming nurseries; when from the roots of many of the trees we see shooting up a dense forest of suckers, an offspring that is destined to be killed by the mother that has borne them. For by the shade of the tree these suckers are indiscriminately stifled, as we often see the case in the laurel, the pomegranate, the plane, the cherry, and the plum. There are some few trees, the elm and the palm for instance, in which the branches spare the suckers; however, they never make their appearance in any of the trees except those in which the roots, from their fondness for the sun and rain, keep close, as they range, to the surface of the ground. It is usual not to place all these suckers at once in the ground upon the spot which they are finally to occupy, but first to entrust them to the nursery, and to allow them to grow in seed-plots, after which they are finally transplanted. This transplanting softens down, in a most remarkable manner, those trees even which grow wild; whether it is that trees, like men, are naturally fond of novelty and change of scene, or that, on leaving the spots of their original growth, or to which they have been transplanted, they lay aside their bad qualities and become tame, like the wild animals, the moment they are separated from the parent stock.

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CHAP. 13.

PROPAGATION BY SLIPS AND CUTTINGS.

Nature has also discovered another method, which is very similar to the last — for slips torn away from the tree will live. In adopting this plan, care should be taken to pull out the haunch of the slip where it adheres to the stock, and so remove with it a portion of the fibrous body of the parent tree. It is in this way that the pomegranate, the hazel, the apple, the sorb, the medlar, the ash, the fig, and more particularly the vine, are propagated. The quince, however, if planted in this way will degenerate, and it has been consequently found a better plan to cut slips and plant them: a method which was at first adopted for making hedges, with the elder, the quince, and the bramble, but came afterwards to be applied to cultivated trees, such as the poplar, the alder, and the willow, which last will grow if even the slip is planted upside down. In the case of cuttings, they are planted at once in the spot which it is intended they should occupy: but before we pass on to the other methods of propagation, it seems as well to mention the care that should be expended upon making seedplots.

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CHAP. 14.

SEED-PLOTS.

In laying out a seed-plot it is necessary that a soil of the very highest quality should be selected; for it is very often requisite that a nurse should be provided for the young plants, who is more ready to hamour them than their parent soil. The ground should therefore be both dry and nutritious, well turned up with the mattock, replete with hospitality to the stranger plants, and as nearly as possible resembling the soil to which it is intended they should be transplanted. But, a thing that is of primary importance, the stones must be carefully gathered from off the ground, and it should be walled in, to ensure its protection from the depredations of poultry; the soil too, should have as few chinks and crannies as possible, so that the sun may not be enabled to penetrate and burn up the roots. The young trees should be planted at distances of a foot and a-half; for if they happen to touch one another, in addition to other inconveniences, they are apt to breed worms; for which reason it is that they should be hoed as often as possible, and all weeds pulled up, the young plants themselves being carefully pruned, and so accustomed to the knife.

Cato recommends, too, that hurdles should be set up upon forks, the height of a man, for the purpose of intercepting the rays of the sun, and that they should be covered with straw to keep off the cold. He says that it is in this way that the seeds of the apple and the pear are reared, the pine-nut also, and the cypress, which is propagated from seed as well. In this last, the seed is remarkably small, so much so, in fact, as to be scarcely perceptible. It is a marvellous fact, and one which ought not to be overlooked, that a tree should be produced from sources so minute, while the grains of wheat and of barley are so very much larger, not to mention the bean. What proportion, too, is there between the apple and the pear tree, and the seeds from which they take their rise? It is from such beginnings, too, as these that springs the timber that is proof against the blows of the hatchet, presses that weights of enormous size even are unable to bend, masts

that support the sails of ships, and battering-rams that are able to shake even towers and walls! Such is the might, such is the power that is displayed by Nature. But, a marvel that transcends all the rest, is the fact of a vegetable receiving its birth from a tear-like drop, as we shall have occasion to mention in the appropriate place.

To resume, however: the tiny balls which contain the seed are collected from the female cypress — for the male, as I have already stated, is barren. This is done in the months which I have previously mentioned, and they are then dried in the sun, upon which they soon burst, and the seed drops out, a substance of which the ants are remarkably fond; this fact, too, only serves to enhance the marvel, when we reflect that an insect so minute is able to destroy the first germ of a tree of such gigantic dimensions. The seed is sown in the month of April, the ground being first levelled with rollers, or else by means of rammers; after which the seed is thickly sown, and earth is spread upon it with a sieve, about a thumb deep. If laid beneath a considerable weight, the seed is unable to spring up, and is consequently thrown back again into the earth; for which reason it is often trodden only into the ground. It is then lightly watered after sunset every three days, that it may gradually imbibe the moisture until such time as it appears above ground. The young trees are transplanted at the end of a year, when about three-quarters of a foot in length, due care being taken to watch for a clear day with no wind, such being the best suited for the process of transplanting. It is a singular thing, but still it is a fact, that if, on the day of transplanting, and only that day, there is the slightest drop of rain or the least breeze stirring, it is attended with danger to the young trees; while for the future they are quite safe from peril, though at the same time they have a great aversion to all humidity. The jujube-tree is propagated from seed sown in the month of April. As to the tuber, it is the best plan to graft it upon the wild plum, the quince, and the calabrix, this last being the name that is given to a wild thorn. Every kind of thorn, too, will receive grafts remarkably well from the myxa plum, as well as from the sorb.

(11.) As to recommending transferring the young plants from the seed-plot to another spot before finally planting them out, I look upon it as advice that would only lead to so much unnecessary

trouble, although it is most confidently urged that by this process the leaves are sure to be considerably larger than they otherwise would.

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CHAP. 15.

THE MODE OF PROPAGATING THE ELM.

The elm seed is collected about the calends of March, before the tree is covered with leaves, but is just beginning to have a yellow tint. It is then left to dry two days in the shade, after which it is thickly sown in a broken soil, earth that has been riddled through a fine sieve being thrown upon it, to the same thickness as in the case of the cypress. It there should happen to be no rain, it is necessary to water the seed. From the nursery the young plants are carried at the end of a year to the elm-plots, where they are planted at intervals of a foot each way. It is better to plant elms in autumn that are to support the vine, as they are destitute of seed and are only propagated from plants. In the vicinity of the City, the young elms are transplanted into the vineyard at five years old, or, according to the plan adopted by some, when they are twenty feet in height. A furrow is first drawn for the purpose, the name given to which is "novenarius," being three feet in depth, and the same in breadth or even more; into this the young tree is put, and the earth is moulded up around it to the height of three feet every way. These mounds are known by the name of "arula" in Campania. The intervals are arranged according to the nature of the spot; but where the country is level, it is requisite that the trees should be planted wider apart. Poplars and ashes, too, as they germinate with greater rapidity, ought to be planted out at an earlier period, or, in other words, immediately after the ides of February. In arranging trees and shrubs for the support of the vine, the form of the quincunx is the one that is gene- rally adopted, and, indeed, is absolutely necessary: it not only facilitates the action of the wind, but presents also a very Pleasing appearance, for whichever way you look at the plantation the trees will always present themselves in a straight Line. The same method is employed in propagating the poplar from seed as the elm, and the mode of transplanting it from the seed-plot is the same as that adopted in transplanting it from the forests.

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CHAP. 16.

THE HOLES FOR TRANSPLANTING.

But it is more particularly necessary in transplanting, that the trees should always be removed to a soil that is similar, or else superior, to the one in which they grew before. If taken from warm or early ripening localities, they ought not to be re- moved to cold or backward sites, nor yet, on the other hand, from these last to the former. If the thing can possibly be done, the holes for transplanting should be dug sufficiently long before to admit of their being covered throughout with a thick coat of grass. Mago recommends that they should be dug a whole year beforehand, in order that they may absorb the heat of the sun and the moisture of the showers; or, if circumstances do not admit of this, that fires should be made in the middle of them some two months before transplanting, that being only done just after rain has fallen. He says, too, that in an argillaceous or a hard soil, the proper measurement is three cubits every way, and on declivitous spots one palm more, care being taken in every case to make the hole like the chimney of a furnace, narrower at the orifice than at the bottom. Where the earth is black, the depth should be two cubits and a palm, and the hole dug in a quadrangular form.

The Greek writers agree in pointing out much the same proportions, and are of opinion that the holes ought not to be more than two feet and a half in depth, or more than two feet wide: at the same time, too, they should never be less than a foot and a half in depth, even though the soil should be wet, and the vicinity of water preclude the possibility of the soil going any deeper. “If the soil is watery,” says Cato, “the hole should be three feet in width at the orifice, and one palm and a foot at the bottom, and the depth four feet. It should be paved, too, with stones, or, if they are not at hand, with stakes of green willow, or, if these cannot be procured, with a layer of twigs; the depth of the layer so made being a foot and a half.”

It appears to me that I ought here to add, after what has been said

with reference to the nature of trees, that the holes should be sunk deeper for those which have a tendency to run near the surface of the earth, such as the ash and the olive, for instance. These trees, in fact, and others of a similar nature, should be planted at a depth of four feet, while for the others three feet will be quite sufficient. "Cut down that stump," said Papirius Cursor, the general, when to the great terror of the prætor of Præneste, he had ordered the lictors to draw their axes. And, indeed, there is no harm in cutting away those portions [of the root] which have become exposed. Some persons recommend that a bed should be formed at the bottom, of potsherds or round pebbles, which both allow the moisture to pass and retain as much as is wanted; while at the same time they are of opinion that flat stones are of no use in such a case, and only prevent the root from penetrating the earth. To line the bottom with a layer of gravel would be to follow a middle course between the two opinions.

Some persons recommend that a tree should not be transplanted before it is two years old, nor yet after three, while others, again, are of opinion that if it is one year old it is quite sufficient; Cato thinks that it ought to be more than five fingers in thickness at the time. The same author, too, would not have omitted, if it had been of any importance, to recommend that a mark should be made on the bark for the purpose of pointing out the southern aspect of the tree; so that, when transplanted, it may occupy exactly the same posi- tion that it has previously done; from an apprehension that the north side of the tree, on finding itself opposite to a southern sun, might split, and the south side be nipped by the north-eastern blasts. Indeed, there are some persons who follow a directly opposite practice even in the vine and the fig, by placing the north side of the tree, when transplanted, towards the south, and vice versa; being, of opinion that by adopting this plan the foliage becomes all the thicker and the better able to protect the fruit, which is less liable to fall off in consequence, and that the tree is rendered all the better for climbing. Most people, however, take the greatest care to turn to the south that part of the tree from which the branches have been lopped at the top, little thinking that they expose it thereby to a chance of splitting from the excessive heat. For my own part, I should prefer that this part of the tree should face that point of the heavens which is occupied by

the sun at the fifth or even the eighth hour of the day. People are also equally unaware that they ought not, through neglect, to let the roots be exposed to the air long enough to get dry; and that the ground should not be worked about the roots of trees while the wind is blowing from the north, or, indeed, from any point of the heavens that lies between north and southeast; or, at all events, that the roots should not be left to lie exposed to these winds; the result of such modes of proceeding being, that the trees die, the grower being all the while in total ignorance of the cause.

Cato disapproves, too, of all wind and rain whenever the work of transplanting is going on. When this is the case, it will be beneficial to let as much adhere to the roots as possible of the earth in which the tree has grown, and to cover them all round with clods of earth: it is for this reason that Cato recommends that the young trees should be conveyed in baskets, a very desirable method, no doubt. The same writer, too, approves of the earth that has been taken from the surface being laid at the bottom of the hole. Some persons say, that if a layer of stones is placed beneath the root of the pomegranate, the fruit will not split while upon the tree. In transplanting, it is the best plan to give the roots a bent position, but it is absolutely necessary that the tree should be placed in such a manner as to occupy exactly the centre of the hole. The fig-tree, it the slip when planted is stuck in a squill — such being the name of a species of bulb — is said to bear with remarkable rapidity, while the fruit is exempt from all attacks of the worm: the same precaution, too, in planting, will preserve the fruit of all other trees in a similar manner. Who is there, too, that can entertain a doubt that the very greatest care ought to be taken of the roots of the fig-tree when transplanted? — indeed, it ought to bear every mark of being taken, and not torn, from out of the earth. Upon this subject I omit various other practical precepts, such, for instance, as the necessity of moulding up the roots with a rammer, a thing that Cato looks upon as of primary importance; while, at the same time, he recommends that the wound made in the stock should be first covered with dung, and then bound with a layer of leaves.

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CHAP. 17. (12.)

THE INTERVALS TO BE LEFT BETWEEN TREES.

The present seems to me to be the proper occasion for making some mention of the intervals that ought to be left between the trees. Some persons have recommended that pomegra- nates, myrtles, and laurels should be planted closer together than the other trees, leaving, however, a space of nine feet between them. Apple-trees, they say, should be planted a little wider apart, and pear-trees, almonds, and figs even still more so. The best rule, however, is to consult the length of the branches, and the nature of the spot, as well as the shade that is formed by the tree; for it is of great importance to take this last into consideration. The shadow thrown by the large trees even is but of small dimensions, when the branches are disposed around the body of the tree in a spherical form, as in the apple and the pear, for instance. In the cherry, on the other hand, and the laurel, the shadow projected is of enormous extent.

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CHAP. 18.

THE NATURE OF THE SAD THROWN BY TREES.

The shadows of trees are possessed of certain properties. That of the walnut is baneful and injurious to man, in whom it is productive of head-ache, and it is equally noxious to everything that grows in its vicinity. The shadow, too, of the pine has the effect of killing the grass beneath it; but in both of these trees the foliage presents an effectual resistance to the winds, while, at the same time, the vine is destitute of such protection. The drops of water that fall from the pine, the quercus, and the holm-oak are extremely heavy, but from the cypress none fall; the shadow, too, thrown by this last tree is extremely small, its foliage being densely packed. The shadow of the fig, although widely spread, is but light, for which reason it is allowed to be planted among vines. The shadow of the elm is refreshing and even nutrimental to whatever it may happen to cover; though, in the opinion of Atticus, this tree is one of the most injurious of them all; and, indeed, I have no doubt that such may be the case when the branches are allowed to become too long; but at the same time I am of opinion that when they are kept short it can be productive of no possible harm. The plane also gives a very pleasant shade, though somewhat dense: but in this case we must look more to the luxuriant softness of the grass beneath it than the warmth of the sun; for there is no tree that forms a more verdant couch on which to recline.

The poplar gives no shade whatever, in consequence of the incessant quivering of its leaves: while that of the alder is very dense, but remarkably nutritive to plants. The vine affords sufficient shade for its wants, the leaf being always in motion, and from its repeated movement tempering the heat of the sun with the shadow that it affords; at the same time too it serves as an effectual protection against heavy rains. In nearly all trees the shade is thin, where the footstalks of the leaves are long.

This branch of knowledge is one by no means to be despised or deserving to be placed in the lowest rank, for in the case of every

variety of plant the shade is found to act either as a kind nurse or a harsh step-mother. There is no doubt that the shadow of the walnut, the pine, the pitch-tree, and the fir is poisonous to everything it may chance to light upon.

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CHAP. 19.

THE DROPPINGS OF WATER FROM THE LEAVES.

A very few words will suffice for the water that drops from the leaves of trees. In all those which are protected by a foliage so dense that the rain will not pass through, the drops are of a noxious nature. In our enquiries, therefore, into this subject it will be of the greatest consequence what will be the nature developed by each tree in the soil in which we are intending to plant it. Declivities, taken by themselves, require smaller intervals between the trees, and in localities that are exposed to the wind it is beneficial to plant them closer together. However, it is the olive that requires the largest intervals to be left, and on this point it is the opinion of Cato, with reference to Italy, that the very smallest interval ought to be twenty-five feet, and the largest thirty: this, however, varies according to the nature of the site. The olive is the largest of all the trees in Bætica: and in Africa — if, indeed, we may believe the authors who say so — there are many olive-trees that are known by the name of milliariæ, being so called from the weight of oil that they produce each year. Hence it is that Mago has prescribed an interval between these trees of no less than seventy-five feet every way, or of forty-five at the very lowest, when the soil happens to be meagre, hard, and exposed to the winds. There is no doubt, however, that Bætica reaps the most prolific harvests from between her olives.

It will be generally agreed that it is a most disgraceful piece of ignorance to lop away the branches more than is absolutely necessary in trees of vigorous growth, and so precipitate old age; as also, on the other hand, what is generally tantamount to an avowal of unskilfulness on the part of those who have planted them, to have to cut them down altogether. Nothing can reflect greater disgrace upon agriculturists than to have to undo what they have done, and it is therefore much the best to commit an error in leaving a superfluity of room.

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CHAP. 20. (13.)

TREES WHICH GROW BUT SLOWLY: THOSE WHICH GROW WITH RAPIDITY.

Some trees are naturally slow in their growth; and those in particular which grow solely from seed and are long-lived. On the other hand, those that are short-lived grow with great rapidity, such as the fig, pomegranate, plum, apple, pear, myrtle, and willow, for instance; and yet these are the very first to display their productions, for they begin to bear at three years old, and make some show of it even before that period. The pear is the slowest in bearing of all the trees above enumerated. The cypirus, however, and the shrub known as the pseudo-cypirus are the earliest in coming to maturity, for they flower almost immediately, and then produce their seed. All trees will come to maturity more rapidly when the suckers are removed, and the nutrimental juices are thrown into the stock only.

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CHAP. 21.

TREES PROPAGATED FROM LAYERS.

Nature; too, has taught us the art of reproduction from layers. The bramble, by reason of its thinness and the exces- sive length to which it grows, bends downwards, and throws the extremities of its branches into the earth; these immediately take root again, and would fill every place far and wide, were it not that the arts of cultivation put a check to it; so much so, indeed, that it would almost appear that men are born for nothing else but to take care of the earth. Hence it is, that a thing that is in itself most noxious and most baneful, has taught us the art of reproduction by layers and quicksets. The ivy, too, has a similar property.

Cato says, that in addition to the vine, the fig, as well as the olive, the pomegranate, every variety of the apple, the laurel, the plum, the myrtle, the filbert, the nut of Præste, and the plane, are capable of being propagated by layers.

Layers are of two kinds; in the one, a branch, while still adhering to the tree, is pressed downwards into a hole that measures four feet every way: at the end of two years it is cut at the part where it curves, and is then transplanted at the expiration of three years more. If it is intended to carry the plant to any distance, it is the best plan to place the layer, directly it is taken up, either in an osier basket or any earthen vessel, for its better security when carried. The other mode of reproduction by layers is a more costly one, and is effected by summoning forth a root from the trunk of the tree even. For this purpose, earthen vessels or baskets are provided, and are then well packed with earth; through these the extremities of the branches are passed, and by this mode of encouragement a root is obtained growing amid the fruit itself, and at the very summit of the tree; for it is at the summit that this method is generally adopted. In this way has a bold and daring inventiveness produced a new tree aloft and far away from the ground. At the end of two years, in the manner already stated, the layer is cut asunder, and then planted in the ground, basket and all.

The herb savin is reproduced by layers, as also by slips; it is said, too, that lees of wine or pounded wall-bricks make it thrive wonderfully well. Rosemary also is reproduced in a similar manner, as also from cuttings of the branches; neither savin nor rosemary having any seed. The rhododendrum is propagated by layers and from seed.

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CHAP. 22. (14.)

GRAFTING: THE FIRST DISCOVERY OF IT.

Nature has also taught us the art of grafting by means of seed. We see a seed swallowed whole by a famished bird; when softened by the natural heat of the crop, it is voided, with the fecundating juices of the dung, upon some soft couch formed by a tree; or else, as is often the case, is carried by the winds to some cleft in the bark of a tree. Hence it is that we see the cherry growing upon the willow, the plane upon the laurel, the laurel upon the cherry, and fruits of various tints and hues all springing from the same tree at once. It is said, too, that the jack-daw, from its concealment of the seeds of plants in holes which serve as its store-houses, gives rise to a similar result.

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CHAP. 23.

INOCULATION OR BUDDING.

In this, too, the art of inoculating took its rise. By the aid of an instrument similar to a shoe-maker's paring-knife an eye is opened in a tree by paring away the bark, and another bud is then enclosed in it, that has been previously removed with the same instrument from another tree. This was the ancient mode of inoculation with the fig and the apple. That again, described by Virgil, requires a slight fissure to be made in the knot of a bud which has burst through the bark, and in this is enclosed a bud taken from another tree. Thus far has Nature been our instructor in these matters.

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CHAP. 24.

THE VARIOUS KINDS OF GRAFTING.

A different mode of engrafting, however, has been taught us by chance, another great instructor, and one from whom, perhaps, we have learnt a still greater number of lessons. A careful husbandman, being desirous, for its better protection, to surround his cottage with a palisade, thrust the stakes into growing ivy, in order to prevent them from rotting. Seized by the tenacious grasp of the still living ivy, the stakes borrowed life from the life of another wood, and it was found that the stock of a tree acted in place of earth.

For this method of grafting the surface is made level with a saw, and the stock carefully smoothed with the pruning-knife. This done, there are two modes of proceeding, the first of which consists in grafting between the bark and the wood. The ancients were fearful at first of cutting into the wood, but afterwards they ventured to pierce it to the very middle, and inserted the graft in the pith, taking care to enclose but one, because the pith, they thought, was unable to receive more. An improved method has, however, in more recent times, allowed of as many as six grafts being inserted, it being considered desirable by additional numbers to make a provision for the contingency of some of them not surviving. With this view, an incision is carefully made in the middle of the stock, a thin wedge being inserted to prevent the sides from closing, until the graft, the end of which is first cut to a point, has been let into the fissure. In doing this many precautions are necessary, and more particularly every care should be taken that the stock is that of a tree suitable for the purpose, and that the graft is taken from one that is proper for grafting. The sap, too, is variously distributed in the several trees, and does not occupy the same place in all. In the vine and the fig the middle of the tree is the driest, and it is in the summit that the generative power resides; hence it is, that from the top the grafts are selected. In the olive, again, the sap lies in the middle of the tree, and the grafts are accordingly taken from thence: the upper part being comparatively dry. The graft takes most easily in a tree, the bark of

which is of a similar nature to its own, and which, blossoming at the same time as itself, has an affinity with it in the development of the natural juices. On the other hand, the process of uniting is but slow where the dry is brought in contact with the moist, and the hard bark with the soft.

The other points to be observed are the following: the incision must not be made in a knot, as such an inhospitable rigidity will certainly repel the stranger plant; the incision should be made, too, in the part which is most compact, and it must not be much more than three fingers in length, not in a slanting direction, nor yet such as to pierce the tree from side to side. Virgil is of opinion, that the grafts should not be taken from the top, and it is universally agreed that it is best to select them from the shoulders of the tree which look towards the north-east; from a tree, too, that is a good bearer, and from a young shoot, unless, indeed, the graft is intended for an old tree, in which case it should be of a more robust growth. In addition to this, the graft ought to be in a state of impregnation, that is to say, swelling with buds, and giving every promise of bearing the same year; it ought, too, to be two years old, and not thinner than the little finger. The graft is inserted at the smaller end, when it is the object of the grower that it should not grow to any considerable length, but spread out on either side. But it is more particularly necessary that the buds upon the graft should be smooth and regular, and there must be nothing upon it at all scabbed or shrivelled. Success may be fully reckoned on if the pith of the graft is brought in contact with the wood and bark of the stock; that being a much better plan than merely uniting them bark to bark. In pointing the graft, the pith ought not to be laid bare; still, however, it should be pared with a small knife, so that the point may assume the form of a fine wedge, not more than three fingers in length, a thing that may be very easily effected by first steeping it in water and then scraping it. The graft, however, must not be pointed while the wind is blowing, and care must be taken that the bark is not rubbed off from either graft or stock. The graft must be thrust into the stock up to the point where the bark begins; care, too, must be taken not to wrench off the bark during the process of insertion, nor must it be thrust back so as to form any folds or wrinkles. It is for this reason that a graft should not

be used that is too full of sap, no, by Hercules! no more than one that is dry and parched; for by doing so, in the former case, from the excess of moisture, the bark becomes detached, and in the latter, from want of vitality, it yields no secretions, and consequently will not incorporate with the stock.

It is a point most religiously observed, to insert the graft during the moon's increase, and to be careful to push it down with both hands; indeed, it is really the fact, that in this operation, the two hands, acting at the same moment, are of necessity productive of a more modified and better regulated effort. Grafts that have been inserted with a vigorous effort are later in bearing, but last all the longer; when inserted more ten- derly, the contrary is the result. The incision in the stock should not be too open or too large; nor ought it to be too small, for in such case it would either force out the graft or else kill it by compression. But the most necessary precaution of all is to see that the graft is fairly inserted, and that it occupies exactly the middle of the fissure in the stock.

Some persons are in the habit of making the place for the fissure in the stock with the knife, keeping the edges of the incision together with bands of osier bound tightly round the stock; they then drive in the wedges, the bands keeping the stock from opening too wide. There are some trees that are grafted in the seed-plot and then transplanted the very same day. If the stock used for grafting is of very considerable thickness, it is the best plan to insert the graft between the bark and the wood; for which purpose a wedge made of bone is best, for fear lest when the bark is loosened the wood should be bruised. In the cherry, the bark is removed before the incision in the stock is made; this, too, is the only tree that is grafted after the winter solstice. When the bark is removed, this tree presents a sort of downy substance, which, if it happens to adhere to the graft, will very speedily destroy it. When once the graft is safely lodged by the aid of the wedge, it is of advantage to drive it home. It is an excellent plan, too, to graft as near the ground as possible, if the conformation of the trunk land knots will admit of it. The graft should not project from the stock more than six fingers in length.

Cato recommends a mixture of argil or powdered chalk, and cow-dung, to be stirred together till it is of a viscous consistency, and then

inserted in the fissure and rubbed all round it. From his writings on the subject it is very evident that at that period it was the practice to engraft only between the wood and the bark, and in no other way; and that the graft was never inserted beyond a couple of fingers in depth. He recommends, too, that the pear and the apple should be grafted in spring, as also during fifty days at the time of the summer solstice, and during the time of vintage; but that the olive and the fig should be grafted in spring only, in a thirsting, or in other words, a dry moon: he says also, that it should be done in the afternoon, and not while a south wind is blowing. It is a singular thing, that, not content with protecting the graft in the manner already mentioned, and with sheltering it from showers and frosts by means of turfs and supple bands of split osiers, he recommends that it should be covered with bugloss as well — a kind of herb so called — which is to be tied over it and then covered up with straw. At the present day, however, it is thought sufficient to cover the bark with a mixture of mud and chaff, allowing the graft to protrude a couple of fingers in length.

Those who wait for spring to carry on these operations, will find themselves pressed for time; for the buds are then just bursting, except, indeed, in the case of the olive, the buds of which are remarkably long in developing themselves, the tree itself having extremely little sap beneath the bark; this, too, is apt, when in too large quantities, to injure the grafts. As to the pomegranate, too, the fig, and the rest of the trees that are of a dry nature, it is far from beneficial to them to put off the process of grafting till a late period. The pear may be grafted even when in blossom, so that with it the operation may be safely delayed to the month of May even. If grafts of fruit trees have to be carried to any distance, it is considered the best plan, with the view of preserving the juices, to insert them in a turnip; they may also be kept alive by placing them near a stream or a pond, between two hollow tiles covered up at each end with earth. (15.) The grafts of vines, however, are kept in dry holes, in which they are covered over with straw, and then with earth, care being taken to let the tops protrude.

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CHAP. 25.

GRAFTING THE VINE.

Cato speaks of three methods of grafting the vine. The first consists in piercing the stock to the pith, and then inserting the grafts, sharpened at the end, in manner already mentioned, care being taken to bring the pith of the two in contact. The second is adopted in case the two vines are near one another, the sides of them both being cut in a slanting direction where they face each other; after which the pith of the two trees is united by tying them together. In employing the third method, the vine is pierced obliquely to the pith, and grafts are inserted a couple of feet in length; they are then tied down and covered over with prepared earth, care being taken to keep them in an upright position. In our time, however, this method has been greatly improved by making use of the Gallic angler. which pierces the tree with- out scorching it; it being the fact, that everything that burns the tree weakens its powers. Care, too, is taken to select a graft that is just beginning to germinate, and not to leave more than a couple of the buds protruding from the stock. The vine, too, should be carefully bound with withes of elm, incisions being made in it on either side, in order that the slimy juices may exude through them in preference, which are so particularly injurious to the vine. After this, when the graft has grown a couple of feet, the withe by which it is fastened should be cut, and the graft left to increase of its own natural vigour.

The proper time for grafting the vine has been fixed as from the autumnal equinox to the beginning of the budding season. The cultivated plants are generally grafted on the roots of wild ones, where these last are of a drier nature. But if a cultivated tree should be grafted on a wild one, it will very soon degenerate and become wild. The rest depends entirely on the weather. Dry weather is the best suited for grafting; an excellent remedy for any evil effects that may possibly be caused by the drought, being a few pots of earth placed near the stock and filled with ashes; through which a little water is slowly filtered. Light dews are extremely favourable to

grafting by inoculation.

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CHAP. 26. (16)

GRAFTING BY SUTCHEONS.

Grafting by scutcheons would appear to owe its origin to that by inoculation; but it is suited more particularly to a thick bark, such as that of the fig-tree for instance. For this purpose, all the branches are cut off, in order that they may not divert the sap, after Which the smoothest part is selected in the stock, and a scutcheon of the bark removed, due care being taken that the knife does not go below it. A similar piece of bark from another tree, with a protuberant bud upon it, is then inserted in its place, care being taken that the union is so exact that there is no room left for a cicatrix to form, and the juncture so perfect as to leave no access to either damp or air: still, however, it is always the best plan to protect the scutcheon by means of a plaster of clay and a band. Those who favour the modern fashions pretend that this method has been only discovered in recent times; but the fact is, that we find it employed by the ancient Greeks, and described by Cato, who recommends it for the olive and the fig; and he goes so far as to determine the very dimensions even, in accordance with his usual exactness. The scutcheon, he says, when taken off with the knife should be four fingers in length, and three in breadth. It is then fitted to the spot which it is to occupy, and anointed with the mixture of his which has been previosly described. This method, too, he recommends for the

Some persons have adopted another plan with the vine, which consists partly of that of grafting by scutcheon, and partly by fissure; they first remove a square piece of bark from the stock, and then insert a slip in the place that is thus laid bare. I once saw at Thuliæ, near Tibur, a tree that had been grafted upon all these various ways, and loaded with fruit of every kind. Upon one branch there were nuts to be seen, upon another berries, upon another grapes, upon another pears, upon another figs, and upon others pomegranates, and several varieties of the apple; the tree, however, was but very short-lived. But, with all our experiments, we find it quite impossible to rival Nature; for there are some plants that can be reproduced in no other

manner than spontaneously, and then only in wild and desert spots. The plane is generally considered the best adapted to receive every kind of graft, and next to it the robur; both of them, however, are very apt to spoil the flavour of the fruit. Some trees admit of grafting upon them in any fashion, the fig and the pomegranate for instance; the vine, however, cannot be grafted upon by scutcheon, nor, indeed, any other of the trees which has a bark that is thin, weak, or cracked. So, too, those trees which are dry, or which contain but little moisture, will not admit of grafting by inoculation. This last method is the most prolific of them all, and next to it that by scutcheon, but neither of them can be depended upon, and this last more particularly; for when the adherence of the bark is the only point of union the scutcheon is liable to be immediately displaced by the slightest gust of wind. Grafting by insertion is the most reliable method, and the tree so produced will bear more fruit than one that is merely planted.

(17.) We must not here omit one very singular circumstance. Corellius, a member of the Equestrian order at Rome, and a native of Ateste, grafted a chesnut, in the territory of Neapolis, with a slip taken from the same tree, and from this was produced the chesnut which is so highly esteemed, and from him has derived its name. At a later period again, Etereius, his freedman, grafted the Corellian chesnut afresh. There is this difference between the two; the Corellian is more prolific, but the Etereian is of superior quality.

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CHAP. 27.

PLANTS WHICH GROW FROM A BRANCH.

It is accident that has the credit of devising the other methods of reproduction, and has taught us how to break off a branch of a tree and plant it in the earth, from seeing stakes, when driven in the earth, take root, and grow. It is in this way that many of the trees are reproduced, and the fig more particularly; which may be propagated also by all the methods previously stated, with the exception, indeed, of that by cuttings. The best plan, however, is to take a pretty large branch, and, after sharpening it like a stake, to drive it to a considerable depth in the earth, taking care to leave only a small portion above ground, and then to cover it over with sand. The pomegranate, too, may be planted in a similar manner, the hole being first widened with a stake; the same, too, with the myrtle. For all trees of this nature a branch is required three feet in length, and not quite the thickness of the arm, care being taken to keep the bark on, and to sharpen the branch to a point at the lower end.

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CHAP. 28.

TREES WHICH GROW FROM CUTTINGS; THE MODE OF PLANTING THEM.

The myrtle, too, may be propagated from cuttings, and the mulberry is grown no other way, the religious observances relative to lightning forbidding it to be grafted on the elm; hence it would appear that the present is a fitting opportunity for speaking of reproduction from cuttings. Care should be taken more particularly to select the slips from fruitful trees, and it should be seen that they are neither bent, scabbed, nor bifurcated. The cuttings, too, should be thick enough to fill the hand, and not less than a foot in length: the bark, too, should be uninjured, and the end which is cut and lies nearest the root should always be the one inserted in the earth. While the work of germination is going on, the slip should be kept well moulded up, until such time as it has fully taken root.

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CHAP. 29. (18.)

THE CULTIVATION OF THE OLIVE.

Cato has treated so well of the precautions that are necessary in cultivating the olive, that we cannot do better than employ his own words on the subject. “Let the slips of olive,” says he, “which you are about to plant in the hole, be three feet long, and be very careful in your treatment of them, so as not to injure the bark when you are smoothing or cutting them. Those that you are going to plant in the nursery, should be a foot in length; and you should plant them the following way: let the spot be turned up with the mattock, and the soil be well loosened. When you put the cutting in the ground, press it down with the foot only. If there is any difficulty in making it descend, drive it down with a mallet or the handle of the dibble, but be careful not to break the bark in doing so. Take care, too, not to make a hole first with the dibble, for the slip will have the better chance of surviving the other way. When the slip is three years old, due care must be taken to observe the direction in which each side of the bark is situate. If you are planting in holes or furrows, you must put in the cuttings by threes, but be careful to keep them separate. Above ground, however, they should not be more than four fingers distant from one another, and each of them must have a bud or eye above ground. In taking up the olive for transplanting, you must use the greatest caution, and see that there is as much earth left about the roots as possible. When you have covered the roots well up, tread down the earth with the foot, so that nothing may injure the plant.”

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CHAP. 30.

TRANSPLANTING OPERATIONS AS DISTRIBUTED THROUGHOUT THE VARIOUS SEASONS OF THE YEAR.

If the enquiry is made what is the proper season for planting the olive, my answer will be, " where the soil is dry, at seed-time; where it is rich, in spring." The following is the advice given by Cato on the subject: "Begin pruning your olive-yard fifteen days before the vernal equinox; from that period for forty days will be a good time for doing so. In pruning, adopt the following rules: when the ground is extremely productive, remove all the dry branches or such as may have been broken by the wind; where it is not so prolific, you must cut away still more, then tie them well up, and remove all tangled branches, so as to lighten the roots. In autumn clear away the roots of the olive, and then manure them. The man who labours most assiduously and most earnestly will remove the very smallest fibres that are attached to the roots. If, however, he hoes negligently, the roots will soon appear again above ground, and become thicker than ever; the consequence of which will be, that the vigour of the tree will be expended in the roots."

We have already stated, when speaking on the subject of oil, what are the different varieties of the olive, in what kind of soil it ought to be planted, and what is the proper aspect for the olive-yard. Mago recommends that the olive should be planted on declivities and in dry spots, in an argillaceous soil, and between autumn and the winter equinox. If, on the other hand, the soil is thick, humid, or somewhat damp even, it ought to be planted between harvest and the winter solstice; advice, however, it should be remembered, applicable to Africa more particularly. At the present day, it is mostly the custom in Italy to plant the olive in spring, but if it is thought desirable to do so in the autumn as well, there are only four days in the forty between the equinox and the setting of the Vergiliæ that are unfavourable for planting it. It is a practice peculiar to Africa, to engraft the olive on the wild olive only, a tree which is made to be everlasting, as it were; for when it becomes old the best of the

suckers are carefully trained for adoption by grafting, and in this way in another tree it grows young again; an operation which may be repeated continuously as often as needed; so much so, indeed, that the same olive-yard will last for ages. The wild olive also is propagated both by insertion and inoculation.

It is not advisable to plant the olive in a site where the quercus has been lately rooted up; for the earth-worms, known as "rauæ" which breed in the root of the quercus, are apt to get into that of the olive. It has been found, from practical experience, that it is not advisable to bury the cuttings in the ground nor yet to dry them before they are planted out. Experience has also taught us that it is the best plan to clean an old olive-yard every other year, between the vernal equinox and the rising of the Vergiliæ, and to lay moss about the roots; to dig holes also round the trees every year, just after the summer solstice, two cubits wide by a foot in depth, and to manure them every third year.

Mago, too, recommends that the almond should be planted between the setting of Arcturus and the winter solstice. All the varieties, however, of the pear, he says, should not be planted at the same time, as they do not all blossom together. Those with oblong or round fruit should be planted between the setting of the Vergiliæ and the winter solstice, and the other kinds in the middle of the winter, after the setting of the constellation of the Arrow, on a site that looks towards the east or north. The laurel should be planted between the setting of the Eagle and that of the Arrow; for we find that the proper time for planting is equally connected with the aspect of the heavenly bodies. For the most part it has been recommended that this should be done in spring and autumn; but there is another appropriate period also, though known to but few, about the rising of the Dog-star, namely; it is not, however, equally advantageous in all localities. Still, I ought not to omit making mention of it, as I am not setting forth the peculiar advantages of any one country in particular, but am enquiring into the operations of Nature taken as a whole.

In the region of Cyrenaica, the planting is generally done while the Etesian winds prevail, and the same is the case in Greece, and with the olive more particularly in Laconia. At this period, also, the vine is planted in the island of Cos; and in the rest of Greece they do

not neglect to inoculate and graft, though they do not plant, their trees just then. The natural qualities, too, of the respective localities, exercise a very considerable influence in this respect; for in Egypt they plant in any month, as also in all other countries where summer rains do not prevail, India and Æthiopia, for instance. When trees are not planted in the spring they must be planted in autumn, as a matter of course.

There are three stated periods, then, for germination; spring, the rising of the Dog-star, and that of Arcturus. And, indeed, it is not the animated beings only that are ardent for the propagation of their species, for this desire is manifested in even a greater degree by the earth and all its vegetable productions; to employ this tendency at the proper moment is the most advantageous method of ensuring an abundant increase. These moments, too, are of peculiar importance in relation to the process of grafting, as it is then that the two productions manifest a mutual desire of uniting. Those who prefer the spring for grafting commence operations immediately after the vernal equinox, reckoning on the fact that then the buds are just coming out, a thing that greatly facilitates the union of the barks. On the other hand, those who prefer the autumn graft immediately after the rising of Arcturus, because then the graft at once takes root in some degree, and becomes seasoned for spring, so as not to exhaust its strength all at once in the process of germination. However, there are certain fixed periods of the year, in all cases, for certain trees; thus, the cherry, for instance, and the almond, are either planted or grafted about the winter solstice. For many trees the nature of the locality will be the best guide; thus, where the soil is cold and moist it is best to plant in spring, and where it is dry and hot, in autumn.

Taking Italy in general, the proper periods for these operations may be thus distributed: — The mulberry is planted at any time between the ides of February and the vernal equinox; the pear, in the autumn, but not beyond the fifteenth day before the winter solstice; the summer apples, the quince, the sorb, and the plum, between mid-winter and the ides of February: the Greek carob and the peach, at any time in autumn before the winter solstice; the various nuts, such as the walnut, pine, filbert, almond, and chesnut, between the calends of March and the ides of that month; the willow and the broom about

the calends of March. The broom is grown from seed, and in a dry soil, the willow from plants, in a damp locality, as already stated on former occasions.

(19.) That I may omit nothing to my knowledge of the facts that I have anywhere been able to ascertain, I shall here add a new method of grafting, which has been discovered by Columella, as he asserts, by the aid of which trees even of a heterogeneous or dissociable nature may be made to unite; such, for instance, as the fig and the olive. In accordance with this plan, he recommends that a fig-tree should be planted near an olive, at a distance sufficiently near to admit of the fig being touched by a branch of the olive when extended to its full length; as supple and pliant a one as possible being selected for' the purpose, and due care being taken all the time to render it seasoned by keeping it constantly on the stretch. After this, when the fig has gained sufficient vigour, a thing that generally happens at the end of three or five years at most, the top of it is cut off, the end of the olive branch being also cut to a point in the manner already stated. This point is then to be inserted in the trunk of the fig, and made secure with cords, lest, being bent, it should happen to rebound: in this way we find the method of propagating by layers combined with that of grafting. This union between the two parent trees is allowed to continue for three years, and then in the fourth the branch is cut away and left entirely upon the tree that has so adopted it. This method however, is not at present universally known, at all events, so far as I have been able to ascertain.

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CHAP. 31.

CLEANING AND BARING THE ROOTS, AND MOULDING THEM.

In addition to these particulars, the same considerations that I have already mentioned in reference to warm or cold, moist or dry soils, have also taught us the necessity of trenching around the roots. These trenches, however, in a moist, watery soil, should be neither wide nor deep; while the contrary is the case where the ground is hot and dry; it being the object, in the latter instance, to let them receive and retain as much water as possible. This rule is applicable to the culture of old trees as well; for in very hot places the roots are well moulded in summer, and carefully covered up, to prevent the heat of the sun from parching them. In other places, again, the ground is cleared away from the roots, in order to give free access to the air, while in winter they are carefully moulded to protect them from the frost. The contrary is the case, however, in hot climates, for there they bare the roots in winter for the purpose of ensuring a supply of moisture to the parched fibres.

In all places the rule is to make a circular trench three feet in width at the foot of the tree; this, however, it is not possible to do in meadows, where the roots, in their fondness for the sun and showers, range near the surface far and wide. Such, then, are the general observations that we have to make in reference to the planting and grafting of trees that we value for their fruits.

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CHAP. 32. (20.)

WILLOW-BEDS.

It now remains to give an account of those trees which are planted for the sake of others — the vine more particularly — and the wood of which is cut from time to time. Holding the very first rank among these we find the willow, a tree that is always planted in a moist soil. The hole, however, should be two feet and a half in depth, and the slip a foot and a half only in length. Willow stakes are also used for the same purpose, and the stouter they are the better: the distance left between these last should be six feet. When they are three years old their growth is checked by cutting them down within a couple of feet from the ground, the object being to make them spread out, so that by the aid of their branches they may be cleared without the necessity of using a ladder; for the willow is the more productive the nearer its branches are to the ground. It is generally recommended to trench round the willow every year, in the month of April. Such is the mode of cultivation employed for the osier willow.

The stake willow is reproduced both from suckers and cuttings, in a trench of the same dimensions. Stakes may be cut from it at the end of about three years mostly. These stakes are also used to supply the place of the trees as they grow old, being fixed in the ground as layers, and cut away from the trunk at the end of a year. A single jugerum of osier willows will supply osiers sufficient for twenty-five jugera of vines. It is for a similar purpose that the white poplar is grown; the trenches being two feet deep and the cutting a foot and a half in length. It is left to dry for a couple of days before it is planted, and a space is left between the plants a foot and a palm in width, after which they are covered with earth to the depth of a couple of cubits.

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CHAP. 33.

REED-BEDS

The reed requires a soil still moister even than that employed for the willow. It is planted by placing the bulb of the root, that part which some people call the “eye,” in a trench three quarters of a foot in depth, at intervals of two feet and a half. A reed-bed will renew itself spontaneously after the old one has been rooted up, a circumstance which it has been found more beneficial to take advantage of than merely to thin them, as was formerly the practice; the roots being in the habit of creeping and becoming interlaced, a thing that ends eventually in the destruction of the bed. The proper time for planting reeds is before the eyes begin to swell, or, in other words, before the calends of March. The reed continues to increase until the winter solstice but ceases to do so when it begins to grow hard, a sign that it is fit for cutting. It is generally thought, too, that the reed requires to be trenched round as often as the vine.

The reed also is planted in a horizontal position, and then covered with earth to a very great depth; by this method as many plants spring up as there are eyes. It is propagated, also, by planting out in trenches a foot in depth, care being taken to cover up two of the eyes, while a third knot is left just on a level with the ground; the head, too, is bent downwards, that it may not become charged with dew. The reed is usually cut when the moon is on the wane. When required for the vineyard, it is better dried for a year than used in a green state.

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CHAP. 34.

OTHER PLANTS THAT ARE CUT FOR POLES AND STAKES.

The chesnut is found to produce better stays for the vine than any other tree, both from the facility with which they are worked, their extremely lasting qualities, and the circumstance that, when cut, the tree will bud again more speedily than the willow even. It requires a soil that is light without being gravelly, a moist, sandy one more particularly, or else a charcoal earth, or a fine tufa even; while at the same time a northern aspect, however cold and shady, and if upon a declivity even, greatly promotes its growth. It refuses to grow, however, in a gravelly soil, or in red earth, chalk, or, indeed, any kind of fertilizing ground. We have already stated, that it is reproduced from the nut, but it will only grow from those of the largest size, and then only when they are sown in heaps of five together. The ground above the nuts should be kept broken from the month of November to February, as it is at that period that the nuts lose their hold and fall of themselves from the tree, and then take root. There ought to be intervals of a foot in width left between them, and the hole in which they are planted should be nine inches every way. At the end of two years or more they are transplanted from this seed plot into another, where they are laid out at intervals of a couple of feet.

Layers are also employed for the reproduction of this tree, and there is none to which they are better adapted: the root of the plant is left exposed, and the layer is placed in the trench at full length, with the summit also protruding from the earth; the result being, that it shoots from the top as well as the root. When transplanted, however, it is very hard to be reconciled, as it stands in dread of all change. Hence it is, that it is nearly two years before it will begin to shoot upward; from which circumstance it is generally preferred to rear the slips in the nursery from the nut itself, to obtaining them from quicksets. The mode of cultivation does not differ from that employed with the plants already mentioned. It is trenched around, and carefully lopped for two successive years; after which it is able

to take care of itself, the shade it gives sufficing to stifle all superfluous suckers: before the end of the sixth year it is fit for cutting.

A single jugerum of chesnuts will provide stays for twenty jugera of vineyard, and the branches that are taken from near the roots afford a supply of two-forked uprights; they will last, too, till after the next cutting of the tree.

The æsculus, too, is grown in a similar manner, the time for cutting being three years at the latest. Being less difficult, too, to propagate, it may be planted in any kind of earth, the acorn — and it is only with the æsculus that this is done — being sown in spring, in a hole nine inches in depth, with intervals between the plants of two feet in width. This tree is lightly hoed, four times a year. This kind of stay is the least likely to rot of them all; and the more the tree is cut, the more abundantly it shoots. In addition to the above, they also grow other trees for cutting that we have already mentioned — the ash for instance, the laurel, the peach, the hazel, and the apple; but then they are of slower growth, and the stays made from them, when fixed in the ground, are hardly able to withstand the action of the earth, and much less any moisture. The elder, on the other hand, which affords stakes of the very stoutest quality, is grown from cuttings, like the poplar. As to the cypress, we have already spoken of it at sufficient length.

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CHAP. 35. (21.)

THE CULTURE OF THE VINE AND THE VARIOUS SHRUBS WHICH SUPPORT IT.

Having now described what we may call the armoury of the vine, it remains for us to treat with a particular degree of care of the nature of the vine itself.

The shoots of the vine, as also of certain other trees, the interior of which is naturally of a spongy quality, have certain knots or joints upon the stem that intercept the pith. The intervals between these joints in the branches are short, and more particularly so towards the extremities. The pith, in itself the vivifying spirit of the tree, is always taking an onward direction, so long as the knot, by being open in the centre, allows it a free passage. If, however, the knot should become solidified and deny it a passage, the pith is then thrown downward upon the knot that lies next below it, and making its escape, issues forth there in the shape of a bud, these buds always making their appearance on each side alternately, as already mentioned in the case of the reed and the giant-fennel; in other words, here one bud makes its appearance at the bottom of a knot to the right, the next one takes its place on the left, and so on alternately. In the vine this bud is known as the "gem," as soon as the pith has formed there a small round knob; but before it has done this, the concavity that is left upon the surface is merely called the "eye:" when situate at the extremity of the shoot, it is known as the " germ." It is in the same way, too, that the stock branches, suckers, grapes, leaves, and tendrils of the vine are developed: and it is a very surprising tact, that all that grows on the right side of the tree is stronger and stouter than on the left.

Hence it is, that when slips of this tree are planted, it is necessary to cut these knots in the middle, in order to prevent the pith from making its escape. In the same way, too, when planting the fig, suckers are taken, nine inches in length, and after the ground is opened they are planted with the part downwards that grew nearest to the tree, and with a couple of eyes protruding from the earth — in

slips of trees, that part is properly called the eye which is to give birth to the: future bud. It is for this reason that, in the seed-plots even the slips that are thus planted sometimes bear the same year the fruit that they would have borne if they had remained upon the tree: this takes place when they have been planted in good seasons and are replete with fecundity, for then they bring to maturity the fruits the conception of which was commenced in another spot. Fig-trees that are thus planted may very easily be transplanted in the third year. As some compensation for the rapidity with which this tree becomes old, it has thus received the privilege of coming to maturity at a very early period.

The vine throws out a great number of shoots. In the first place, however, none of them are ever used for planting, except those which are useless, and would have been cut away as mere brushwood; while, on the other hand, every part is pruned off that has borne fruit the previous year. In former times, it was the custom to plant the slip with a head at the extremity, consisting of a piece of the hard wood on each side of it, the same, in fact, that is called a mallet shoot at the present day. In more recent times, however, the practice has been adopted of pulling it off merely with a heel attached to it, as in the fig; and there is no kind of slip that takes with greater certainty. A third method, again, has been added to the former ones, and a more simple one as well, that of taking the slip without any heel at all. These slips are known by the name of arrow- shoots, when they are twisted before planting; and the same, when they are neither cut short nor twisted, are called three-budded slips. The same sucker very often furnishes several slips of this kind. To plant a stock-shoot of the vine is unproductive, and, indeed, no shoots will bear unless they are taken from a part that has borne fruit already. A slip that has but few knots upon it, is looked upon as likely not to bear; while a great number of buds is considered an indication of fruitfulness. Some persons say that no suckers ought to be planted, but those which have already blossomed. It is far from advantageous to plant arrow-slips, for after being twisted, they are apt to break in transplanting. The slips when planted should be a foot in length, and not less, and they ought to have five or six knots upon them; with the dimensions above stated, they cannot, however, possibly have less than three buds. It is

considered the most advantageous plan to plant them out the same day that they are cut; but if it is found necessary to plant them some time after, they should be kept in the way that we have already mentioned; particular care being taken not to let them protrude from the earth, lest they should become dried by the action of the sun, or nipped by the wind or frost. When they have been kept too long in a dry place, they must be put in water for several days, for the purpose of restoring their verdancy and freshness.

The spot selected, whether for nursery or vineyard, ought to be exposed to the sun, and of as great extent as possible; the soil being turned up to a depth of three feet with a two-pronged fork. The earth, on being thrown up with the mattock, swells naturally, and ridges are formed with it four feet in height, intersected by trenches a couple of feet in depth. The earth in the trenches is carefully cleansed and raked out, so that none of it may be left unbroken, care being taken also to keep it exactly level; if the ridges are unequal, it shows that the ground has been badly dug. At the same time the breadth should be measured of each ridge that lies between the trenches. The slips are planted either in holes or else in elongated furrows, and then covered with very fine earth; but where it is a light soil, the grower will lose his pains should he neglect to place a layer of richer mould beneath. Not less than a couple of slips should be planted together, keeping them exactly on a level with the adjoining earth, which should be pressed down and made compact with the dibble. In the seed-plot there should be intervals left between each two settings a foot and a half in breadth and half a foot in length: when thus planted, it is usual, at the end of two years, to cut the mallet-shoots at the knot nearest the ground, unless there is some good reason for sparing them. When this is done, they throw out eyes, and with these upon them at the end of three years the quicksets are transplanted.

There is another method, also, of planting the vine, which a luxurious refinement in these matters has introduced. Four mallet-shoots are tightly fastened together with a cord in tile greenest part, and when thus arranged are passed through the shank-bone of an ox or else a tube of baked earth, after which they are planted in the ground, care being taken to leave a couple of buds protruding: in this way they become impregnated with moisture, and, immediately on

being cut, throw out fresh wood. The tube is then broken, upon which the root, thus set at liberty, assumes fresh vigour, and the clusters ultimately bear upon them grapes belonging to the four kinds thus planted together.

In consequence of a more recent discovery, another method has been adopted. A mallet-shoot is split down the middle and the pith extracted, after which the two portions are fastened together, every care being taken not to injure the buds. The mallet-shoot is then planted in a mixture of earth and manure, and when it begins to throw out branches it is cut, the ground being repeatedly dug about it. Columella assures us that the grapes of this plant will have no stones, but it is a more surprising thing that the slip itself should survive when thus deprived of the pith. Still, however, I think I ought not to omit the fact that there are some slips that grow without the ordinary articulations of trees upon them; thus, for instance, five or six very small sprigs of box if tied together and put in the ground, will take root. It was formerly made a point to take these sprigs from a box-tree that had not been lopped, as it was fancied that in the last case they would not live; experience, however, has since put an end to that notion.

The culture of the vineyard naturally follows the training of the nursery. There are five different kinds of vine: that with the branches running along the ground, the vine that stands without support, the vine that is propped and requires no cross-piece, the vine that is propped and requires a single cross-piece, and the vine that requires a trellis of four compartments. The mode of cultivation requisite for the propped vine may be understood as equally adapted to the one that stands by itself and requires no support, for this last method is only employed where there is a scarcity of wood for stays. The stay with the single cross-piece in a straight line is known by the name of "canterius." It is the best of all for the wine, for then the tree throws no shadow, and the grape is ripened continuously by the sun, while, at the same time, it derives more advantage from the action of the wind, and disengages the dew with greater facility: the superfluous leaves and shoots, too, are more easily removed, and the breaking up of the earth and other operations about the tree are effected with greater facility. But, above all, by the adoption of this method, the

tree sheds its blossoms more beneficially than under any other circumstances. This cross-piece is generally made of a stake, or a reed, or else of a rope of hair or hemp, as is usually the case in Spain and at Brundisium. When the trellis is employed, wine is produced in greater quantities; this method has its name of "compluviata" from the "compluvium" or square opening in the roofs of our houses; the trellis is divided into four compartments by as many crosspieces. This mode of planting the vine will now be treated of, and it will be found equally applicable to every kind, with the only difference that under this last method the operation is somewhat more complicated.

The vine is planted three different ways; in a soil that has been turned up with the spade-the best of the three; in furrows, which is the next best; and in holes, the least advisable method of all: of the way in which ground is prepared by digging, we have made sufficient mention already. (22.) In preparing the furrows for the vine it will be quite sufficient if they are a spade in breadth; but if holes are employed for the purpose, they should be three feet every way. The depth required for every kind of vine is three feet; it should, therefore, be made a point not to transplant any vine that is less than three feet in length, allowing then two buds to be above the ground. It will be necessary, too, to soften the earth by working little furrows at the bottom of the hole, and mixing it up with manure. Where the ground is declivitous, it is requisite that the hole should be deeper, in addition to which it should be artificially elevated on the edge of the lower side. Holes of this nature, which are made a little longer, to receive two vines, are known as "alvei," or beds. The root of the vine should occupy the middle of the hole, and when firmly fixed in the ground it should incline at the top due east; its first support it ought to receive from a reed. The vineyard should be bounded by a decuman path eighteen feet in width, sufficiently wide, in fact, to allow two carts to pass each other; others, again, should run at right angles to it, ten feet in width, and passing through the middle of each jugerum; or else, if the vineyard is of very considerable extent, cardinal paths may be formed instead of them, of the same breadth as the decuman path. At the end, too, of every five of the stays a path should be made to run, or, in other words, there should be one continuous cross-piece to every five stays; each space that is thus

included from one end to the other forming a bed.

Where the soil is dense and hard it must be turned up only with the spade, and nothing but quicksets should be planted there; but where, on the other hand, it is thin and loose, mallet-shoots even may be set either in hole or furrow. Where the ground is declivitous it is a better plan to draw furrows across than to turn up all the soil with the spade, so that the falling away of the earth may be counteracted by the position of the cross-pieces. It will be best, too, where the weather is wet or the soil naturally dry, to plant the mallet-shoots in autumn, unless, indeed, there is anything in the nature of the locality to counteract it; for while a dry, hot soil makes it necessary to plant in autumn, in a moist, cold one it may be necessary to defer it until the end of spring even. In a parched soil, too, it would be quite in vain to plant quicksets, and it is far from advantageous to set mallet-shoots in a dry ground, except just after a fall of rain. On the other hand, in moist localities, a vine in leaf even may be transplanted and thrive very well, and that, too, even as late as the summer solstice, in Spain, for example. It is of very considerable advantage that there should be no wind stirring on the day of planting, and, though many persons are desirous that there should be a south wind blowing at the time, Cato is of quite a different way of thinking.

In a soil of medium quality, it is best to leave an interval of five feet between every two vines; where it is very fertile the distance should be five feet at least, and where it is poor and thin eight at the very most. The Umbri and the Marsi leave intervals between their vines of as much as twenty feet in length, for the purpose of ploughing between them; such a plot of ground as this they call by the name of "porculetum." In a rainy, foggy locality, the plants ought to be set wider apart, but in dry spots nearer to one another. Careful observation has discovered various methods of economizing space; thus, for instance, when a vineyard is planted in shaded ground, a seed-plot is formed there as well; or, in other words, at the same time that the quickset is planted in the place which it is finally to occupy, the mallet-shoot intended for transplanting is set between the vines, as well as between the rows. By adopting this method, each jugerum will produce about sixteen thousand quicksets; and the result is, that two years' fruit is gained thereby, a cutting planted being two years

later in bearing than a quickset transplanted. Quicksets, when growing in a vineyard, are cut down at the end of a year, leaving only a single eye above ground; some manure is then placed upon the spot, and a stay driven in close to the plant. In the same manner it is again cut down at the end of the second year, and from this it acquires additional strength, and receives nutriment to enable it to endure the onerous task of reproduction. If this is neglected, in its over-haste to bear it will shoot up slim and meagre, like a bulrush, and from not being subjected to such a training, will grow to nothing but wood. In fact, there is no tree that grows with greater eagerness than the vine, and if its strength is not carefully husbanded for the bearing of fruit, it will be sure to grow to nothing but wood.

The best props for supporting the vine are those which we have already mentioned, or else stays made of the robur and the olive; if these cannot be procured, then props of juniper, cypress, laburnum, or elder, must be employed. If any other wood is used for the purpose, the stakes should be cut at the end each year: reeds tied together in bundles make excellent cross-rails for the vine, and will last as long as five years. Sometimes the shorter stock-branches of the vines are brought together and tied with vine-cuttings, like so many cords: by this method an arcade is formed, known to us by the name of “funetum.”

The vine, by the end of the third year, throws out strong and vigorous stock-branches with the greatest rapidity, and these in due time form the tree; after this, it begins to mount the cross-piece. Some persons are in the habit of “blinding” the vine at this period, by removing the eyes with the end of the pruning-knife turned upwards, their object being to increase the length of the branches — a most injurious practice, however; for it is far better to let the tree become habituated to grow of itself, and to prune away the tendrils every now and then when they have reached the cross-rail, so long as it may be deemed proper to add to its strength. There are some persons who forbid the vine to be touched for a whole year after it has been transplanted, and who say that the pruning-knife ought never to be used before it is five years old; and then at that period they are for cutting it down so completely as to leave three buds only. Others, again, cut down the vine within a year even after it has been

transplanted, but then they take care to let the stem increase every year by three or four joints, bringing it on a level with the cross-piece by the fourth. These two methods, however, both of them, retard the fruit and render the tree stunted and knotty, as we see the case in all dwarf trees. The best plan is to make the parent stem as robust and vigorous as possible, and then the wood will be sure to be strong and hardy. It is far from safe, too, to take slips from a cicatrized stem; such a practice is erro- neous, and only the result of ignorance. All cuttings of this nature are sure to be the offspring of acts of violence, and not in reality of the tree itself. The vine, while growing, should be possessed of all its natural strength; and we find that when left entirely to itself, it will throw out wood in every part; for there is no portion of it that Nature does not act upon. When the stem has grown sufficiently strong for the purpose, it should at once be trained to the cross-piece; if, how- ever, it is but weak, it should be cut down so as to lie below the hospitable shelter of the cross-piece. Indeed, it is the strength of the stem, and not its age, that ought to decide the matter. It is not advisable to attempt to train a vine before the stem has attained the thickness of the thumb; but in the year after it has reached the frame, one or two stock-branches should be preserved, according to the strength developed by the parent tree. The same, too, must be done the succeeding year, if the weakness of the stem demands it; and in the next, two more should be added. Still, however, there should never be more than four branches allowed to grow; in one word, there must be no indulgence shown, and every exuberance in the tree must in all cases be most carefully repressed; for such is the nature of the vine, that it is more eager to bear than it is to live. It should be remembered, too, that all that is subtracted from the wood is so much added to the fruit. The vine, in fact, would much rather produce shoots and ten- drils than fruit, because its fruit, after all, is but a transitory possession: hence it is that it luxuriates to its own undoing, and instead of really gaining ground, exhausts itself.

The nature, too, of the soil will afford some very useful suggestions. Where it is thin and hungry, even though the vine should display considerable vigour, it should be pruned down below the cross-piece and kept there, so that all the shoots may be put forth

below it. The interval, however, between the top of the vine and the cross-piece ought to be but very small; so much so, indeed, as to leave it hopes, as it were, of reaching it, which, however, it must never be suffered to do; for it should never be allowed to recline thereon and spread and run on at its ease. This mode of culture ought, in fact, to be so nicely managed, that the vine should show an inclination rather to grow in body than to run to wood.

The main branch should have two or three buds left below the cross-piece that give promise of bearing wood, and it should be carefully trained along the rail, and drawn close to it in such a manner as to be supported by it, and not merely hang loosely from it. When this is done, it should be tightly fastened also with a binding three buds off, a method which will greatly contribute to check the too abundant growth of the wood, while stouter shoots will be thrown out below the ligature: it is absolutely forbidden, however, to tie the extremity of the main branch. When all this is done, Nature operates in the following way — the parts that are allowed to fall downward, or those which are held fast by the ligature, give out fruit, those at the bend of the branch more particularly. On the other hand, the portion that lies below the ligature throws out wood; by reason, I suppose, of the interception of the vital spirit and the marrow or pith, previously mentioned: the wood, too, that is grown under these circumstances will bear fruit in the following year. In this way there are two kinds of stock branches: the first of which, issuing from the solid stock, gives promise of wood only for this year, and is known as the leaf stock-branch; while that which grows beyond the mark made by the ligature is a fruit stock-branch. There are other kinds, again, that shoot from the stock-branches when they are a year old, and these are in all cases fruit stock-branches. There is left, also, beneath the cross-piece a shoot that is known as the reserve shoot, being always a young stock-branch, with not more than three buds upon it. This is intended to give out wood the next year, in case the vine by over-luxuriance should happen to exhaust itself. Close to it there is another bud left, no bigger than a wart; this is known as the "furunculus," and is kept in readiness in case the reserve shoot should fail.

The vine, if enticed to bear fruit before the seventh year from its

being planted as a slip, will pine away, become as slim as a bulrush, and die. It is thought equally undesirable, too, to let an old stock-branch range far and wide, and extend as far as the fourth stay from the stem; to such a branch the name of dragon-branch is given by some, and of juniculus by others; if these are allowed to spread, they will run to wood only, and make male vines, as they are called. When a vine has become quite hard, it is an extremely bad plan to use it for reproduction by layers. When the vine is five years old the stock-branches are twisted, but each is allowed to throw out some new wood; and so from one to another, care being taken to prune away the old wood. It is always the best plan, however, to leave a reserve shoot; but this should always be very near the main stem of the vine, not at a greater distance, in fact, than that already mentioned. If, too, the stock branches should throw out too luxuriantly, they must be twisted, the object being that the vine may put forth no more than four secondary branches, or even two only, if it happens to be a single cross-railed vine.

If the vine is to be trained to grow without any stay at all, still it will stand in need, at first, of some support or other, until it has learnt to support itself: in all other respects the mode of proceeding will be the same at first. When pruning, it will be necessary that the thumb-branches should be arranged in equal numbers on either side, in order that the fruit may not overload one side of the tree; and we may here remark by the way, that the fruit by its weight is apt to bear down the tree and counteract any tendency to increase in height. The vine, unsupported, when more than three feet in height, begins to bend, but the others do not, until they are five feet high at the least; care should be taken, however, never to let them exceed the height of a man of moderate stature. Growers are in the habit of surrounding the vines that creep along the ground with a low fence for them to lean upon; and round this fence they dig a trench by way of precaution, for fear lest the branches in their range should meet one another and so come into collision. The greater part of the world, in fact, gather grapes at their vintage, grown in this fashion, and lying upon the ground — at all events, it is so in Africa, Egypt, and Syria; throughout the whole of Asia, too, and in many parts of Europe as well, this method prevails. In such cases the vine ought to be kept down close to the

ground, and the root should be nurtured at the same time and in just the same way as in the case of the vine that grows on the cross-piece. Care, too, should be taken to leave only the young thumb-shoots, together with three buds, where it is a prolific soil, two where it is poor and thin: it is better, too, that the shoots should be numerous than individually long. The influences of soil, of which we have made mention already, will make themselves felt all the more powerfully the nearer the grapes grow to the ground.

It is a very advantageous plan to separate the various species of vines and to set them in different compartments — for the mixture of different varieties is apt to deteriorate the flavour not only of the must, but the wine even as well. If, again, for some reason or other, the different kinds must be intermingled, it will be requisite to keep all those together which ripen at exactly the same period. The more fertile and the more level the soil, the higher the cross-pieces must he placed. High cross-pieces, too, are best suited to localities that are subject to heavy dews and fogs, but not to those that are exposed to high winds; on the other hand, where the soil is thin, parched, and arid, or exposed to the wind, the cross-pieces should be set lower. The cross-piece should be fastened to the stay with cords tied as tight as possible, while the bindings used for tying the vine should be thin. As to the various species of vines, and the soils and climates requisite for the growth of each, we have already treated of them, when enumerating the several varieties of the vine and the wines which they produce.

With reference to other points connected with the culture of the vine, there are very considerable doubts. Many persons recommend that the vineyard should be turned up with the spade after every dew that falls in the summer. Others, again, forbid this practice when the vine is in bud; for the clothes, they say, of the people coming and going to and fro are apt to catch the buds, and either knock or rub them off; it is for this reason, too, that they are so careful to keep all animals away from the vines, those with long wool in particular, as it is very apt to pull off the buds. Raking, too, they say, is very injurious to the vine while the grape is forming; and it will be quite sufficient, they assure us, if the ground is turned up three times in the year, after the vernal equinox — first, at the rising of the Vergiliæ,

the second at the rising of the Dog-star, and the third time just as the grape is turning black. Some persons make it a rule that an old vineyard shall have one turning up between the time of vintage and the winter solstice, though others, again, are of opinion that it is quite sufficient to bare the roots and manure them. They turn up the ground again after the ides of April, but before the time for germination, or, in other words, the sixth of the ides of May; then again before the tree begins to blossom, after it has shed its blossom, and, last of all, when the grape is just on the turn. The most skilful growers say that if the ground is dug up oftener than necessary, the grapes will become so remarkably thin-skinned as to burst. When the ground is turned up, care should be taken to do it before the hot hours of the day; a clayey soil, too, should never be ploughed or dug. The dust that is raised in digging is beneficial to the vine, it is said, by protecting it from the heat of the sun and the injurious effects of fogs.

The spring clearing ought to be done, it is universally admitted, within ten days after the ides of May, and before the blossoming begins; in addition to which, it should always be done below the cross-piece. As to the second clearing, opinions differ very considerably. Some think it ought to be done when the blossoming is over, others, again, when the grapes are nearly at maturity. This point, however, may be decided by following the advice of Cato on the subject; for we must now pass on to a description of the proper' mode of pruning the vine.

Immediately after the vintage, and while the weather is still warm, the work of pruning begins; this, however, ought never to be done, for certain physical reasons, before the rising of the Eagle, as we shall have occasion to explain in the following Book. Nor should it be done either when the west winds begin to prevail, for even then there is great doubt whether a fault may not be committed by being in too great haste to commence the work. If any return of wintry weather should chance to nip the vines, while still labouring under the wounds recently inflicted on them in pruning, there is little doubt that their buds will become quite benumbed with cold, the wounds will open again, and the eyes, moistened by the juices that distil from the tree, will become frost-bitten by the rigour of the weather. For who is there, in fact, that does not know that the buds are rendered

brittle by frost? All this, however, depends upon accurate calculations in the management of large grounds, and the blame of precipitation cannot with any justice be laid upon Nature. The earlier the vine is pruned, in suitable weather, the greater is the quantity of wood, while the later the pruning, the more abundant is the fruit. Hence it is that it is most advisable to prune the poor meagre vines first, and to defer pruning the more thriving ones to the very last. In pruning, due care should always be taken to cut in a slanting direction, in order that the rain may run off with all the greater facility. The wounds, too, should look down- wards towards the ground, and should be made as lightly as possible, the edge of the knife being well-sharpened for the purpose, so as to make a clean cut each time. Care should be taken, too, to cut always between two buds, and that the eyes are not injured in the operation. It is generally thought that wherever the vine is black, all those parts may be cut off, the healthy parts not being touched; as no useful shoots can be put forth by wood that is bad in itself. If a meagre vine has not good stock-shoots, the best plan is to cut it down to the ground, and then to train new ones. In clearing away the leaves, too, those leaves should not be removed which accompany the clusters, for by so doing the grapes are made to fall off, except where the vine happens to be young. Those leaves are regarded as useless which grow on the sides of the trunk and not from an eye; and so, too, are the bunches which shoot from the hard, strong wood, and are only to be removed by the aid of the knife.

Some persons are of opinion that it is a better plan to fix the stay midway between two vines; and, indeed, by the adoption of this method the roots are cleared with greater facility. It is best, however, where the vine needs but a single cross- rail, due care being taken that the rail is a strong one, and the locality not exposed to high winds. In the case of those vines which require trellissed cross-rails, the stay should be placed as near as possible to the burden it has to support; in order, however, that there may be no impediment thrown in the way of clearing the roots, it may be placed at the distance of one cubit from the stock, but not more. It is generally recommended to clear the roots before the pruning is commenced.

Cato gives the following general precepts in relation to the culture

of the vine:—" Let the vine grow as high as possible, and fasten it firmly, but not too tight. You should treat it in the following manner. Clean the roots of the vine at seedtime, and after pruning it dig about it, and then begin to labour at the ground, by tracing with the plough continuous furrows every way. Plant the young vines in layers as early as possible, and then break up the ground about them. If the vine is old, take care and prune it as little as possible. In preference, bend the vine into the ground for layers, if necessary, and cut it at the end of two years. The proper time for cutting the young vine, is when it has gained sufficient strength. If the vineyard is bald of vines, then draw furrows between them, and plant quicksets there: but let no shadow be thrown on the furrows, and take care and dig them often. If the vineyard is old, sow ocinum there, in case the trees are meagre: but take care and sow there nothing that bears seed. Put manure, chaff, and grape-husks about the roots, or, indeed, anything of a similar nature that will give the tree additional strength. As soon as the vine begins to throw out leaves, set about clearing them. Fasten the young trees in more places than one, so that the stem may not break. As soon as it begins to run along the stay, fasten down the young branches lightly, and extend them, in order that they may gain the right position. When the grape begins to be mottled, then tie down the vine. The first season for grafting the vine is the spring, the other when the grape is in blossom; the last period is the best. If it is your wish to transplant an old vine, you will only be able to do so in case it is no thicker than the arm: first, however, you must prune it, taking care not to have more than two buds upon the stem. Then dig it well up by the roots, being careful to trace them, and using every possible precaution not to injure them. Place it in the hole or furrow exactly in the position in which it has stood before, then cover it with earth, which should be well trodden down. You must then prop it up, fasten it, and turn it in the same direction as before; after which, dig about it repeatedly." The ocinum that Cato here recommends to be sown in the vineyards, is a fodder known by that name by the ancients; it thrives in the shade remarkably well, and received its name from the rapidity with which it grows.

(23.) We come now to speak of the method of growing vines upon trees, a mode that has been condemned in the strongest terms by the

Saserna's, both father and son, and up- held by Scrofa, these being our most ancient writers on agri- culture next to Cato, and men of remarkable skill. Indeed, Scrofa himself will not admit that it is beneficial anywhere except in Italy. The experience of ages, however, hats sufficiently proved that the wines of the highest quality are only grown upon vines attached to trees, and that even then the choicest wines are produced by the upper part of the tree, the produce of the lower part being more abundant; such being the beneficial results of elevating the vine. It is with a view to this that the trees employed for this purpose are selected. In the first rank of all stands the elm, with the exception of the Atinian variety, which is covered with too many leaves; and next comes the black poplar, which is valued for a similar reason, being not so densely covered with leaves. Most people, too, by no means hold the ash and the fig in disesteem, as also the olive, if it is not overshadowed with branches. We have treated at sufficient length already of the planting and culture of these several trees.

They must not be touched with the knife before the end of three years; and then the branches are preserved, on each side in its turn, the pruning being done in alternate years. In the sixth year the vine is united to the tree. In Italy beyond the Padus, in addition to the trees already mentioned, they plant for their vines the cornel, the opulus, the linden, the maple, the ash, the yoke-elm, and the quercus; while in Venetia they grow willows for the purpose, on account of the humidity of the soil. The top of the elm is lopped away, and the branches of the middle are regularly arranged in stages; no tree in general being allowed to exceed twenty feet in height. The stories begin to spread out in the tree at eight feet from the ground, in the hilly districts and upon dry soils, and at twelve in champaign and moist localities. The hand of the trunk ought to have a southern aspect, and the branches that project from them should be stiff and rigid like so many fingers; at the same time due care should be taken to lop off the thin beardlike twigs, in order to check the growth of all shade. The interval best suited for the trees, if it is the grower's intention to keep the soil turned up with the plough, is forty feet back and front, and twenty at the side; if it is not to be turned up, then twenty feet every way will do. A single tree is often made to support

as many as ten vines, and the grower is greatly censured who attaches less than three. It is worse than useless to attach the vine before the tree has gained its full strength, as in such case its rapidity of growth would only tend to kill the tree. It is necessary to plant the vine in a trench three feet in depth, leaving an interval of one foot between it and the tree. In this case there is no necessity for using mallet shoots, or for going to any expense in spading or digging; for this method of training on trees has this advantage in particular, that it is beneficial even to the vine that corn should be sown in the same soil; in addition to which, from its height, it is quite able to protect itself, and does not call for the necessity, as in the case of an ordinary vineyard, of enclosing it with walls and hedges or ditches, made at a considerable expense, to protect it from injury by animals.

In the method of training upon trees, reproduction from quicksets or from layers is the only mode employed of all those that have been previously described; the growing by layers being effected two different ways, as already mentioned. The plan, however, of growing from layers in baskets set upon the stages of the tree is the most approved one, as it ensures an efficient protection from the ravages of cattle; while, according to another method, a vine or else a stock-branch is bent into the ground near the tree it has previously occupied, or else the nearest one that may be at liberty. It is recommended that all parts of the parent tree that appear above ground should then be scraped, so that it may not throw out wood; while at the same time there are never less than four buds on the part that is put into the ground for the purpose of taking root; there are also two buds left above ground at the head. The vine intended for training on a tree is planted in a furrow four feet long, three broad, and two and a half in depth. At the end of a year the layer is cut to the pith, to enable it to strengthen gradually at the root; after which, the end of the branch is pruned down to within two buds from the ground. At the end of two years the layer is completely separated from the stock, and buried deeper in the ground, that it may not shoot at the place where it has been cut. As to the quicksets, they ought to be removed directly after the vintage.

In more recent times, a plan has been discovered of planting a dragon branch near the tree — that being the name given to an old

stock-branch that has become hard and tough in the course of years. For this purpose, it is cut as long as possible, and the bark is taken off from three-fourths of its length, that being the portion which is to be buried in the ground; hence it is, too, that it is called a "barked" plant. It is then laid at full length in the furrow, the remaining part protruding from the ground and reclining against the tree. This method is the most speedy one that can be adopted for growing the vine. If the vine is meagre or the soil impoverished, it is usual to keep it cut down as near to the ground as possible, until such time as the root is strengthened. Care, too, should be taken not to plant it covered with dew, nor yet while the wind is blowing from the north. The vine itself ought to look towards the north-east, but the young stock-shoots should have a southern aspect.

There should not be too great haste in pruning a young vine, but a beginning should be made by giving the wood and foliage a circular form, care being taken not to prune it until it has become quite strong; it should be remembered, too, that the vine, when trained upon a tree, is generally a year later in bearing fruit than when grown on the cross-piece. There are some persons, again, who altogether forbid that a vine should be pruned until such time as it equals the tree in height. At the first pruning it may be cut to within six feet from the ground, below which a shoot must be left, and encouraged to run out by bending the young wood. Upon this shoot, when pruned, there should not be more than three buds left. The branches that take their rise from these buds should be trained in the following year upon the lowermost stages of the tree, and so in each successive year taught to climb to the higher ones. Care, too, should always be taken to leave one hard, woody branch at each stage, as well as one breeding shoot, at liberty to mount as high as it pleases. In addition to these precautions, in all pruning, those shoots should be cut off which have borne fruit the last year, and after the ten- drils have been cut away on every side fresh branches should be trained to run along the stages. In Italy the pruning is so managed that the shoots and tendrils of the vines are arranged so as to cover the branches of the tree, while the shoots of the vine in their turn are surrounded with clusters of grapes. In Gallia, on the other hand, the vine is trained to pass from tree to tree. On the Æmilian Way, again, the vine is seen

embracing the trunks of the Atinian elms that line the road, while at the same time it carefully avoids their foliage.

It is a mark of ignorance in some persons to suspend the vine with a cord beneath the branches of the tree, to the great risk of stifling it; for it ought to be merely kept up with a withe of osier, and not tightly laced. Indeed, in those places where the willow abounds, the withes that it affords are preferred, on account of their superior suppleness, while the Sicilians employ for the purpose a grass, which they call "ampelodesmos:" throughout the whole of Greece, rushes, cyperus, and sedge are similarly employed. When at any time the vine has been liberated from its bonds, it should be allowed to range uncontrolled for some days, and to spread abroad at pleasure, as well as to recline upon the ground which it has been looking down upon the whole year through. For in the same manner that beasts of burden when released from the yoke, and dogs when they have returned from the chase, love to roll themselves on the ground, just so does the vine delight to stretch its loins. The tree itself, too, seems to rejoice, and, thus relieved from the continuous weight which has burdened it, to have all the appearance of now enjoying a free respiration. Indeed, there is no object in all the economy of Nature that does not desire certain alternations for the enjoyment of rest, witness the succession of night and day, for instance. It is for this reason that it is forbidden to prune the vine directly the vintage is over, and while it is still exhausted by the process of reproduction.

Directly the vine has been pruned, it ought to be fastened again to the tree, but in another place; for there is no doubt that it feels very acutely the indentations that are made in it by the holdfasts. In the Gallic method of cultivation they train out two branches at either side, if the trees are forty feet apart, and four if only twenty; where they meet, these branches are fastened together and made to grow in unison; if, too, they are anywhere deficient in number or strength, care is taken to fortify them by the aid of small rods. In a case, however, where the branches are not sufficiently long to meet, they are artificially prolonged by means of a hook, and so united to the tree that desires their company. The branches thus trained to unite they used to prime at the end of the second year. But where the vine is aged, it is a better plan to give them a longer time to reach the

adjoining tree, in case they should not have gained the requisive thickness; besides which, it is always good to encourage the growth of the hard wood in the dragon branches.

There is yet another method, which occupies a middle place between this mode of propagation and that by layers. It consists of laying the entire vine in the earth, and then splitting the stock asunder by means of wedges; the fibrous portions are then trained out in as many furrows, care being taken to support each of the slender plants by fastening it to a stake, and not to cut away the branches that shoot from the sides. The growers of Novara, not content with the multitude of shoots that run from tree to tree, nor yet with an abundance of branches, encourage the stock-branches to entwine around forks planted in the ground for the purpose; a method, however, which, in addition to the internal defects arising from the soil, imparts a harshness to the wine.

There is another fault, too, that is committed by the people of Varracina, near Rome-they only prune their vines every other year; not, indeed, because it is advantageous to the tree, but from a fear lest, from the low prices fetched by their wines, the expense might exceed the profits. At Carseoli they adopt a middle course, by pruning away only the rotten parts of the vine, as well as those which are beginning to wither, and leaving the rest to bear fruit, after thus clearing away all superfluous incumbrances. The only nutriment they give it is this exemption from frequent pruning; but unless the soil should happen to be a very rich one, the vine, under such a method of cultivation, will very soon degenerate to a wild state.

The vine that is thus trained requires the ground to be ploughed very deep, though such is not the case for the sowing there of grain. It is not customary to cut away the leaves in this case, which, of course, is so much labour spared. The trees themselves require pruning at the same period as the vine, and are thinned by clearing away all useless branches, and such parts as would only absorb the nutriment. We have already stated that the parts that are lopped should never look north or south: and it will be better still, if they have not a western aspect. The wounds thus made are very susceptible for a considerable time, and heal with the greatest difficulty, if exposed to excesses of cold or heat. The vine when

trained on a tree enjoys advantages that are not possessed by the others; for the latter have certain fixed aspects, .while in the former, it is easy to cover up the wounds made in pruning, or to turn them whichever way you please. When trees are pruned at the top, cup-like cavities should be formed there, to prevent the water from lodging.

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CHAP. 36.

HOW GRAPES ARE PROTECTED FROM THE RAVAGES OF INSECTS.

Stays, too, should be given to the vine for it to take hold of and climb upwards, if they are taller than it. (24.) Espaliers for vines of a high quality should be cut, it is said, at the Quinquatria, and when it is intended to keep the grapes, while the moon is on the wane. We are assured, moreover, that those which are cut at the change of the moon, are exempt from the attacks of all insects. According to another system, it is said that vines should be pruned by night at full moon, and while it is in Leo, Scorpio, Sagittarius, or Taurus: and that, in general, they ought to be planted either when the moon is at full or on the increase. In Italy, ten workmen will suffice for one hundred jugera of vineyard.

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CHAP. 37.

THE DISEASES OF TREES.

Having now treated sufficiently at length of the planting and cultivation of trees — (for we have already said enough of the palm and the cytisus, when speaking of the exotic trees) — we shall proceed, in order that nothing may be omitted, to describe other details relative to their nature, which are of considerable importance, when taken in connection with all that precedes. Trees, we find, are attacked by maladies; and, indeed, what created thing is there that is exempt from these evils? Still however, the affections of the forest trees, it is said, are not attended with danger to them, and the only damage they receive is from hail-storms while they are budding and blossoming; with the exception, indeed, of being nipped either by heat or cold blasts in unseasonable weather; for frost, when it comes at the proper times, as we have already stated, is serviceable to them. "Well but," it will be said, "is not the vine sometimes killed with cold?" No doubt it is, and this it is through which we detect inherent faults in the soils, for it is only in a cold soil that the vine will die. Just in the same way, too, in winter we approve of cold, so long as it is the cold of the weather, and not of the ground. It is not the weakest trees, too, that are endangered in winter by frost, but the larger ones. When they are thus attacked, it is the summit that dries away the first, from the circumstance that the sap becomes frozen before it is able to arrive there.

Some diseases of trees are common to them all, while others, again, are peculiar to individual kinds, Worms are common to them all, and so, too, is sideration, with pains in the limbs, which are productive of debility in the various parts. Thus do we apply the names of the maladies that prevail among mankind to those with which the plants are afflicted. In the same way, too, we speak of their bodies being mutilated, the eyes of the buds being burnt up, with many other expressions of a similar nature. It is in accordance with the same phraseology that we say that trees are afflicted with hunger or indigestion, both of which result from the comparative amount of

sap that they contain; while some, again, are troubled with obesity, as in the case of all the resinous trees, which, when suffering from excessive fatness, are changed into a torch-tree. When the roots, too, begin to wax fat, trees, like animals, are apt to perish from excess of fatness. Sometimes, too, a pestilence will prevail in certain classes of trees, just as among men, we see maladies attack, at one time the slave class, and at another the common people, in cities or in the country, as the case may be.

Trees are more or less attacked by worms; but still, nearly all are subject to them in some degree, and this the birds are able to detect by the hollow sound produced on tapping at the bark. These worms even have now begun to be looked upon as delicacies by epicures, and the large ones found in the robur are held in high esteem; they are known to us by the name of" cossis;" and are even fed with meal, in order to fatten them! But it is the pear, the apple, and the fig that are most subject to their attacks, the trees that are bitter and odoriferous enjoying a comparative exemption from them. Of those which infest the fig, some breed in the tree itself, while others, again, are produced by the worm known as the cerastes; they all, however, equally assume the form of the cerastes, and emit a small shrill noise. The service-tree is infested, too, with a red hairy worm, which kills it; and the medlar, when old, is subject to a similar malady.

The disease known as sideration entirely depends upon the heavens; and hence we may class under this head, the ill effects produced by hail-storms, carbunculation, and the damage caused by hoar-frosts. When the approach of spring tempts the still tender shoots to make their appearance, and they venture to burst forth, the malady attacks them, and scorches up the eyes of the buds, filled as they are with their milky juices: this is what upon flowers they call " charcoal" blight. The consequences of hoar-frost to plants are even more dangerous still, for when it has once settled, it remains there in a frozen form, and there is never any wind to remove it, seeing that it never prevails except in weather that is perfectly calm and serene. Sideration, however, properly so called, is a certain heat and dryness that prevails at the rising of the Dog-star, and owing to which grafts and young trees pine away and die, the fig and the vine more particularly. The olive, also, besides the worm, to which it is equally

subject with the fig, is attacked by the measles, or as some think fit to call it, the fungus or platter; it is a sort of blast produced by the heat of the sun. Cato says that the red moss is also deleterious to the olive. An excessive fertility, too, is very often injurious to the vine and the olive. Scab is a malady common to all trees. Eruptions, too, and the attacks of a kind of snail that grows on the bark, are diseases peculiar to the fig, but not in all countries; for there are some maladies that are prevalent in certain localities only.

In the same way that man is subject to diseases of the sinews, so are the trees as well, and, like him, in two different ways. Either the virulence of the disease manifests itself in the feet, or, what is the same thing, the roots of the tree, or else in the joints of the fingers, or, in other words, the extremities of the branches that are most distant from the trunk. The parts that are thus affected become dry and shrivel up: the Greeks have appropriate names by which to distinguish each of these affections. In either case the first symptoms are that the tree is suffering from pain, and the parts affected become emaciated and brittle; then follows rapid consumption and ultimately death; the juices being no longer able to enter the diseased parts, or, at all events, not circulating in them. The fig is more particularly liable to this disease: but the wild fig is exempt from all that we have hitherto mentioned. Scab is produced by viscous dews which fall after the rising of the Vergiliæ; but if they happen to fall copiously, they drench the tree, without making the bark rough. When the fig is thus attacked, the fruit falls off while green; and so, too, if there is too much rain. The fig suffers also from a superfluity of moisture in the roots.

In addition to worms and sideration, the vine is subject to a peculiar disease of its own, which attacks it in the joints, and is produced from one of the three following causes: — either the destruction of the buds by stormy weather, or else the fact, as remarked by Theophrastus, that the tree, when pruned, has been cut with the incisions upwards, or has been injured from want of skill in the cultivator. All the injury that is inflicted in these various ways is felt by the tree in the joints more particularly. It must be considered also as a species of sideration, when the cold dews make the blossoms fall off, and when the grapes harden before they have

attained their proper size. Vines also become sickly when they are perished with cold, and the eyes are frost-bitten just after they have been pruned. Heat, too, out of season, is productive of similar results: for everything is regulated according to a fixed order and certain determinate movements. Some maladies, too, originate in errors committed by the vine-dresser; when they are tied too tight, for instance, as already mentioned, or when in trenching round them the digger has struck them an unlucky blow, or when in ploughing about them the roots have been strained through carelessness, or the bark has been stripped from off the trunk: sometimes, too, contusions are produced by the use of too blunt a pruning-knife. Through all the causes thus enumerated the tree is rendered more sen- sitive to either cold or heat, as every injurious influence from without is apt to concentrate in the wounds thus made. The apple, however, is the most delicate of them all, and more particularly the one that bears the sweetest fruit. In some trees weakness induced by disease is productive of barrenness, and does not kill the tree; as in the pine for instance, or the palm, when the top of the tree has been removed; for in such case the tree becomes barren, but does not die. Sometimes, too, the fruit itself is sickly, independently of the tree; for example, when there is a deficiency of rain, or of warmth, or of wind, at the periods at which they usually prevail, or when, on the other hand, they have prevailed in excess; for in such cases the fruit will either drop off or else deteriorate. But the worst thing of all that can befall the vine or the olive, is to be pelted with heavy showers just when the tree is shedding its blossom, for then the fruit is sure to fall off as well.

Rain, too, is productive of the caterpillar, a noxious insect that eats away the leaves, and, some of them, the blossoms as well; and this in the olive even, as we find the case at Miletus; giving to the half-eaten tree a most loathsome appearance. This pest is produced by the prevalence of a damp, languid heat; and if the sun should happen to shine after this with a more intense heat and burn them up, this pest only gives place to another just as bad, the aspect only of the evil being changed.

There is still one other affection that is peculiar to the olive and the vine, known as the “cobweb,” the fruit being enveloped in a

web, as it were, and so stifled. There are certain winds, too, that are particularly blighting to the olive and the vine, as also to other fruits as well: and then besides, the fruits themselves, independently of the tree, are very much worm-eaten in some years, the apple, pear, medlar, and pomegranate for instance. In the olive the presence of the worm may be productive of a twofold result: if it grows beneath the skin, it will destroy the fruit, but if it is in the stone, it will only gnaw it away, making the fruit all the larger. The prevalence of showers after the rising of Arcturus prevents them from breeding; but if the rains are accompanied with wind from the south, they will make their appearance in the ripe fruit even, which are then very apt to fall. This happens more particularly in moist, watery localities; and even if they do not fall, the olives that are so affected are good for nothing. There is a kind of fly also that is very troublesome to some fruit, acorns and figs for instance: it would appear that they breed from the juices secreted beneath the bark, which at this period are sweet. These trees, too, are generally in a diseased state when this happens.

There are certain temporary and local influences which cause instantaneous death to trees, but which cannot properly be termed diseases; such, for example, as consumption, blast, or the noxious effects of some winds that are peculiar to certain localities; of this last nature are the Atabulus that prevails in Apulia, and the Olympias of Eubœa. This wind, if it happens to blow about the winter solstice, nips the tree with cold, and shrivels it up to such a degree that no warmth of the sun can ever revive it. Trees that are planted in valleys, and are situate near the banks of rivers, are especially liable to these accidents, the vine more particularly, the olive, and the fig. When this has been the case, it may instantly be detected the moment the period for germination arrives, though, in the olive, somewhat later. With all of these trees, if the leaves fall off, it is a sign that they will recover; but if such is not the case, just when you would suppose that they have escaped uninjured, they die. Sometimes, however, the leaves will become green again, after being dry and shrivelled. Other trees, again, in the northern regions, Pontus and Phrygia, for example, suffer greatly from cold or frost, in case they should continue for forty days after the winter solstice. In these countries,

too, as well as in other parts, if a sharp frost or copious rains should happen to come on immediately after fructification, the fruit is killed in a very few days even.

Injuries inflicted by the hand of man are productive also of bad effects. Thus, for instance, pitch, oil, and grease, if applied to trees, and young ones more particularly, are highly detrimental. They may be killed, also, by removing a circular piece of the bark from around them, with the exception, indeed, of the cork-tree, which is rather benefitted than otherwise by the operation; for the bark as it gradually thickens tends to stifle and suffocate the tree: the andrachle, too, receives no injury from it, if care is taken not to cut the body of the tree. In addition to this, the cherry, the lime, and the vine shed their bark; not that portion of it, indeed, which is essential to life, and grows next the trunk, but the part that is thrown off, in proportion as the other grows beneath. In some trees the bark is naturally full of fissures, the plane for instance: in the linden it will all but grow again when removed. Hence, in those trees the bark of which admits of cicatrization, a mixture of clay and dung is employed by way of remedy; and sometimes with success, in case excessive cold or heat does not immediately supervene. In some trees, again, by the adoption of these methods death is only retarded, the robur and the quercus, for example. The season of the year has also its peculiar influences; thus, if the bark is removed from the fir and the pine, while the sun is passing through Taurus or Gemini, the period of their germination, they will instantly die, while in winter they are able to withstand the injurious effects of it much longer: the same is the case, too, with the holm-oak, the robur, and the quercus. In the trees above mentioned, if it is only a narrow circular strip of bark that is removed, no injurious effects will be perceptible; but in the case of the weaker trees, as well as those which grow in a thin soil, the same operation, if performed even on one side only, will be sure to kill them. The removal of the top, in the pitch-tree, the cedar, and the cypress is productive of a similar result; for if it is either cut off or destroyed by fire, the tree will not survive: the same is the case, too, if they are bitten by the teeth of animals.

Varro informs us, too, as we have already stated, that the olive, if only licked by a she-goat, will be barren. When thus injured, some

trees will die, while in others the fruit becomes deteriorated, the almond, for instance, the fruit of which changes from sweet to bitter. In other cases, again, the tree is improved even — such, for instance, as the pear known in Chios as the Phocian pear. We have already mentioned certain trees, also, that are all the better for having the tops removed. Most trees perish when the trunk is split; but we must except the vine, the apple, the fig, and the pomegranate. Others, again, will die if only a wound is inflicted: the fig, however, as well as all the resinous trees, is proof against such injury. It is far from surprising that, when the roots of a tree are cut, death should be the result; most of them perish, however, when, not all the roots, but only the larger ones, and those which are more essential to life, have been severed.

Trees, too, will kill one another by their shade, or the density of their foliage, as also by the withdrawal of nourishment. Ivy, by clinging to a tree, will strangle it. The mistletoe, too, is far from beneficial, and the cytisus is killed by the plant to which the Greeks have given the name of halimon. It is the nature of some plants not to kill, but to injure, by the odour they emit, or by the admixture of their juices; such is the influence exercised by the radish and the laurel upon the vine. For the vine may reasonably be looked upon as possessed of the sense of smell, and affected by odours in a singular degree; hence, when it is near a noxious exhalation, it will turn away and withdraw from it. It was from his observation of this fact that Androcydes borrowed the radish as his antidote for drunkenness, recommending it to be eaten on such occasions. The vine, too, abhors all coleworts and garden herbs, and the hazel as well; indeed it will become weak and ailing if they are not removed to a distance from it. Nitre, alum, warm sea-water, and the shells of beans and fitches act as poisons on the vine.

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CHAP. 38. (25.)

PRODIGIES CONNECTED WITH TREES.

Among the maladies which affect the various trees, we may find room for portentous prodigies also. For we find some trees that have never had a leaf upon them; a vine and a pome- granate bearing fruit adhering to the trunk, and not upon the shoots or branches; a vine, too, that bore grapes but had no leaves; and olives that have lost their leaves while the fruit remained upon the tree. There are some marvels also connected with trees that are owing to accident; an olive that was completely burnt, has been known to revive, and in Bœotia, some fig-trees that had been quite eaten away by locusts budded afresh. Trees, too, sometimes change their colour, and turn from black to white; this, however, must not always be looked upon as portentous, and more particularly in the case of those which are grown from seed; the white poplar, too, often becomes black. Some persons are of opinion also that the service-tree, if transplanted to a warmer locality, will become barren. But it is a prodigy, no doubt, when sweet fruits become sour, or sour fruits sweet; and when the wild fig becomes changed into the cultivated one, or vice versa. It is sadly portentous, too, when the tree becomes deteriorated by the change, the cultivated olive changing into the wild, and the white grape or fig becoming black: such was the case, also, when upon the arrival of Xerxes there, a plane-tree at Laodicea was trans- formed into an olive. In such narratives as these, the book written in Greek by Aristander abounds, not to enter any further on so extended a subject; and we have in Latin the Commentaries of C. Epidius, in which we find it stated that trees have even been known to speak. In the territory of Cumæ, a tree, and a very ominous presage it was, sank into the earth shortly before the civil wars of Pompeius Magnus began, leaving only a few of the branches protruding from the ground. The Sibylline Books were accordingly consulted, and it was found that a war of extermination was impending, which would be attended with greater carnage the nearer it should approach the city of Rome.

Another kind of prodigy, too, is the springing up of a tree in some extraordinary and unusual place, the head of a statue, for instance, or an altar, or upon another tree even. A fig-tree shot forth from a laurel at Cyzicus, just before the siege of that city; and so in like manner, at Tralles, a palm issued from the pedestal of the statue of the Dictator Cæsar, at the period of his civil wars. So, too, at Rome, in the Capitol there, in the time of the wars against Perseus, a palm-tree grew from the head of the statue of Jupiter, a presage of impending victory and triumphs. This palm, however, having been destroyed by a tempest, a fig-tree sprang up in the very same place, at the period of the lustration made by the censors M. Messala and C. Cassius, a time at which, according to Piso, an author of high authority, all sense of shame had been utterly banished. Above all the prodigies, however, that have ever been heard of, we ought to place the one that was seen in our own time, at the period of the fall of the Emperor Nero, in the territory of Marrucinum; a plantation of olives, belonging to Vectius Marcellus, one of the principal members of the Equestrian order, bodily crossed the public highway, while the fields that lay on the opposite side of the road passed over to supply the place which had been thus vacated by the olive-yard.

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CHAP. 39. (26.)

TREATMENT OF THE DISEASES OF TREES.

Having set forth the various maladies by which trees are attacked, it seems only proper to mention the most appropriate remedies as well. Some of these remedies may be applied to all kinds of trees in common, while others, again, are peculiar to some only. The methods that are common to them all, are, baring the roots, or moulding them up, thus admitting the air or keeping it away, as the case may be; giving them water, or depriving them of it, refreshing them with the nutritious juices of manure, and lightening them of their burdens by pruning. The operation, too, of bleeding, as it were, is performed upon them by withdrawing their juices, and the bark is scraped all round to improve them. In the vine, the stock branches are sometimes lengthened out, and at other times repressed; the buds too are smoothed, and in a measure polished up, in case the cold weather has made them rough and scaly. These remedies are better suited to some kinds of trees and less so to others: thus the cypress, for instance, has a dislike to water, and manifests an aversion to manure, spading round it, pruning, and, indeed, remedial operations of every kind; nay, what is more, it is killed by irrigation, while, on the other hand, the vine and the pomegranate receive their principal nutriment from it. In the fig, again, the tree is nourished by watering, while the very same thing will make the fruit pine and die: the almond, too, if the ground is spaded about it, will lose its blossom. In the same way, too, there must be no digging about the roots of trees when newly grafted, or indeed until such time as they are sufficiently strong to bear. Many trees require that all superfluous burdens should be pruned away from them, just as we ourselves cut the nails and hair. Old trees are often cut down to the ground, and then shoot up again from one of the suckers; this, however, is not the case with all of them, but only those, the nature of which, as we have already stated, will admit of it.

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CHAP. 40.

METHODS OF IRRIGATION.

Watering is good for trees during the heats of summer, but injurious in winter; the effects of it are of a varied nature in autumn, and depend upon the peculiar nature of the soil. Thus, in Spain for instance, the vintager gathers the grapes while the ground beneath is under water; on the other hand, in most parts of the world, it is absolutely necessary to carry off the autumn rains by draining. It is about the rising of the Dog-star that irrigation is so particularly beneficial; but even then it ought not to be in excess, as the roots are apt to become inebriated, and to receive injury therefrom. Care should be taken, too, to proportion it to the age of the tree, young trees being not so thirsty as older ones; those too which require the most water, are the ones that have been the most used to it. On the other hand, plants which grow in a dry soil, require no more moisture than is absolutely necessary to their existence.

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CHAP. 41.

REMARKABLE FACTS CONNECTED WITH IRRIGATION.

In the Fabian district, which belongs to the territory of Sulmo in Italy, where they are in the habit, also, of irrigating the fields, the natural harshness of the wines makes it necessary to water the vineyards; it is a very singular thing, too, that the water there kills all the weeds, while at the same time it nourishes the corn, thus acting in place of the weeding- hook. In the same district, too, at the winter solstice, and more particularly when the snow is on the ground or frosts prevail, they irrigate the land, a process which they call “warming” the soil. This peculiarity, however, exists in the water of one river only, the cold of which in summer is almost insupportable.

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CHAP. 42. (27.)

-INCISIONS MADE IN TREES.

The proper remedies for charcoal-blight and mildew will be pointed out in the succeeding Book. In the meantime, however, we may here observe that among the remedies may be placed that by scarification. When the bark becomes meagre and impoverished by disease, it is apt to shrink, and so compress the vital parts of the tree to an excessive degree: upon which, by means of a sharp pruning knife held with both hands, incisions are made perpendicularly down the tree, and a sort of looseness, as it were, imparted to the skin. It is a proof that the method has been adopted with success, when the fissures so made remain open and become filled with wood of the trunk growing between the lips.

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CHAP. 43.

OTHER REMEDIES FOR THE DISEASES OF TREES.

The medical treatment of trees in a great degree resembles that of man, seeing that in certain cases the bones of them both are perforated even. The bitter almond will become sweet, if, after spading round the trunk and cleaning it, the lowermost part of it is pierced all round, so that the humours may have a passage for escape and ensure being removed. In the elm, too, the superfluous juices are drawn off, by piercing the tree above ground to the pith when it is old, or when it is found to suffer from an excess of nutriment. So, too, when the bark of the fig is turgid and swollen, the confined juices are discharged by means of light incisions made in a slanting direction; by the adoption of which method the fruit is prevented from falling off. When fruit-trees bud but bear no fruit, a fissure is made in the root, and a stone inserted; the result of which is, that they become productive. The same is done also with the almond, a wedge of robur being employed for the purpose. For the pear and the service tree a wedge of torch-wood is used, and then covered over with ashes and earth. It is even found of use, too, to make circular incisions around the roots of the vine and fig, when the vegetation is too luxuriant, and then to throw ashes over the roots. A late crop of figs is ensured, if the first fruit is taken off when green and little larger than a bean; for it is immediately succeeded by fresh, which ripens at a later period than usual. If the tops of each branch are removed from the fig, just as it is beginning to put forth leaves, its strength and productiveness are greatly increased. As to caprification, the effect of that is to ripen the fruit.

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CHAP. 44.

CAPRIFICATION, AND PARTICULARS CONNECTED WITH THE FIG.

It is beyond all doubt that in caprification the green fruit gives birth to a kind of gnat; for when they have taken flight, there are no seeds to be found within the fruit: from this it would appear that the seeds have been transformed into these gnats. Indeed, these insects are so eager to take their flight, that they mostly leave behind them either a leg or a part of a wing on their departure. There is another species of gnat, too, that grows in the fig, which in its indolence and malignity strongly resembles the drone of the beehive, and shows itself a deadly enemy to the one that is of real utility; it is called centrina, and in killing the others it meets its own death.

Moths, too, attack the seeds of the fig: the best plan of getting rid of them, is to bury a slip of mastich, turned upside down, in the same trench. The fig, too, is rendered extremely productive by soaking red earth in amurca, and laying it, with some manure, upon the roots of the tree, just as it is beginning to throw out leaves. Among the wild figs, the black ones, and those which grow in rocky places, are the most esteemed, from the fact of the fruit containing the most seed. Caprification takes place most advantageously just after rain.

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CHAP. 45.

ERRORS THAT MAY BE COMMITTED IN PRUNING.

But, before everything, especial care should be taken that intended remedies are not productive of ill results; as these may arise from either remedial measures being applied in excess or at unseasonable times. Clearing away the branches is of the greatest benefit to trees, but to slaughter them this way every year, is productive of the very worst results. The vine is the only tree that requires lopping every year, the myrtle, the pomegranate, and olive every other; the reason being that these trees shoot with great rapidity. The other trees are lopped less frequently, and none of them in autumn; the trunk even is never scraped, except in spring. In prun- ing a tree, all that is removed beyond what is absolutely necessary, is so much withdrawn from its vitality.

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CHAP. 46.

THE PROPER MODE OF MANURING TREES.

The same precautions, too, are to be regarded in manuring. Though manure is grateful to the tree, still it is necessary to be careful not to apply it while the sun is hot, or while it is too new, or more stimulating than is absolutely necessary. The dung of swine will burn up the vine, if used at shorter intervals than those of five years; unless, indeed, it is mixed with water. The same is the case, too, with the refuse of the cur- rier's workshop, unless it is well diluted with water: manure will scorch also, if laid on land too plentifully. It is generally considered the proper proportion, to use three modii to every ten feet square; this, however, the nature of the soil must decide.

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CHAP. 47.

-MEDICAMENTS FOR TREES.

Wounds and incisions of trees are treated also with pigeon dung and swine manure. If pomegranates are acid, the roots of the tree are cleared, and swine's dung is applied to them: the result is, that in the first year the fruit will have a vinous flavour, but in the succeeding one it will be sweet. Some persons are of opinion that the pomegranate should be watered four times a year with a mixture of human urine and water, at the rate of an amphora to each tree; or else that the ex- tremities of the branches should be sprinkled with silphium steeped in wine. The stalk of the pomegranate should be twisted, if it is found to split while on the tree. The fig, too, should be drenched with the amurca of olives, and other trees when they are ailing, with lees of wine; or else lupines may be sown about the roots. The water, too, of a decoction of lupines is beneficial to the fruit, if poured upon the roots of the tree. When it thunders at the time of the Vulcanalia, the figs fall off; the only remedy for which is to have the area beneath ready covered with barley-straw. Lime applied to the roots of the tree makes cherries come sooner to maturity, and ripen more rapidly. The best plan, too, with the cherry, as with all other kinds, is to thin the fruit, so that that which is left behind may grow all the larger.

(28.) There are some trees, again, which thrive all the better for being maltreated, or else are stimulated by pungent substances; the palm and the mastich for instance, which derive nutriment from salt water. Ashes have the same virtues as salt, only in a more modified degree; for which reason it is, that fig-trees are sprinkled with them; as also with rue, to keep away worms, and to prevent the roots from rotting. What is still more even, it is recommended to throw salt water on the roots of vines, if they are too full of humours; and if the fruit falls off, to sprinkle them with ashes and vinegar, or with sandarach if the grapes are rotting. If, again, a vine is not productive, it should be sprinkled and rubbed with strong vinegar and ashes; and if the grapes, instead of ripening, dry and shrivel up, the vine should

be lopped near the roots, and the wound and fibres drenched with strong vinegar and stale urine; after which, the roots should be covered up with mud annealed with these liquids, and the ground spaded repeatedly.

As to the olive, if it gives promise of but little fruit, the roots should be bared, and left exposed to the winter cold, a mode of treatment for which it is all the better.

All these operations depend each year upon the state of the weather, and require to be sometimes retarded, and at other times precipitated. The very element of fire even has its own utility, in the case of the reed for instance; which, after the reed-bed has been burnt, will spring up all the thicker and more pliable.

Cato, too, gives receipts for certain medicaments, specifying the proportions as well; for the roots of the large trees he prescribes an amphora, and for those of the smaller ones, an urna, of amphora of olives, mixed with water in equal proportions, recommending the roots to be cleared, and the mixture to be gradually poured upon them. In addition to this, in the case of the olive and the fig, he recommends that a layer of straw should be first placed around them. In the fig, too, more particularly, he says that in spring the roots should be well moulded up; the result of which is, that the fruit will not fall off while green, and the tree will be all the more productive, and not affected with roughness of the bark. In the same way, too, to prevent the vine-fretter from attacking the tree, he recommends that two congii of amurca of olives should be boiled down to the consistency of honey, after which it must be boiled again with one-third part of bitumen, and one-fourth of sulphur; and this should be done, he says, in the open air, for fear of its igniting if prepared in-doors; with this mixture, the vine is to be anointed at the ends of the branches and at the axils; after which, no more fretters will be seen. Some persons are content to make a fumigation with this mixture while the wind is blowing towards the vine, for three days in succession.

Many persons, again, attribute no less utility and nutritious virtue to urine than Cato does to amurca; only they add to it an equal proportion of water, it being injurious if employed by itself. Some give the name of " volucre" to an insect which eats away the young

grapes: to prevent this, they rub the pruning-knife, every time it is sharpened, upon a beaver-skin, and then prune the tree with it: it is recommended also, that after the pruning, the knife should be well rubbed with the blood of a bear. Ants, too, are a great pest to trees; they are kept away, however, by smearing the trunk with red earth and tar: if a fish, too, is hung up in the vicinity of the tree, these insects will collect in that one spot. Another method, again, is to pound lupines in oil, and anoint the roots with the mixture. Many people kill both ants as well as moles with amurca, and preserve apples from caterpillars as well as from rotting, by touching the top of the tree with the gall of a green lizard.

Another method, too, of preventing caterpillars, is to make a woman, with her monthly courses on her, go round each tree, barefooted and ungirt. Again, for the purpose of pre- venting animals from doing mischief by browsing upon the leaves, they should be sprinkled with cow-dung each time after rain, the showers having the effect of washing away the virtues of this application.

The industry of man has really made some very wonderful discoveries, and, indeed, has gone so far as to lead many persons to believe, that hail-storms may be averted by means of a certain charm, the words of which I really could not venture seriously to transcribe; although we find that Cato has given those which are employed as a charm for sprained limbs, employing splints of reed in conjunction with it. The same author, too, has allowed of consecrated trees and groves being cut down, after a sacrifice has first been offered: the form of prayer, and the rest of the proceedings, will be found fully set forth in the same work of his.

SUMMARY. — Remarkable facts, narratives; and observations, eight hundred and eighty.

ROMAN AUTHORS QUOTED. — Cornelius Nepos, Cato the Censor, M. Varro, Celsus, Virgil, virginus, Saserna father and son, Scrofa, Calpurnius Bassus, Trogus, Æmilius Macer, Græcinus, Columella, Atticus Julius, Fabianus, Mamilius Sura, Dossenus Mundus, C. Epidius, L. Piso.

FOREIGN AUTHORS QUOTED. — Hesiod, Theophrastus, Aristotle, Democritus, Theopompus, King Hiero, King Attalus Philometor, King Archelaus, Archytas, Xenophon, Amphilochus of

Athens, Anaxipolis of Thasos, Apollodorus of Lemnos, Aristophanes of Miletus, Antigonus of Cymæ, Agathocles of Chios, Apollonius Pergamus, Bacchius of Miletus, Bion of Soli, Chæreas of Athens, Chæristus of Athens, Diodorus of Priene, Dion of Colophon, Epigenes of Rhodes, Euagon of Thasos, Euphronius of Athens, Androtion who wrote on Agriculture, Æschrion who wrote on Agriculture, Lysimachus who wrote on Agriculture, Dionysius who translated Mago, Diophanes who made an Epitome of Dionysius, Aristander who wrote on Portents.

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BOOK XVIII. THE NATURAL HISTORY OF GRAIN.

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CHAP. 1. (1.)

TASTE OF THE ANCIENTS FOR AGRICULTURE.

WE now pass on to the Natural History of the various grains, of the garden plants and flowers, and indeed of all the other productions, with the exception of the trees and shrubs, which the Earth, in her bounteousness, affords us — a boundless field for contemplation, if even we regard the herbs alone, when we take into consideration the varieties of them, their numbers, the flowers they produce, their odours, their colours, their juices, and the numerous properties they possess — all of which have been engendered by her with a view to either the preservation or the gratification of the human race.

On entering, however, upon this branch of my subject, it is my wish in the first place to plead the cause of the Earth, and to act as the advocate of her who is the common parent of all, although in the earlier part of this work I have already had occasion to speak in her defence. For my subject matter, as I proceed in the fulfillment of my task, will now lead me to consider her in the light of being the producer of various noxious substances as well; in consequence of which it is that we are in the habit of charging her with our crimes, and imputing to her a guilt that is our own. She has produced poisons, it is true; but who is it but man that has found them out? For the birds of the air and the beasts of the field, it is sufficient to be on their guard against them, and to keep at a distance from them. The elephant, we find, and the gurus, know how to sharpen and renovate their teeth against the trunks of trees, and the rhinoceros against rocks; wild boars, again, point their tusks like so many poniards by the aid of both rocks and trees; and all animals, in fact, are aware how to prepare themselves for the infliction of injury upon others; but still, which is there among them all, with the exception of man, that dips his weapons in poison? As for ourselves, we envenom the point of the arrow, and we contrive to add to the destructive powers of iron itself; by the aid of poisons we taint the waters of the stream, and we infect the various elements of Nature; indeed, the very air even, which is the main support of life, we turn into a medium for the

destruction of life.

And it is not that we are to suppose that animals are ignorant of these means of defence, for we have already had occasion to point out the preparations which they make against the attacks of the serpent, and the methods they devise for effecting a cure when wounded by it; and yet, among them all, there is not one that fights by the aid of the poison that belongs to another, with the sole exception of man. Let us then candidly confess our guilt, we who are not contented even with the poisons as Nature has produced them; for by far the greater portion of them, in fact, are artificially prepared by the human hand!

And then besides, is it not the fact, that there are many men, the very existence of whom is a baneful poison, as it were? Like that of the serpent, they dart their livid tongue, and the venom of their disposition corrodes every object upon which it concentrates itself. Ever vilifying and maligning, like the ill-omened birds of the night, they disturb the repose of that darkness which is so peculiarly their own, and break in upon the quiet of the night even, by their moans and wailings, the only sounds they are ever heard to emit. Like animals of inauspicious presage, they only cross our path to prevent us from employing our energies or becoming useful to our fellow-men; and the only enjoyment that is sought by their abominable aspirations is centred in their universal hatred of mankind.

Still, however, even in this respect Nature has asserted her majestic sway; for how much more numerous are the good and estimable characters which she has produced! just in the same proportion that we find her giving birth to productions which are at once both salutary and nutritious to man. It is in our high esteem for men such as these, and the commendations they bestow, that we shall be content to leave the others, like so many brakes and brambles, to the devouring flames of their own bad passions, and to persist in promoting the welfare of the human race; and this, with all the more energy and perseverance, from the circumstance that it has been our object throughout, rather to produce a work of lasting utility than to ensure ourselves a widely-spread renown. We have only to speak, it is true, of the fields and of rustic operations; but still, it is upon these that the enjoyment of life so materially depends, and that the ancients

conferred the very highest rank in their honors and commendations.

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CHAP. 2. (2.)

WHEN THE FIRST WREATHS OF CORN WERE USED AT ROME.

Romulus was the first who established the Arval priesthood at Rome. This order consisted of the eleven sons of Accra Placentia, his nurse, together with Romulus himself, who assumed the appellation of the twelfth of the brotherhood. Upon this priesthood he bestowed, as being the most august dis- tinction that he could confer upon it, a wreath of years of corn, tied together with a white fillet; and this in fact, was the first chaplet that was ever used at Rome.This dignity is only ended with life itself, and whether in exile or in captivity, it always attends its owner. In those early days, two jugera of land were considered enough for a citizen of Rome, and to none was a larger portion than this allotted. And yet, at the present day, men who but lately were the slaves of the Emperor Nero have been hardly content with pleasure-gardens that occupied the same space as this; while they must have fishponds, forsooth, of still greater extent, and in some instances I might add, perhaps, kitchens even as well.

Numa first established the custom of offering corn to the gods, and of propitiating them with the salted cake; he was the first, too, as we learn from Hemina, to parch spelt, from the fact that, when in this state, it is more wholesome as an aliment This method, however, he could only establish one way: by making an enactment, to the effect that spelt is not in a pure state for offering, except when parched. He it was, too, who instituted the Fornacalia, festivals appropriated for the parching of corn, and others, observed with equal solemnity, for the erection and preservation of the “termini,” or boundaries of the fields: for these termini, in those days, they particularly regarded as gods; while to other divinities they gave the names of Seia, from “sero,” “to sow,” and of Segesta, from tile “segetes,” or “crops of standing corn,” the statues of which goddesses we still see erected in the Circus. A third divinity it is forbidden by the rules of our religion to name even beneath a roof. In former days, too, they would not so much as taste the corn when newly cut, nor yet wine when just made, before the priests had made a libation of the first-fruits.

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CHAP. 3. (3.

THE JUGERUM OF LAND.

That portion of land used to be known as a "jugerum," which was capable of being ploughed by a single "jugum," or yoke of oxen, in one day; an "actus" being as much as the oxen could plough at a single spell, fairly estimated, without stopping. This last was one hundred and twenty feet in length; and two in length made a jugerum. The most considerable recompense that could be bestowed upon generals and valiant citizens, was the utmost extent of land around which a person could trace a furrow with the plough in a single day. The whole population, too, used to contribute a quarter of a sextarius of spelt, or else half a one, per head.

From agriculture the earliest surnames were derived. Thus, for instance, the name of Pilumnus was given to him who invented the "pilum," or pestle of the bake-house, for pounding corn; that of Piso was derived from "piso," to grind corn; and those of Fabius, Lentulus, and Cicero, from the several varieties of leguminous plants in the cultivation of which respectively these individuals excelled. One individual of the family of the Junii received the name of "Bubuleus," from the skill he displayed in breeding oxen. Among the sacred ceremonials, too, there was nothing that was held more holy than the marriage by confarreation, and the woman just married used to present a cake made of spelt. Careless cultivation of the land was in those times an offence that came under the cognizance of the censors; and, as we learn from Cato, when it was said that such and such a man was a good agriculturist or a good husbandman, it was looked upon as the very highest compliment that could be paid him. A man came to be called "locuples," or "rich," from being "loci plenus," or "full of earth." Money, too, received its name of "pecunia," from "pecus," "cattle." At the present day, even, in the registers of the censors, we find set down under the head of "pascua," or "pasture lands," everything from which the public revenues are derived, from the fact that for a long period of time pasture lands were the only sources of the public revenue. Fines, too, were only

imposed in the shape of paying so many sheep or so many oxen; and the benevolent spirit of the ancient laws deserves remark, which most considerately enjoined that the magistrate, when he in- flicted a penalty, should never impose a fine of an ox before having first condemned the same party to the payment of a sheep.

Those who celebrated the public games in honour of the ox received the name of Bubetii. King Servius was the first who impressed upon our copper coin the figures of sheep and oxen. To depasture cattle secretly by night upon the unripe crops on plough lands, or to cut them in that state, was made by the Twelve Tables a capital offence in the case of an adult; and it was enacted that the person guilty of it should be hanged, in order to make due reparation to the goddess Ceres, a punishment more severe, even, than that inflicted for murder. If, on the other hand, the offender was not an adult, he was beaten at the discretion of the prætor; a penalty double the amount of the damage was also exacted.

The various ranks, too, and distinctions in the state had no other origin than the pursuits of agriculture. The rural tribes held the foremost rank, and were composed of those who possessed lands; while those of the city, a place to which it was looked upon as ignominious to be transferred, had the discredit thrown upon them of being an indolent race. Hence it was that these last were only four in number, and received their names from the several parts of the City which they respectively inhabited; being the Suburran, the Palatine, Colline, and Exquiline tribes. Every ninth day the rural tribes used to visit the city for the purpose of marketing, and it was for this reason that it was made illegal to hold the comitia upon the Nundinaæ; the object being that the country people might not be called away thereby from the transaction of their business. In those days repose and sleep were enjoyed upon straw. Even to glory itself, in compliment to corn, the name was given of “adorea.”

For my own part, I greatly admire the modes of expression employed in our ancient language: thus, for instance, we read in the Commentaries of the Priesthood to the follow- ing effect:— “For deriving an augury from the sacrifice of a bitch, a day should be set apart before the ear of corn appears from out of the sheath, and then again before it enters the sheath.”

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CHAP. 4.

HOW OFTEN AND ON WHAT OCCASIONS CORN HAS SOLD AT A REMARKABLY LOW PRICE.

The consequence was, that when the Roman manners were such as these, the corn that Italy produced was sufficient for its wants, and it had to be indebted to no province for its food; and not only this, but the price of provisions was incredibly cheap. Manius Marcius, the ædile of the people, was the first who gave corn to the people at the price of one as for the modius. L. Minutius Augurinus, the same who detected, when eleventh tribune of the people, the projects of Spurius Mælius, reduced the price of corn on three market days, to one as per modius; for which reason a statue was erected in honour of him, by public subscription, without the Trigeminian Gate. T. Seius distributed corn to the people, in his ædileship, at one as per modius, in remembrance of which statues were erected in honour of him also in the Capitol and the Palatium: on the day of his funeral he was borne to the pile on the shoulders of the Roman people. In the year, too, in which the Mother of the Gods was brought to Rome, the harvest of that summer, it is said, was more abundant than it had been for ten years before. M. Yarro informs us, that in the year in which L. Metellus exhibited so many elephants in his triumphal procession, a modius of spelt was sold for one as, which was the standard price also of a congius of wine, thirty pounds' weight of dried figs, ten pounds of olive oil, and twelve pounds of flesh meat. Nor did this cheapness originate in the wide-spread domains of individuals encroaching continually upon their neighbours, for by a law proposed by Licinius Stolo, the landed property of each individual was limited to five hundred jugera; and he himself was convicted under his own law of being the owner of more than that amount, having as a disguise prevailed upon his son to lend him his name. Such were the prices of commodities at a time when the fortunes of the republic were rapidly on the increase. The words, too, that were uttered by Manius Curius after his triumphs and the addition of an immense extent of territory to the Roman sway, are

well known: “The man must be looked upon,” said he, “as a dangerous citizen, for whom seven jugera of land are not enough;” such being the amount of land that had been allotted to the people after the expulsion of the kings.

What, then, was the cause of a fertility so remarkable as this? The fact, we have every reason to believe, that in those days the lands were tilled by the hands of generals even, the soil exulting beneath a plough-share crowned with wreaths of laurel, and guided by a husbandman graced with triumphs: whether it is that they tended the seed with the same care that they had displayed in the conduct of wars, and manifested the same diligent attention in the management of their fields that they had done in the arrangement of the camp, or whether it is that under the hands of honest men everything prospers all the better, from being attended to with a scrupulous exactness. The honours awarded to Serranus found him engaged in sowing his fields, a circumstance to which he owes his surname. Cincinnatus was ploughing his four jugera of land upon the Vaticanian Hill — the same that are still known as the “Quintian Meadows,” when the messenger brought him the dictatorship — finding him, the tradition says, stripped to the work, and his very face begrimed with dust. “Put on your clothes,” said he, “that I may deliver to you the mandates of the senate and people of Rome.” In those days these messengers bore the name of “viator,” or “wayfarer,” from the circumstance that their usual employ- ment was to fetch the senators and generals from their fields.

But at the present day these same lands are tilled by slaves whose legs are in chains, by the hands of malefactors and men with a branded face! And yet the Earth is not deaf to our adjurations, when we address her by the name of “parent,” and say that she receives our homage in being tilled by hands such as these; as though, forsooth, we ought not to believe that she is reluctant and indignant at being tended in such a manner as this! Indeed, ought we to feel any surprise were the recompense she gives us when worked by chastised slaves, not the same that she used to bestow upon the labours of warriors?

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CHAP. 5.

ILLUSTRIOUS MEN WHO HAVE WRITTEN UPON AGRICULTURE.

Hence it was that to give precepts upon agriculture became one of the principal occupations among men of the highest rank, and that in foreign nations even. For among those who have written on this subject we find the names of kings even, Hiero, for instance, Attalus Philometor, and Archelaüs, as well as of generals, Xenophon, for example, and Mago the Carthaginian. Indeed, to this last writer did the Roman senate award such high honours, that, after the capture of Carthage, when it bestowed the libraries of that city upon the petty kings of Africa, it gave orders, in his case only, that his thirty-two Books should be translated into the Latin language, and this, although M. Cato had already compiled his Book of Precepts; it took every care also to entrust the execution of this task to men who were well versed in the Carthaginian tongue, among whom was pre-eminent D. Silanus, a member of one of the most illustrious families of Rome. I have already indicated, at the commencement of this work, the numerous learned authors and writers in verse, together with other illustrious men, whose authority it is any intention to follow; but among the number I may here more particularly distinguish M. Yarro, who, at the advanced age of eighty-eight years, thought it his duty to publish a treatise upon this subject.

(4.) Among the Romans the cultivation of the vine was introduced at a comparatively recent period, and at first, as indeed they were obliged to do, they paid their sole attention to the culture of the fields. The various methods of cultivating the land will now be our subject; and they shall be treated of by us in no ordinary or superficial manner, but in the same spirit in which we have hitherto written; enquiry shall be made with every care first into the usages of ancient days, and then into the discoveries of more recent times, our attention being devoted alike to the primary causes of these operations, and the reasons upon which they are respectively based. We shall make mention, too, of the various constellations, and of the several indications which, beyond all doubt, they afford to the earth;

and the more so, from the fact that those writers who have hitherto treated of them with any degree of exact- ness, seem to have written their works for the use of any class of men but the agriculturist.

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CHAP. 6.

POINTS TO BE OBSERVED IN BUYING LAND.

First of all, then, I shall proceed in a great measure according to the dicta of the oracles of agriculture; for there is no branch of practical life in which we find them more numerous or more unerring. And why should we not view in the light of oracles those precepts which have been tested by the infallibility of time and the truthfulness of experience?

(5.) To make a beginning, then, with Cato— "The agricul- tural population," says he, "produces the bravest men, the most valiant soldiers, and a class of citizens the least given of all to evil designs. — Do not be too eager in buying a farm. — In rural operations never be sparing of your trouble, and, above all, when you are purchasing land. — A bad bargain is always a ground for repentance. — Those who are about to purchase land, should always have an eye more particularly to the water there, the roads, and the neighbourhood." Each of these points is susceptible of a very extended explanation, and replete with undoubted truths. Cato recommends, too, that an eye should be given to the people in the neighbourhood, to see how they look: "For where the land is good," says he, "the people will look well-conditioned and healthy."

Atilius Regulus, the same who was twice consul in the Punic War, used to say that a person should neither buy an unhealthy piece of land in the most fertile locality, nor yet the very healthiest spot if in a barren country. The salubrity of land, however, is not always to be judged of from the looks of the inhabitants, for those who are well-seasoned are able to withstand the effects of living in pestilent localities even. And then, besides, there are some localities that are healthy during certain periods of the year only; though, in reality, there is no soil that can be looked upon as really valuable that is not healthy all the year through. "That is sure to be bad land against which its owner has a continual struggle." Cato recommends us before everything, to see that the land which we are about to purchase not only excels in the advantages of locality, as already

stated, but is really good of itself We should see, too, he says, that there is an abundance of manual labour in the neighbourhood, as well as a thriving town; that there are either rivers or roads, to facilitate the carriage of the produce; that the buildings upon the land are substantially erected, and that the land itself bears every mark of having been carefully tilled — a point upon which I find that many persons are greatly mistaken, as they are apt to imagine that the negligence of the previous owner is greatly to the purchaser's advantage; while the fact is, that there is nothing more expensive than the cultivation of a neglected soil.

For this reason it is that Cato says that it is best to buy land of a careful proprietor, and that the methods adopted by others ought not to be hastily rejected — that it is the same with land as with mankind — however great the proceeds, if at the same time it is lavish and extravagant, there will be no great profits left. Cato looks upon a vineyard as the most profitable investment; and he is far from wrong in that opinion, seeing that he takes such particular care to retrench all superfluous expenses. In the second rank he places gardens that have a good supply of water, and with good reason, too, supposing always that they are near a town. The ancients gave to meadow lands the name of "parata," or lands "always ready."

Cato being asked, on one occasion, what was the most certain source of profit, "Good pasture land," was his answer; upon which, enquiry was made what was the next best. "Pretty good pasture lands," said he — the amount of all which is, that he looked upon that as the most certain source of income which stands in need of the smallest outlay. This, however, will naturally vary in degree, according to the nature of the respective localities; and the same is the case with the maxim to which he gives utterance, that a good agriculturist must be fond of selling. The same, too, with his remark, that in his youth a landowner should begin to plant without delay, but that he ought not to build until the land is fully brought into cultivation, and then only a little at a time: and that the best plan is, as the common proverb has it, "To profit by the folly of others;" taking due care, however, that the keeping up of a farm-house does not entail too much expense. Still, however, those persons are guilty of no falsehood who are in the habit of saying that a proprietor who

is well housed comes all the oftener to his fields, and that “the master’s forehead is of more use than his back.”

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CHAP. 7. (6.)

THE PROPER ARRANGEMENTS FOR A FARM-HOUSE.

The proper plan to be pursued is this: the farm-house must not be unsuitable for the farm, nor the farm for the house; and we must be on our guard against following the examples of L. Lucullus and Q. Scævola, who, though living in the same age, fell into the two opposite extremes; for whereas the farm-house of Scævola was not large enough for the produce of his farm, the farm of Lucullus was not sufficiently large for the house he built upon it; an error which gave occasion to the reproof of the censors, that on his farm there was less of ground for ploughing than of floor for sweeping. The proper arrange- ments for a farm-house are not to be made without a certain degree of skill. C. Marius, who was seven times consul, was the last person who had one built at Misenum; but he erected it with such a degree of that artistic skill which he had displayed in castrametation, that Sylla Felix even made the remark, that in comparison with Marius, all the others had been no better than blind.

It is generally agreed, that a farm-house ought neither to be built near a marsh, nor with a river in front of it; for, as Homer has remarked, with the greatest correctness, unwholesome vapours are always exhaled from rivers before the rising of the sun. In hot localities, a farm-house should have a northern aspect, but where it is cold, it should look towards the south; where, on the other hand, the site is temperate, the house should look due east. Although, when speaking of the best kinds of soil, I may seem to have sufficiently discussed the characteristics by which it may be known, I shall take the present opportunity of adding a few more indications, employing the words of Cato more particularly for the purpose. “The dwarf-elder,” says he, “the wild plum, the bramble, the small bulb, trefoil, meadow grass, the quercus, and the wild pear and wild apple, are all of them indicative of a corn land. The same is the case, too, where the land is black, or of an ashy colour. All chalky soils are scorching, unless they are very thin; the same, too, with sand, unless it is remarkably fine. These remarks, however, are more applicable to

champaign localities than declivities."

The ancients were of opinion, that before everything, moderation should be observed in the extent of a farm; for it was a favourite maxim of theirs, that we ought to sow the less, and plough the more: such too, I find, was the opinion entertained by Virgil, and indeed, if we must confess the truth, it is the wide-spread domains that have been the ruin of Italy, and soon will be that of the provinces as well. Six proprietors were in possession of one half of Africa, at the period when the Emperor Nero had them put to death. With that greatness of mind which was so peculiarly his own, and of which he ought not to lose the credit, Cneius Pompeius would never purchase the lands that belonged to a neighbour. Mago has stated it as his opinion, that a person, on buying a farm, ought at once to sell his town house; an opinion, however, which savours of too great rigidity, and is by no means conformable to the public good. It is with these words, indeed, that he begins his precepts; a good proof, at all events, that he looks upon the personal inspection of the owner as of primary importance.

The next point which requires our care is to employ a farmsteward of experience, and upon this, too, Cato has given many useful precepts. Still, however, it must suffice for me to say that the steward ought to be a man nearly as clever as his master, though without appearing to know it. It is the very worst plan of all, to have land tilled by slaves let loose from the houses of correction, as, indeed, is the case with all work entrusted to men who live without hope. I may possibly appear guilty of some degree of rashness in making mention of a maxim of the ancients, which will very probably be looked upon as quite incredible— "That nothing is so disadvantageous as to cultivate land in the highest style of perfection." L. Tarius Rufus, a man who, born in the very lowest ranks of life, by his military talents finally attained the consulship, and who in other respects adhered to the old-fashioned notions of thriftiness, made away with about one hundred millions of sesterces, which, by the liberality of the late Emperor Augustus, he had contrived to amass, in buying up lands in Picenum, and cultivating them in the highest style, his object being to gain a name thereby; the consequence of which was, that his heir renounced the inheritance. Are we of opinion, then, that ruin and starvation must be the necessary consequence of such a course as

this? Yes, by Hercules! and the very best plan of all is to let moderation guide our judgment in all things. To cultivate land well is absolutely necessary, but to cultivate it in the very highest style is mere extravagance, unless, indeed, the work is done by the hands of a man's own family, his tenants, or those whom he is obliged to keep at any rate. But besides this, even when the owner tills the land itself, there are some crops which it is really not worth the while to gather, if we only take into account the manual labour expended upon them. The olive, too, should never be too highly cultivated, nor must certain soils, it is said, be too carefully tilled, those of Sicily, for instance; hence it is, that new comers there so often find themselves deceived.

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CHAP. 8.

MAXIMS OF THE ANCIENTS ON AGRICULTURE.

In what way, then, can land be most profitably cultivated? Why, in the words of our agricultural oracles, "by making good out of bad." But here it is only right that we should say a word in justification of our forefathers, who in their precepts on this subject had nothing else in view but the benefit of mankind: for when they use the term "bad" here, they only mean to say that which costs the smallest amount of money. The principal object with them was in all cases to cut down expenses to the lowest possible sum; and it was in this spirit that they made the enactments which pronounced it criminal for a person who had enjoyed a triumph, to be in possession, among his other furniture, of ten pounds' weight of silver plate: which permitted a man, upon the death of his farmsteward, to abandon all his victories, and return to the cultivation of his lands — such being the men the culture of whose farms the state used to take upon itself; and thus, while they led our armies, did the senate act as their steward.

It was in the same spirit, too, that those oracles of ours have given utterance to these other precepts, to the effect that he is a bad agriculturist who has to buy what his farm might have supplied him with; that the man is a bad manager who does in the day-time what he might have done in the night, except, indeed, when the state of the weather does not allow it; that he is a worse manager still, who does on a work-day what he might have done on a feast-day; but that he is the very worst of all, who works under cover in fine weather, instead of labouring in the fields.

I cannot refrain from taking the present opportunity of quoting one illustration afforded us by ancient times, from which it will be found that it was the usage in those days to bring before the people even questions connected with the various methods employed in agriculture, and will be seen in what way men were accustomed to speak out in their own defence. C. Furius Chresimus, a freedman, having found himself able, from a very small piece of land, to raise far more abundant harvests than his neighbours could from the

largest farms, became the object of very considerable jealousy among them, and was accordingly accused of enticing away the crops of others by the practice of sorcery. Upon this, a day was named by Spurius Calvinus, the curule ædile, for his appearance. Apprehensive of being condemned, when the question came to be put to the vote among the tribes, he had all his implements of husbandry brought into the Forum, together with his farm servants, robust, Well-conditioned, and well-clad people, Piso says. The iron tools were of first-rate quality, the mattocks were stout and strong, the plough-shares ponderous and substantial, and the oxen sleek and in prime condition. When all this had been done, "Here, Roman citizens," said he, "are my implements of magic; but it is impossible for me to exhibit to your view, or to bring into this Forum, those midnight toils of mine, those early watchings those sweats, and those fatigues." Upon this, by the unanimous voice of the people, he was immediately acquitted. Agriculture, in fact, depends upon the expenditure of labour and exertion; and hence it is that the ancients were in the habit of saying, that it is the eye of the master that does more towards fertilizing a field than anything else.

We shall give the rest of these precepts in their appropriate places, according as we find them adapted to each variety of cultivation; but in the meantime we must not omit some of a general nature, which here recur to our recollection, and more particularly that maxim of Cato, as profitable as it is humane: "Always act in such away as to secure the love of your neighbours." He then proceeds to state his reasons for giving this advice, but it appears to me that no one surley can entertain the slightest doubt upon the subject. One of the very first recommendations that he gives is to take every care that the farm servants are kept in good condition. It is a maxim universally agreæd upon in agriculture, that nothing must be done too late; and again, that everything must be done at its proper season; while there is a third precept, which reminds us that opportunities lost can never be regained. The male- diction uttered by Cato against rotten ground has been treated of at some length already; but there is another precept which he is never tired of repeating, "Whatever can be done by the help of the ass, will cost the least money."

Fern will be sure to die at the end of a couple of years, if you

prevent it from putting forth leaves; the most efficient method of ensuring this is to beat the branches with a stick while they are in bud; for then the juices that drop from it will kill the roots. It is said, too, that fern will not spring up again if it is pulled up by the roots about the turn of the summer solstice, or if the stalks are cut with the edge of a reed, or if it is turned up with a plough-share with a reed placed upon it. In the same way, too, we are told that reeds may be effectually ploughed up, if care is taken to place a stalk of fern upon the share. A field infested with rushes should be turned up with the spade, or, if the locality is stony, with a two-pronged mattock: overgrown shrubs are best removed by fire. Where ground is too moist, it is an advantageous plan to cut trenches in it and so drain it; where the soil is cretaceous, these trenches should be left open; and where it is loose, they should be strengthened with a hedge to prevent them from falling in. When these drains are made on a declivity, they should have a layer of gutter tiles at the bottom, or else house tiles with the face upwards: in some cases, too, they should be covered with earth, and made to run into others of a larger size and wider; the bottom, also, should, if possible, have a coating of stones or of gravel. The openings, too, should be strengthened with two stones placed on either side, and another laid upon the top. Democritus has described a method of rooting up a forest, by first macerating the flower of the lupine for one day in the juice of hemlock, and then watering the roots of the trees with it.

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CHAP. 9. (7.)

THE DIFFERENT KINDS OF GRAIN.

As the field is now prepared, we shall proceed to speak of the nature of the various kinds of grain; we must premise, however, that there are two principal classes of grain, the cereals, comprising wheat and barley, and the legumina, such as the bean and the chick-pea, for instance. The difference between these two classes is too well known to require any further description.

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CHAP. 10.

THE HISTORY OF the VARIOUS KINDS OF GRAIN.

The cereals are divided again into the same number of varieties, according to the time of the year at which they are sown. The winter grains are those which are put in the ground about the setting of the Vergiliæ, and there receive their nutriment throughout the winter, for instance, wheat, spelt, and barley. The summer grains are those which are sown in summer, before the rising of the Vergiliæ, such as millet, panic, sesame, horminum, and irio, in accordance, however, with the usage of Italy only; for in Greece and Asia all the grains are sown just after the setting of the Vergiliæ. There are some, again, that aræ sown at either season in Italy, and others at a third period, or, ill other words, in the spring. Some authors give the name of spring- grain to millet, panic, lentils, chick-peas, and alica, while they call wheat, barely, beans, turnips, and rape, sementive or early sowing seeds. Certain species of wheat are only sown to make fodder for cattle, and are known by the name of "farrago," or mixed grain; the same, too, with the leguminous plants, the vetch, for instance. The lupine. however, is grown in common as food for both cattle and men.

All the leguminous plants, with the exception of the bean, have a single root, hard and tough, like wood, and destitute of numerous ramifications; the chick-pea has the deepest root of all. Corn has numerous fibrous roots, but no ramifications. Barley makes its appearance above ground the seventh day after sowing; the leguminous plants on the fourth, or at the very latest, the seventh; the bean from the fifteenth day to the twentieth: though in Egypt the leguminous plants appear as early as the third day after they are sown. In barley, one extremity of the grain throws out the root, and the other the blade; this last flowers, too, before the other grain. In the cereals in general it is the thicker end of the seed that throws out the root, the thinner end the blossom; while in the other seeds both root and blossom issue from the same part.

During the winter, corn is in the blade; but in the spring winter

corn throws out a tall stem. As for millet and panic, they grow with a jointed and grooved stalk, while sesame has a stem resembling that of fennel-giant. The fruit of all these seeds is either contained in an ear, as in wheat and barley, for instance, and protected from the attacks of birds and small animals by a prickly beard bristling like so many plisades; or else it is enclosed in pods, as in the leguminous plants, or in capsules, as in sesame and the poppy. Millet and panic can only be said to belong to the grower and the small birds in common, as they have nothing but a thin membrane to cover them, without the slightest protection. Panic receives that name from the panicule or down that is to be seen upon it; the head of it droops languidly, and the stalk tapers gradually in thickness, being of almost the toughness and consistency of wood: the head is loaded with grain closely packed, there being a tuft upon the top, nearly a foot in length. In millet the husks which embrace the grain bend downward with a wavy tuft upon the edge. There are several varieties of panic, the mammose, for instance, the ears of which are in clusters with small edgings of down, the head of the plant being double; it is distinguished also according to the colour, the white, for instance, the black, the red, and the purple even. Several kinds of bread are made from millet, but very little from panic: there is no grain known that weighs heavier than millet, and which swells more in baking. A modius of millet will yield sixty pounds' weight of bread; and three sextarii steeped in water will make one modius of fermenty. A kind of millet has been introduced from India into Italy within the last ten years, of a swarthy colour, large grain, and a stalk like that of the reed. This stalk springs up to the height of seven feet, and has tufts of a remarkable size, known by the name of "phobæ." This is the most prolific of all the cereals, for from a single grain no less than three sextarii are produced: it requires, however, to be sown in a humid soil.

Some kinds of corn begin to form the ear at the third joint, and others at the fourth, though at its first formation the ear remains still concealed. Wheat, however, has four articulations, spelt six, and barley eight. In the case of these last, the ear does not begin to form before the number of joints, as above mentioned, is complete. Within four or five days, at the very latest, after the ear has given signs of

forming, the plant begins to flower, and in the course of as many days or a little more, sheds its blossom: barley blossoms at the end of seven days at the very latest. Varro says that the grains are perfectly formed at the end of four times nine days from their flowering, and are ready for cutting at the ninth month.

The bean, again, first appears in leaf, and then throws out a stalk, which has no articulations upon it. The other legu- minous plants have a tough, ligneous stalk, and some of them throw out branches, the chick-pea, the fitch, and the lentil, for instance. In some of the leguminous plants, the pea, for example, the stem creeps along the ground, if care is not taken to support it by sticks: if this precaution is omitted, the quality is deteriorated. The bean and the lupine are the only ones among the leguminous plants that have a single stem: in all the others the stem throws out branches, being of a ligneous nature, very thin, and in all cases hollow. Some of these plants throw out the leaves from the root, others at the top. Wheat, barley, and the vetch, all the plants, in fact, which produce straw, have a single leaf only at the summit: in barley, however, this leaf is rough, while in the others it is smooth. * * * In the bean, again, the chick-pea, and the pea, the leaves are numerous and divided. In corn the leaf is similar to that of the reed, while in the bean it is round, as also in a great proportion of the leguminous plants. In the ervilia and the pea the leaf is long, in the kidney-bean veined, and in sesame and irio the colour of blood. The lupine and the poppy are the only ones among these plants that lose their leaves.

The leguminous plants remain a longer time in flower, the fitch and the chick-pea more particularly; but the bean is in blossom the longest of them all, for the flower remains on it forty days; not, indeed, that each stalk retains its blossom for all that length of time, but, as the flower goes off in one, it comes on in another. In the bean, too, the crop is not ripe all at once, as is the case with corn; for the pods make their appearance at different times, at the lowest parts first, the blossom mounting upwards by degrees.

When the blossom is off in corn, the stalk gradually thickens, and it ripens within forty days at the most. The same is the case, too, with

the bean, but the chick-pea takes a much shorter time to ripen; indeed, it is fit for gathering within forty days from the time that it is sown. Millet, panic, sesame, and all the summer grains are ripe within forty days after blossoming with considerable variations, of course, in reference to soil and weather. Thus, in Egypt, we find barley cut at the end of six months, and wheat at the end of seven, from the time of sowing. In Hellas, again, barley is cut in the seventh month, and in Peloponnesus in the eighth; the wheat being got in at a still later period.

Those grains which grow on a stalk of straw are enclosed in an envelope protected by a prickly beard; while in the bean and the leguminous plants in general they are enclosed in pods upon branches which shoot alternately from either side. The cereals are the best able to withstand the winter, but the leguminous plants afford the most substantial food. In wheat, the grain has several coats, but in barley, more particularly, it is naked and exposed; the same, too, with arinca, but most of all, the oat. The stem is taller in wheat than it is in barley, but the ear is more bearded in the last. Wheat, barley, and winter-wheat aræ threshed out; they are cleaned, too, for sowing just as they are prepared for the mill, there being no necessity for parching them. Spelt, on the other hand, millet, and panic, cannot be cleaned without parching them; hence it is that they are always sown raw and with the chaff on. Spelt is preserved in the husk, too, for sowing, and, of course, is not in such case parched by the action of fire.

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CHAP. 11.

SPELT.

Of all these grains barley is the lightest, its weight rarely exceeding fifteen pounds to the modius, while that of the bean is twenty-two. Spelt is much heavier than barley, and wheat heavier than spelt. In Egypt they make a meal of olyra, a third variety of corn that grows there. The Gauls have also a kind of spelt peculiar to that country: they give it the name of “brace,” while to us it is known as “sanldala:” it has a grain of remarkable whiteness. Another difference, again, is the fact that it yields nearly four pounds more of bread to the modius than any other kind of spelt. Verrius states that for three hundred years the Romans made use of no other meal than that of corn.

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CHAP. 12.

WHEAT.

There are numerous kinds of wheat which have received their names from the countries where they were first produced. For my part, however, I can compare no kind of wheat to that of Italy either for whiteness or weight, qualities for which it is more particularly distinguished: indeed it is only with the produce of the more mountainous parts of Italy that the foreign wheats can be put in comparison. Among these the wheat of Bœotia occupies the first rank, that of Sicily the second, and that of Africa the third. The wheats of Thrace, Syria, and, more recently, of Egypt, used to hold the third rank for weight, these facts having been ascertained through the medium of the athletes; whose powers of consumption, equal to those of beasts of burden, have established the gradations in weight, as already stated. Greece, too, held the Pontic wheat in high esteem; but this has not reached Italy as yet. Of all the varieties of grain, however, the Greeks gave the preference to the kinds called dracontion, strangia, and Selinusium, the chief characteristic of which is a stem of remarkable thickness: it was this, in the opinion of the Greeks, that marked them as the peculiar growth of a rich soil. On the other hand, they recommended for sowing in humid soils an extremely light and diminutive species of grain, with a remarkably thin stalk, known to them as speudias, and standing in need of an abundance of nutriment. Such, at all events, were the opi- nions generally entertained in the reign of Alexander the Great, at a time when Greece was at the height of her glory, and the most powerful country in the world. Still, however, nearly one hundred and forty-four years before the death of that prince we find the poet Sophocles, in his Tragedy of "Triptolemus," praising the corn of Italy before all others. The passage, translated word for word, is to the following effect:— "And favour'd Italy grows white with hoary wheat."
And it is this whiteness that is still one of the peculiar merits of the Italian wheat; a circumstance which makes me the more surprised to find that none of the Greek writers of a later period have made any

reference to it.

Of the various kinds of wheat which are imported at the present day into Rome, the lightest in weight are those which come from Gaul and Chersonnesus; for, upon weighing them, it will be found that they do not yield more than twenty pounds to the modius. The grain of Sardinia weighs half a pound more, and that of Alexandria one-third of a pound more than that of Sardinia; the Sicilian wheat is the same in weight as the Alexandrian. The Bœotian wheat, again, weighs a whole pound more than these last, and that of Africa a pound and three quarters. In Italy beyond the Padus, the spelt, to my knowledge, weighs twenty-five pounds to the modius, and, in the vicinity of Clusium, six-and-twenty. We find it a rule, universally established by Nature, that in every kind of commissariat bread that is made, the bread exceeds the weight of the grain by one-third; and in the same way it is generally considered that that is the best kind of wheat, which, in kneading, will absorb one congius of water. There are some kinds of wheat which give, when used by themselves, an additional weight equal to this; the Balearic wheat, for instance, which to a modius of grain yields thirty-five pounds weight of bread. Others, again, will only give this additional weight by being mixed with other kinds, the Cyprian wheat and the Alexandrian, for example; which, if used by themselves, will yield no more than twenty pounds to the modius. The wheat of Cyprus is swarthy, and produces a dark bread; for which reason it is generally mixed with the white wheat of Alexandria; the mixture yielding twenty-five pounds of bread to the modius of grain. The wheat of Thebais, in Egypt, æhen made into bread, yields twenty-six pounds to the modius. To knead the meal with sea-water, as is mostly done in the maritime districts, for the purpose of saving the salt, is extremely pernicious; there is nothing, in fact, that will more readily predispose the human body to disease. In Gaul and Spain, where they make a drink by steeping corn in the way that has been already described — they employ the foam which thickens upon the surface as a leaven: hence it is that the bread in those countries is lighter than that made else- where.

There are some differences, also, in the stem of wheat; for the

better the kind the thicker it is. In Thrace, the stem of the wheat is covered with several coats, which are rendered absolutely necessary by the excessive cold of those regions. It is the cold, also, that led to the discovery there of the three-month wheat, the ground being covered with snow most of the year. At the end mostly of three months after it has been sown, this wheat is ready for cutting, both in Thrace and in other parts of the world as well. This variety is well known, too, throughout all the Alpine range, and in the northern provinces there is no kind of wheat that is more prolific; it has a single stem only, is by no means of large size in any part of it, and is never sown but in a thin, light soil. There is a two-month wheat also found in the vicinity of Ænos, in Thrace, which ripens the fortieth day after sowing; and yet it is a surprising fact, that there is no kind of wheat that weighs heavier than this, while at the same time it produces no bran. Both Sicily and Achaia grow it, in the mountainous districts of those countries; as also Eubœa, in the vicinity of Carystus. So greatly, then, is Columella in error, in supposing that there is no distinct variety of three-month wheat even; the fact being that these varieties have been known from the very earliest times. The Greeks give to these wheats the name of "setanion." It is said that in Bactria the grains of wheat are of such an enormous size, that a single one is as large as our ears of corn.

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CHAP. 13.

BARLEY: RICE.

Of all the cereals the first that is sown is barley. We shall state the appropriate time for sowing each kind when we come to treat of the nature of each individually. In India, there is both a cultivated and a wild barley, from which they make excellent bread, as well as alica. But the most favourite food of all there is rice, from which they prepare a ptisan similar to that made from barley in other parts of the world. The leaves of rice are fleshy, very like those of the leek, but broader; the stem is a cubit in height, the blossom purple, and the root globular, like a pearl in shape.

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CHAP. 14.

POLENTA.

Barley is one of the most ancient aliments of man, a fact that is proved by a custom of the Athenians, mentioned by Menander, as also by the name of “hordearii,” that used to be given to gladiators. The Greeks, too, prefer barley to anything else for making polenta. This food is made in various ways: in Greece, the barley is first steeped in water, and then left a night to dry. The next day they parch it, and then grind it in the mill. Some persons parch it more highly, and then sprinkle it again with a little water; after which they dry it for grinding. Others shake the grain from out of the ear while green, and, aftær cleaning and soaking it in water, pound it in a mortar. They then wash the paste in baskets, and leave it to dry in the sun; after which they pound it again, clean it, and grind it in the mill. But whatever the mode of preparation adopted, the proportions are always twenty pounds of barley to three pounds of linseed, half a pound of coriander, and fifteen drachmæ of salt: the ingredients are first parched, and then ground in the mill.

Those who want it for keeping, store it in new earthen vessels, with fine flour and bran. In Italy, the barley is parched without being steeped in water, and then ground to a fine meal, with the addition of the ingredients already mentioned, and some millet as well. Barley bread, which was extensively used by the ancients, has now fallen into universal disrepute, and is mostly used as a food for cattle only.

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CHAP. 15.

PTISAN.

With barley, too, the food called ptisan is made, a most substantial and salutary aliment, and one that is held in very high esteem. Hippocrates, one of the most famous writers on medical science, has devoted a whole volume to the praises of this aliment. The ptisan of the highest quality is that which is made at Utica; that of Egypt is prepared from a kind of barley, the grain of which grows with two points. In Baltic and Africa, the kind of barley from which this food is made is that which Turranius calls the “smooth” barley: the same author expresses an opinion, too, that olyra and rice are the same. The method of preparing ptisan is universally known.

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CHAP. 16.

TRAGUM.

In a similar manner, too, tragum is prepared from seed wheat, but only in Campania and Egypt.

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CHAP. 17.

AMYLUM.

Amylum is prepared from every kind of wheat, and from winter-wheat as well; but the best of all is that made from three-month wheat. The invention of it we owe to the island of Chios, and still, at the present day, the most esteemed kind comes from there; it derives its name from its being made without the help of the mill. Next to the amylum made with three-month wheat, is that which is prepared from the lighter kinds of wheat. In making it, the grain is soaked in fresh water, placed in wooden vessels; care being taken to keep it covered with the liquid, which is changed no less than five times in the course of the day. If it can be changed at night as well, it is all the better for it, the object being to let it imbibe the water gradually and equally. When it is quitæ soft, but before it turns sour, it is passed through linen cloth, or else wicker-work, after which it is poured out upon a tile covered with leaven, and left to harden in the sun. Next to the amylum of Chios, that of Crete is the most esteemed, and next to that the Ægyptian. The tests of its goodness are its being light and smooth: it should be used, too, while it is fresh. Cato, among our writers, has made mention of it.

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CHAP. 18.

the NATURE OF BARLEY.

Barley-meal, too, is employed for medicinal purposes; and it is a curious fact, that for beasts of burden they make a paste of it, which is first hardened by the action of fire, and then ground. It is then made up into balls, which are introduced with the hand into the paunch, the result of which is, that the vigour and muscular strength of the animal is considerably increased. In some kinds of barley, the ears have two rows of grains, and in others more; in some cases, as many as six. The grain itself, too, presents certain differences, being long and thin, or else short or round, white, black, or, in some instances, of a purple colour. This last kind is employed for making polenta: the white is ill adapted for standing the severity of the weather. Barley is the softest of all the grains: it can only be sown in a dry, loose soil, but fertile withal. The chaff of barley ranks among the very best; indeed, for litter there is none that can be compared with it. Of all grain, barley is the least exposed to accidents, as it is gathered before the time that mildew begins to attack wheat; for which reason it is that the provident agriculturist sows only as much wheat as may be required for food. The saying is, that "barley is sown in a money-bag," because it so soon returns a profit. The most prolific kind of all is that which is got in at Carthage, in Spain, in the month of April. It is in the same month that it is sown in Celtiberia, and yet it yields two harvests in the same year. All kinds of barley are cut sooner than other grain, and immediately after they are ripe; for the straw is extremely brittle, and the grain is enclosed in a husk of remarkable thinness. It is said, too, that a better polenta is made from it, if it is gathered before it is perfectly ripe.

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CHAP. 19. (8.)

ARINCA, AND OTHER KINDS OF GRAIN THAT ARE GROWN IN THE EAST.

The several kinds of corn are not everywhere the same; and even where they are the same, they do not always bear a similar name. The kinds most universally grown are spelt, by the ancients known as "adorea," winter wheat, and wheat; all these being common to many countries. Arinca was originally peculiar to Gaul, though now it is widely diffused over Italy as well. Egypt, too, Syria, Cilicia, Asia, and Greece, have their own peculiar kinds, known by the names of zea, olyra, and wheat. In Egypt, they make a fine flour from wheat of their own growth, but it is by no means equal to that of Italy. Those countries which employ zea, have no spelt. Zea, however, is to be found in Italy, and in Campania more particularly, where it is known by the name of "seed." The grain that bears this name enjoys a very considerable celebrity, as we shall have occasion to state on another occasion; and it is in honour of this that Homer uses the expression, ζείδωρος ἄρουρα, and not, as some suppose, from the fact of the earth giving life. Amylum is made, too, from this grain, but of a coarser quality than the kind already mentioned; this, however, is the only difference that is perceptible.

The most hardy kind, however, of all the grains is spelt, and the best to stand the severity of the weather; it will grow in the very coldest places, as also in localities that are but half tilled, or soils that are extremely hot, and destitute of water. This was the earliest food of the ancient inhabitants of Latium; a strong proof of which is the distributions of adorea that were made in those times, as already stated. It is evident, too, that the Romans subsisted for a long time upon pottage, and not bread; for we find that from its name of "puls," certain kinds of food are known, even at the present day, as "pulmentaria." Ennius, too, the most ancient of our poets, in describing the famine in a siege, relates how that the parents snatched away the messes of pottage from their weeping children. At the present day, even, the sacrifices in conformity with the ancient

rites, as well as those offered upon birthdays, are made with parched pottage. This food appears to have been as much unknown in those days in Greece as polenta was in Italy.

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CHAP. 20.

WINTER WHEAT. SIMILAGO, OR FINE FLOUR.

There is no grain that displays a greater avidity than wheat, and none that absorbs a greater quantity of nutriment. With all propriety I may justly call winter wheat the very choicest of all the varieties of wheat. It is white, destitute of all flavour, and not oppressive to the stomach. It suits moist localities particularly well, such as we find in Italy and Gallia Comata; but beyond the Alps it is found to maintain its character only in the territory of the Allobroges and that of the Memini; for in the other parts of those countries it degenerates at the end of two years into common wheat. The only method of preventing this is to take care and sow the heaviest grains only.

(9.) Winter wheat furnishes bread of the very finest quality and the most esteemed delicacies of the bakers. The best bread that is known in Italy is made from a mixture of Cam- panian winter wheat with that of Pisæ. The Campanian kind is of a redder colour, while the latter is white; when mixed with chalk, it is increased in weight. The proper proportion for the yield of Campanian wheat to the modius of grain is four sextarii of what is known as bolted flour; but when it is used in the rough and has not been bolted, then the yield should be five sextarii of flour. In addition to this, in either case there should be half a modius of white meal, with four sextarii of coarse meal, known as "seconds," and the same quantity of bran. The Pisan wheat produces five sextarii of fine flour to the modius; in other respects it yields the same as that of Campania. The wheat of Clusium and Arretium gives another sextarius of fine flour, but the yield is similar to that of the kinds already mentioned in all other respects. If, however, as much of it as possible is converted into fine wheat meal, the modius will yield sixteen pounds weight of white bread, and three of seconds, with half a modius of bran. These differences, however, depend very materially upon the grinding; for when the grain is ground quite dry it produces more meal, but when sprinkled with salt water a whiter flour, though at the same time a greater quantity of bran. It is very evident that "firina," the name we

give to meal, is derived from “far.” A modius of meal made from Gallic winter wheat, yields twenty-two pounds of bread; while that of Italy, if made into bread baked in tins, will yield two or three pounds more. When the bread is baked in the oven, two pounds must be added in weight in either case.

(10.) Wheat yields a fine flour of the very highest quality. In African wheat the modius ought to yield half a modius of fine flour and five sextarii of pollen, that being the name given to fine wheat meal, in the same way that that of winter wheat is generally known as “fos,” or the “flower.” This fine meal is extensively used in copper works and paper manufactories. In addition to the above, the modius should yield four sextarii of coarse meal, and the same quantity of bran. The finest wheaten flour will yield one hundred and twenty-two pounds of bread, and the fine meal of winter wheat one hundred and seventeen, to the modius of grain. When the prices of grain are moderate, meal sells at forty asses the modius, bolted wheaten flour at eight asses more, and bolted flour of winter wheat, at sixteen asses more. There is another distinction again in fine wheaten flour, which originated formerly in the days of L. Paul’s. There were three classes of wheat; the first of which would appear to have yielded seventeen pounds of bread, the second eighteen, and the third nineteen pounds and a third: to these were added two pounds and a half of seconds, and the same quantity of brown bread, with six sextarii of bran.

Winter wheat never ripens all at once, and yet there is none of the cereals that can so ill brook any delay; it being of so delicate a nature, that the ears directly they are ripe will begin to shed their grain. So long, however, as it is in stalk, it is exposed to fewer risks than other kinds of wheat, from the fact of its always having the ear upright, and not retaining the dew, which is a prolific cause of mildew.

From arinca a bread of remarkable sweetness is made. The grains in this variety lie closer than they do in spelt; the ear, too, is larger and more weighty. It is rarely the case that a modius of this grain does not weigh full sixteen pounds. In Greece they find great difficulty in threshing it; and hence it is that we find Homer saying that it is given to beasts of burden, this being the same as the grain that he calls “olyra.” In Egypt it is threshed without any difficulty,

and is remarkably prolific. Spelt has no beard, and the same is the case with winter wheat, except that known as the Laconion variety. To the kinds already mentioned we have to add bromos, the winter wheat just excepted, and tragos, all of them exotics introduced from the East, and very similar to rice. Tiphe also belongs to the same class, from which in our part of the world a cleaned grain resembling rice is prepared. Among the Greeks, too, there is the grain known as zea; and it is said that this, as well as tiphe, when cleaned from the husk and sown, will degenerate and assume the form of wheat; not immediately, but in the course of three years.

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CHAP. 21.

THE FRUITFULNESS OF AFRICA IN WHEAT.

There is no grain more prolific than wheat, Nature having bestowed upon it this quality, as being the substance which she destined for the principal nutriment of man. A modius of wheat, if the soil is favourable, as at Byzacium, a champaign district of Africa, will yield as much as one hundred and fifty modii of grain. The procurator of the late Emperor Augustus sent him from that place — a fact almost beyond belief — little short of four hundred shoots all springing from a single grain; and we have still in existence his letters on the subject. In a similar manner, too, the procurator of Nero sent him three hundred and sixty stalks all issuing from a single grain. The plains of Leontium in Sicily, and other places in that island, as well as the whole of Bætica, and Egypt more particularly, yield produce a hundred-fold. The most prolific kinds of wheat are the ramose wheat, and that known as the "hun- dred-grain" wheat. Before now, as many as one hundred beans, too, have been found on a single stalk.

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CHAP. 22.

SESAME. ERYSIMUM, OR IRIO. HORMINUTM.

We have spoken of sesame, millet, and panic as belonging to the summer grains. Sesame comes from India, where they extract an oil from it; the colour of its grain is white. Similar in appearance to this is the erysimum of Asia and Greece, and indeed it would be identical with it were it not that the grain is better filled. It is the same grain that is known among us as “irio;” and strictly speaking, ought rather to be classed among the medicaments than the cereals. Of the same nature, too, is the plant called “horminum” by the Greeks, though resembling cummin in appearance; it is sown at the same time as sesame: no animal will eat either this or irio while green.

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CHAP. 23.

THE MODE OF GRINDING CORN.

All the grains aræ not easily broken. In Etruria they first parch the spelt in the ear, and then pound it with a pestle shod with iron at the end. In this instrument the iron is notched at the bottom, sharp ridges running out like the edge of a knife, and concentrating in the form of a star; so that if care is not taken to hold the pestle perpendicularly while pounding, the grains will only be splintered and the iron teeth broken. Throughout the greater part of Italy, however, they employ a pestle that is only rough at the end, and wheels turned by water, by means of which the corn is gradually ground. I shall here set forth the opinions given by Mago as to the best method of pounding corn. He says that the wheat should be steeped first of all in water, and then cleaned from the husk; after which it should be dried in the sun, and then pounded with the pestle; the same plan, he says, should be adopted in the preparation of barley. In the latter case, however, twenty sextarii of grain require only two sextarii of water. When lentils are used, they should be first parched, and then lightly pounded with, the bran; or else, adopting another method, a piece of unbaked brick and half a modius of sand should be added to every twenty sextarii of lentils.

Ervilia should be treated in the same way as lentils. Sesame should be first steeped in warm water, and then laid out to dry, after which it should be rubbed out briskly, and then thrown into cold water, so that the chaff may be disengaged by floating to the surface. After this is done, the grain should again be spread out in the sun, upon linen cloths, to dry. Care, however, should be taken to lose no time in doing this, as it is apt to turn musty, and assume a dull, livid colour. The grains, too, which are just cleaned from the husk, require various methods of pounding. When the beard is ground by itself, without the grain, the result is known as “acus,” but it is only used by goldsmiths. If, on the other hand, it is beaten out on the threshing-floor, together with the straw, the chaff has the name of “palea,” * * *

* and in most parts of the world is employed as fodder for beasts of burden. The residue of millet, panic, and sesame, is known to us as “apluda;” but in other countries it is called by various other names.

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CHAP. 24.

MILLET.

Campania is particularly prolific in millet, and a fine white porridge is made from it: it makes a bread, too, of remarkable sweetness. The nations of Sarmatia live principally on this porridge, and even the raw meal, with the sole addition of mares' milk, or else blood extracted from the thigh of the horse. The Æthiopians know of no other grain but millet and barley.

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CHAP. 25.

PANIC.

The people of Gaul, and of Aquitania more particularly, make use of panic; the same is the case, too, in Italy beyond the Padus, with the addition, however, of the bean, without which they prepare none of their food. There is no aliment held in higher esteem than panic by the nations of Pontus. The other summer grains thrive better in well-watered soils than in rainy localities; but water is by no means beneficial to millet or panic when they are coming into blade. It is recommended not to sow them among vines or fruit-trees, as it is generally thought that these crops impoverish the soil.

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CHAP. 26. (11)

THE VARIOUS KINDS OF LEAVEN.

Millet is more particularly employed for making leaven; and if kneaded with must, it will keep a whole year. The same is done, too, with the fine wheat-bran of the best quality; it is kneaded with white must three days old, and then dried in the sun, after which it is made into small cakes. When required for making bread, these cakes are first soaked in water, and then boiled with the finest spelt flour, after which the whole is mixed up with the meal; and it is generally thought that this is the best method of making bread. The Greeks have established a rule that for a modius of meal eight ounces of leaven is enough.

These kinds of leaven, however, can only be made at the time of vintage, but there is another leaven which may be prepared with barley and water, at any time it may happen to be required. It is first made up into cakes of two pounds in weight, and these are then baked upon a hot hearth, or else in an earthen dish upon hot ashes and charcoal, being left till they turn of a reddish brown. When this is done, the cakes are shut close in vessels, until they turn quite sour: when wanted for leaven, they are steeped in water first. When barley bread used to be made, it was leavened with the meal of the fitch, or else the chicheling vetch, the proportion being, two pounds of leaven to two modii and a half of barley meal. At the present day, however, the leaven is prepared from the meal that is used for making the bread. For this purpose, some of the meal is kneaded before adding the salt, and is then boiled to the consistency of porridge, and left till it begins to turn sour. In most cases, however, they do not warm it at all, but only make use of a little of the dough that has been kept from the day before. It is very evident that the principle which causes the dough to rise is of an acid nature, and it is equally evident that those persons who are dieted upon fermented bread are stronger in body. Among the ancients, too, it was generally thought that the heavier wheat is, the more wholesome it is.

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CHAP. 27.

THE METHOD OF MAKING BREAD: ORIGIN OF THE ART.

It seems to me quite unnecessary to enter into an account of the various kinds of bread that are made. Some kinds, we find, receive their names from the dishes with which they are eaten, the oyster-bread, for instance: others, again, from their peculiar delicacy, the artolaganus, or cake-bread, for example; and others from the expedition with which they are prepared, such as the "speusticus," or "hurry-bread." Other varieties receive their names from the peculiar method of baking them, such as oven-bread, tin-bread, and mould-bread. It is not so very long since that we had a bread introduced from Parthia, known as water-bread, from a method in kneading it, of drawing out the dough by the aid of water, a process which renders it remarkably light, and full of holes. like a sponge: some call this Parthian bread. The excellence of the finest kinds of bread depends principally on the goodness of the wheat, and the fineness of the bolter. Some persons knead the dough with eggs or milk, and butter even has been employed for the purpose by nations that have had leisure to cultivate the arts of peace, and to give their attention to the art of making pastry. Picenum still maintains its ancient reputation for making the bread which it was the first to invent, alica being the grain employed. The flour is kept in soak for nine days, and is kneaded on the tenth with raisin juice, in the shape of long rolls; after which it is baked in an oven in earthen pots, till they break. This bread, however, is never eaten till it has been well soaked, which is mostly done in milk mixed with honey.

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CHAP. 28.

WHEN BAKERS WERE FIRST INTRODUCED AT ROME.

There were no bakers at Rome until the war with King Perseus, more than five hundred and eighty years after the building of the City. The ancient Romans used to make their own bread, it being an occupation which belonged to the women, as we see the case in many nations even at the present day. Plautus speaks of the artopta, or bread-tin, in his Comedy of the Alularia, though there has been considerable discussion for that very reason among the learned, whether or not that line really belongs to him. We have the fact, too, well ascertained, in the opinion of Ateius Capito, that the cooks in those days were in the habit of making the bread for persons of affluence, while the name of "pistor" was only given to the person who pounded, or "pisebat," the spelt. In those times, they had no cooks in the number of their slaves but used to hire them for the occasion from the market. The Gauls were the first to employ the bolter that is made of horse-hair; while the people of Spain make their sieves and meal-dressers of flax, and the Egyptians of papyrus and rushes.

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CHAP. 29.

ALTCA.

But among the very first things of all, we ought to speak of the method employed in preparing alica, a most delightful and most wholesome food, and which incontestably confers upon Italy the highest rank among the countries that produce the cereals. This delicacy is prepared, no doubt, in Egypt as well, but of a very inferior quality, and not worth our notice. In Italy, however, it is prepared in numerous places, the territories of Verona and Pisæ, for example; but that of Campania is the most highly esteemed. There, at the foot of mountains capped with clouds, runs a plain, not less in all than forty miles in extent. The land here — to give a description first of the nature of the soil — is dusty on the surface, but spongy below, and as porous as pumice. The inconveniences that generally arise from the close vicinity of mountains are here converted into so many advantages: for the soil, acting on it as a sort of filter, absorbs the water of the abundant rains that fall; the consequence of which is, that the water not being left to soak or form mud on the surface, the cultivation is greatly facilitated thereby. This land does not return, by the aid of any springs, the moisture it has thus absorbed, but thoroughly digests it, by warming it in its bosom, in a heated oven as it were. The ground is kept cropped the whole year through, once with panic, and twice with spelt; and yet in the spring, when the soil is allowed to have a moment's repose, it will produce roses more odoriferous by far than the cultivated rose: for the earth here is never tired of producing, a circumstance in which originated the common saying, that Campania produces more unguents than other countries do oil.

In the same degree, however, that the Campanian soil excels that of all other countries, so does that part of it which is known to us as Laboriæ, and to the Greeks as Phlegræum, surpass all the rest. This district is bounded on two sides by the consular high road, which leads from Puteoli to Capua on the one side, and from Cumæ on the other.

Alica is prepared from the grain called zea, which we have already mentioned as being known to us as “seed” wheat. The grain is cleansed in a wooden mortar, for fear lest stone, from its hardness, should have the effect of grating it. The motive power for raising the pestle, as is generally known, is supplied by slaves working in chains, the end of it being enclosed in a case of iron. After the husks have been removed by this process, the pure grain is broken to pieces, the same implements being employed. In this way, there are three different kinds of alica made, the finest, the seconds, and the coarse, which last is known as “aphærema.” Still, however, these various kinds have none of them that whiteness as yet for which they are so distinguished, though even now they are preferable to the Alexandrian alica. With this view — a most singular fact — chalk is mixed with the meal, which, upon becoming well incorporated with it, adds very materially to both the whiteness and the shortness of the mixture. This chalk is found between Puteoli and Neapolis, upon a hill called Leucogæum; and there is still in existence a decree of the late Emperor Augustus, (who established a colony at Capua), which orders a sum of twenty thousand sesterces to be paid annually from his exchequer to the people of Neapolis, for the lease of this hill. His motive for paying this rent, he stated, was the fact that the people of Campania had alleged that it was impossible to make their alica without the help of this mineral. In the same hill, sulphur is found as well, and the springs of Araxus issue from its declivities, the waters of which are particularly efficacious for strengthening the sight, healing wounds, and preventing the teeth from becoming loose.

A spurious kind of alica is made, more particularly of a degenerate kind of zea grown in Africa; the ears of it are larger and blacker than those of the genuine kind, and the straw is short. This grain is pounded with sand, and even then it is with the greatest difficulty that the outer coats are removed; when stripped, the grain fills one half only of the original measure. Gypsum, in the proportion of one fourth, is then sprinkled over it, and after the mixture has been well incorporated, it is bolted through a meal-sieve. The portion that remains behind, after this is done, is known as “excepticia,” and consists of the coarser parts; while that which has passed through is submitted to a second process, with a finer sieve; and that which then

refuses to pass has the name of “secun- daria.” That, again, which, in a similar manner, is submitted to a third sifting, with a sieve of the greatest fineness, which will only admit of sand passing through it, is known as “cribraria,” when it remains on the top of the sieve.

There is another method, again, that is employed every where for adulterating it. They pick out the whitest and largest grains of wheat, and parboil them in earthen pots; these are then dried in the sun till they have regained their original size, after which they are lightly sprinkled with water, and then ground in a mill. A better granæum is made from zea than from wheat, although it is nothing else, in fact, but a spurious alica: it is whitened by the addition of boiled milk, in place of chalk.

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CHAP. 30. (12.)

THE LEGUMINOUS PLANTS: THE BEAN.

We now come to the history of the leguminous plants, among which the place of honour must be awarded to the bean; indeed, some attempts have even been made to use it for bread. Bean meal is known as "lomentum;" and, as is the case with the meal of all leguminous plants, it adds considerably, when mixed with flour, to the weight of the bread. Beans are on sale at the present day for numerous purposes, and are employed for feeding cattle, and man more particu- larly. They are mixed, also, among most nations, with wheat, and panic more particularly, either whole or lightly broken. In our ancient ceremonials, too, bean pottage occupies its place in the religious services of the gods. Beans are mostly eaten together with other food, but it is generally thought that they dull the senses, and cause sleepless nights attended with dreams. Hence it is that the bean has been condemned by Pythagoras; though, according to some, the reason for this denunciation was the belief which he entertained that the souls of the dead are enclosed in the bean: it is for this reason, too, that beans are used in the funereal banquets of the Parentalia. According to Varro, it is for a similar cause that the Flamen abstains from eating beans: in addition to which, on the blossom of the bean, there are certain letters of ill omen to be found.

There are some peculiar religious usages connected with the bean. It is the custom to bring home from the harvest a bean by way of auspice, which, from that circumstance, has the name of "referiva." In sales by public auction, too, it is thought lucky to include a bean in the lot for sale. It is a fact, too, that the bean is the only one among all the grains that fills out at the increase of the moon, however much it may have been eaten away: it can never be thoroughly boiled in sea-water, or indeed any other water that is salt.

The bean is the first leguminous plant that is sown; that being done before the setting of the Vergiliæ, in order that it may pass the winter in the ground. Virgil recommends that it should be sown in spring, according to the usage of the parts of Italy near the Padus: but

most people prefer the bean that has been sown early to that of only three months' growth; for, in the former case, the pods as well as the stalk afford a most agreeable fodder for cattle. When in blossom more particularly, the bean requires water; but after the blossom has passed off, it stands in need of but very little. It fertilizes the ground in which it has been sown as well as any manure hence it is that in the neighbourhood of Thessaly and Macedonia, as soon as it begins to blossom, they turn up the ground.

The bean, too, grows wild in most countries, as in those islands of the Northern Ocean, for instance, which for that reason have been called by us the "Fabariæ." In Mauritania, also, it is found in a wild state in various parts, but so remarkably hard that it will never become soft by boiling.

In Egypt there is a kind of bean which grows upon a thorny stalk; for which reason the crocodiles avoid it, being apprehensive of danger to their eyes. This stalk is four cubits in length, and its thickness, at the very most, that of the finger: were it not for the absence of articulations in it, it would resemble a soft reed in appearance. The head is similar to that of the poppy, being of a rose colour: the beans enclosed in this head are not above thirty in number; the leaves are large, and the fruit is bitter and odoriferous. The root, however, is highly esteemed by the natives as a food, whether eaten raw or well boiled; it bears a strong resemblance to that of the reed. This plant grows also in Syria and Cilicia, and upon the banks of Lake Torone in Chalcidice.

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CHAP. 31.

LENTILS. PEASE.

Among the leguminous plants the lentil is sown in the month of November, and the pea, among the Greeks. The lentil thrives best in a soil that is rather thin than rich, and mostly stands in need of dry weather. There are two kinds of lentil grown in Egypt; one of which is rounder and blacker than the other, which has a peculiar shape of its own. The name of this plant has been applied to various uses, and among others has given origin to our word “lenticula.” I find it stated in some authors that a lentil diet is productive of evenness of temper. The pea requires to be sown in a warm, sunny spot, and is ill able to endure cold; hence in Italy and the more rigorous climates, it is sown in the spring only, a light, loose soil being chosen for the purpose.

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CHAP. 32.

THE SEVERAL KINDS OF CHICK-PEASE.

The chick-pea is naturally salt, for which reason it is apt to scorch the ground, and should only be sown after it has been steeped a day in water. This plant presents considerable differences in reference to size, colour, form, and taste. One variety resembles in shape a ram's head, from which circumstance it has received the name of "arietinum;" there are both the white and the black arietinum. There is also the columbine chick-pea, by some known as the "pea of Venus;" it is white, round, and smooth, being smaller than the arietinum, and is employed in the observances of the night festivals or vigils. The chicheling vetch, too, is a diminutive kind of chick-pea, unequal and angular, like the pea. The chickpea that is the sweetest in flavour is the one that bears the closest resemblance to the fitch; the pod in the black and the red kinds is more firmly closed than in the white ones.

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CHAP. 33.

THE KIDNEY-BEAN.

The pod of the chick-pea is rounded, while in other legu- minous plants it is long and broad, like the seed which it contains; in the pea, again, it is of a cylindrical form. In the case of the kidney-bean it is usual to eat the pod together with the seed. This last may be sown in all kinds of soils indifferently, between the ides of October and the calends of November. As soon as ever the leguminous plants begin to ripen, they ought to be plucked, for the pods will very soon open and the seed fall out, in which case it is very difficult to find: the same is the case, too, with the lupine. But before we pass on to the lupine, it will be as well to make some mention of the rape.

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CHAP. 34. (13.)

THE RAPE.

The Latin writers have only treated of this plant in a cursory manner, while those of Greece have considered it a little more attentively; though even they have ranked it among the garden plants. If, however, a methodical arrangement is to be strictly observed, it should be spoken of immediately after corn, or the bean, at all events; for next to these two produc- tions, there is no plant that is of more extensive use. For, in the first place, all animals will feed upon it as it grows; and it is far from being the least nutritious plant in the fields for various kinds of birds, when boiled in water more particularly. Cattle, too, are remarkably fond of the leaves of rape; and the stalks and leaves, when in season, are no less esteemed as a food for man than the sprouts of the cabbage; these, too, when turned yellow and left to die in the barn, are even more highly esteemed than when green. As to the rape itself, it will keep all the better if left in its mould, aftær which it should be dried in the open air till the next crop is nearly ripe, as a resource in case of scarcity. Next to those of the grape and corn, this is the most profitable harvest of all for the countries that lie beyond the Padus. The rape is by no means difficult to please in soil, for it will grow almost anywhere, indeed where nothing else can be sown. It readily derives nutriment from fogs and hoar-frosts, and grows to a marvellous size; I have seen them weighing upwards of forty pounds. It is prepared for table among us in several ways, and is made to keep till the next crop, its Fermentation being prevented by preserving it in mustard. It is also tinted with no less than six colours in addition to its own, and with purple even; in- deed, that which is used by us as food ought to bæ of no other colour.

The Greeks have distinguished two principal species of rape, the male and the female, and have discovered a method of obtaining them both from the same seed; for when it is sown thick, or in a hard, cloggy soil, the produce will be male. The smaller the seed the better it is in quality. There are three kinds of rape in all; the first is broad

and flat, the second of a spherical shape, and tile third, to which the name of “wild” rape has been given, throws out a long root, similar in appearance to a radish, with an angular, rough leaf, and an acrid juice, which, if extracted about harvest, and mixed with a woman’s milk, is good for cleansing the eves and improving defective sight. The colder the weather the sweeter they are, and the larger, it is generally thought; heat makes them run to leaf. The finest rape of all is that grown in the district of Nurslia: it is valued at as much as one sesterce per pound, and, in times of scarcity, two even. That of the next best quality is produced on Mount Algidus.

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CHAP. 35.

THE TURNIP.

The turnip of Amiternum, which is pretty nearly of the same nature as the rape, thrives equally well in a cold soil. It is sown just before the calends of March, four sextarii of seed to the jugerum. The more careful growers recommend that the ground should be turned up five times before putting in the turnip, and four for rape, care being taken, in both cases, to manure it well. Rape, they say, will thrive all the better, if it is sown together with some chaff. They will have it, too, that the sower ought to be stripped, and that he should offer up a prayer while sowing, and say: “I sow this for myself and for my neighbours.” The proper time for sowing both kinds is the period that intervenes between the festivals of the two divinities, Neptune and Vulcan. It is said, too — and it is the result of very careful observation — that these plants will thrive wonderfully well, if they are sown as many days after the festival of Neptune as the moon was old when the first snow fell the previous winter. They are sown in spring as well, in warm and humid localities.

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CHAP. 36. (14.)

THE LUPINE.

The lupine is the next among the leguminous plants that is in extensive use, as it serves for food for man in common with the hoofed quadrupeds. To prevent it from springing out of the pod while being gathered, and so lost, the best plan is to gather it immediately after a shower. Of all the seeds that are sown, there is not one of a more marvellous nature than this, or more favoured by the earth. First of all, it turns every day with the sun, and shows the hour to the husbandman, even though the weather should happen to be cloudy and overcast. It blossoms, too, no less than three times, and so attached is it to the earth, that it does not require to be covered with the soil; indeed, this is the only seed that does not require the earth to be turned up for sowing it. It thrives more particularly on a sandy, dry, and even gravelly soil; and requires no further care to be taken in its cultivation. To such a degree is it attached to the earth, that even though left upon a soil thickly covered with brambles, it will throw out a root amid the leaves and brakes, and so con- trive to reach the ground. We have already stated that the soil of a field or vineyard is enriched by the growth of a crop of lupines; indeed, so far is it from standing in need of manure, that the lupines will act upon it as well as the very best. It is the only seed that requires no outlay at all, so much so, in fact, that there is no necessity to carry it even to the spot where it is sown; for it may be sown the moment it is brought from the threshing-floor: and from the fact that it falls from the pod of its own accord, it stands in need of no one to scatter it.

This is the very first grain sown and the last that is gathered, both operations generally taking place in the month of September; indeed, if this is not done before winter sets in, it is liable to receive injury from the cold. And then, besides, it may even be left with impunity to lie upon the ground, in case showers should not immediately ensue and cover it in, it being quite safe from the attacks of all animals, on account of its bitter taste: still, however, it is mostly covered up in a slight furrow. Among the thicker soils, it is attached to a red earth

more particularly. In order to enrich this earth, it should be turned up just after the third blossom; but where the soil is sandy, after the second. Chalky and slimy soils are the only ones that it has an aversion to; indeed, it will never come to anything when sown in them. Soaked in warm water, it is used as a food, too, for man. One modius is a sufficient meal for an ox, and it is found to impart considerable vigour to cattle; placed, too, upon the abdomen of children, it acts as a remedy in certain cases. It is an excellent plan to season the lupine by smoking it; for when it is kept in a moist state, maggots are apt to attack the germ, and render it useless for reproduction. If cattle have eaten it off while in leaf, as a matter of necessity it should be ploughed in as soon as possible.

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CHAP. 37. (15.)

THE VETCH.

The vetch, too, enriches the soil, and its cultivation en- tails no labour on the agriculturist. It is sown after the ground has been but once turned up, and requires neither hoe- ing nor manuring; nothing at all, indeed, except harrowing there are three periods for sowing it; the first is about the setting of Arcturus, when it is intended for feeding cattle in the month of December, while in the blade; this crop, too, is the best of all for seed, for, although grazed upon, it will bear just as well. The second crop is sown in the month of January, and the last in March; this last being the best crop for fodder. Of all the seeds this is the one that thrives best in a dry soil; still, however, it manifests no repugnance to a shaded locality. This grain, if gathered when quite ripe, produces a chaff superior to that of any other. If sown near vines supported by trees, the vetch will draw away the juices from the vines, and make them languid.

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CHAP. 38.

THE FITCH.

The cultivation of the fitch, too, is attended with no difficulty. It requires weeding, however, more than the vetch. Like it, the fitch has certain medicinal properties; for we find the fact still kept in remembrance by some letters of his, that the late Emperor Augustus was cured by its agency. Five modii will sow as much ground as a yoke of oxen can plough in a day. If sown in the month of March, it is injurious, they say, to oxen: and when sown in autumn, it is apt to produce head-ache. If, however, it is put in the ground at the beginning of spring, it will be productive of no bad results.

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CHAP. 39. (16.)

SILICIA.

Silicia, or, in other words, fenugreek, is sown after alight ploughing merely, the furrows being no more than some four fingers in depth; the less the pains that are bestowed upon it the better it will thrive — a singular fact that there should be anything that profits from neglect. The kinds, however, that are known as “secale” and “farrago” require harrowing only.

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CHAP. 40.

SECALE OR ASIA.

The people of Taurinum, at the foot of the Alps, give to secale the name of “asia;” it is a very inferior grain, and is only employed to avert positive famine. It is prolific, but has a straw of remarkable thinness; it is also black and sombre-looking, but weighs extremely heavy. Spelt is mixed with this grain to modify its bitterness, and even then it is very disagreeable to the stomach. It will grow upon any soil, and yields a hundred-fold; it is employed also as a manure for enriching the land.

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CHAP. 41.

FARRAGO: THE CRACCA.

Farrago, a mixture made of the refuse of “far,” or spelt, is sown very thick, the vetch being sometimes mingled with it; in Africa, this mixture is sometimes made with barley. All these mixtures, however, are only intended for cattle, and the same is the case with the cracca a degenerate kind of leguminous plant. Pigeons, it is said, are so remarkably fond of this grain, that they will never leave the place where it has been given to them.

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CHAP. 42.

OCINUM: ERVILIA.

Among the ancients there was a sort of fodder, to which Cato gives the name of “ocinum;” it was employed by them to stop scouring in oxen. This was a mixture of various kinds of fodder, cut green before the frosts came on. Mamilius Sura, however, explains the term differently, and says that ten modii of beans, two of vetches, and the same quantity of ervilia, were mixed and sown in autumn on a jugerum of land. He states, also, that it is a still better plan to mix some Greek oats with it, the grain of which never falls to the ground; this mixture, according to him, was ocinum, and was usually sown as a food for oxen. Varro informs us that it received its name on account of the celerity with which it springs up, from the Greek ὠχέως, “quickly.”

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CHAP. 43.

LUCERNE.

Lucerne is by nature an exotic to Greece even, it having been first introduced into that country from Media, at the time of the Persian wars with King Darius; still it deserves to be mentioned among the very first of these productions. So superior are its qualities, that a single sowing will last more than thirty years. It resembles trefoil in appearance, but the stalk and leaves are articulated. The longer it grows in the stalk, the narrower is the leaf. Amphilochus has devoted a whole book to this subject and the cytisus. The ground in which it is sown, being first cleaned and cleared of stones, is turned up in the autumn, after which it is ploughed and harrowed. It is then harrowed a second and a third time, at intervals of five days; after which manure is laid upon it. This seed requires either a soil that is dry, but full of nutriment, or else a well-watered one. After the ground has been thus pre- pared, the seed is put in the month of May; for if sown earlier, it is in danger from the frosts. It is necessary to sow the seed very thick, so that all the ground may be occupied, and no room left for weeds to shoot up in the intervals; a result which may be secured by sowing twenty modii to the jugerum. The seed must be stirred at once with the rake, to prevent the sun from scorching it, and it should be covered over with earth as speedily as possible. If the soil is naturally damp or weedy, the lucerne will be overpowered, and the spot degenerate into an ordinary pasture; it is necessary, therefore, directly the crop is an inch in height, to disengage it from all weeds, by hand, in preference to the weeding-hook.

It is cut when it is just beginning to flower, and this is repeated as often as it throws out new blossoms; which happens mostly six times in the year, and four at the very least. Care should be taken to prevent it from running to seed, as it is much more valuable as fodder, up to the third year. It should be hoed in the spring, and cleared of all other plants; and in the third year the surface should be well worked with the weeding-hook. By adopting this method, the weeds will be effectually destroyed, though without detriment to the lucerne, in

consequence of the depth of its roots. If the weeds should happen to get ahead of it, the only remedy is to turn it up repeatedly with the plough, until the roots of the weeds are thoroughly destroyed. This fodder should never be given to cattle to satiety, otherwise it may be necessary to let blood; it is best, too, when used while green. When dry, it becomes tough and ligneous, and falls away at last into a thin, useless dust. As to the cytisus, which also occupies the very foremost rank among the fodders, we have already spoken of it at sufficient length when describing the shrubs. It remains for us now to complete our account of all the cereals, and we shall here devote a portion of it to the diseases to which they are subject.

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CHAP. 44. (17.)

the DISEASES OF GRAIN: THE OAT.

The foremost feature of disease in wheat is the oat. Barley, too, will degenerate into the oat; so much so, in fact, that tile oat has become an equivalent for corn; for the people of Germany are in the habit of sowing it, and make their porridge of nothing else. This degeneracy is owing more particularly to humidity of soil and climate; and a second cause is a weakness in the seed, the result of its being retained too long in the ground before it makes its appearance above it. The same, too, will be the consequence, if the seed is decayed when put in the ground. This may be known, however, the moment it makes its appearance, from which it is quite evident that the defect lies in the root. There is another form of disease, too, which closely resembles the oat, and which supervenes when the grain, already developed to its full size, but not ripe, is struck by a noxious blast, before it has acquired its proper body and strength; in this case, the seed pines away in the ear, by a kind of abortion, as it were, and totally disappears.

The wind is injurious to wheat and barley, at three periods of the year in particular: when they are in blossom, directly the blossom has passed off, and just as the seed is beginning to ripen. In this last case, the grain wastes away, while in the two former ones it is prevented from being developed. Gleams of sunshine, every now and then, from the midst of clouds, are injurious to corn. Maggots, too, breed in the roots, when the rains that follow the seed-time are succeeded by a sudden heat, which encloses the humidity in the ground. Maggots make their appearance, also, in the grain, when the ear ferments through heat succeeding a fall of rain. There is a small beetle, too, known by the name of “cantharis,” which eats away the blade. All these insects die, however, as soon as their nutriment fails them. Oil, pitch, and grease are pre- judicial to grain, and care should be taken not to let them come in contact with the seed that is sown. Rain is only beneficial to grain while in the blade; it is injurious to wheat and barley while they are in blossom, but is not detrimental to

the leguminous plants, with the exception of the chick-pea. When grain is beginning to ripen, rain is injurious, and to barley in particular. There is a white grass that grows in the fields, very similar to panic in appearance, but fatal to cattle. As to darnel, the tribulus, the thistle, and the burdock, I can consider them, no more than the bramble, among the maladies that attack the cereals, but rather as so many pests inflicted on the earth. Mildew, a malady resulting from the inclemency of the weather, and equally attacking the vine and corn, is in no degree less injurious. It attacks corn most frequently in localities which are exposed to dews, and in vallies which have not a thorough draught for the wind; windy and elevated spots, on the other hand, are totally exempt from it. Another evil, again, in corn, is over-luxuriance, when it falls to the ground beneath the weight of the grain. One evil, however, to which all crops in common, the chick-pea even, are exposed, is the attacks of the caterpillar, when the rain, by washing away the natural saltness of the vegetation, makes it all the more tempting for its sweetness.

There is a certain plant, too, which kills the chick-pea and the fitch, by twining around them; the name of it is "orobanche." In a similar manner, also, wheat is attacked by darnel, barley by a long-stalked plant, called "ægilops," and the lentil by an axe-leafed grass, to which, from the resemblance of the leaf, the Greeks have given the name of "pelecinon." All these plants, too, kill the others by entwining around them. In the neighbourhood of Philippi, there is a plant known as ateramon, which grows in a rich soil, and kills the bean, after it has been exposed, while wet, to the blasts of a certain wind: when it grows in a thin, light soil, this plant is called "teramon." The seed of darnel is extremely minute, and is enclosed in a prickly husk. If introduced into bread, it will speedily produce vertigo; and it is said that in Asia and Greece, the bath-keepers, when they want to disperse a crowd of people, throw this seed upon burning coals. The phalangium, a diminutive insect of the spider genus, breeds in the fitch, if the winter happens to be wet. Slugs, too, breed in the vetch, and sometimes a tiny snail makes its way out of the ground, and eats it away in a most singular manner.

These are pretty nearly all the maladies to which grain is subject.

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CHAP. 45.

THE BEST REMEDIES FOR THE DISEASES OF GRAIN.

The best remedy for these maladies, so long as grain is in the blade, is the weeding-hook, and, at the moment of sowing, ashes. As to those diseases which develop themselves in the seed and about the root, with due care precautions may be effectually employed against them. It is generally supposed that if seed has been first steeped in wine, it will be less exposed to disease. Virgil recommends that beans should be drenched with nitre and amurca of olives; and he says that if this is done, they will be all the larger. Some persons, again, are of opinion, that they will grow of increased size, if the seed is steeped for three days before it is sown in a solution of urine and water. If the ground, too, is hoed three times, a modius of beans in the pod, they say, will yield not less than a modius of shelled beans. Other seeds, again, it is said, will be exempt from the attacks of maggots, if bruised cypress leaves are mixed with them, or if they are sown just at the moon's conjunction. Many persons, for the more effectual protection of millet, recommend that a bramble-frog should be carried at night round the field before the hoeing is done, and then buried in an earthen vessel in the middle of it. If this is done, they say, neither sparrows nor worms will attack the crop. The frog, however, must be disinterred before the millet is cut; for if this is neglected, the produce will be bitter. It is pretended, too, that all seeds which have been touched by the shoulders of a mole are remarkably productive.

Democritus recommends that all seeds before they are sown should be steeped in the juice of the herb known as "aizoüm," which grows on tiles or shingles, and is known to us by the Latin name of "sedum" or "digitellum." If blight pre- vails, or if worms are found adhering to the roots, it is a very common remedy to sprinkle the plants with pure amurca of olives without salt, and then to hoe the ground. If, however, the crop should be beginning to joint, it should be stubbed at once, for fear lest the weeds should gain the upper hand. I know for certain that flights of starlings and sparrows, those

pests to millet and panic, are effectually driven away by means of a certain herb, the name of which is unknown to me, being buried at the four corners of the field: it is a wonderful thing to relate, but in such case not a single bird will enter it. Mice are kept away by the ashes of a weasel or a cat being steeped in water and then thrown upon the seed, or else by using the water in which the body of a weasel or a cat has been boiled. The odour, however, of these animals makes itself perceived in the bread even; for which reason it is generally thought a better plan to steep the seed in ox-gall. As for mildew, that greatest curse of all to corn, if branches of laurel are fixed in the ground, it will pass away from the field into the leaves of the laurel. Over-luxuriance in corn is repressed by the teeth of cattle, but only while it is in the blade; in which case, if depastured upon ever so often, no injury to it when in the ear will be the result. If the ear, too, is once cut off, the grain, it is well known, will assume a larger form, but will be hollow within and worthless, and if sown, will come to nothing.

At Babylon, however, they cut the blade twice, and then let the cattle pasture on it a third time, for otherwise it would run to nothing but leaf. Even then, however, so fertile is the soil, that it yields fifty, and, indeed, with care, as much as a hundred, fold. Nor is the cultivation of it attended with any difficulty, the only object being to let the ground be under water as long as possible, in order that the extreme richness and exuberance of the soil may be modified. The Euphrates, however, and the Tigris do not deposit a slime, in the same way that the Niles does in Egypt, nor does the soil produce vegetation spontaneously; but still, so great is the fertility, that, although the seed is only trodden in with the foot, a crop springs up spontaneously the following year. So great a dif- ferrous in soils as this, reminds me that I ought to take this opportunity of specifying those which are the best adapted for the various kinds of grain.

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CHAP. 46.

THE CROPS THAT SHOULD BE SOWN IN THE DIFFERENT SOILS.

This, then, is the opinion expressed by Cato on the subject: “In a dense and fertile soil wheat should be sown: but if the locality is subject to fogs, rape, radishes, millet, and panic. Where the land is cold and moist, sowing should be commenced earlier; but where it is hot, at a later period. In a red, black, or gravelly soil, provided it is not watery, lupines should be sown; but in chalk, red earth, or a watery soil, spelt. Where a locality is dry, free from weeds, and not overshadowed, wheat should be put; in; and where the soil is strong and powerful, beans. Vetches should be grown in a soil as free from water and weeds as possible; while wheat and winter wheat are best adapted to an open, elevated locality, fully exposed to the warmth of the sun, the lentil thrives best in a meager, red earth, free from weeds. Barley is equally suited for fallow land and for a soil that is not intended to be fallow, and three-month wheat, for a soil upon which a crop of ordinary wheat would never ripen, but strong enough to bear.”

The following, too, is sound advice: Those plants should be sown in a thin soil which do not stand in need of much nutriment, the cytisus, for instance, and such of the leguminous plants, with the exception of the chick-pea, as are taken up by the roots and not cut. From this mode of gathering them— “legers” — the leguminous derive their name. Where it is a rich earth, those plants should be grown which require a greater proportion of nutriment, codeword for instance, wheat, winter-wheat, and flax. The result, then, will be, that a light soil will be given to barley — the root of that grain standing in need of less nutriment — while a more dense, though easily-worked soil, will be assigned to wheat. In humid localities spelt should be sown in preference to wheat; but where the soil is of moderate temperature, either wheat or barley may be grown. Declivities produce a stronger growth of wheat, but in smaller quantities. Spelt and winter-wheat adopt a moist, cretaceous soil in preference to any other.

(18.) The only occasion on which there ever was a prodigy connected with grain, at least that I am aware of, was in the consulship of P. Ælias and Census Cornelius, the year in which Hannibal was vanquished: on that occasion, we find it stated, corn was seen growing upon trees.

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CHAP. 47.

THE DIFFERENT SYSTEMS OF CULTIVATION EMPLOYED BY VARIOUS NATIONS.

As we have now spoken at sufficient length of the several varieties of grain and soil, we shall proceed to treat of the methods adopted in tilling the ground, taking care, in the very first place, to make mention of the peculiar facilities enjoyed by Egypt in this respect. In that country, performing the duties of the husbandman, the Nile begins to overflow, as already stated, immediately after the summer solstice or the new moon, gradually at first, but afterwards with increased impetuosity, as long as the sun remains in the sign of Leo, When the sun has passed into Virgo, the impetuosity of the overflow begins to slacken, and when he has entered Libra the river subsides. Should it not have exceeded twelve cubits in its overflow, famine is the sure result; and this is equally the case if it should chance to exceed sixteen; for the higher it has risen, the more slowly it subsides, and, of course, the seedtime is impeded in proportion. It was formerly a very general belief that immediately upon the subsiding of the waters the Egyptians were in the habit of driving herds of swine over the ground, for the purpose of treading the seed into the moist soil — and it is my own impression that this was done in ancient times. At the present day even, the operation is not attended with much greater labour. It is well known, however, that the seed is first laid upon the slime that has been left by the river on its subsidence, and then ploughed in; this being done at the beginning of November. After this is done, a few persons are employed in stubbing, an operation known there as “botanismos.” The rest of the labourers, however, have no occasion to visit the land again till a little before the calends of April, and then it is with the reaping-hook. The harvest is completed in the month of May. The stem is never so much as a cubit in length, as there is a stratum of sand beneath the slime, from which last alone the grain receives its support. The best wheat of all is that of the region of Thebais, Egypt being of a marshy character.

The method adopted at Seleucia in Babylonia is very similar to this, but the fertility there is still greater, owing to the overflow of the Euphrates and Tigris, the degree of irrigation being artificially modified in those parts. In Syria, too, the furrows are made extremely light, while in many parts of Italy, again, it takes as many as eight oxen to pant and blow at a single plough. All the operations of agriculture, but this in particular, should be regulated by the oracular precept— "Remember that every locality has its own tendencies."

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CHAP. 48.

THE VARIOUS KINDS OF PLOUGHS.

Ploughs are of various kinds. The coulter is the iron part that cuts up the dense earth before it is broken into pieces, and traces beforehand by its incisions the future furrows, which the share, reversed, is to open out with its teeth. Another kind — the common plough-share — is nothing more than a lever, furnished with a pointed beak; while another variety, which is only used in light, easy soils, does not present an edge projecting from the share-beam throughout, but only a small point at the extremity. In a fourth kind again, this point is larger and formed with a cutting edge; by the agency of which implement, it both cleaves the ground, and, with the sharp edges at the sides, cuts up the weeds by the roots. There has been invented, at a comparatively recent period, in that part of Gaul known as Rhætia, a plough with the addition of two small wheels, and known by the name of "plaumorati." The extremity of the share in this has the form of a spade: it is only used, however, for sowing in cultivated lands, and upon soils which are nearly fallow. The broader the plough-share, the better it is for turning up the clods of earth. Immediately after ploughing, the seed is put into the ground, and then harrows with long teeth are drawn over it. Lands which have been sown in this way require no hoeing, but two or three pairs of oxen are employed in ploughing. It is a fair estimate to consider that a single yoke of oxen can work forty jugera of land in the year, where the soil is light, and thirty where it is stubborn.

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CHAP. 49. (19,)

THE MODE OF PLOUGHING.

In ploughing, the most rigid attention should be paid to the oracular precepts given by Cato on the subject. “What is the essence of good tillage? Good ploughing. What is the second point? Ploughing again. What is the third point? Manuring. Take care not to make crooked furrows. Be careful to plough at the proper time.” In warm localities it is necessary to open the ground immediately after the winter solstice, but where it is coke, directly after the vernal equinox: this, too, should be done sooner in dry districts than in wet ones, in a dense soil than a loose one, in a rich land than a meagre one. In countries where the summers are hot and oppressive, the soil cretaceous or thin, it is the best plan to plough between the summer solstice and the autumnal equinox. Where, on the other hand, the heat is moderate, with frequent falls of rain, and the soil rich and full of vegetation, the ploughing should be done during the prevalence of the heat. A deep, heavy soil, again, should be ploughed in winter; but one that is very thin and dry, only just before putting in the seed.

Tillage, too, has its own particular rules — Never touch the ground while it is wet and cloggy; plough with all your might; loosen the ground before you begin to plough. This method has its advantages, for by turning up the clods the roots of the weeds are killed. Some persons recommend that in every case the ground should be turned up immediately after the vernal equinox. Land that has been ploughed once in spring, from that circumstance has the name of “vervactum.” This, too, is equally necessary in the case of fallow land, by which term is meant land that is sown only in alternate years. The oxen employed in ploughing should be harnessed as tightly as possible, to make them plough with their heads up; attention paid to this point will prevent them from galling the neck. If it is among trees and vines that you are ploughing, the oxen should be muzzled, to prevent them from eating off the tender buds. There should be a small bill-hook, too, projecting from the plough-tail, for the purpose of cutting up the roots; this plan being

preferable to that of turning them up with the share, and so straining the oxen. When ploughing, finish the furrow at one spell, and never stop to take breath in the middle.

It is a fair day's work to plough one jugerum, for the first time, nine inches in depth; and the second time, one jugerum and a half — that is to say, if it is an easy soil. If this, however, is not the case, it will take a day to turn up half a jugerum for the first time, and a whole jugerum the second; for Nature has set limits to the powers of animals even. The furrows should be made, in every case, first in a straight line, and then others should be drawn, crossing them obliquely. Upon a hill-side the furrows are drawn transversely only, the point of the share inclining upwards at one moment and downwards at another. Man, too, is so well fitted for labour, that he is able to supply the place of the ox even; at all events, it is without the aid of that animal that the mountain tribes plough, having only the hoe to help them.

The ploughman, unless he stoops to his work, is sure to prevaricate, a word which has been transferred to the Forum, as a censure upon those who transgress — at any rate, let those be on their guard against it, where it was first employed. The share should be cleaned every now and then with a stick pointed with a scraper. The ridges that are left between every two furrows, should not be left in a rough state, nor should large clods be left protruding from the ground. A field is badly ploughed that stands in need of harrowing after the seed is in; but the work has been properly done, when it is impossible to say in which direction the share has gone. It is a good plan, too, to leave a channel every now and then, if the nature of the spot requires it, by making furrows of a larger size, to draw off the water into the drains.

(20.) After the furrows have been gone over again transversely, the clods are broken, where there is a necessity for it, with either the harrow or the rake; and this operation is repeated after the seed has been put in. This last harrowing is done, where the usage of the locality will allow of it, with either a toothed harrow, or else a plank attached to the plough. This operation of covering in the seed is called "lirare," from which is derived the word "deliratio." Virgil, it is generally thought, intends to recommend sowing after *four*

ploughings, in the passage where he says that land will bear the best crop, which has twice felt the sun and twice the cold. Where the soil is dense, as in most parts of Italy, it is a still better plan to go over the ground five times before sowing; in Etruria, they give the land as many as nine ploughings first. The bean, however, and the vetch may be sown with no risk, without turning up the land at all; which, of course, is so much labour saved.

We must not here omit to mention still one other method of ploughing, which the devastations of warfare have suggested in Italy that lies beyond the Padus. The Salassi, when ravaging the territories which lay at the foot of the Alps, made an attempt to lay waste the crops of panic and millet that were just appearing above the ground. Finding, however, that Nature resisted all their endeavours, they passed the plough over the ground, the result of which was that the crops were more abundant than ever; and this it was that first taught us the method of ploughing in, expressed by the word "artrare," otherwise "aratrare," in my opinion the original form. This is done either just as the stem begins to develope itself, or else when it has put forth as many as two or three leaves. Nor must we withhold from the reader a more recent method, which was discovered the year but one before this, in the territory of the Treviri. The crops having been nipped by the extreme severity of the winter, the people sowed the land over again in the month of March, and had a most abundant harvest.

We shall now proceed to a description of the peculiar methods employed in cultivating each description of grain.

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CHAP. 50. (21.)

THE METHODS OF HARROWING, STUBBING, AND HOEING, EMPLOYED FOR EACH DESCRIPTION OF GRAIN. THE USE OF THE HARROW.

For winter wheat, spelt, wheat, zea, and barley, harrow, hoe and stub upon the days which will be mentioned in the sequel. A single hand per jugerum will be quite enough for any one of these kinds of grain. The operation of hoeing loosens the ground in spring when it has been hardened and saddened by the rigours of the winter, and admits the early sun to the interior. In hoeing, every care must be taken not to go beneath the roots of the corn; in the case of wheat, zea, and barley, it is best to give a couple of hoeings. Stubbing, when the crop is just beginning to joint, cleanses it of all noxious weeds, disengages the roots of the corn, and liberates the growing blade from the clods. Among the leguminous plants, the chick-pea requires the same treatment that spelt does. The bean requires no stubbing, being quite able of itself to overpower all weeds; the lupine, too, is harrowed only. Millet and panic are both harrowed and hoed; but this operation is never repeated, and they do not require stubbing. Fenugreek and the kidney-bean require harrowing only.

There are some kinds of ground, the extreme fertility of which obliges the grower to comb down the crops while in the blade — this is done with a sort of harrow armed with pointed iron teeth — and even then he is obliged to depasture cattle upon them. When, however, the blade has been thus eaten down, it stands in need of hoeing to restore it to its former vigour.

But in Bactria, and at Cyrenæ in Africa, all this trouble has been rendered quite unnecessary by the indulgent benignity of the climate, and after the seed is in, the owner has no occasion to return to the field till the time has come for getting in the harvest. In those parts the natural dryness of the soil prevents noxious weeds from springing up, and, aided by the night dews alone, the soil supplies its nutriment to the grain. Virgil recommends that the ground should be left to enjoy repose every other year; and this, no doubt, if the extent of the farm will admit of it, is the most advantageous plan. If, however, cir-

cumstances will not allow of it, spelt should be sown upon the ground that has been first cropped with lupines, vetches, or beans; for all these have a tendency to make the soil more fertile. We ought to remark here more particularly, that here and there certain plants are sown for the benefit of others, although, as already stated in the preceding Book, not to repeat the same thing over again, they are of little value themselves. But it is the nature of each soil that is of the greatest importance.

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CHAP. 51. (22.)

EXTREME FERTILITY OF SOIL.

There is a city of Africa, situate in the midst of the sands as you journey towards the Syrtes and Great Leptis, Tacape by name. The soil there, which is always well-watered, enjoys a degree of fertility quite marvellous. Through this spot, which extends about three miles each way, a spring of water flows — in great abundance it is true — but still, it is only at certain hours that its waters are distributed among the inhabitants. Here, beneath a palm of enormous size, grows the olive, beneath the olive the fig, beneath the fig, again, the pomegranate, beneath the pomegranate the vine, and beneath the vine we find sown, first wheat, then the leguminous plants, and after them garden herbs — all in the same year, and all growing beneath another's shade. Four cubits square of this same ground — the cubit being measured with the fingers contracted and not extended — sell at the rate of four denarii. But what is more surprising than all, is the fact that here the vine bears twice, and that there are two vintages in the year. Indeed, if the fertility of the soil were not distributed in this way among a multitude of productions, each crop would perish from its own exuberance: as it is, there is no part of the year that there is not some crop or other being gathered in; and yet, it is a well-known fact, that the people do nothing at all to promote this fruitfulness.

There are very considerable differences, too, in the nature of water, as employed for the purposes of irrigation. In the province of Gallia Narbonensis there is a famous fountain, Orge by name; within it there grow plants which are sought for with such eagerness by the cattle, that they will plunge over head into the water to get at them; it is a well ascertained fact, however, that these plants, though growing in the water, receive their nutriment only from the rains that fall. It is as well then that every one should be fully acquainted with the nature, not only of the soil, but of the water too.

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CHAP. 52. (23.)

THE METHOD OF SOWING MORE THAN ONCE IN THE YEAR.

If the soil is of that nature which we have already spoken of as "tender," after a crop of barley has been grown upon it, millet may be sown, and after the millet has been got in, rape. In succession to these, again, barley may be put in, or else wheat, as in Campania; and it will be quite enough, in such case, to plough the ground when the seed is sown. There is another rotation again — when the ground has been cropped with spelt, it should lie fallow the four winter months; after which, spring beans should be put in, to keep it occupied till the time comes for cropping it with winter beans. Where the soil is too rich, it may lie fallow one year, care being taken after sowing it with corn to crop it with the leguminous plants the third year. Where, on the other hand, it is too thin, the land should lie fallow up to the third year even. Some persons recommend that corn should never be sown except in land which has lain fallow the year before.

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CHAP. 53.

THE MANURING OF LAND.

The proper method of manuring is here a very important subject for consideration — we have already treated of it at some length in the preceding Book. The only point that is universally agreed upon is, that we must never sow without first manuring the ground; although in this respect even there are certain rules to be observed. Millet, panic, rape, and turnips should never be sown in any but a manured soil. If, on the other hand, the land is not manured, sow wheat there in preference to barley. The same, too, with fallow lands; though in these it is generally recommended that beans should be sown. It should be remembered, however, that wherever beans are sown, the land should have been manured at as recent a period as possible. If it is intended to crop ground in autumn, care must be taken to plough in manure in the month of September, just after rain has fallen. In the same way, too, if it is intended to sow in spring, the manure should be spread in the winter. It is the rule to give eighteen cart-loads of manure to each jugerum, and to spread it well before ploughing it in, or sowing the seed. If this manuring, however, is omitted, it will be requisite to spread the land with aviary dust just before hoeing is commenced. To clear up any doubts with reference to this point, I would here observe that the fair price for a cart-load of manure is one denarius; where, too, sheep furnish one cart-load, the larger cattle should furnish ten: unless this result is obtained, it is a clear proof that the husbandman has littered his cattle badly.

There are some persons who are of opinion that the best method of manuring land is to pen sheep there, with nets erected to prevent them from straying. If land is not manured, it will get chilled; but if, on the other hand, it is over-manured, it becomes burnt up: it is a much better plan, too, to manure little and often than in excess. The warmer the soil is by nature, the less manure it requires.

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CHAP. 54. (24.)

HOW TO ASCERTAIN THE QUALITY OF SEED.

The best seed of all is that which is of the last year's growth. That which is two years old is inferior, and three the worst of all — beyond that, it is unproductive. The same definite rule which applies to one kind of seed is applicable to them all: the seed which falls to the bottom on the threshing-floor, should be reserved for sowing, for being the most weighty it is the best in quality: there is no better method, in fact, of ascertaining its quality. The grains of those ears which have intervals between the seed should be rejected. The best grain is that which has a reddish hue, and which, when broken between the teeth, presents the same colour; that which has more white within is of inferior quality. It is a well-known fact that some lands require more seed than others, from which circumstance first arose a superstition that exists among the peasantry; it is their belief that when the ground demands the seed with greater avidity than usual, it is famished, and devours the grain. It is consistent with reason to put in the seed where the soil is humid sooner than elsewhere, to prevent the grain from rotting in the rain: on dry spots it should be sown later, and just before the fall of a shower, so that it may not have to lie long without germinating and so come to nothing. When the seed is put in early it should be sown thick, as it is a considerable time before it germinates; but when it is put in later, it should be sown thinly, to prevent it from being suffocated. There is a certain degree of skill, too, required in scattering the seed evenly; to ensure this, the hand must keep time with the step, moving always with the right foot. There are certain persons, also, who have a secret method of their own, having been born with a happy hand which imparts fruitfulness to the grain. Care should be taken not to sow seed in a warm locality which has been grown in a cold one, nor should the produce of an early soil be sown in a late one. Those who give advice to the contrary have quite misapplied their pains.

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CHAP. 55.

WHAT QUANTITY OF EACH KIND OF GRAIN IS REQUISITE FOR SOWING A JUGEBRUM.

In a soil of middling quality, the proper proportion of seed is five modii of wheat or winter-wheat to the jugerum, ten of spelt or of seed-wheat — that being the name which we have mentioned as being given to one kind of wheat — six of barley, one-fifth more of beans than of wheat, twelve of vetches, three of chick-pease, chicheling vetches, and pease, ten of lupines, three of lentils — (these last, however, it is said, must be sown with dry manure) — six of fitches, six of fenugreek, four of kidney-beans, twenty of hay grass, and four sextarii of millet and panic. Where the soil is rich, the proportion must be greater, where it is thin, less.

There is another distinction, too, to be made; where the soil is dense, cretaceous, or moist, there should be six modii of wheat or winter-wheat to the jugerum, but where the land is loose, dry, and prolific, four will be enough. A meagre soil, too, if the crop is not very thinly sown, will produce a diminutive, empty ear. Rich lands give a number of stalks to each grain, and yield a thick crop from only a light sowing. The result, then, is, that from four to six modii must be sown, according to the nature of the soil; though there are some who make it a rule that five modii is the proper proportion for sowing, neither more nor less, whether it is a densely-planted locality, a declivity, or a thin, meagre soil. To this subject bears reference an oracular precept which never can be too carefully observed— “Don’t rob the harvest.” Attius, in his Praxidicus, has added that the proper time for sowing is, when the moon is in Aries, Gemini, Leo, Libra, and Aquarius. Zoroaster says it should be done when the sun has passed twelve degrees of Scorpio, and the moon is in Taurus.

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CHAP. 56.

THE PROPER TIMES FOR SOWING.

We now come to a subject which has been hitherto deferred by us, and which requires our most careful attention — the proper times for sowing. This is a question that depends in a very great degree upon the stars; and I shall therefore make it my first care to set forth all the opinions that have been written in reference to the subject. Hesiod, the first writer who has given any precepts upon agriculture, speaks of one period only for sowing — the setting of the Vergiliæ: but then he wrote in Bœotia, a country of Hellas, where, as we have already stated, they are still in the habit of sowing at that period.

It is generally agreed by the most correct writers, that with the earth, as with the birds and quadrupeds, there are certain impulses for reproduction; and the epoch for this is fixed by the Greeks at the time when the earth is warm and moist. Virgil says that wheat and spelt should be sown at the setting of the Vergiliæ, barley between the autumnal equinox and the winter solstice, and vetches, kidney-beans, and lentils at the setting of Boötes: it is of great importance, therefore, to ascertain the exact days of the rising and setting of these constellations, as well as of the others. There are some, again, who recommend the sowing to be done before the setting of the Vergiliæ, but only in a dry soil, and in those provinces where the weather is hot; for the seed, they say, if put in the ground will keep, there being no moisture to spoil it, and within a single day after the next fall of rain, will make its appearance above ground. Others, again, are of opinion that sowing should begin about seven days after the setting of the Vergiliæ, a period which is mostly followed by rain. Some think that cold soils should be sown immediately after the autumnal equinox, and a warm soil later, so that the blade may not put forth too luxuriantly before winter.

It is universally agreed, however, that the sowing should not be done about the period of the winter solstice; for this very good reason — the winter seeds, if put in before the winter solstice, will make their appearance above ground on the seventh day, whereas, if they

are sown just after it, they will hardly appear by the fortieth. There are some, however, who begin very early, and have a saying to justify their doing so, to the effect that if seed sown too early often disappoints, seed put in too late always does so. On the other hand, again, there are some who maintain that it is better to sow in spring than in a bad autumn; and they say that if they find themselves obliged to sow in spring, they would choose the period that intervenes between the prevalence of the west winds and the vernal equinox. Some persons, however, take no notice of the celestial phenomena, and only regulate their movements by the months. In spring they put in flax, the oat, and the poppy, up to the feast of the Quinquatria, as we find done at the present day by the people of Italy beyond the Padus. There, too, they sow beans and winter-wheat in the month of November, and spelt at the end of September, up to the ides of October: others, however, sow this last after the ides of October, as late as the calends of November.

The persons who do this take no notice, consequently, of the phænomena of Nature, while others, again, lay too much stress upon them, and hence, by these refined subtleties and distinctions, only add to their blindness; for here are ignorant rustics, not only dealing with a branch of learning, but that branch astronomy! It must still, however, be admitted that the observation of the heavens plays a very important part in the operations of agriculture; and Virgil, we find, gives it as his advice, that before any thing else, we should learn the theory of the winds, and the revolutions of the stars; for, as he says, the agriculturist, no less than the mariner, should regulate his movements thereby. It is an arduous attempt, and almost beyond all hope of success, to make an endeavour to introduce the divine science of the heavens to the uninformed mind of the rustic; still, however, with a view to such vast practical results as must be derived from this kind of knowledge, I shall make the attempt. There are some astronomical difficulties, however, which have been experienced by the learned even, that ought to be first submitted for consideration, in order that the mind may feel some encouragement on abandoning the study of the heavens, and may be acquainted with facts at least, even though it is still unable to see into futurity.

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CHAP. 57. (25.)

ARRANGEMENT OF THE STARS ACCORDING TO THE TERRESTRIAL DAYS AND NIGHTS.

In the first place, it is almost an utter impossibility to calculate with a fair degree of accuracy the days of the year and the movements of the sun. To the three hundred and sixty-five days there are still to be added the intercalary days, the result of the additional quarters of a day and night: hence it is, that it is found impossible to ascertain with exactness the proper periods for the appearance of the stars. To this we must add, too, a certain degree of uncertainty connected with these matters, that is universally admitted; thus, for instance, bad and wintry weather will often precede, by several days, the proper period for the advent of that season, a state of things known to the Greeks as προχειμάζειν; while at another time, it will last longer than usual, a state of circumstances known as ἐπιχειμάζειν. The effects, too, of the changes that take place in the seasons will sometimes be felt later, and at other times earlier, upon their reaching the face of the earth; and we not unfrequently hear the remark made, upon the return of fine weather, that the action of such and such a constellation is now completed. And then, again, as all these phænomena depend upon certain stars, arranged and regulated in the vault of heaven, we find intervening, in accordance with the movements of certain stars, hailstorms and showers, themselves productive of no slight results, as we have already observed, and apt to interfere with the anticipated regular recurrence of the seasons. Nor are we to suppose that these disappointments fall upon the human race only, for other animated beings, as well as ourselves, are deceived in regard to them, although endowed with even a greater degree of sagacity upon these points than we are, from the fact of their very existence depending so materially upon them. Hence it is, that we sometimes see the summer birds killed by too late or too early cold, and the winter birds by heat coming out of the usual season. It is for this reason, that Virgil has recommended us to study the courses of the planets, and has particularly warned us to watch the passage of the cold star Saturn.

There are some who look upon the appearance of the butterfly as the surest sign of spring, because of the extreme delicacy of that insect. In this present year, however, in which I am penning these lines, it has been remarked that the flights of butterflies have been killed three several times, by as many returns of the cold; while the foreign birds, which brought us by the sixth of the calends of February every indication of an early spring, after that had to struggle against a winter of the greatest severity. In treating of these matters, we have to meet a twofold difficulty: first of all, we have to ascertain whether or not the celestial phænomena are regulated by certain laws, and then we have to seek how to reconcile those laws with apparent facts. We must, however, be more particularly careful to take into account the convexity of the earth, and the differences of situation in the localities upon the face of the globe; for hence it is, that the same constellation shows itself to different nations at different times, the result being, that its influence is by no means perceptible everywhere at the same moment. This difficulty has been considerably enhanced, too, by various authors, who, after making their observations in different localities, and indeed, in some instances, in the same locality, have yet given us varying or contradictory results.

There have been three great schools of astronomy, the Chaldæan, the Ægyptian, and the Grecian. To these has been added a fourth school, which was established by the Dictator Cæsar among ourselves, and to which was entrusted the duty of regulating the year in conformity with the sun's revolution, under the auspices of Sosigenes, an astronomer of considerable learning and skill. His theory, too, upon the discovery of certain errors, has since been corrected, no intercalations having been made for twelve successive years, upon its being found that the year which before had anticipated the constellations, was now beginning to fall behind them. Even Sosigenes himself, too, though more correct than his predecessors, has not hesitated to show, by his continual corrections in the three several treatises which he composed, that he still entertained great doubts on the subject. The writers, too, whose names are inserted at the beginning of this work, have sufficiently revealed the fact of these discrepancies, the opinions of one being

rarely found to agree with those of another. This, however, is less surprising in the case of those whose plea is the difference of the localities in which they wrote. But with reference to those who, though living in the same country, have still arrived at different results, we shall here mention one remarkable instance of discrepancy. Hesiod — for under his name, also, we have a treatise extant on the Science of the Stars — has stated that the morning setting of the Vergiliæ takes place at the moment of the autumnal equinox; whereas Thales, we find, makes it the twenty-fifth day after the equinox, Anaximander the twenty-ninth, and Euctemon the forty-eighth.

As for ourselves, we shall follow the calculations made by Julius Cæsar, which bear reference more particularly to Italy; though at the same time, we shall set forth the dicta of various other writers, bearing in mind that we are treating not of an individual country, but of Nature considered in her totality. In doing this, however, we shall name, not the writers themselves, for that would be too lengthy a task, but the countries in reference to which they speak. The reader must bear in mind, then, that for the sake of saving space, under the head of Attica, we include the islands of the Cyclades as well; under that of Macedonia, Magnesia and Thracia; under that of Egypt, Phœnice, Cyprus, and Cilicia; under that of Bœotia, Locris, Phocis, and the adjoining countries; under that of Hellespont, Chersonesus, and the contiguous parts as far as Mount Athos; under that of Ionia, Asia and the islands of Asia; under that of Peloponnesus, Achaia, and the regions lying to the west of it. Chaldæa, when mentioned, will signify Assyria and Babylonia, as well.

My silence as to Africa, Spain, and the provinces of Gaul, will occasion no surprise, from the fact that no one has published any observations made upon the stars in those countries. Still, however, there will be no difficulty in calculating them, even for these regions as well, on reference being made to the parallels which have been set forth in the Sixth Book. By adopting this course, an accurate acquaintance may be made with the astronomical relations, not only of individual nations, but of cities even as well. By taking the circular parallels which we have there appended to the several portions of the earth respectively, and applying them to the countries

in question, that are similarly situate, it will be found that the rising of the heavenly bodies will be the same for all parts within those parallels, where the shadows projected are of equal length. It is also deserving of remark, that the seasons have their periodical recurrences, without any marked difference, every four years, in consequence of the influence of the sun, and that the characteristics of the seasons are developed in excess every eighth year, at the revolution of every hundredth moon.

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CHAP. 58.

THE RISING AND SETTING OF THE STARS.

The whole of this system is based upon the observation of three branches of the heavenly phænomena, the rising of the constellations, their setting, and the regular recurrence of the seasons. These risings and settings may be observed in two different ways: — The stars are either concealed, and cease to be seen at the rising of the sun, or else present themselves to our view at his setting — this last being more generally known by the name of “emersion” than of “rising,” while their dis- appearance is rather an “occultation” than a “setting.” — Considered, again, in another point of view, when upon certain days they begin to appear or disappear, at the setting or the rising of the sun, as the case may be, these are called their morning or their evening settings or risings, according as each of these phenomena takes place at day-break or twilight. It requires an interval of three quarters of an hour at least before the rising of the sun or after his setting, for the stars to be visible to us. In addition to this, there are certain stars which rise and set twice. All that we here state bears reference, it must be remembered, to the fixed stars only.

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CHAP. 59.

THE EPOCHS OF THE SEASONS.

The year is divided into four periods or seasons, the recurrence of which is indicated by the increase or diminution of the daylight. Immediately after the winter solstice the days begin to increase, and by the time of the vernal equinox, or in other words, in ninety days and three hours, the day is equal in length to the night. After this, for ninety-four days and twelve hours, the days continue to increase, and the nights to diminish in proportion, up to the summer solstice; and from that point the days, though gradually decreasing, are still in excess of the nights for ninety-two days, twelve hours, until the autumnal equinox. At this period the days are of equal length with the nights, and after it they continue to decrease inversely to the nights until the winter solstice, a period of eighty-eight days and three hours. In all these calculations, it must be remembered, equinoctial hours are spoken of, and not those measured arbitrarily in reference to the length of any one day in particular. All these seasons, too, commence at the eighth degree of the signs of the Zodiac. The winter solstice begins at the eighth degree of Capricorn, the eighth day before the calends of January, in general; the vernal equinox at the eighth degree of Aries; the summer solstice, at the eighth degree of Cancer; and the autumnal equinox at the eighth degree of Libra: and it is rarely that these days do not respectively give some indication of a change in the weather.

These four seasons again, are subdivided, each of them, into two equal parts. Thus, for instance, between the summer solstice and the autumnal equinox, the setting of the Lyre, on the forty-sixth day, indicates the beginning of autumn; between the autumnal equinox and the winter solstice, the morning setting of the Vergiliæ, on the forty-fourth day, denotes the beginning of winter; between the winter solstice and the vernal equinox, the prevalence of the west winds on the forty-fifth day, denotes the commencement of spring; and between the vernal equinox and the summer solstice, the morning rising of the Vergiliæ, on the forty-eighth day, announces the

commencement of summer. We shall here make seed-time, or in other words, the morning setting of the Vergiliæ, our starting-point; and shall not interrupt the thread of our explanation by making any mention of the minor constellations, as such a course would only augment the difficulties that already exist. It is much about this period that the stormy constellation of Orion departs, after traversing a large portion of the heavens.

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CHAP. 60.

THE PROPER TIME FOR WINTER SOWING.

Most persons anticipate the proper time for sowing, and begin to put in the corn immediately after the eleventh day of the autumnal equinox, at the rising of the Crown, when we may reckon, almost to a certainty, upon several days of rainy weather in succession. Xenophon is of opinion, that sowing should not be commenced until the Deity has given us the signal for it, a term by which Cicero understands the rains that prevail in November. The true method to be adopted, however, is not to sow until the leaves begin to fall. Some persons are of opinion that this takes place at the setting of the Vergiliæ, or the third day before the ides of November, as already stated, and they carefully observe it, for it is a constellation very easily remarked in the heavens, and warns us to resume our winter clothes. Hence it is, that immediately on its setting, the approach of winter is expected, and care is taken by those who are on their guard against the exorbitant charges of the shop-keepers, to provide themselves with an appropriate dress. If the Vergiliæ set with cloudy weather, it forebodes a rainy winter, and the prices of cloaks immediately rise; but if, on the other hand, the weather is clear at that period, a sharp winter is to be expected, and then the price of garments of other descriptions is sure to go up. But as to the husbandman, unacquainted as he is with the phænomena of the heavens, his brambles are to him in place of constellations, and if he looks at the ground he sees it covered with their leaves. This fall of the leaves, earlier in one place and later in another, is a sure criterion of the temperature of the weather; for there is a great affinity between the effects produced by the weather in this respect, and the nature of the soil and climate. There is this peculiar advantage, too, in the careful observation of these effects, that they are sure to be perceptible throughout the whole earth, while at the same time they have certain features which are peculiar to each individual locality. — A person may perhaps be surprised at this, who does not bear in mind that the herb pennyroyal, which is hung up in our larders,

always blossoms on the day of the winter solstice; so firmly resolved is Nature that nothing shall remain concealed from us, and in that spirit has given us the fall of the leaf as the signal for sowing.

Such is the true method of interpreting all these phenomena, granted to us by Nature as a manifestation of her will. It is in this way that she warns us to prepare the ground, makes us a promise of a manure, as it were, in the fall of the leaves, announces to us that the earth and the productions thereof are thus protected by her against the cold, and warns us to hasten the operations of agriculture.

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CHAP. 61.

WHEN TO SOW THE LEGUMINOUS PLANTS AND THE POPPY.

Varro has given no other sign but this for our guidance in sowing the bean. Some persons are of opinion that it should be sown at full moon, the lentil between the twenty-fifth and thirtieth day of the moon, and the vetch on the same days of the moon; and they assure us that if this is done they will be exempt from the attacks of slugs. Some say, however, that if wanted for fodder, they may be sown at these periods, but if for seed, in the spring. There is another sign, more evident still, supplied us by the marvellous foresight of Nature, with reference to which we will give the words employed by Cicero himself:

"The lentisk, ever green and ever bent
Beneath its fruits, affords a threefold crop:
Thrice teeming, thrice it warns us when to plough."

One of the periods here alluded to, is the same that is now under consideration, being the appropriate time also for sowing flax and the poppy. With reference to this last, Cato gives the following advice: "Burn, upon land where corn has been grown, the twigs and branches which are of no use to you, and when that is done, sow the poppy there." The wild poppy, which is of an utility that is quite marvellous, is boiled in honey as a remedy for diseases in the throat, while the cultivated kind is a powerful narcotic. Thus much in reference to winter sowing.

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CHAP. 62.

WORK TO BE DONE IN THE COUNTRY IN EACH MONTH RESPECTIVELY.

And now, in order to complete what we may call in some measure an abridgment of the operations of agriculture, it is as well to add that it will be a good plan at the same period to manure the roots of trees, and to mould up the vines — a single hand being sufficient for one jugerum. Where, too, the nature of the locality will allow it, the vines, and the trees upon which they are trained, should be lopped, and the soil turned up with the mattock for seed plots; trenches, too, should be opened out, and the water drained from off the fields, and the presses should be well washed and put away. Never put eggs beneath the hen between the calends of November and the winter solstice: during all the summer and up to the calends of November, you may put thirteen under the hen; but the number must be smaller in winter, not less than nine, however. Democritus is of opinion, that the winter will turn out of the same character as the weather on the day of the winter solstice and the three succeeding days; the same too with the summer and the weather at the summer solstice. About the winter solstice, for about twice seven days mostly, while the halcyon is sitting, the winds are lulled, and the weather serene; but in this case, as in all others, the influence of the stars must only be judged of by the result, and we must not expect the changes of the weather, as if out upon their recognizances, to make their appearance exactly on certain predetermined days.

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CHAP. 63.

WORK TO BE DONE AT THE WINTER SOLSTICE.

Be careful never to touch the vine at the winter solstice. Hyginus recommends us to strain and even rack-off wine at the seventh day after the winter solstice, provided the moon is seven days old. About this period, also, the cherry-tree, he says, should be planted. Acorns, too, should now be put in soak for the oxen, a modius for each pair. If given in larger quantities, this food will prove injurious to their health; and whenever it is given, if they are fed with it for less than thirty days in succession, an attack of scab in the spring, it is said, will be sure to make you repent.

This, too, is the period that we have already assigned for cutting timber — other kinds of work, again, may be found for the hours of the night, which are then so greatly prolonged. There are baskets, hurdles, and panniers to be woven, and wood to be cut for torches: squared stays for the vine may be prepared, too, thirty in the day time, and if rounded, as many as sixty. In the long hours of the evening, too, some five squared stays, or ten rounded ones may be got ready, and the same number while the day is breaking.

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CHAP. 64.

WORK TO BE DONE BETWEEN THE WINTER SOLSTICE AND THE PREVALENCE OF THE WEST WINDS.

Between the winter solstice and the period when the west winds begin to prevail, the following, according to Cæsar, are the more important signs afforded by the constellations: the Dog sets in the morning, upon the third day before the calends of January; a day on the evening of which the Eagle sets to the people of Attica and the adjoining countries. On the day be- fore the nones of January, according to Cæsar's computation, the Dolphin rises in the morning, and on the next day, the Lyre, upon the evening of which the Arrow sets to the people of Egypt. Upon the sixth day before the ides of January, the Dolphin sets in the evening, and Italy has many days of continuous cold; the same is the case also when the sun enters Aquarius, about the sixteenth day before the calends of February. On the eighth before the calends of February, the star which Tubero calls the Royal Star sets in the morning in the breast of Leo, and in the evening of the day before the nones of February, the Lyre sets.

During the latter days of this period, whenever the nature of the weather will allow of it, the ground should be turned up with a double mattock, for planting the rose and the vine — sixty men to a jugerum. Ditches, too, should be cleaned out, or new ones made; and the time of day-break may be usefully employed in sharpening iron tools, fitting on handles, repairing such dolia as may have been broken, and rubbing up and cleaning their staves.

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CHAP. 65.

WORK TO BE DONE BETWEEN THE PREVALENCE OF THE WEST WINDS AND THE VERNAL EQUINOX.

Between the prevalence of the west winds and the vernal equinox, the fourteenth day before the calends of March, according to Cæsar, announces three days of changeable weather; the same is the case, too, with the eighth before the calends of March, at the first appearance of the swallow, Arcturus rising on the evening of the next day. Cæsar has observed, that the same takes place on the third before the nones of March, at the rising of Cancer; and most authorities say the same with reference to the emersion of the Vintager. On the eighth before the ides of March, the northern limb of Pisces rises, and on the next day Orion, at which period also, in Attica, the Kite is first seen. Cæsar has noted, too, the setting of Scorpio on the ides of March, a day that was so fatal to him; and on the fifteenth before the calends of April, the Kite appears in Italy. On the twelfth before the calends of April, the Horse sets in the morning.

This interval of time is a period of extreme activity for the agriculturist, and affords him a great number of occupations, in reference to which, however, he is extremely liable to be deceived. He is summoned to the commencement of these labours, not upon the day on which the west winds ought to begin, but upon the day on which they really do begin, to blow. This moment then must be looked for with the most careful attention, as it is a signal which the Deity has vouchsafed us in this month, attended with no doubts or equivocations, if only looked for with scrupulous care. We have already stated in the Second Book, the quarter in which this wind blows, and the exact point from which it comes, and before long we shall have occasion to speak of it again still more in detail.

In the mean time, however, setting out from the day, what- ever it may happen to be, on which the west winds begin to prevail (for it is not always on the seventh before the ides of February that they do begin), whether, in fact, they begin to blow before the usual time, as is the case with an early spring, or whether after, which generally

happens when the winter is prolonged — there are subjects innumerable to engage the attention of the agriculturist, and those, of course, should be the first attended to, which will admit of no delay. Three month wheat must now be sown, the vine pruned in the way we have already described, the olive carefully attended to, fruit-trees put in and grafted, vineyards cleaned and hoed, seedlings laid out, and replaced in the nursery by others, the reed, the willow, and the broom planted and lopped, and the elm, the poplar, and the plane planted in manner already mentioned. At this period, also, the crops of corn ought to be weeded, and the winter kinds, spelt more particularly, well hoed. In doing this, there is a certain rule to be observed, the proper moment being when four blades have made their appearance, and with the bean this should never be done until three leaves have appeared above ground; even then, however, it is a better plan to clean them only with a slight hoeing, in preference to digging up the ground — but in no case should they ever be touched the first fifteen days of their blossom. Barley must never be hoed except when it is quite dry: take care, too, to have all the pruning done by the vernal equinox. Four men will be sufficient for pruning a jugerum of vineyard, and each hand will be able to train fifteen vines to their trees.

At this period, too, attention should be paid to the gardens and rose-beds, subjects which will be separately treated of in succeeding Books; due care should be given to ornamental gardening as well. It is now, too, the very best time for making ditches. The ground should now be opened for future purposes, as we find recommended by Virgil in particular, in order that the sun may thoroughly warm the clods. It is a piece of even more sound advice, which recommends us to plough no lands in the middle of spring but those of middling quality; for if this is done with a rich soil, weeds will be sure to spring up in the furrows immediately; and if, on the other hand, it is a thin, meagre land, as soon as the heat comes on, it will be dried up, and so lose all the moisture which should be reserved to nourish the seed when sown. It is a much better plan, beyond a doubt, to plough such soils as these in autumn.

Cato lays down the following rules for the operations of spring. “Ditches,” he says, “should be dug in the seed-plots, vines should be

grafted, and the elm, the fig, the olive, and other fruit-trees planted in dense and humid soils. Such meadows as are not irrigated, must be manured in a dry moon, protected from the western blasts, and carefully cleaned; noxious weeds must be rooted up, fig-trees cleared, new seed-plots made, and the old ones dressed: all this should be done before you begin to hoe the vineyard. When the pear is in blossom, too, you should begin to plough, where it is a meagre, gravelly soil. When you have done all this, you may plough the more heavy, watery soils, doing this the last of all."

The proper time for ploughing, then, is denoted by these two signs, the earliest fruit of the lentisk making its appearance, and the blossoming of the pear. There is a third sign, however, as well, the flowering of the squill among the bulbous, and of the narcissus among the garland, plants. For both the squill and the narcissus, as well as the lentisk, flower three times, denoting by their first flowering the first period for ploughing, by the second flowering the second, and by the third flowering the last; in this way it is that one thing affords hints for another. There is one precaution, too, that is by no means the least important among them all, not to let ivy touch the bean while in blossom; for at this period the ivy is noxious to it, and most baneful in its effects. Some plants, again, afford certain signs which bear reference more particularly to themselves, the fig for instance; when a few leaves only are found shooting from the summit, like a cup in shape, then it is more particularly that the fig-tree should be planted.

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CHAP. 66.

WORK TO BE DONE AFTER THE VERNAL EQUINOX.

The vernal equinox appears to end on the eighth day be- fore the calends of April. Between the equinox and the morning rising of the Vergiliæ, the calends of April announce, according to Cæsar, [stormy weather]. Upon the third before the nones of April, the Vergiliæ set in the evening in Attica, and the day after in Bœotia, but according to Cæsar and the Chaldæans, upon the nones. In Egypt, at this time, Orion and his Sword begin to set. According to Cæsar, the setting of Libra on the sixth before the ides of April announces rain. On the fourteenth before the calends of May, the Suculæ set to the people of Egypt in the evening, a stormy constellation, and significant of tempests both by land and sea. This constellation sets on the sixteenth in Attica, and on the fifteenth, according to Cæsar, announcing four days of bad weather in succession: in Assyria it sets upon the twelfth before the calends of May. This constellation has ordinarily the name of Parilicium, from the circumstance that the eleventh before the calends of May is observed as the natal day of the City of Rome; upon this day, too, fine weather generally returns, and gives us a clear sky for our observations. The Greeks call the Suculæ by the name of "Hyades," in consequence of the rain and clouds which they bring with them; while our people, misled by the resemblance of the Greek name to another word of theirs, meaning a "pig," have imagined that the constellation receives its name from that word, and have consequently given it, in their ignorance, the name of "Suculæ," or the "Little Pigs."

In the calculations made by Cœsar, the eighth before the calends of May is a day remarked, and on the seventh before the calends, the constellation of the Kids rises in Egypt. On the sixth before the calends, the Dog sets in the evening in Bœotia and Attica, and the Lyre rises in the morning. On the fifth before the calends of May, Orion has wholly set to the people of Assyria, and on the fourth before the calends the Dog. On the sixth before the nones of May, the Suculæ rise in the morning, according to the calculation of Cæsar,

and on the eighth before the ides, the She-goat, which announces rain. In Egypt the Dog sets in the evening of the same day. Such are pretty nearly the movements of the constellations up to the sixth before the ides of May, the period of the rising of the Vergiliæ.

In this interval of time, during the first fifteen days, the agriculturist must make haste and do all the work for which he has not been able to find time before the vernal equinox; and he should bear in mind that those who are late in pruning their vines are exposed to jibes and taunts, in imitation of the note of the bird of passage known to us as the cuckoo. For it is looked upon as a disgrace, and one that subjects him to well-merited censure, for that bird, upon its arrival, to find him only then pruning his vines. Hence it is, too, that we find those cutting jokes, of which our peasantry are the object, at the beginning of spring. Still, however, all such jokes are to be looked upon as most abominable, from the ill omens they convey.

In this way, then, we see that, in agricultural operations, the most trifling things are construed as so many hints supplied us by Nature. The latter part of this period is the proper time for sowing panic and millet; the precise moment, however, is just after the barley has ripened. In the case of the very same land, too, there is one sign that points in common both to the ripening of the barley and the sowing of panic and millet — the appearance of the glow-worm, shining in the fields at night. “Cicindelæ” is the name given by the country people to these flying stars, while the Greeks call them “lampyrides,” — another manifestation of the incredible bounteousness of Nature.

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CHAP. 67. (27.)

WORK TO BE DONE AFTER THE RISING OF THE VERGILIÆ: HAY-MAKING.

Nature had already formed the Vergiliæ, a noble group of stars, in the heavens; but not content with these, she has made others as well for the face of the earth, crying aloud, as it were "Why contemplate the heavens, husbandman? Why, rustic, look up at the stars? Do not the nights already afford you a sleep too brief for your fatigues? Behold now! I scatter stars amid the grass for your service, and I reveal them to you in the evening, as you return from your work; and that you may not disregard them, I call your attention to this marvel. Do you not see how the wings of this insect cover a body bright and shining like fire, and how that body gives out light in the hours of the night even? I have given you plants to point out to you the hours, and, that you may not have to turn your eyes from the earth, even to view the sun, the heliotropium and the lupine have been made by me to move with his movements. Why then still look upwards, and scan the face of heaven? Behold, here before your very feet are your Vergiliæ; upon a certain day do they make their appearance, and for a certain time do they stay. Equally certain, too, it is that of that constellation they are the offspring. Whoever, then, shall put in his summer seeds before they have made their appearance, will infallibly find himself in the wrong."

It is in this interval, too, that the little bee comes forth, and announces that the bean is about to blossom; for it is the bean in flower that summons it forth. We will here give another sign, which tells us when the cold is gone; as soon as ever you see the mulberry in bud, you have no occasion to fear any injury from the rigour of the weather.

It is the time, now, to put in cuttings of the olive, to clear away between the olive-trees, and, in the earlier days of the equinox, to irrigate the meadows. As soon, however, as the grass puts forth a stem, you must shut off the water from the fields. You must now lop the leafy branches of the vine, it being the rule that this should be

done as soon as the branches have attained four fingers in length; one labourer will be sufficient for a jugerun. The crops of corn, too, should be hoed over again, an operation which lasts twenty days. It is generally thought, however, that it is injurious to both vine and corn to begin hoeing directly after the equinox. This is the proper time, too, for washing sheep.

After the rising of the Vergiliæ the more remarkable signs are, according to Cæsar, the morning rising of Arcturus, which takes place on the following day; and the rising of the Lyre on the third before the ides of May. The She-goat sets in the evening of the twelfth before the calends of June, and in Attica the Dog. On the eleventh before the calends of June, according to Cæsar, Orion's Sword begins to appear; and, according to the same writer, on the fourth before the nones of June the Eagle rises in the evening, and in Assyria as well. On the seventh before the ides of June Arcturus sets in the morning to the people of Italy, and on the fourth before the ides the Dolphin rises in the evening. On the seventeenth before the calends of July Orion's Sword rises in Italy, and, four days later, in Egypt. On the eleventh before the calends of July, according to Cæsar's reckoning, Orion's Sword begins to set; and the eighth before the calends of July, the longest day in the year, with the shortest night, brings us to the summer solstice.

In this interval of time the vine should be cleared of its superfluous branches, and care taken to give an old vine one turning up at the roots, a young tree two. Sheep, too, are sheared at this period, lupines turned up for manuring the land, the ground dug, vetches cut for fodder, and beans gathered in and threshed.

(28.) About the calends of June the meadows are mown; the cultivation of which, the one which is the easiest of all, and requires the smallest outlay, leads me to enter into some further details relative to it. Meadow lands should be selected in a rich, or else a moist or well-watered, soil, and care should be taken to drain the rain-water upon them from the high- road. The best method of ensurïng a good crop of grass, is first to plough the land, and then to harrow it: but, before passing the harrow over it, the ground should be sprinkled with such seed as may have fallen from the hay in the haylofts and mangers. The land should not be watered, however, the

first year, nor should cattle be put to graze upon it before the second hay-harvest, for fear lest the blade should be torn up by the roots, or be trodden down and stunted in its growth. Meadow land will grow old in time, and it requires to be renovated every now and then, by sowing upon it a crop of beans, or else rape or millet, after which it should be sown the next year with corn, and then left for hay the third. Care, too, should be taken, every time the grass is cut, to pass the sickle over the ground, and so cut the aftermath which the mowers have left behind; for it is a very bad plan to leave any of the grass and let it shed its seed there. The best crop for meadow land is trefoil, and the next best is grass; nummulus is the very worst of all, as it bears a pod which is particularly injurious; equisætis, too, which derives its name from its resemblance to horse-hair, is of a noxions character. The proper time for mowing grass is when the ear begins to shed its blossom and to grow strong: care must be taken to cut it before it becomes dry and parched. "Don't mow your hay too late," says Cato; "but cut it before the seed is ripe." Some persons turn the water upon it the day before mowing, where it is practicable to do so. It is the best plan to cut hay in the night while the dews are falling. In some parts of Italy the mowing is not done till after harvest.

This operation, too, was a very expensive one in ancient times. In those days the only whetstones known were those of Crete and other places beyond sea, and they only used oil to sharpen the scythe with. For this purpose the mower moved along, with a horn, to hold the oil, fastened to his thigh. Italy has since furnished us with whetstones which are used with water, and give an edge to the iron quite equal to that imparted by the file; these water-whetstones, however, turn green very quickly. Of the scythe there are two va- rieties; the Italian, which is considerably shorter than the other, and can be handled among underwood even; and the Gallic, which makes quicker work of it, when employed on extensive domains, for there they cut the grass in the middle only, and pass over the shorter blades. The Italian mowers cut with one hand only. It is a fair day's work for one man to cut a jugerum of grass, and for another to bind twelve hundred sheaves of four pounds each. When the grass is cut it should be turned towards the sun, and must never be stacked until it is quite dry. If this last precaution is not carefully taken, a kind of vapour

will be seen arising from the rick in the morning, and as soon as the sun is up it will ignite to a certainty, and so be consumed. When the grass has been cut, the meadow must be irrigated again, for the purpose of ensuring a crop in the autumn, known to us as the "cordum," or aftermath. At Interamna in Umbria the grass is cut four times a-year, and this although the meadows there are not irrigated, — in most places, three. After all this has been done, too, the pasturage of the land is found no less lucrative than the hay it has produced. This, however, is a matter of consideration for those more particularly who rear large herds of cattle, and every one whose occupation it is to breed beasts of burden, will have his own opinions upon the subject: it is found, however, the most lucrative of all by those whose business it is to train chariot-horses.

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CHAP. 68.

THE SUMMER SOLSTICE.

We have already stated that the summer solstice arrives at the eighth degree of Cancer, and upon the eighth day before the calends of July: this is an important crisis in the year, and of great interest to the whole earth. Up to this period from the time of the winter solstice the days have gone on increasing, and the sun has continued for six months making his ascension towards the north; having now surmounted the heights of the heavens, at this point he reaches the goal, and after doing so, commences his return towards the south; the consequence of which is, that for the next six months he increases the nights and subtracts from the length of the days. From this period, then, it is the proper time to gather in and store away the various crops in succession, and so make all due preparations for the rigour and severity of the winter.

It was only to be expected that Nature should point out to us the moment of this change by certain signs of an indubitable character; and she has accordingly placed them beneath the very hands of the agriculturist, bidding the leaves turn round upon that day, and so denote that the luminary has now run its course. And it is not the leaves of trees only that are wild and far remote that do this, nor have those persons who are on the look-out for these signs to go into devious forests and mountain tracts to seek them. Nor yet, on the other hand, are they to be seen in the leaves of trees only that are grown in the vicinity of cities or reared by the hand of the ornamental gardener, although in them they are to be seen as well. Nature upon this occasion turns the leaf of the olive which meets us at every step; she turns the leaf of the linden, sought by us, as it is, for a thousand purposes; she turns the leaf of the white poplar, too, wedded to the vine that grows upon its trunk. And still, for her, all this is not enough. "You have the elm," she says, "reared for the support of the vine, and the leaf of that I will make to turn as well. The leaves of this tree you have to gather for fodder, the leaves of the vine you prune away. Only look upon them, and there you behold the solstice;

they are now pointing towards a quarter of the heavens the reverse of that towards which they looked the day before. The twigs of the withy, that most lowly of trees, you employ for tying things without number. You are a head taller than it — I will make its leaves to turn round as well. Why complain, then, that you are but a rustic peasant? It shall be no fault of mine if you do not understand the heavens and become acquainted with the movements of the celestial bodies. I will give another sign, too, that shall address itself to your ear — only listen for the cooing of the ring-doves; and beware of sup- posing that the summer solstice is past, until you see the wood-pigeon sitting on her eggs."

Between the summer solstice and the setting of the Lyre, on the sixth day before the calends of July, according to Cæsar's reckoning, Orion rises, and upon the fourth before the nones of July, his Belt rises to the people of Assyria. Upon-the morning of the same day, also, the scorching constellation of Procyon rises. This last constellation has no name with the Romans, unless, indeed, we would consider it as identical with Canicula, or Lesser Dog, which we find depicted among the stars; this last is productive of excessive heat, as we shall shortly have further occasion to state. On the fourth before the nones of July, the Crown sets in the morning to the people of Chaldæa, and in Attica, the whole of Orion has risen by that day. On the day before the ides of July, the rising of Orion ends to the Egyptians also; on the sixteenth before the calends of August, Procyon rises to the people of Assyria, and, the day but one after, of nearly all other countries as well, indicating a crisis that is universally known among all nations, and which by us is called the rising of the Dog-star; the sun at this period entering the first degree of Leo. The Dog-star rises on the twenty-third day after the summer solstice; the influence of it is felt by both ocean, and earth, and even by many of the animals as well, as stated by us elsewhere on the appropriate occasions. No less veneration, in fact, is paid to this star, than to those that are consecrated to certain gods; it kindles the flames of the sun, and is one great source of the heats of summer.

On the thirteenth day before the calends of August, the Eagle sets in the morning to the people of Egypt, and the breezes that are the precursors of the Etesian winds, begin to blow; these, according to

Cæsar, are first perceived in Italy, on the tenth before the calends of August. The Eagle sets in the morning of that day to the people of Attica, and on tile third before the calends of August, the Royal Star in the breast of Leo rises in the morning, according to Cæsar. On the eighth before the ides of August, one half of Arcturus has ceased to be visible, and on the third before the ides the Lyre, by its setting, opens the autumn, — according to Cæsar at least; though a more exact calculation has since shown, that this takes place on the sixth day before the ides of that month.

The time that intervenes between these periods is one that is of primary importance in the cultivation of the vine; as the constellation of which we have spoken, under the name of Canicula, has now to decide upon the fate of the grape. It is at this period that the grapes are said to be charred, a blight falling upon them which burns them away, as though red-hot coals had been applied to them. There is no hail that can be compared with this destructive malady, nor yet any of those tempests, which have been productive of such scarcity and dearth. For the evil effects of these, at the very utmost, are only felt in isolated districts, while the coal blight, on the other hand, extends over whole countries, far and wide. Still, however, the remedy would not be very difficult, were it not that men would much rather calumniate Nature, than help themselves. It is said that Democritus, who was the first to comprehend and demonstrate that close affinity which exists between the heavens and the earth, finding his laborious researches upon that subject slighted by the more opulent of his fellow-citizens, and presaging the high price of oil, which was about to result upon the rising of the Vergiliæ, (as we have already mentioned, and shall have to explain more fully hereafter), bought up all the oil in the country, which was then at a very low figure, from the universal expectation of a fine crop of olives; a proceeding which greatly surprised all who knew tlat a life of poverty and learned repose was so entirely the object of his aspirations. When, however, his motives had been fully justified by the result, and vast riches had flowed in upon him apace, he returned all his profits to the disappointed proprietors, whose avarice had now taught them to repent, thinking it quite sufficient to have thus proved how easy it was for him to acquire riches whenever he pleased. At a more recent

period, again, Sextius, a Roman philosopher residing at Athens, made a similar application of his knowledge. Such, then, is the utility of science, the instruction provided by which it shall be my aim, as clearly and as perspicuously as possible, to apply to the various occupations of a country life.

Most writers have said that it is the dew, scorched by a burning sun, that is the cause of mildew in corn, and of coal-blight in the vine; this, however, seems to me in a great measure incorrect, and it is my opinion that all blights result entirely from cold, and that the sun is productive of no injurious effects whatever. This, in fact, will be quite evident, if only a little attention is paid to the subject; for we find that the blight makes its appearance at first in the night time only, and before the sun has shone with any vigour. The natural inference is, that it depends entirely upon the moon, and more particularly as such a calamity as this is never known to happen except at the moon's conjunction, or else at the full moon, periods at which the influence of that heavenly body is at its greatest height. For at both of these periods, as already stated by us more than once, the moon is in reality at the full; though during her conjunction she throws back to the heavens all the light which she has received from the sun. The difference in the effects produced by the moon at these two periods is very great, though at the same time equally apparent; for at the conjunction, that body is extremely hot in summer, but cold in winter; while, on the other hand, at the full moon, the nights are cold in summer, but warm in winter. The reason of this. although Fabianus and the Greek writers adopt another method of explaining it, is quite evident. During the moon's conjunction in summer, she must of necessity move along with the sun in an orbit nearer to the earth, and so become warmed by the heat which she receives by reason of her closer vicinity to the sun. In winter, again, at the time of the conjunction, she is farther off from us, the sun being also removed to a greater distance. On the other hand, again, when the moon is at the full in summer, she is more remote from the earth, and in opposition with the sun; while, in winter, she approaches nearer to us at that period, by adopting the same orbit as at her conjunction in summer. Naturally humid herself, as often as from her position she is cold, she congeals to an unlimited extent the dews which fall at that

period of the year.

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CHAP. 69.

CAUSES OF STERILITY.

But we ought always to bear in mind, more particularly, that there are two varieties of evils that are inflicted upon the earth by the heavens. The first of these, known by us under the name of "tempests," comprehends hail-storms, hurricanes and other calamities of a similar nature; when these take place at the full moon, they come upon us with additional intensity. These tempests take their rise in certain noxious constellations, as already stated by us on several occasions, Arcturus, for instance, Orion, and the Kids.

The other evils that are thus inflicted upon us, supervene with a bright, clear sky, and amid the silence of the night, no one being sensible of them until we have perceived their effects. These dispensations are universal and of a totally different character from those previously mentioned, and have various names given to them, sometimes mildew, sometimes blast, and sometimes coal blight; but in all cases sterility is the infallible result. It is of these last that we have now to speak, entering into details which have not hitherto been treated of by any writer; and first of all we will explain the causes of them.

(29.) Independently of the moon, there are two principal causes of these calamities, which emanate more particularly from two quarters of the heavens of but limited extent. On the one hand, the Vergiliæ exercise an especial influence on our harvests, as it is with their rising that the summer begins, and with their setting, the winter; thus embracing, in the space of six months, the harvest, the vintage, and the ripening of all the vegetable productions. In addition to this, there is a circular tract in the heavens, quite visible to the human eye even, known as the Milky Way. It is the emanations from this, flowing as it were from the breast, that supply their milky nutriment to all branches of the vegetable world. Two constellations more particularly mark this circular tract, the Eargle in the north, and Canicula in the south; of this last, we have already made mention in its appropriate place. This circle traverses also Sagittarius and

Gemini, and passing through the centre of the sun, cuts the equinoctial line below, the constellation of the Eagle making its appearance at the point of intersection on the one side, and Canicula on the other. Hence it is that the influences of both these constellations develope themselves upon all cultivated lands; it being at these points only that the centre of the sun is brought to correspond with that of the earth. If, then, at the moments of the rising and the setting of these constellations, the air, soft and pure, transmits these genial and milky emanations to the earth, the crops will thrive and ripen apace; but if on the other hand, the moon, as already mentioned, sheds her chilling dews, the bitterness thereof infuses itself into these milky secretions, and so kills the vegetation in its birth. The measure of the injury so inflicted on the earth depends, in each climate, upon the combination of the one or other of these causes; and hence it is that it is not felt in equal intensity throughout the whole earth, nor even precisely at the same moment of time. We have already said that the Eagle rises in Italy on the thirteenth day before the calends of January, and the ordinary course of Nature does not permit us before that period to reckon with any degree of certainty upon the fruits of the earth; for if the moon should happen to be in conjunction at that time, it will be a necessary consequence, that all the winter fruits, as well as the early ones, will receive injury more or less.

The life led by the ancients was rude and illiterate; still, as will be readily seen, the observations they made were not less remarkable for ingenuity than are the theories of the present day. With them there were three set periods for gathering in the produce of the earth, and it was in honour of these periods that they instituted the festive days, known as the Robigalia, the Floralia, and the Vinalia. The Robigalia were established by Numa in the fortieth year of his reign, and are still celebrated on the seventh day before the calends of May, as it is at this period that mildew mostly makes its first attacks upon the growing corn. Varro fixes this crisis at the moment at which the sun enters the tenth degree of Taurus, in accordance with the notions that prevailed in his day: but the real cause is the fact, that thirty-one days after the vernal equinox, according to the observations of various nations, the Dog-star sets between the seventh and fourth before the

calends of May, a constellation baneful in itself, and to appease which a young dog should first be sacrificed. The same people also, in the year of the City 513, instituted the Floralia, a festival held upon the fourth before the calends of May, in accordance with the oracular injunctions of the Sibyl, to secure a favourable season for the blossoms and flowers. Varro fixes this day as the time at which the sun enters the fourteenth degree of Taurus. If there should happen to be a full moon during the four days at this period, injury to the corn and all the plants that are in blossom, will be the necessary result. The First Vinalia, which in ancient times were established on the ninth before the calends of May, for the purpose of tasting the wines, have no signification whatever in reference to the fruits of the earth, any more than the festivals already mentioned have in reference to the vine and the olive; the germination of these last not commencing, in fact, till the rising of the Vergiliæ, on the Sixth day before the ides of May, as already mentioned on previous occasions. This, again, is another period of four days, which should never be blemished by dews, as the chilling constellation of Arcturus, which sets on the following day, will be sure to nip the vegetation; stili less ought there to be a full moon at this period.

On the fourth before the nones of June, the Eagle rises again in the evening, a critical day for the olives and vines in blossom, if there should happen to be a full moon. For my part, I am of opinion that the eighth before the calends of July, the day of the summer solstice, must be a critical day, for a similar reason; and that the rising of the Dog-star, twenty-three days after the summer solstice, must be so too, in case the moon is then in conjunction; for the excessive heat is productive of injurious effects, and the grape becomes prematurely ripened, shrivelled, and tough. Again, if there is a full noon on the fourth before the nones of July, when Canicula rises to the people of Egypt, or at least on the sixteenth before the calends of August, when it rises in Italy, it is productive of injurious results. The same is the case, too, from the thirteenth day before the calends of August, when the Eagle sets, to the tenth before the calends of that month. The Second Vinalia, which are celebrated on the fourteenth before the calends of September, bear no reference to these influences. Varro fixes them at; the period at which the Lyre

begins its morning setting, and says that this indicates the beginning of autumn, the day having been set apart for the purpose of propitiating the weather: at the present day, however, it is observed that the Lyre sets on the sixth before the ides of August.

Within these periods there are exerted the sterilizing influences of the heavens, though I am far from denying that they may be considerably modified by the nature of the locality according as it is cold or hot. Still, however, it is sufficient for me to have demonstrated the theory; the modifications of its results depending, in a great degree, upon attentive observation. It is beyond all question too, that either one of these two causes will be always productive of its own peculiar effects, the full moon, I mean, or else the moon's conjunction. And here it suggests itself how greatly we ought to admire the bounteous provisions made for us by Nature; for, in the first place, these calamitous results cannot by any possibility befall us every year, in consequence of the fixed revolutions of the stars; nor indeed, when they do happen, beyond a few nights in the year, and it may be easily known beforehand which nights those are likely to be. In order, too, that we might not have to apprehend these injuries to vegetation in all the months, Nature has so ordained that the times of the moon's conjunction in summer, and of the full moon in winter, with the exception of two days only at those respective periods, are well ascertained, and that there is no danger to be apprehended on any but the nights of summer, and those nights the shortest of all; in the day-time, on the other hand, there is nothing to fear. And then, besides, these phænomena may be so easily understood, that the ant even, that most diminutive of insects, takes its rest during the moon's conjunction, but toils on, and that during the night as well, when the moon is at the full; the bird, too, called the "parra" disappears upon the day on which Sirius rises, and never reappears until that star has set; while the witwall, on the other hand, makes its appearance on the day of the summer solstice. The moon, however, is productive of no noxious effects at either of these periods, except when the nights are clear, and every movement of the air is lulled; for so long as clouds prevail, or the wind is blowing, the night dews never fall. And then, besides, there are certain remedies to counteract these noxious influences.

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CHAP. 70.

REMEDIES AGAINST THESE NOXIOUS INFLUENCES.

When you have reason to fear these influences, make bonfires in the fields and vineyards of cuttings or heaps of chaff, or else of the weeds that have been rooted up; the smoke will act as a good preservative. The smoke, too, of burning chaff will be an effectual protection against the effects of fogs, when likely to be injurious. Some persons recommend that three crabs should be burnt alive among the trees on which the vines are trained, to prevent these from being attacked by coal blight; while others say that the flesh of the silurus should be burnt in a slow fire, in such a way that the smoke may be dispersed by the wind throughout the vineyard.

Varro informs us, that if at the setting of the Lyre, which is the beginning of autumn, a painted grape is consecrated in the midst of the vineyard, the bad weather will not be pro- ductive of such disastrous results as it otherwise would. Archibius has stated, in a letter to Antiochus, king of Syria, that if a bramble-frog is burried in a new earthen vessel, in the middle of a corn-field, there will be no storms to cause injury.

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CHAP. 71.

WORK TO BE DONE AFTER THE SUMMER SOLSTICE.

The following are the rural occupations for this interval of time-the ground must have another turning up, and the trees must be cleared about the roots and moulded up, where the heat of the locality requires it. Those plants, however, which are in bud must not be spaded at the roots, except where the soil is particularly rich. The seed-plots, too, must be well cleared with the hoe, the barley-harvest got in, and the threshing-floor prepared for the harvest with chalk, as Cato tells us, slackened with amurca of olives; Virgil makes mention of a method still more laborious even. In general, however, it is considered sufficient to make it perfectly level, and then to cover it with a solution of cow-dung and water; this being thought sufficient to prevent the dust from rising.

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CHAP. 72. (30.)

THE HARVEST.

The mode of getting in the harvest varies considerably. In the vast domains of the provinces of Gaul a large hollow frame, armed with teeth and supported on two wheels, is driven through the standing corn, the beasts being yoked behind it; the result being, that the ears are torn off and fall within the frame. In other countries the stalks are cut with the sickle in the middle, and the ears are separated by the aid of paddle-forks. In some places, again, the corn is torn up by the roots; and it is asserted by those who adopt this plan, that it is as good as a light turning up for the ground, whereas, in reality, they deprive it of its juices. There are differences in other respects also: in places where they thatch their houses with straw, they keep the longest haulms for that purpose; and where hay is scarce, they employ the straw for litter. The straw of panic is never used for thatching, and that of millet is mostly burnt; barley-straw, however, is always preserved, as being the most agreeable of all as a food for oxen. In the Gallic provinces panic and millet are gathered, ear by ear, with the aid of a comb carried in the hand.

In some places the corn is beaten out by machines upon the threshing-floor, in others by the feet of mares, and in others with flails. The later wheat is cut, the more prolific it is; but it is got in early, the grain is finer and stronger. The best rule is to cut it before the grain hardens, and just as it is changing colour: though the oracles on husbandry say that it is better to begin the harvest two days too soon than two days too late. Winter and other wheat must be treated exactly the same way both on the threshing-floor and in the granary. Spelt, as it is difficult to be threshed, should be stored with the chaff on, being only disengaged of the straw and the beard.

Many countries make use of chaff for hay: the smoother and thinner it is, and the more nearly resembling dust, the better; hence it is that the chaff of millet is considered the best, that of barley being the next best, and that of wheat the worst of all, except for beasts that are hard worked. In stony places they break the haulms, when dry,

with staves, for the cattle to lie upon: if there is a deficiency of chaff, the straw as well is ground for food. The following is the method employed in preparing it: it is cut early and sprinkled with bay salt, after which it is dried and rolled up in trusses, and given to the oxen as wanted, instead of hay. Some persons set fire to the stubble in the fields, a plan that has been greatly extolled by Virgil: the chief merit of it is that the seed of the weeds is effectually destroyed. The diversity of the methods employed in harvesting mainly depends upon the extent of the crops and the price of labour.

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CHAP. 73

THE METHODS OF STORING CORN.

Connected with this branch of our subject is the method of storing corn. Some persons recommend that granaries should be built for the purpose at considerable expense, the walls being made of brick, and not less than three feet thick; the corn, they say, should be let in from above, the air being carefully excluded, and no windows allowed. Others, again, say that the granary should have an aspect in no direction but the north-east or north, and that the walls should be built without lime, that substance being extremely injurious to corn; as to what we find recommended in reference to amurca of olives, we have already mentioned it on a former occasion. In some places they build their granaries of wood, and upon pillars, thinking it the best plan to leave access for the air on every side, and from below even. Some persons think, how- ever, that the grain diminishes in bulk if laid on a floor above the level of the ground, and that it is liable to ferment beneath a roof of tiles. Many persons say, too, that the grain should never be stirred up to air it, as the weevil is never known to penetrate beyond four fingers in depth; consequently, beyond that depth there is no danger. According to Columella, the west wind is beneficial to grain, a thing that surprises me, as that wind is generally a very parching one. Some persons recommend that, before housing the corn, a bramble-frog should be hung up by one of the hind legs at the threshold of the granary. To me it appears that the most important precaution of all is to house the grain at the proper time; for if it is unripe when cut, and not sufficiently firm, or if it is got in a heated state, it follows of necessity that noxious insects will breed in it.

There are several causes which contribute to the preservation of grain; the outer coats in some kinds are more numerous, as in millet, for instance; the juices are of an oleaginous nature, and so supply ample moisture, as in sesame, for example; while in other kinds, again, they are naturally bitter, as in the lupine and the chicheling vetch. It is in wheat more particularly that insects breed, as it is apt to heat from the density of its juices, and the grain is covered with a

thick bran. In barley the chaff is thinner, and the same is the case with all the leguminous seeds: it is for this reason that they do not ordinarily breed insects. The bean, however, is covered with a coat of a thicker substance: and hence it is that it ferments. Some persons sprinkle wheat, in order to make it keep the longer, with amurea of olives, a quadrantal to a thousand modii: others, again, with powdered Chalcidian or Carian chalk, or with worm-wood. There is a certain earth found at Olynthus, and at Cerinthus, in Eubœa, which prevents grain from spoiling. If garnered in the ear, grain is hardly ever found to suffer any injury.

The best plan, however, of preserving grain, is to lay it up in trenches, called "siri," as they do in Cappadocia, Thracia, Spain, and at * * * in Africa. Particular care is taken to dig these trenches in a dry soil, and a layer of chaff is then placed at the bottom the grain, too, is always stored in the ear. In this case, if no air is allowed to penetrate to the corn, we may rest assured that no noxious insects will ever breed in it. Varro says, that wheat, if thus stored, will keep as long as fifty years, and millet a hundred; and he assures us that beans and other leguminous grain, if put away in oil jars with a covering of ashes, will keep for a great length of time. He makes a statement, also, to the effect that some beans were preserved in a cavern in Ambracia from the time of King Pyrrhus until the Piratical War of Pompeius Magnus, a period of about two hundred and twenty years.

The chick-pea is the only grain in which no insect will breed while in the granary. Some persons place upon the heaps of the leguminous grains pitchers full of vinegar and coated with pitch, a stratum of ashes being laid beneath; and they fancy that if this is done, no injury will happen. Some, again, store them in vessels which have held salted provisions, with a coating of plaster on the top, while other persons are in the habit of sprinkling lentils with vinegar scented with laser, and, when dry, giving them a covering of oil. But the most effectual method of all is to get in everything that you would preserve from injury at the time of the moon's conjunction; and hence it is of the greatest importance to know, when getting in the

harvest, whether it is for garnering or whether for immediate sale. If cut during the increase of the moon, grain will increase in size.

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CHAP. 74. (31.)

THE VINTAGE, AND THE WORKS OF AUTUMN.

In accordance with the ordinary divisions of the year, we now come to autumn, a period which extends from the setting of the Lyre to the autumnal equinox, and from that to the setting of the Vergiliæ and the beginning of winter. In these intervals, the more important periods are marked by the rising of the Horse to the people of Attica, in the evening of the day before the ides of August; upon which day also the Dolphin sets in Egypt, and, according to Cæsar, in Italy. On the eleventh before the calends of September, the star called the Vintager begins to rise in the morning, according to Cæsar's reckoning, and to the people of Assyria; it announces the ripening of the vintage, a sure sign of which is the change of colour in the grape. On the fifth before the calends of September, the Arrow sets in Assyria, and the Etesian winds cease to blow: on the nones of September, the Vintager rises in Egypt, and in the morning of that day, Arcturus rises to the people of Attica: on the same morning, too, the Arrow sets. On the fifth before the ides of September, according to Cæsar, the She-Goat rises in the evening; and one half of Arcturus becomes visible on the day before the ides of September, being portentous of boisterous weather for five days, both by land and sea.

The theory relative to the effects produced by Arcturus, is stated in the following terms: if showers prevail, it is said, at the setting of the Dolphin, they will not cease so long as Arcturus is visible. The departure of the swallows may be looked upon as the sign of the rising of Arcturus; for if overtaken by it, they are sure to perish.

On the sixteenth day before the calends of October, the Ear of Corn, which Virgo holds, rises to the people of Egypt in the morning, and by this day the Etesian winds have quite ceased to blow. According to Cæsar, this constellation rises on the fourteenth before the calends, and it affords its prognostics to the Assyrians on the thirteenth. On the eleventh before the calends of October, the point of junction in Pisces disappears, and upon the eighth is the autumnal equinox. It is a remarkable fact, and rarely the case, that Philippus,

Callip- pus, Dositheus, Parmeniscus, Conon, Criton, Democritus, and Eudoxus, all agree that the She-Goat rises in the morning of the fourth before the calends of October, and on the third the Kids. On the sixth day before the nones of October, the Crown rises in the morning to the people of Attica, and upon the morning of the fifth, the Charioteer sets. On the fourth before the nones of October, the Crown, according to Cæsar's reckoning, begins to rise, and on the evening of the day after is the setting of the constellation of the Kids. On the eighth before the ides of October, according to Cæsar, the bright star rises that shines in the Crown, and on the evening of the sixth before the ides the Vergiliæ, rise. Upon the ides of October, the Crown has wholly risen. On the seventeenth before the calends of November, the Suculæ rise in the evening, and on the day before the calends, according to Cæsar's reckoning, Arcturus sets, and the Suculæ rise with the sun. In the evening of the fourth day before the nones of November, Arcturus sets. On the fifth before the ides of November, Orion's Sword begins to set; and on the third before the ides the Vergiliæ set.

In this interval of time, the rural operations consist in sowing rape and turnips, upon the days which have been mentioned on a previous occasion. The people in the country are of opinion, that it is not a good plan to sow rape after the departure of the stork; but for my own part, I am of opinion that it should be sown after the Vulcanalia, and the early kind at the same time as panic. After the setting of the Lyre, vetches should be sown, kidney-beans and hay-grass: it is generally recommended that this should be done while the moon is in conjunction. This, too, is the proper time for gathering in the leaves: it is fair work for one woodman, to fill four baskets in the day. If the leaves are gathered while the moon is on the wane, they will not decay; they ought not to be dry, however, when gathered.

The ancients were of opinion, that the vintage is never ripe before the equinox; but at the present day I find that it is gathered in before that period; it will be as well, therefore, to give the signs and indications by which the proper moment may be exactly ascertained. The rules for getting in the vintage are to the following effect: Never gather the grape in a heated state, or in other words, when the weather is dry, and before the rains have fallen; nor ought it to be

gathered when covered with dew, — or in other words, when dews have fallen during the night, — nor yet before the dews have been dispelled by the sun. Commence the vintage when the bearing-shoots begin to recline upon the stem, or when, after a grape is removed from the bunch, the space left empty is not filled up; this being a sure proof that the berry has ceased to increase in size. It is of the greatest consequence to the grape, that it should be gathered while the moon is on the increase. Each pressing should fill twenty culei, that being the fair proportion. To fill twenty culei and vats from twenty jugera of vineyard, a single press will be enough. In pressing the grape, some persons use a single press-board, but it is a better plan to employ two, however large the single ones may be. It is the length of them that is of the greatest consequence, and not the thickness: if wide, however, they press the fruit all the better. The ancients used to screw down the press-boards with ropes and leather thongs, worked by levers. Within the last hundred years the Greek press has been invented, with thick spiral grooves running down the stem. To this stem there are spokes attached, which project like the rays of a star, and by means of which the stem is made to lift a box filled with stones — a method that is very highly approved of. It is only within the last two-and-twenty years, that a plan has been discovered of employing smaller press-boards, and a less unwieldy press: to effect this, the height has been reduced, and the stem of the screw placed in the middle, the whole pressure being concentrated upon broad planks placed over the grapes, which are covered also with heavy weights above.

This is the proper time for gathering fruit; the best moment for doing so is when it has begun to fall through ripeness, and not from the effects of the weather. This is the season, too, for extracting the lees of wine, and for boiling defrutum: this last must be done on a night when there is no moon, or if it is a full moon, in the day-time. At other times of the year, it must be done either before the moon has risen, or after it has set. The grapes employed for this purpose should never be gathered from a young vine, nor yet from a tree that is grown in a marshy spot, nor should any grapes be used but those that are perfectly ripe: the liquor, too, should never be skimmed with anything but a leaf; for if the vessel should happen to be touched

with wood, the liquor, it is generally thought, will have a burnt and smoky flavour.

The proper time for the vintage is between the equinox and the setting of the Vergiliæ, a period of forty-four days. It is a saying among the growers, that to pitch wine-vessels after that day, in consequence of the coldness of the weather, is only so much time lost. Still, however, I have seen, before now, persons getting in the vintage on the calends of January even, in consequence of the want of wine-vessels, and putting the must into receivers, or else pouring the old wine out of its vessels, to make room for new liquor of a very doubtful quality. This, however, happens not so often in consequence of an over-abundant crop, as through carelessness, or else the avarice which leads people to wait for a rise in prices. The method that is adopted by the most economical managers, is to use the produce supplied by each year, and this, too, is found in the end the most lucrative mode of proceeding. As for the other details relative to wines, they have been discussed at sufficient length already; and it has been stated on a previous occasion, that as soon as the vintage is got in, the olives should at once be gathered, with other particulars relative to the olive after the setting of the Vergiliæ.

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CHAP. 75. (32.)

THE REVOLUTIONS OF THE MOON.

I shall now proceed to add some necessary information re- lative to the moon, the winds, and certain signs and prognostics, in order that I may complete the observations I have to make with reference to the sidereal system. Virgil has even gone so far, in imitation of Democritus, as to assign certain operations to certain days of the moon; but my sole object shall be, as, indeed, it has been throughout this work, to consult that utility which is based upon a knowledge and appreciation of general principles.

All vegetable productions are cut, gathered, and housed to more advantage while the moon is on the wane than while it is on the increase. Manure must never be touched except when the moon is on the wane; and land must be manured more particularly while the moon is in conjunction, or else at the first quarter. Take care to geld your boars, bulls, rams, and kids, while the moon is on the wane. Put eggs under the hen at a new moon. Make your ditches in the night-time, when the moon is at full. Cover up the roots of trees, while the moon is at full. Where the soil is humid, put in seed at the moon's conjunction, and during the four days about that period. It is generally recommended, too, to give an airing to corn and the leguminous grains, and to garner them, towards the end of the moon; to make seed-plots when the moon is above the horizon; and to tread out the grape, to fell timber, and to do many other things that have been mentioned in their respective places, when the moon is below it.

The observation of the moon, in general, as already observed in the Second Book, is not so very easy, but what I am about here to state even rustics will be able to comprehend: so long as the moon is seen in the west, and during the earlier hours of the night, she will be on the increase, and one half of her disk will be perceived; but when the moon is seen to rise at sun-set and opposite to the sun, so that they are both perceptible at the same moment, she will be at fall. Again,

as often as the moon rises in the east, and does not give her light in the earlier hours of the night, but shows herself during a portion of the day, she will be on the wane, and one half of her only will again be perceptible: when the moon has ceased to be visible, she is in conjunction, a period known to us as “interlunium.” During the conjunction, the moon will he above the horizon the same time as the sun, for the whole of the first day: on the second, she will advance upon the night ten-twelfths of an hour and one-fourth of a twelfth; on the third day, the same as on the second, and * * * so on in succession up to the fifteenth day, the same proportional parts of an hour being added each day. On the fifteenth day she will be above the horizon all night, and below it all day. On the sixteenth, she will remain below the horizon ten-twelfths of an hour, and one-fourth of a twelfth, at the first hour of the night, and so on in the same proportion day after day, up to the period of her conjunction; and thus, the same time which by remaining under the horizon, she withdraws from the first part of the night, she will add to the end of the night by remaining above the horizon. Her revolutions, too, will occupy thirty days one month, and twenty-nine the next, and so on alternately. Such is the theory of the revolutions of the moon.

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CHAP. 76. (33.)

THE THEORY OF THE WINDS.

The theory of the winds is of a somewhat more intricate nature. After observing the quarter in which the sun rises on any given day, at the sixth hour of the day take your position in such a manner as to have the point of the sun's rising on your left; you will then have the south directly facing you, and the north at your back: a line drawn through a field in this direction is called the "cardinal" line. The observer must then turn round, so as to look upon his shadow, for it will be behind him. Having thus changed his position, so as to bring the point of the sun's rising on that day to the right, and that of his setting to the left, it will be the sixth hour of the day, at the moment when the shadow straight before him is the shortest. Through the middle of this shadow, taken lengthwise, a furrow must be traced in the ground with a hoe, or else a line drawn with ashes, some twenty feet in length, say; in the middle of this line, or, in other words, at the tenth foot in it, a small circle must then be described: to this circle we may give the name of the "umbilicus," or "navel." That point in the line which lies on the side of the head of the shadow will be the point from which the north wind blows. You who are engaged in pruning trees, be it your care that the incisions made in the wood do not face this point; nor should the vine-trees or the vines have this aspect, except in the climates of Africa, Cyrenæ, or Egypt. When the wind blows, too, from this point, you must never plough, nor, in fact, attempt any other of the operations of which we shall have to make mention.

That part of the line which lies between the umbilicus and the feet of the shadow will look towards the south, and indicate the point from which the south wind blows, to which, as already mentioned, the Greeks have given the name of Notus. When the wind comes from this quarter, you, hasbandman, must never fell wood or touch the vine. In Italy this wind is either humid or else of a burning heat, and in Africa it is accompanied with intense heat and fine clear weather. In Italy the bearing branches should be trained to face this

quarter, but the incisions made in the trees or vines when pruned must never face it. Let those be on their guard against this wind upon the four days at the rising of the Vergiliæ, who are engaged in planting the olive, as well as those who are employed in the operations of grafting or inoculating.

It will be as well, too, here to give some advice, in reference to the climate of Italy, as to certain precautions to be observed at certain hours of the day. You, woodman, must never lop the branches in the middle of the day; and you, shepherd, when you see midday approaching in summer, and the shadow gradually decreasing, drive your flocks from out of the sun into some well-shaded spot. When you lead the flocks to pasture in summer, let them face the west before midday, and after that time, the east: if this precaution is not adopted, calamitous results will ensue; the same, too, if the flocks are led in winter or spring to pastures covered with dew. Nor must you let them feed with their faces to the north, as already mentioned; for the wind will either close their eyes or else make them bleared, and they will (lie of looseness. If you wish to have females, you should let the dams have their faces towards the north while being covered.

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CHAP. 77. (34.)

THE LAYING OUT OF LANDS ACCORDING TO THE POINTS OF THE WIND.

We have already stated that the umbilicus should be described in the middle of the line. Let another line be drawn transversely through the middle of it, and it will be found to run from due east to due west; a trench cut through the land in accordance with this line is known by the name of "decumanus." Two other lines must then be traced obliquely across them in the form of the letter X, in such a way as to run exactly from right and left of the northern point to left and right of the southern one. All these lines must pass through the centre of the umbilicus, and all must be of corresponding length, and at equal distances. This method should always be adopted in laying out land; or if it should be found necessary to employ it frequently, a plan of it may be made in wood, sticks of equal length being fixed upon the surface of a small tambour, but perfectly round. In the method which I am here explaining, it is necessary to point out one precaution that must always be observed by those who are unacquainted with the subject. The point that must he verified first of all is the south, as that is always the same; but the sun, it must be remembered, rises every day at a point in the heavens different to that of his rising on the day before, so that the east must never be taken as the basis for tracing the lines.

Having now ascertained the various points of the heavens, the extremity of the line that is nearest to the north, but lying to the east of it, will indicate the solstitial rising, or, in other words, the rising of the sun on the longest day, as also the point from which the wind Aquilo blows, known to the Greeks by the name of Boreas. You should plant all trees and vines facing this point, but take care never to plough, or sow corn, or plant in seed plots, while this wind is blowing, for it has the effect of drying up and blasting the roots of the trees while being transplanted. Be taught in time — one thing is good for grown trees, another for them while they are but young. Nor have I forgotten the fact, that it is at this point of the heavens that the

Greeks place the wind, to which they give the name of Cæcias; Aristotle, a man of most extensive learning, who has assigned to Cæcias this position, explains that it is in consequence of the convexity of the earth, that Aquilo blows in an opposite direction to the wind called Africus.

The agriculturist, however, has nothing to fear from Aquilo, in respect to the operations before mentioned, all the year through; for this wind is softened by the sun in the middle of the summer, and, changing its name, is known by that of Etesias. When you feel the cold, then, be on your guard; for, whatever the noxious effects that are attributed to Aquilo, the more sensibly will they be felt when the wind blows from due north. In Asia, Greece, Spain, the coasts of Italy, Campania, and Apulia, the trees that support the vines, as well as the vines themselves, should have an aspect towards the north-east. If you wish to have male produce, let the flock feed in such a way, that this wind may have the opportunity of fecundating the male, whose office it is to fecundate the females. The wind Africus, known to the Greeks by the name of Libs, blows from the south-west, the opposite point to Aquilo; when animals, after coupling, turn their heads towards this quarter, you may be sure that female produce has been conceived.

The third: line from the north, which we have drawn transversely through the shadow, and called by the name of "decumanus," will point due east, and from this quarter the wind Subsolanus blows, by the Greeks called Apeliotes. It is to this point that, in healthy localities, farm-houses and vineyards are made to look. This wind is accompanied with soft, gentle showers; Favonius, however, the wind that blows from due west, the opposite quarter to it, is of a drier nature; by the Greeks it is known as Zephyrus. Cato has recommended that olive-yards should look due west. It is this wind that begins the spring, and opens the earth; it is moderately cool, but healthy. As soon as it begins to prevail, it indicates that the time has arrived for pruning the vine, weeding the corn, planting trees, grafting fruit-trees, and trimming the olive; for its breezes are productive of the most nutritious effects.

The fourth line from the north, and the one that lies nearest the south on the eastern side, will indicate the point of the sun's rising at

the winter solstice, and the wind Volturnus, known by the name of Eurus to the Greeks. This wind is warm and dry, and beehives and vineyards, in the climates of Italy and the Gallic provinces, should face this quarter. Directly opposite to Volturnus, the wind Corus blows; it indicates the point of the sun's setting at the summer solstice, and lies on the western side next to the north. By the Greeks it is called Argestes, and is one of the very coldest of the winds, which, in fact, is the case with all the winds that blow from the north; this wind, too, brings hailstorms with it, for which reason it is necessary to be on our guard against it no less than the north. If Volturnus begins to blow from a clear quarter of the heavens, it will not last till night; but if it is Subsolanus, it will prevail for the greater part of the night. Whatever the wind that may happen to be blowing, if it is accompanied by heat, it will be sure to last for several days. The earth announces the approach of Aquilo, by drying on a sudden, while on the approach of Auster, the surface becomes moist without any apparent cause.

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CHAP. 78. (35.)

PROGNOSTICS DERIVED FROM THE SUN.

Having now explained the theory of the winds, it seems to me the best plan, in order to avoid any repetition, to pass on to the other signs and prognostics that are indicative of a change of weather. I find, too, that this is a kind of knowledge that greatly interested Virgil, for he mentions the fact, that during the harvest even, he has often seen the winds engage in a combat that was absolutely ruinous to the improvident agriculturist. There is a tradition, too, to the effect that Democritus, already mentioned, when his brother Damasus was getting in his harvest in extremely hot weather, entreated him to leave the rest of the crop, and house with all haste that which had been cut; and it was only within a very few hours that his prediction was verified by a most violent storm. On the other hand, it is particularly recommended never to plant reeds except when rain is impending, and only to sow corn just before a shower; we shall therefore briefly touch upon the prognostics of this description, making enquiry more particularly into those among them that have been found the most useful.

In the first place, then, we will consider those prognostics of the weather which are derived from the sun. If the sun is bright at its rising, and not burning hot, it is indicative of fine weather, but if pale, it announces wintry weather accompanied with hail. If the sun is bright and clear when it sets, and it' it rises with a similar appearance, the more assured of fine weather may we feel ourselves. If it is hidden in clouds at its rising, it is indicative of rain, and of wind, when the clouds are of a reddish colour just before sunrise; if black clouds are intermingled with the red ones, they betoken rain as well. When the sun's rays at its rising or setting appear to unite, rainy weather may be looked for. When the clouds are red at sunset, they give promise of a fine day on the morrow; but if, at the sun's rising, the clouds are dispersed in various quarters, some to the south, and some to the north-east, even though the heavens in the vicinity of the sun may be bright, they are significant of rain and wind. If at the

sun's rising or setting, its rays appear contracted, they announce the approach of a shower. If it rains at sunset, or if the sun's rays attract the clouds towards them, it is portentous of stormy weather on the following day. When the sun, at its rising, does not emit vivid rays, although there are no clouds surrounding it, rain may be expected. If before sunrise the clouds collect into dense masses, they are portentous of a violent storm; but if they are repelled from the east and travel westward, they indicate fine weather. When clouds are seen surrounding the face of the sun, the less the light they leave, the more violent the tempest will be: but if they form a double circle round the sun, the storm will be a dreadful one. If this takes place at sunrise or sunset, and the clouds assume a red hue, the approach of a most violent storm is announced: and if the clouds hang over the face of the sun without surrounding it, they presage wind from the quarter from which they are drifting, and rain as well, if they come from the south.

If, at its rising, the sun is surrounded with a circle, wind may be looked for in the quarter in which the circle breaks; but if it disappears equally throughout, it is indicative of fine weather. If the sun at its rising throws out its rays afar through the clouds, and the middle of its disk is clear, there will be rain; and if its rays are seen before it rises, both rain and wind as well. If a white circle is seen round the sun at its setting, there will be a slight storm in the night; but if there is a mist around it, the storm will be more violent. If the sun is pale at sunset, there will be wind, and if there is a dark circle round it, high winds will arise in the quarter in which the circle breaks.

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CHAP. 79.

PROGNOSTICS DERIVED FROM THE MOON.

The prognostics derived from the moon, assert their right to occupy our notice in the second place. In Egypt, attention is paid, more particularly, to the fourth day of the moon. If, when the moon rises, she shines with a pure bright light, it is generally supposed that we shall have fine weather; but if she is red, there will be wind, and if of a swarthy hue, rain. If upon the fifth day of the moon her horns are obtuse, they are always indicative of rain, but if sharp and erect, of wind, and this on the fourth day of the moon more particularly. If her northern horn is pointed and erect, it portends wind; and if it is the lower horn that presents this appearance, the wind will be from the south; if both of them are erect, there will be high winds in the night. If upon the fourth day of the moon she is surrounded by a red circle, it is portentous of wind and rain.

In Varro we find it stated to the following effect:— "If, at the fourth day of the moon, her horns are erect, there will be great storms at sea, unless, indeed, she has a circlet around her, and that circlet unblemished; for by that sign we are informed that there will be no stormy weather before full moon. If, at the full moon, one half of her disk is clear, it is indicative of fine weather, but if it is red, of wind, and if black, of rain. If a darkness comes over the face of the moon, covered with clouds, in whatever quarter it breaks, from that quarter wind may be expected. If a twofold circle surrounds the moon, the storm will be more violent, and even more so still, if there are three circles, or if they are black, broken, and disjointed. If the new moon at her rising has the upper horn obscured, there will be a prevalence of rainy weather, when she is on the wane; but if it is the lower horn that is obscured, there will be rain before full moon; if, again, the moon is darkened in the middle of her disk, there will be rain when she is at full. If the moon, when full, has a circle round her, it indicates wind from the quarter in the circle which is the brightest; but if at her rising the horns are obtuse, they are portentous of a frightful tempest. If, when the west wind prevails, the moon does not

make her appearancè before her fourth day, there will be a prevalence of stormy weather throughout the month. If on the sixteenth day the moon has a bright, flaming appearance, it is a presage of violent tempests."

There are eight different epochs of the moon, or periods at which she makes certain angles of incidence with the sun, and most persons only notice the prognostics derived from the moon, according to the places which they occupy between these angles. The periods of these angles are the third day, the seventh, the eleventh, the fifteenth, the nineteenth, the twenty-third, the twenty-seventh, and that of the conjunction.

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CHAP. 80.

PROGNOSTICS DERIVED FROM THE STARS.

In the third rank must be placed the prognostics derived from the stars. These bodies are sometimes to be seen shooting to and fro; when this happens, winds immediately ensue, in that part of the heavens in which the presage has been afforded. When the heavens are equally bright throughout their whole expanse, at the periods previously mentioned, the ensuing autumn will be fine and cool. If the spring and summer have passed not without some rain, the autumn will be fine and settled, and there will be but little wind: when the autumn is fine, it makes a windy winter. When the brightness of the stars is suddenly obscured, though without clouds or fog, violent tempests may be expected. If numerous stars are seen to shoot, leaving a white track behind them, they presage wind from that quarter. If they follow in quick succession from the same quarter, the wind will blow steadily, but if from various quarters of the heavens, the wind will shift in sudden gusts and squalls. If circles are seen to surround any of the planets, there will be rain. In the constellation of Cancer, there are two small stars to be seen, known as the Aselli, the small space that lies between them being occupied by a cloudy appearance, which is known as the Manger; when this cloud is not visible in a clear sky, it is a presage of a violent storm. If a fog conceals from our view the one of these stars which lies to the north-east, there will be high winds from the south; but if it is the star which lies to the south that is so obscured, then the wind will be from the north-east. The rainbow, when double, indicates the approach of rain; but if seen after rain, it gives promise, though by no means a certain one, of fine weather. Circular clouds around some of the stars are indicative of rain.

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CHAP. 81.

PROGNOSTICS DERIVED FROM THUNDER.

When, in summer, there is more thunder than lightning, wind may be expected from that quarter; but if, on the other hand, there is not so much thunder as lightning, there will be a fall of rain. When it lightens in a clear sky, there will be rain, and if there is thunder as well, stormy weather; but if it lightens from all four quarters of the heavens, there will be a dreadful tempest. When it lightens from the north-east only, it portends rain on the following day; but when from the north, wind may be expected from that quarter. When it lightens on a clear night from the south, the west, or the north-west, there will be wind and rain from those quarters. Thunder in the morning is indicative of wind, and at midday of rain.

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CHAP. 82.

PROGNOSTICS DERIVED FROM CLOUDS.

When clouds are seen moving in a clear sky, wind may be expected in the quarter from which they proceed; but if they accumulate in one spot, as they approach the sun they will disperse. If the clouds are dispersed by a north-east wind, it is a presage of high winds, but if by a wind from the south, of rain. If at sunset the clouds cover the heavens on either side of the sun, they are indicative of tempest; if they are black and lowering in the east, they threaten rain in the night, but if in the west, on the following day. If the clouds spread in large numbers from the east, like fleeces of wool in appearance, they indicate a continuance of rain for the next three days. When the clouds settle on the summits of the mountains, there will be stormy weather; but if the clouds clear away, it will be fine. When the clouds are white and lowering, a hailstorm, generally known as a “white” tempest, is close at hand. An isolated cloud, however small, though seen in a clear sky, announces wind and storm.

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CHAP. 83.

PROGNOSTICS DERIVED FROM MISTS.

Mists descending from the summits of mountains, or from the heavens, or settling in the vallies, give promise of fine weather.

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CHAP. 84.

PROGNOSTICS DERIVED FROM FIRE KINDLED BY MAN.

Next to these are the prognostics that are derived from fire kindled upon the earth. If the flames are pallid, and emit a murmuring noise, they are considered to presage stormy weather; and fungi upon the burning wick of the lamp are a sign of rain. If the flame is spiral and flickering, it is an indication of wind, and the same is the case when the lamp goes out of itself, or is lighted with difficulty. So, too, if the snuff hangs down, and sparks gather upon it, or if the burning coals adhere to vessels taken from off the fire, or if the fire, when covered up, sends out hot embers or emits sparks, or if the cinders gather into a mass upon the hearth, or the coals burn bright and glowing.

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CHAP. 85.

PROGNOSTICS DERIVED FROM WATER.

There are certain prognostics, too, that may be derived from water. If, when the sea is calm, the water ripples in the harbour, with a hollow, murmuring noise, it is a sign of wind, and if in winter, of rain as well. If the coasts and shores reecho while the sea is calm, a violent tempest may be expected; and the same when the sea, though calm, is heard to roar, or throws up foam and bubbling spray. If sea pulmones are to be seen floating on the surface, they are portentous of stormy weather for many days to come. Very frequently, too, the sea is seen to swell in silence, and more so than when ruffled by an ordinary breeze; this is an indication that the winds are at work within its bosom already.

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CHAP. 86.

PROGNOSTICS DERIVED FROM TEMPESTS THEMSELVES.

The reverberations, too, of the mountains, and the roaring of the forests, are indicative of certain phænomena; and the same is the case when the leaves are seen to quiver, without a breath of wind, the downy filaments of the poplar or thorn to float in the air, and feathers to skim along the surface of the water. In champaign countries, the storm gives notice of its approach by that peculiar muttering which precedes it; while the murmuring that is heard in the heavens affords us no doubtful presage of what is to come.

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CHAP. 87.

PROGNOSTICS DERIVED FROM AQUATIC ANIMALS, AND BIRDS.

The animals, too, afford us certain presages; dolphins, for instance, sporting in a calm sea, announce wind in the quarter from which they make their appearance. When they throw up the water in a billowy sea, they announce the approach of a calm. The loligo, springing out of the water, shell-fish adhering to various objects, sea-urchins fastening by their stickles upon the sand, or else burrowing in it, are so many in- dications of stormy weather: the same, too, when frogs croak more than usual, or coots make a chattering in the morning. Divers, too, and ducks, when they clean their feathers with the bill, announce high winds; which is the case also when the aquatic birds unite in flocks, cranes make for the interior, and divers and sea-mews forsake the sea or the creeks. Cranes when they fly aloft in silence announce fine weather, and so does the owlet, when it screeches during a shower; but it is heard in fine weather, it presages a storm. Ravens, too, when they croak with a sort of gurgling noise and shake their feathers, give warning of the approach of wind, if their note is continuous: but if, on the other hand, it is smothered, and only heard at broken intervals, we may expect rain, accompanied with high winds. Jackdaws, when they return late from feeding, give notice of stormy weather, and the same with the white birds, when they unite in flocks, and the land birds, when they descend with cries to the water and besprinkle themselves, the crow more particularly. The swallow, too, when it skims along the surface of the water, so near as to ripple it every now and then with its wings, and the birds that dwell in the trees, when they hide themselves in their nests, afford similar indications; geese, too, when they set up a continuous gabbling, at an unusual time, and the heron, when it stands moping in the middle of the sands.

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CHAP. 88.

PROGNOSTICS DERIVED FROM QUADRUPEDS.

Nor, indeed, is it surprising that the aquatic birds, or any birds, in fact, should have a perception of the impending changes of the atmosphere. Sheep, however, when they skip and frisk with their clumsy gambols, afford us similar prognostics; oxen, when they snuff upwards towards the sky, and lick themselves against the hair; unclean swine, when they tear to pieces the trusses of hay that are put for other animals; bees, when, contrary to their natural habits of industry, they keep close within the hive; ants, when they hurry to and fro, or are seen carrying forth their eggs; and earthworms, emerging from their holes — all these indicate approaching changes in the weather.

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CHAP. 89.

PROGNOSTICS DERIVED FROM PLANTS.

It is a well-known fact, that trefoil bristles up, and its leaves stand erect, upon the approach of a tempest.

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CHAP. 90.

PROGNOSTICS DERIVED FROM FOOD.

At our repasts, too, and upon our tables, when we see the vessels sweat in which the viands are served, and leave marks upon the side-board, it is an indication that a dreadful storm is impending.

SUMMARY. — Remarkable facts, narratives, and observations, two thousand and sixty.

ROMAN AUTHORS QUOTED. — Massurius Sabinus, Cassius Hemina, Verrius Flaccus, L. Piso, Cornelius Celsus, Turranius Gracilis, D. Silanus, M. Varro, Cato the Censor, Scrofa, the Sasernœ, father and son, Domitius Calvinus, Hyginus, Virgil, Trogus, Ovid, Græcinus, Columella, Tubero, L. Tarutius, who wrote in Greek on the Stars, Cæsar the Dictator, who wrote upon the Stars, Sergins Paulus, Sabinus Fabianus, M. Cicero, Calpurnius Bassus, Ateius Capito, Mamilius Sura, Attius, who wrote the Praxidica.

FOREIGN AUTHORS QUOTED. — Hesiod, Theophrastus, Aristotle, Democritus, King Hiero, King Attalus Philometor, King Archelaüs, Archytas, Xenophon, Amphilochus of Athens, Anaxipolis of Thasos, Aristophanes of Miletus, Apollodorus of Lemnos, Antigonus of Cymæ, Agathocles of Chios, Apollonius of Pergamus, Aristander of Athens, Bacchius of Miletus, Bion of Soli, Chæreas of Athens, Chæristus of Athens, Diodorus of Priene, Dion of Colophon, Epigenes of Rhodes, Euagon of Thasos, Euphronius of Athens, Androtion who wrote on Agriculture, Æschrion who wrote on Agriculture, Lysimachus who wrote on Agriculture, Dionysius who translated Mago, Diophanes who made an Epitome from Dionysius, Thales, Eudoxus, Philippus, Calippus, Dositheus, Parmeniscus, Meton, Criton, Œnopides, Zenon, Euctemon, Harpalus, Hecatæus, Anaximander, Sosigenes, Hipparchus, Aratus, Zoroaster, Archibius.

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BOOK XIX. THE NATURE AND CULTIVATION OF FLAX, AND AN ACCOUNT OF VARIOUS GARDEN PLANTS.

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CHAP. 1.

THE NATURE OF FLAX — MARVELLOUS FACTS RELATIVE THERETO.

WE have now imparted a knowledge of the constellations and of the seasons, in a method unattended with difficulty for the most ignorant even, and free from every doubt; indeed, to those who understand these matters aright, the face of the earth contributes in no less a degree to a due appreciation of the celestial phenomena, than does the science of astronomy to our improvement in the arts of agriculture.

Many writers have made it their next care to treat of horticulture; but, for my own part, it does not appear to me altogether advisable to pass on immediately to that subject, and, indeed, I am rather surprised to find that some among the learned, who have either sought the pleasures of knowledge in these pursuits, or have grounded their celebrity upon them, have omitted so many particulars in reference thereto; for no mention do we find in their writings of numerous vegetable productions, both wild as well as cultivated, many of which are found, in ordinary life, to be of higher value and of more extended use to man than the cereals even.

To commence, then, with a production which is of an utility that is universally recognized, and is employed not only upon dry land but upon the seas as well, we will turn our attention to flax, a plant which is reproduced from seed, but which can neither be classed among the cereals nor yet among the garden plants. What department is there to be found of active life in which flax is not employed? and in what production of the earth are there greater marvels revealed to us than in this? To think that here is a plant which brings Egypt in close proximity to Italy! — so much so, in fact, that Galerius and Balbillus, both of them prefects of Egypt, made the passage to Alexandria from the Straits of Sicily, the one in six days, the other in five! It was only this very last summer, that Valerius Marianus, a senator of prætorian rank, reached Alexandria from Puteoli in eight days, and that, too, with a very moderate breeze all the time! To think that here is a plant which brings Gades, situate near the Pillars

of Hercules, within six days of Ostia, Nearer Spain within three, the province of Gallia Narbonensis within two, and Africa within one! — this last passage having been made by C. Flavius, when legatus of Vibius Crispus, the proconsul, and that, too, with but little or no wind to favour his passage!

What audacity in man! What criminal perverseness! thus to sow a thing in the ground for the purpose of catching the winds and the tempests, it being not enough for him, forsooth, to be borne upon the waves alone! Nay, still more than this, sails even that are bigger than the very ships themselves will not suffice for him, and although it takes a whole tree to make a mast to carry the cross-yards, above those cross-yards sails upon sails must still be added, with others swelling at the prow and at the stern as well — so many devices, in fact, to challenge death! Only to think, in fine, that that which moves to and fro, as it were, the various countries of the earth, should spring from a seed so minute, and make its appearance in a stem so fine, so little elevated above the surface of the earth! And then, besides, it is not in all its native strength that it is employed for the purposes of a tissue; no, it must first be rent asunder, and then tawed and beaten, till it is reduced to the softness of wool; indeed, it is only by such violence done to its nature, and prompted by the extreme audacity of man, and * * * that it is rendered subservient to his purposes. The inventor of this art has been already mentioned by us on a more appropriate occasion; not satisfied that his fellow-men should perish upon land, but anxious that they should meet their end with no sepulchral rites to await them, there are no execrations to be found that can equal his demerits!

It is only in the preceding Book that I was warning the agriculturist, as he values the grain that is to form our daily sustenance, to be on his guard against the storm and the tempest; and yet, here we have man sowing with his own hand, man racking his invention how best to gather, an object the only aspirations of which upon the deep are the winds of heaven! And then, too, as if to let us understand all the better how highly favoured is this instrument of our punishment, there is no vegetable production that grows with greater facility; and,

to prove to us that it is in despite of Nature her- self that it exists, it has the property of scorching the ground where it is grown, and of deteriorating the quality of the very soil itself.

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CHAP. 2. (1.)

HOW FLAX IS SOWN: TWENTY-SEVEN PRINCIPAL VARIETIES OF IT.

Flax is mostly sown in sandy soils, and after a single ploughing only. There is no plant that grows more rapidly than this; sown in spring, it is pulled up in summer, and is, for this reason as well, productive of considerable injury to the soil. There may be some, however, who would forgive Egypt for growing it, as it is by its aid that she imports the merchandize of Arabia and India; but why should the Gallic provinces base any of their reputation upon this product? Is it not enough, forsooth, for them to be separated by mountains from the sea, and to have, upon the side on which they are bounded by the Ocean, that void and empty space, as it is called? The Cadurci, the Caleti, the Ruteni, the Bituriges, and the Morini, those remotest of all mankind, as it is supposed, the whole of the Gallic provinces, in fact, are in the habit of weaving sail-cloth; and at the present day our enemies even, who dwell beyond the Rhenus, have learned to do the same; indeed, there is no tissue that is more beautiful in the eyes of their females than linen. I am here reminded of the fact, that we find it stated by M. Varro, that it is a custom peculiar to the family of the Serrani for the women never to wear garments of linen. In Germany it is in caves deep underground that the linen-weavers ply their work; and the same is the case, too, in the Alian territory, in Italy, between the rivers Padus and Ticinus, the linen of which holds the third rank among the kinds manufactured in Europe, that of Sætabis claiming the first, and those of Retovium and of Faven- tia, in the vicinity of Alia, on the Æmilian Way, the second, place in general estimation. The linens of Faventia are preferred for whiteness to those of Alia, which are always unbleached: those of Retovium are remarkable for their extreme fineness, combined with substance, and are quite equal in whiteness to the linens of Faventia; but they have none of that fine downy nap upon them, which is so highly esteemed by some persons, though equally disliked by others. A thread is made, too, from their flax, of considerable strength, smoother and more even, almost, than the spider's web; when tested with the teeth, it emits a

sharp, clear twang; hence it is, that it sells at double the price of the other kinds.

But it is the province of Nearer Spain that produces a linen of the greatest lustre, an advantage which it owes to the waters of a stream which washes the city of Tarraco there. The fineness, too, of this linen is quite marvellous, and here it is that the first manufactories of cambric were established. From the same province, too, of Spain, the flax of Zoëla has of late years been introduced into Italy, and has been found extremely serviceable for the manufacture of hunting-nets. Zoëla is a city of Callæcia, in the vicinity of the Ocean. The flax, too, of Cumæ, in Campania, has its own peculiar merits in the manufacture of nets for fishing and fowling; it is employed, also, for making hunting-nets. For it is from flax, in fact, that we prepare various textures, destined to be no less insidious to the brute creation than they are to ourselves. It is with toils made from the flax of Cumæ that wild boars are taken, the meshes being proof against their bristles, equally with the edge of the knife: before now, too, we have seen some of these toils of a fineness so remarkable as to allow of being passed through a man's ring, running ropes and all, a single individual being able to carry an amount of nets sufficient to environ a whole forest — a thing which we know to have been done not long ago by Julius Lupus, who died prefect of Egypt. This, however, is nothing very surprising, but it really is quite wonderful that each of the cords was composed of no less than one hundred and fifty threads. Those, no doubt, will be astonished at this, who are not aware that there is preserved in the Temple of Minerva, at Lindus, in the Isle of Rhodes, the cuirass of a former king of Egypt, Amasis by name, each thread employed in the texture of which is composed of three hundred and sixty-five other threads. Mucianus, who was three times consul, informs us that he saw this curiosity very recently, though there was but little then remaining of it, in consequence of the injury it had experienced at the hands of various persons who had tried to verify the fact. Italy, too, holds the flax of the Peligni in high esteem, though it is only employed by fullers; there is no kind known that is whiter than this, or which bears a closer resemblance to wool. That grown by the Cadurci is held in high estimation for making mattresses; which, as well as flock, are an invention for which we are

indebted to the Gauls: the ancient usage of Italy is still kept in remembrance in the word “stramentum,” the name given by us to beds stuffed with straw.

The flax of Egypt, though the least strong of all as a tissue, is that from which the greatest profits are derived. There are four varieties of it, the Tanitic, the Pelusiac, the Butic, and the Tentyritic — so called from the various districts in which they are respectively grown. The upper part of Egypt, in the vicinity of Arabia, produces a shrub, known by some as “gossypium,” but by most persons as “xylon;” hence the name of “xylina,” given to the tissues that are manufactured from it. The shrub is small, and bears a fruit, similar in appearance to a nut with a beard, and containing in the inside a silky substance, the down of which is spun into threads. There is no tissue known, that is superior to those made from this thread, either for whiteness, softness, or dressing: the most esteemed vestments worn by the priests of Egypt are made of it. There is a fourth kind of tissue, known by the name of “othoninum,” which is made from a kind of marshreed, the panicule only being employed for the purpose. In Asia, again, there is a thread made from broom, which is employed in the construction of fishing-nets, being found to be remarkably durable; for the purpose of preparing it, the shrub is steeped in water for ten days. The Æthiopians, also, and the people of India, prepare a kind of thread from a fruit which resembles our apple, and the Arabians, as already mentioned, from gourds that grow upon trees.

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CHAP. 3.

THE MODE OF PREPARING FLAX.

In our part of the world the ripeness of flax is usually ascertained by two signs, the swelling of the seed, and its assuming a yellowish tint. It is then pulled up by the roots, made up into small sheaves that will just fill the hand, and hung to dry in the sun. It is suspended with the roots upwards the first day, and then for the five following days the heads of the sheaves are placed, reclining one against the other, in such a way that the seed which drops out may fall into the middle. Linseed is employed for various medicinal purposes, and it is used by the country-people of Italy beyond the Padus in a certain kind of food, which is remarkable for its sweet- ness: for this long time past, however, it has only been in general use for sacrifices offered to the divinities. After the wheat harvest is over, the stalks of flax are plunged in water that has been warmed in the sun, and are then submitted to pressure with a weight; for there is nothing known that is more light and buoyant than this. When the outer coat is loosened, it is a sign that the stalks have been sufficiently steeped; after which they are again turned with the heads downwards, and left to dry as before in the sun: when thoroughly dried, they are beaten with a tow-mallet on a stone.

The part that lies nearest to the outer coat is known by the name of “stuppa;” it is a flax of inferior quality, and is mostly employed for making the wicks of lamps. This, however, requires to be combed out with iron hatchels, until the whole of the outer skin is removed. The inner part presents numerous varieties of flax, esteemed respectively in proportion to their whiteness and their softness. Spinning flax is held to be an honourable employment for men even: the husks, or outer coats, are employed for heating furnaces and ovens. There is a certain amount of skill required in hatchelling flax and dressing it: it is a fair proportion for fifty pounds in the sheaf to yield fifteen pounds of flax combed out. When spun into thread, it is rendered additionally supple by being soaked in water and then beaten out upon a stone; and after it is woven into a tissue, it is again

beaten with heavy maces: indeed, the more roughly it is treated the better it is.

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CHAP. 4.

LINEN MADE OF ASBESTOS.

There has been invented also a kind of linen which is incombustible by flame. It is generally known as "live" linen, and I have seen, before now, napkins that were made of it thrown into a blazing fire, in the room where the guests were at table, and after the stains were burnt out, come forth from the flames whiter and cleaner than they could possibly have been rendered by the aid of water. It is from this material that the corpse-cloths of monarchs are made, to ensure the separation of the ashes of the body from those of the pile. This substance grows in the deserts of India, scorched by the burning rays of the sun: here, where no rain is ever known to fall, and amid multitudes of deadly serpents, it becomes habituated to resist the action of fire. Rarely to be found, it presents considerable difficulties in weaving it into a tissue, in consequence of its shortness; its colour is naturally red, and it only becomes white through the agency of fire. By those who find it, it is sold at prices equal to those given for the finest pearls; by the Greeks it is called "asbestinon," a name which indicates its peculiar properties. Anaxilaüs makes a statement to the effect that if a tree is surrounded with linen made of this substance, the noise of the blows given by the axe will be deadened thereby, and that the tree may be cut down without their being heard. For these qualities it is that this linen occupies the very highest rank among all the kinds that are known.

The next rank is accorded to the tissue known as "byssus," an article which is held in the very highest estimation by females, and is produced in the vicinity of Elis, in Achaia. I find it stated by some writers that a scruple of this sold for- merly at four denarii, the same rate, in fact, as gold. The downy nap of linen, and more particularly that taken from the sails of sea-going ships, is very extensively employed for medicinal purposes, and the ashes of it have the same virtues as spodium. Among the poppies, too, there is a variety which imparts a remarkable degree of whiteness to fabrics made of linen.

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CHAP. 5.

AT WHAT PERIOD LINEN WAS FIRST DYED.

Attempts, too, have even been made to dye linen, and to make it assume the frivolous colours of our cloths. This was first done in the fleet of Alexander the Great, while sailing upon the river Indus; for, upon one occasion, during a battle that was being fought, his generals and captains distinguished their vessels by the various tints of their sails, and astounded the people on the shores by giving their many colours to the breeze, as it impelled them on. It was with sails of purple, too, that Cleopatra accompanied M. Antonius to the battle of Actium, and it was by their aid that she took to flight: such being the distinguishing mark of the royal ship.

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CHAP. 6.

AT WHAT PERIOD COLOURED AWNINGS WERE FIRST EMPLOYED IN THE THEATRES.

In more recent times linens alone have been employed for the purpose of affording shade in our theatres; Q. Catulus having been the first who applied them to this use, on the occasion of the dedication by him of the Capitol. At a later period, Lentulus Spinther, it is said, was the first to spread awnings of fine linen over the theatre, at the celebration of the Games in honour of Apollo. After this, Cæsar, when Dictator, covered with a linen awning the whole of the Roman Forum, as well as the Sacred Way, from his own house as far as the ascent to the Capitol, a sight, it is said, more wonderful even than the show of gladiators which he then exhibited. At a still later period, and upon the occasion of no public games, Marcellus, the son of Octavia, sister of Augustus, during his ædileship, and in the eleventh consulship of his uncle, on the * * * day before the calends of August, covered in the Forum with awnings, his object being to consult the health of those assembled there for the purposes of litigation — a vast change, indeed, from the manners prevalent in the days of Cato the Censor, who expressed a wish that the Forum was paved with nothing else but sharp pointed stones.

Awnings have been lately extended, too, by the aid of ropes, over the amphitheatres of the Emperor Nero, dyed azure, like the heavens, and bespangled all over with stars. Those which are employed by us to cover the inner court of our houses are generally red: one reason for employing them is to protect the moss that grows there from the rays of the sun. In other respects, white fabrics of linen have always held the ascendancy in public estimation. Linen, too, was highly valued as early as the Trojan war; for why else should it not have figured as much in battles as it; did in shipwrecks? Thus Homer, we find, bears witness that there were but few among the warriors of those days who fought with cuirasses on made of linen; while, as for

the rigging of the ships, of which that writer speaks, it is generally supposed by the more learned among the commentators, that it was made of this material; for the word “sparta,” which he employs, means nothing more than the produce of a seed.

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CHAP. 7. (2.)

THE NATURE OF SPARTUM.

For the fact is that spartum did not begin to be employed till many ages after the time of Homer; indeed, not before the first war that the Carthaginians waged in Spain. This, too, is a plant that grows spontaneously, and is incapable of being reproduced by sowing, it being a species of rush, peculiar to a dry, arid soil, a morbid production confined to a single country only; for in reality it is a curse to the soil, as there is nothing whatever that can be sown or grown in its vicinity. There is a kind of spartum grown in Africa, of a stunted nature, and quite useless for all practical purposes. It is found in one portion of the province of Carthage in Nearer Spain, though not in every part of that; but wherever it is produced, the mountains, even, are covered all over with it.

This material is employed by the country-people there for making their beds; with it they kindle their fires also, and prepare their torches; shoes also, and garments for the shepherds, are made of it. As a food for animals, it is highly injurious, with the sole exception of the tender tops of the shoots. When wanted for other uses, it is pulled up by the roots, with considerable labour; the legs of the persons so employed being protected by boots, and their hands with gloves, the plant being twisted round levers of bone or holm-oak, to get it up with the greater facility. At the present day it is gathered in the winter, even; but this work is done with the least difficulty between the ides of May and those of June, that being the period at which it is perfectly ripe.

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CHAP. 8.

THE MODE OF PREPARING SPARTUM.

When taken up it is made into sheaves, and laid in heaps for a couple of days, while it retains its life and freshness; on the third day the sheaves are opened out and spread in the sun to dry, after which it is again made up into sheaves, and placed under cover. It is then put to soak in sea-water, this being the best of all for the purpose, though fresh water will do in case sea-water cannot be procured: this done, it is again dried in the sun, and then moistened afresh. If it is wanted for immediate use, it is put in a tub and steeped in warm water, after which it is placed in an upright position to dry: this being universally admitted to be the most expeditious method of preparing it. To make it ready for use, it requires to be beaten out. Articles made of it are proof, more particularly, against the action of fresh or sea-water; but on dry land, ropes of hemp are generally preferred. Indeed, we find that spartum receives nutriment even from being under water, by way of compensation, as it were, for the thirst it has had to endure upon its native soil.

By nature it is peculiarly well adapted for repairing, and however old the material may be, it unites very well with new. The person, indeed, who is desirous duly to appreciate this marvellous plant, has only to consider the numerous uses to which, in all parts of the world, it is applied: from it are made, the rigging of ships, various appliances of mechanism employed in building, and numerous other articles which supply the wants of daily life. To suffice for all these requirements, we find it growing solely on a tract of ground which lies upon the sea-line of the province of New Carthage, somewhat less than thirty miles in breadth by one hundred in length. The expense precludes its being transported to any very considera- ble distance.

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CHAP. 9.

AT WHAT PERIOD SPARTUM WAS FIRST EMPLOYED.

The Greeks used formerly to employ the rush for making ropes; so, at least, we are led to believe, from the name given by them to that plant; and at a later period they made them, it is very clear, from the leaves of the palm, and the inner bark of the linden-tree. It seems to me very probable, too, that it was from them that the Carthaginians borrowed the first hint for applying spartum to a similar purpose.

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CHAP. 10.

THE BULB ERIOPHORUS.

Theophrastus informs us, that there is a kind of bulb, which grows on the banks of rivers, and which encloses between the outer coat and the portion that is eaten a sort of woolly substance, of which felt socks, and other articles of dress, are made; but, in the copies, those at least which have fallen in my way, there is no mention made of the country in which it grows, or of any details in connection with it, beyond the fact that the name given to it is “eriophoron.” As to spartum, he makes no mention of it whatever, although he has given the history, with the greatest exactness, of all the known plants, three hundred and ninety years before our time — a fact to which I have already alluded on other occasions: from this it would appear that spartum has come into use since his day.

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CHAP. 11.

PLANTS WHICH SPRING UP AND GROW WITHOUT A ROOT — PLANTS WHICH GROW, BUT CANNOT BE REPRODUCED FROM SEED.

As we have here made a beginning of treating of the marvels of Nature, we shall proceed to examine them in detail; and among them the very greatest of all, beyond a doubt, is the fact that any plant should spring up and grow without a root. Such, for instance, is the vegetable production known as the truffle; surrounded on every side by earth, it is connected with it by no fibres, not so much as a single thread even, while the spot in which it grows, presents neither protuberance nor cleft to the view. It is found, in fact, in no way adhering to the earth, but enclosed within an outer coat; so much so, indeed, that though we cannot exactly pronounce it to be composed of earth, we must conclude that it is nothing else but a callous concretion of the earth.

Truffles generally grow in dry, sandy soils, and spots that are thickly covered with shrubs; in size they are often larger than a quince, and are found to weigh as much as a pound. There are two kinds of them, the one full of sand, and consequently injurious to the teeth, the other free from sand and all impurities. They are distinguished also by their colour, which is red or black, and white within; those of Africa are the most esteemed. Whether the truffle grows gradually, or whether this blemish of the earth — for it can be looked upon as nothing else — at once assumes the globular form and magnitude which it presents when found; whether, too, it is possessed of vitality or not, are all of them questions, which, in my opinion, are not easy to be solved. It decays and rots in a manner precisely similar to wood.

It is known to me as a fact, that the following circumstance happened to Lartius Licinius, a person of prætorian rank, while minister of justice, a few years ago, at Carthage in Spain; upon biting a truffle, he found a denarius inside, which all but broke his fore teeth — an evident proof that the truffle is nothing else but an agglomeration of elementary earth. At all events, it is quite certain

that the truffle belongs to those vegetable productions which spring up spontaneously, and are incapable of being reproduced from seed.

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CHAP. 12. (3.)

MISY; ITON; AND GERANION.

Of a similar nature, too, is the vegetable production known in the province of Cyrenaica by the name of “misy,” re- markable for the sweetness of its smell and taste, but more fleshy than the truffle: the same, too, as to the iton of the Thracians, and the geranion of the Greeks.

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CHAP. 13.

PARTICULARS CONNECTED WITH THE TRUFFLE.

The following peculiarities we find mentioned with reference to the truffle. When there have been showers in autumn, and frequent thunder-storms, truffles are produced, thunder contributing more particularly to their developement; they do not, however, last beyond a year, and are considered the most delicate eating when gathered in spring. In some places the formation of them is attributed to water; as at Mytilene, for instance, where they are never to be found, it is said, unless the rivers overflow, and bring down the seed from Tiara, that being the name of a place at which they are produced in the greatest abundance. The finest truffles of Asia are those found in the neighbourhood of Lampsacus and Alopeconnesus; the best in Greece are those of the vicinity of Elis.

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CHAP. 14.

THE PEZICA.

Belonging to the mushroom genus, also, there is a species, known to the Greeks by the name of “pezica,” which grows without either root or stalk.

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CHAP. 15.

LASERPITIUM, LASER, AND MASPETUM.

Next to these, laserpitium claims our notice, a very re- markable plant, known to the Greeks by the name of "silphion," and originally a native of the province of Cyrenaica. The juice of this plant is called "laser," and it is greatly in vogue for medicinal as well as other purposes, being sold at the same rate as silver. For these many years past, however, it has not been found in Cyrenaica, as the farmers of the revenue who hold the lands there on lease, have a notion that it is more profitable to depasture flocks of sheep upon them. Within the memory of the present generation, a single stalk is all that has ever been found there, and that was sent as a curiosity to the Emperor Nero. If it so happen that one of the flock, while grazing, meets with a growing shoot of it, the fact is easily ascertained by the following signs; the sheep, after eating of it, immediately falls asleep, while the goat is seized with a fit of sneezing. For this long time past, there has been no other laser imported into this country, but that produced in either Persis, Media, or Armenia, where it grows in considerable abundance, though much inferior to that of Cyrenaica; and even then it is extensively adulterated with gum, sacopenium, or pounded beans. I ought the less then to omit the facts, that in the consulship of C. Valerius and M. Herennius, there was brought to Rome, from Cyrenæ, for the public service, thirty pounds' weight of laserpitium, and that the Dictator Cæsar, at the beginning of the Civil War, took from out of the public treasury, besides gold and silver, no less than fifteen hundred pounds of laserpitium.

We find it stated by the most trustworthy among the Greek writers, that this plant first made its appearance in the vicinity of the gardens of the Hesperides and the Greater Syrtis, immediately after the earth had been soaked on a sudden by a shower as black as pitch. This took place seven years before the foundation of the city of Cyrenæ, and in the year of Rome 143. The virtues of this remarkable fall of rain extended, it is said, over no less than four thousand stadia of the African territory; and upon this soil laserpitium began

universally to grow, a plant that is in general wild and stubborn, and which, it attempted to be cultivated, will leave the spot where it has been sown quite desolate and barren. The roots of it are numerous and thick, the stalk being like that of fennel-giant, and of similar thickness. The leaves of this plant were known as "maspetum," and bore a considerable resemblance to parsley; the seeds of it were foliaceous, and the plant shed its leaves every year. They used to feed the cattle there upon it; at first it purged them, but afterwards they would grow fat, the flesh being improved in flavour in a most surprising degree. After the fall of the leaf, the people themselves were in the habit of eating the stalk, either roasted or boiled: from the drastic effects of this diet the body was purged for the first forty days, all vicious humours being effectually removed.

The juices of this plant were collected two different ways, either from the root or from the stalk; in consequence of which these two varieties of the juice were known by the distinguish- ing names of "rhizias" and "caulias," the last being of inferior quality to the other, and very apt to turn putrid. Upon the root there was a black bark, which was extensively employed for the purposes of adulteration. The juice of the plant was received in vessels, and mixed there with a layer of bran; after which, from time to time it was shaken, till it had reached a proper state of maturity; indeed, if this precaution was neglected, it was apt to turn putrid. The signs that it had come to maturity were its colour, its dryness, and the absorption of all humidity.

There are some authors, however, who state that the root of laserpitium was more than a cubit in length, and that it presented a tuberosity above the surface of the earth. An incision, they say, was made in this tuberosity, from which a juice would flow, like milk in appearance; above the tuberosity grew a stalk, to which they give the name of "magydaris;" the leaves that grew upon this stalk were of the colour of gold, and, falling at the rising of the Dog-star, when the south winds begin to prevail, they acted as seed for the purposes of reproduction. It was from these leaves, too, they say, that laserpitium was produced, the root and the stalk attaining their full growth in the space of one year. The same writers also state, that it was the practice to turn up the ground about the plant, and that it had no such effect as

purging the cattle that were fed upon it; though one result of using it as food was, that such cattle as were ailing were either cured of their distempers, or else died immediately upon eating of it, a thing, however, that but rarely happened. The first description, however, is found to agree more nearly with the silphium that comes from Persis.

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CHAP. 16.

MAGYDARIS.

There is another variety of this plant, known as “magydaris,” of a more delicate nature, less active in its effects, and destitute of juice. It grows in the countries adjacent to Syria, but is not to be found in the regions of Cyrenaica. There grows also upon Mount Parnassus, in great abundance, a plant to which some persons give the name of “laserpitium:” by means of all these varieties, adulterations are effected of a production that is held in the highest esteem for its salutary qualities and its general usefulness. The chief proofs of its genuineness consist in its colour, which ought to be slightly red without, and when broken quite white and transparent within; the drops of it, too, should melt very rapidly on the application of spittle. It is extensively employed for medi- cinal purposes.

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CHAP. 17.

MADDER.

There are two other plants also, which are but little known to any but the herd of the sordid and avaricious, and this because of the large profits that are derived from them. The first of these is madder, the employment of which is necessary in dyeing wool and leather. The madder of Italy is the most esteemed, and that more particularly which is grown in the suburbs of the City; nearly all our provinces, too, produce it in great abundance. It grows spontaneously, but is capable of reproduction by sowing, much after the same manner as the fitch. The stem, however, is prickly, and articulated, with five leaves arranged round each joint: the seed is red. Its medicinal properties we shall have occasion to mention in the appropriate place.

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CHAP. 18.

THE RADICULA.

The plant known to us by the name of “radicula,” is the second of these productions. It furnishes a juice that is extensively employed in washing wool, and it is quite wonderful how greatly it contributes to the whiteness and softness of wool. It may be produced anywhere by cultivation, but that which grows spontaneously in Asia, and Syria, upon rugged, rocky sites, is more highly esteemed. That, however, which is found beyond the Euphrates has the highest repute of all. The stalk of it is ferulaceous and thin, and is sought by the inhabitants of those countries as an article of food. It is employed also for making unguents, being boiled up with the other ingredients, whatever they may happen to be. In leaf it strongly resembles the olive. The Greeks have given it the name of “struthion.” It blossoms in summer, and is agreeable to the sight, but entirely destitute of smell. It is somewhat thorny, and has a stalk covered with down. It has an extremely diminutive seed, and a large root, which is cut up and employed for the purposes already mentioned.

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CHAP. 19. (4.)

THE PLEASURES OF THE GARDEN.

Having made mention of these productions, it now remains for us to return to the cultivation of the garden, a subject recommended by its own intrinsic merits to our notice: for we find that in remote antiquity, even, there was nothing looked upon with a greater degree of admiration than the gardens of the Hesperides, those of the kings Adonis and Alci- noüs, and the Hanging Gardens, whether they were the work of Semiramis, or whether of Cyrus, king of Assyria, a subject of which we shall have to speak in another work. The kings of Rome cultivated their gardens with their own hands; indeed, it was from his garden that Tarquinius Superbus sent to his son that cruel and sanguinary message of his. In our laws of the Twelve Tables, we find the word "villa," or "farm," nowhere mentioned; it is the word "hortus" that is always used with that signification, while the term "heredium" we find employed for "garden."

There are certain religious impressions, too, that have been attached to this species of property, and we find that it is in the garden and the Forum only that statues of satyrs are con- secrated, as a protection against the evil effects of spells and sorcery; although in Plautus, we find the gardens spoken of as being under the tutelage of Venus. At the present day, under the general name of gardens, we have pleasure-grounds situate in the very heart of the City, as well as extensive fields and villas.

Epicurus, that connoisseur in the enjoyments of a life of ease, was the first to lay out a garden at Athens; up to his time it had never been thought of, to dwell in the country in the middle of the town. At Rome, on the other hand, the garden constituted of itself the poor man's field, and it was from the garden that the lower classes procured their daily food — an aliment how guiltlessly obtained! But still, it is a great deal better, no doubt, to dive into the abysses of the deep, and to seek each kind of oyster at the risk and peril of shipwreck, to go searching for birds beyond the river Phasis even, which, protected as they are by the terrors invented by fable, are only

rendered all the more precious thereby — to go searching for others, again, in Numidia, and the very sepulchres of Æthiopia, or else to be battling with wild beasts, and to get eaten one's self while trying to take a prey which another person is to eat! And yet, by Hercules! how little do the productions of the garden cost us in comparison with these! How more than sufficient for every wish and for every want! — were it not, indeed, that here, as in every thing else, turn which way we will, we find the same grounds for our wrath and indignation. We really might be content to allow of fruits being grown of the most exquisite quality, remarkable, some of them for their flavour, some for their size, some, again, for the monstrosities of their growth, morsels all of them forbidden to the poor! We might allow of wines being kept till they are mellowed with age, or enfeebled by being passed through cloth strainers, of men, too, however prolonged their lives, never drinking any but a wine that is still older than themselves! We might allow of luxury devising how best to extract the very aroma, as it were, and marrow only from grain; of people, too, living upon nothing but the choicest productions of the confectioner, and upon pastes fashioned in fantastic shapes: of one kind of bread being prepared for the rich, and another for the multitude; of the yearly produce of the field being classified in a descending scale, till it reaches the humble means of the very lowest classes — but do we not find that these refined distinctions have been extended to the very herbs even, and that riches have contrived to establish points of dissimilarity in articles of food which ordinarily sell for a single copper coin?

In this department even, humble as it is, we are still des- tined to find certain productions that are denied to the community at large, and the very cabbages pampered to such an enormous extent that the poor man's table is not large enough to hold them. Asparagus, by Nature, was intended to grow wild, so that each might gather it where he pleased — but, lo and behold! we find it in the highest state of cultivation, and Ravenna produces heads that weigh as much as three pounds even! Alas for the monstrous excess of gluttony! It would be surprising indeed, for the beasts of the field to be forbidden the thistle for food, and yet it is a thing forbidden to the lower classes of the community! These refined distinctions, too, are extended to the

very water even, and, thanks to the mighty influence of money, there are lines of demarcation drawn in the very elements themselves. Some persons are for drinking ice, others for quaffing snow, and thus is the curse of the mountain steep turned into an appetizing stimulus for the palate! Cold is carefully treasured up for the summer heats, and man's invention is racked how best to keep snow freezing in months that are not its own. Some again there are who first boil the water, and then bring it to the temperature of winter — indeed, there is nothing that pleases man in the fashion in which Nature originally made it.

And is it the fact, then, that any herb of the garden is reared only for the rich man's table? It is so — but still let no one of the angered populace think of a fresh secession to Mount Sacer or Mount Aventine; for to a certainty, in the long run, all-powerful money will bring them back to just the same position as they were in when it wrought the severance. For, by Hercules! there was not an impost levied at Rome more grievous than the market-dues, an impost that aroused the indignation of the populace, who repeatedly appealed with loud clamours to all the chief men of the state to be relieved from it. At last they were relieved from this heavy tax upon their wares; and then it was found that there was no tax more lucrative, more readily collected, or less obnoxious to the caprices of chance, than the impost that was levied in exchange for it, in the shape of a property-tax, extended to the poorest classes: for now the very soil itself is their surety that paid the tax will be, their means are patent to the light of day, and the superficial extent of their possessions, whatever the weather may chance to be, always remains the same.

Cato, we find, speaks in high praise of garden cabbages: — indeed, it was according to their respective methods of garden cultivation that the agriculturists of early times were appreciated, and it was immediately concluded that it was a sign of a woman being a bad and careless manager of her family, when the kitchen-garden — for this was looked upon as the woman's department more particularly — was negligently cultivated; as in such case her only resource was, of course, the shambles or the herb-market. But cabbages were not held in such high esteem in those days as now: indeed, all dishes were held in disrepute which required something

else to help them down, the great object being to economize oil as much as possible; and as to the flesh-market, so much as a wish even to taste its wares was visited with censure and reproach. The chief thing that made them so fond of the garden was the fact that its produce needs no fire and ensures economy in fuel, and that it offers resources which are always ready and at hand. These articles of food, which from their peculiar nature we call “vinegar-diets,” were found to be easy of digestion, by no means apt to blunt and overload the senses, and to create but little craving for bread as an accompaniment. A portion of them which is still used by us for seasonings, attests that our forefathers used only to look at home for their resources, and that no Indian peppers were in request with them, or any of those other condi- ments which we are in the habit of seeking beyond the seas. In former times the lower classes of Rome, with their mimic gardens in their windows, day after day presented the reflex of the country to the eye, when as yet the multitudes of atrocious burglaries, almost innumerable, had not compelled us to shut out all such sights with bars to the passers by.

Let the garden, then, have its due meed of honour, and let not things, because they are common, enjoy for that the less share of our consideration — and the more so, as we find that from it men of the very highest rank have been content to borrow their surnames even; thus in the Valerian family, for instance, the Lactucini have not thought themselves disgraced by taking their name from the lettuce. Perhaps, too, our labours and research may contribute some slight recommendation to this our subject; although, with Virgil, we are ready to admit how difficult it is, by language however elevated, to ennoble a subject that is so humble in itself.

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CHAP. 20.

THE LAYING OUT OF GARDEN GROUND.

There is no doubt that the proper plan is, to have the gar- dens adjoining the country-house; and they should be watered, more particularly, by a river running in front of it, if possible; or else with water drawn from a well by the aid of a wheel or of pumps, or by swipes. The ground should be opened just as the west winds are beginning to prevail; fourteen days after which it should be got ready for autumn, and then before the winter solstice it should have another turning up. It will require eight men to dig a jugerum, manure being mixed with the earth to a depth of three feet: the ground, too, should be divided into plots or beds with raised and rounded edges, each of which should have a path dug round it, by means of which access may be afforded to the gardener and a channel formed for the water needed for irrigation.

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CHAP. 21.

PLANTS OTHER THAN GRAIN AND SHRUBS.

Among the garden plants there are some that recommend themselves by their bulbs, others by the head, others by the stalk, others by the leaf, others by both: some, again, are valued for their seed, others for the outer coat, others for their membranous tissues, others for their cartilaginous substance, others for the firmness of their flesh, and others for the fleshy tunics in which they are enveloped.

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CHAP. 22.

THE NATURAL HISTORY OF TWENTY DIFFERENT KINDS OF PLANTS WHICH GROW IN GARDENS — THE PROPER METHODS TO BE FOLLOWED IN SOWING THEM RESPECTIVELY.

Of some plants the fruits are in the earth, of others both in the earth and out of it, and of others, again, out of the earth solely. Some of them increase as they lie upon the ground, gourds and cucumbers, for instance; the same products will grow also in a hanging position, but they are much heavier even then than any of the fruits that grow upon trees. The cucumber, however, is composed of cartilage and a fleshy substance, while the gourd consists of rind and cartilage: this last is the only vegetable production the outer coat of which becomes of a ligneous nature, when ripe. Radishes, turnips, and rape are hidden in the earth, and so, too, are elecampane, skirrets, and parsnips, though in a different manner. There are some plants, again, to which we shall give the name of "ferulaceous," anise and mallows, for instance; indeed, we find it stated by some writers that in Arabia the mallow be- comes arborescent at the sixth month, so much so, in fact, as to admit of its being used for walking-sticks. We have another instance, again, in the mallow-tree of Mauretania, which is found at Lixus, a city built upon an æstuary there; and at which spot, it is said, were formerly the gardens of the Hesperides, at a distance of two hundred paces from the Ocean, near the shrine of Hercules, more ancient, tradition says, than the temple at Gades. This mallow-tree is twenty feet in height, and of such a thickness that there is not a person in existence who is able with his arms to span its girth.

In the class of ferulaceous plants we must include hemp also. There are some plants, again, to which we must give the appellation of "fleshy;" such as those spongy productions which are found growing in damp meadows. As to the fungus, with a hard, tough flesh, we have already made mention of it when speaking of wood and trees; and of truffles, which form another variety, we have but very recently given a de- scription.

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CHAP. 23. (5.)

VEGETABLES OF A CARTILAGINOUS NATURE — CUCUMBERS. PEPONES.

The cucumber belongs to the cartilaginous class of plants, and grows above the ground. It was a wonderful favourite with the Emperor Tiberius, and, indeed, he was never without it; for he had raised beds made in frames upon wheels, by means of which the cucumbers were moved and exposed to the full heat of the sun; while, in winter, they were withdrawn, and placed under the protection of frames glazed with mirror-stone. We find it stated, also, by the ancient Greek writers, that the cucumber ought to be propagated from seed that has been steeped a couple of days in milk and honey, this method having the effect of rendering them all the sweeter to the taste. The cucumber, while growing, may be trained to take any form that may be wished: in Italy the cucumbers are green and very small, while those grown in some of the provinces are remarkably large, and of a wax colour or black. Those of Africa, which are also remarkably prolific, are held in high esteem; the same, too, with the cucumbers of Mœesia, which are by far the largest of all. When the cucumber acquires a very considerable volume, it is known to us as the "pepo." Cucumbers when eaten remain on the stomach till the following day, and are very difficult of digestion; still, for all that, in general they are not considered very unwholesome. By nature they have a wonderful hatred to oil, and no less affection for water, and this after they have been cut from the stem even. If water is within a moderate distance of them, they will creep towards it, while from oil, on the other hand, they will shrink away: if any obstacle, too, should happen to arrest their progress, or if they are left to hang, they will grow curved and crooked. Of these facts we may be satisfactorily convinced in a single night even, for if a vessel filled with water is placed at four fingers' distance from a cucumber, it will be found to have descended to it by the following morning; but if the same is done with oil, it will have assumed the curved form of a hook by the next day. If hung in a tube while in blossom, the cucumber will grow

to a most surprising length. It is only of late, too, that a cucumber of entirely new shape has been produced in Campania, it having just the form of a quince. It was quite by accident, I am told, that the first one acquired this shape in growing, and it was from the seed of this that all the others have been reproduced. The name given to this variety is "melopepo." These last do not grow hanging, but assume their round shape as they lie on the ground. A thing that is very remarkable in them, in addition to their shape, colour, and smell, is the fact that, when ripe, although they do not hang from the stem, they separate from it at the stalk.

Columella has given us a plan of his, by which we may have cucumbers the whole year round: the largest bramble-bush that can be procured is transplanted to a warm, sunny spot, and then cut down, about the time of the vernal equinox, to within a couple of fingers of the ground; a cucumber-seed is then inserted in the pith of the bramble, and the roots are well moulded up with fine earth and manure, to withstand the cold. According to the Greeks, there are three kinds of cu- cumbers, the Laconian, the Scytalic, and the Bœotian, the Laconian being the only one among them that is fond of the water.

There are some persons who recommend steeping the seed of the cucumber in the juice of the herb known as the "culix;" the produce, they say, will be sure to grow without seeds.

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CHAP. 24.

GOURDS.

Gourds resemble the cucumber in nature, at least in their manner of growing; they manifest an equal aversion to the winter, too, while they require constant watering and manure. Both cucumbers and gourds are sown in holes a foot and a half deep, between the vernal equinox and the summer solstice, at the time of the Parilia more particularly. Some persons, however, think it better to sow gourds after the calends of March, and cucumbers after the nones, and at the time of the Quinquatria. The cucumber and the gourd climb upwards in a precisely similar manner, their shoots creeping along the rough surface of the walls, even to the very roof, so great is their fondness for elevated spots. They have not sufficient strength, however, to support themselves without the aid of stays. Shooting upwards with the greatest rapidity, they soon cover with their light shade the arched roofs of the houses and the trellises on which they are trained. From this circum- stance it is that we find the gourd classified into two primary kinds, the roof-gourd, and the common gourd, which creeps upon the ground. In the first kind, from a stalk of remarkable thinness is suspended a fruit of considerable weight and volume, and quite immoveable by the action of the wind. The gourd, too, as well as the cucumber, admits of being lengthened to any extent, by the aid of osier tubes more particularly. Just after the blossom has fallen off, the plant is introduced into these tubes, and as it grows it can be made to assume any form that may be wished, that of a serpent coiled up being the one that is mostly preferred; if left at liberty to grow as it hangs, it has been known before now to attain to no less than nine feet in length.

The cucumber flowers gradually, blossom succeeding blossom; and it adapts itself perfectly well to a dry soil. It is covered with a white down, which increases in quantity as the plant gains in size.

The gourd admits of being applied to more numerous uses than the cucumber even: the stem is used as an article of food when young, but at a later period it changes its nature, and its qualities

become totally different: of late, gourds have come to be used in baths for jugs and pitchers, but for this long time past they have been employed as casks for keeping wine. The rind is tender while the fruit is green, but still it is always scraped off when the gourd is used for food. It admits of being eaten several ways, and forms a light and wholesome aliment, and this although it is one of those fruits that are difficult of digestion by the human stomach, and are apt to swell out those who eat of them. The seeds which lie nearest to the neck of the gourd produce fruit of remarkable length, and so do those which lie at the lower extremities, though not at all comparable with the others. Those, on the other hand, which lie in the middle, produce gourds of a round shape, and those on the sides fruit that are thick and short. The seeds are dried by being placed in the shade, and when wanted for sowing, are steeped in water first. The longer and thinner the gourd is, the more agreeable it is to the palate, and hence it is that those which have been left to grow hanging are reckoned the most wholesome: these, too, have fewer seeds than the others, the hardness of which is apt to render the fruit less agreeable for eating.

Those which are intended for keeping seed, are usually not cut before the winter sets in; they are then dried in the smoke, and are extensively employed for preserving seeds, and for making other articles for domestic use. There has been a method discovered, also, of preserving the gourd for table, and the cucumber as well, till nearly the time when the next year's crop is ripe; this is done by putting them in brine. We are assured, too, that if put in a hole dug in a place well shaded from the sun, with a layer of sand beneath, and dry hay and earth on the top of them, they may be kept green for a very long time. We also find wild cucumbers and gourds; and, indeed, the same is the case with pretty nearly all the garden plants. These wild varieties, however, are only possessed of certain medicinal properties, and for this reason we shall defer any further mention of them till we come to the Books appropriated to that subject.

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CHAP. 25.

RAPE. TURNIPS.

The other plants that are of a cartilaginous nature are concealed, all of them, in the earth. In the number of these is the rape, a subject upon which it would almost appear that we have treated at sufficient length already, were it not that we think it as well to observe, that; medical men call those which are round “male,” while those which are larger and more elongated, are known to them as “female” rape: these last are superior in sweetness, and better for keeping, but by successive sowings they are changed into male rape.

The same authors, too, have distinguished five different va- rieties of the turnip: the Corinthian, the Cleonæan, the Liothasian, the Bœotian, and the one which they have characterized as peculiarly the “green” turnip. The Corinthian turnip grows to a very large size, and the root is all but out of the ground; indeed, this is the only kind that, in growing, shoots upwards, and not as the others do, downwards into the ground. The Liothasian is known by some persons as the Thracian turnip; it is the one that stands extreme cold the best of all. Next to it, the Bœotian kind is the sweetest; it is remarkable, also, for the roundness of its shape and its shortness; while the Cleonæan turnip, on the other hand, is of an elongated form. Those, in general, which have a thin, smooth leaf, are the sweetest; while those, again, the leaf of which is rough, angular, and prickly, have a pungent taste. There is a kind of wild turnip, also, the leaves of which resemble those of rocket. At Rome, the highest rank is given to the turnips of Amiternum, and those of Nursia; after them, those grown in the neighbourhood of the City are held in the next degree of esteem. The other particulars connected with the sowing of the turnip have been already mentioned by us when speaking of the rape.

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CHAP. 26.

RADISHES.

Radishes are composed of an outer coat and a cartilaginous substance, and in many instances the rind is found to be thicker than the bark of some trees. This plant is remarkable for its pungency, which increases in proportion to the thickness of the rind: in some cases, too, the surface of it assumes a ligneous nature. Radishes are flatulent to a remarkable degree, and are productive of eructations; hence it is that they are looked upon as an aliment only fit for low-bred people, and this more particularly if coleworts are eaten directly after them. If, on the other hand, they are eaten with green olives, the eructations produced are not so frequent, and less offensive. In Egypt the radish is held in very high esteem, on account of the abundance of oil that is extracted from the seed. In- deed, the people of that country sow this plant in preference to any other, whenever they can get the opportunity, the profits derived from it being larger than those obtained from the cultivation of corn, and the imposts levied upon it considerably less: there is no grain known that yields a larger quantity of oil.

The Greeks have distinguished the radish into three different kinds, according to the characteristic features of the leaves, there being the crisped leaf, the smooth leaf, and the wild radish, the leaf of which is smooth, but shorter than that of the others; it is round also, grows in great abundance, and spreads like a shrub. The taste of this last variety is acrid, and it acts medicinally as a strong purgative. In the first kind, again, there are certain differences, determined by the seed, for in some varieties the seed is of an inferior quality, and in others remarkably small: these defects, however, are only found to exist in the kind that has the crisped leaf.

Our own people, again, have found other varieties of the radish: there is the Algidan radish, long and transparent, so called from the place of its growth: another, similar to the rape in form, is known as the Syrian radish; it is pretty nearly the mildest and the most tender of them all, and is well able to bear the winter. The very best of all,

however, is the one that has been brought from Syria, very recently it would seem, as we do not find it mentioned by any of our writers: it lasts the whole of the winter through. In addition to these kinds, there is another, a wild variety, known by the Greeks as "agrion," and to the people of Pontus as "armon," while others, again, call it "leuce, and our people "armoracia;" it has more leaves, however, than root.

In testing the quality of the radish, it is the stem more particularly, that is looked at; in those which are acrid to the taste, for instance, it is rounder and thicker than in the others, and grooved with long channels, while the leaves are more unsightly to the eye, being angular and covered with prickles.

The radish requires to be sown in a loose, humid soil, has a great aversion to manure, and is content with a dressing solely of chaff: so fond is it of the cold, that in Germany it is known to grow as large as an infant in size. For the spring crop, it is sown immediately after the ides of February; and then again about the time of the Vulcanalia, this last crop being looked upon as the best: many persons, however, sow radishes in March, April, and September. When the plant begins to grow to any size, it is considered a good plan to cover up the leaves successively, and to earth up the root as well; for the part of it which appears above ground is apt to become hard and pithy. Aristomachus recommends the leaves to be taken off in winter, and the roots to be well moulded up, to prevent the water from accumulating about them; and he says, that by using these precautions, they will be all the finer in summer. Some authors have mentioned a plan of making a hole with a dibble, and covering it at the bottom with a layer of chaff, six fingers in depth; upon this layer the seed is put, and then covered over with manure and earth; the result of which is, according to their statement, that radishes are obtained full as large as the hole so made. It is salt, however, that conduces more particularly to their nutriment, and hence it is that they are often watered with brine; in Egypt, too, the growers sprinkle nitre over them, the roots being remarkable for their mildness The salt, too, has the similar effect of removing all their pungency, and when thus treated, they become very similar in their qualities to radishes that have been boiled: for when boiled they become sweet and mild, and eat, in fact, just like turnips.

Medical men recommend raw radishes to be eaten fasting, with salt, for the purpose of collecting the crude humours of the viscera; and in this way they prepare them for the action of emetics. It is said, too, that the juices of this plant are absolutely necessary for the cure of certain diseases of the diaphragm; for it has been found by experiment, in Egypt, that the phthiriasis which attaches itself to the internal parts of the heart, cannot possibly be eradicated by any other remedy, the kings of that country having ordered the bodies of the dead to be opened and examined, for the purpose of enquiring into certain diseases.

Such, too, is the frivolity of the Greeks, that, in the temple of Apollo at Delphi, it is said, the radish is so greatly preferred to all other articles of diet, as to be represented there in gold, the beet in silver, and the rape in lead. — You might be very sure that Manius Curius was not a native of that country, the general whom, as we find stated in our Annals, the ambassadors of the Samnites found busy roasting rape at the fire, when they came to offer him the gold which he so indignantly refused. Moschion, too, a Greek author, has written a volume on the subject of the radish. These vegetables are considered a very useful article of food during the winter; but they are at all times very injurious to the teeth, as they are apt to wear them away; at all events, they give a polish to ivory. There is a great antipathy between the radish and the vine; which last will shrink from the radish, if sown in its vicinity.

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CHAP. 27.

PARSNIPS.

The other kinds which have been classified by us among the cartilaginous plants, are of a more ligneous nature; and it is a singular thing, that they have, all of them, a strong flavour. Among these, there is one kind of wild parsnip which grows spontaneously; by the Greeks it is known as “staphylinos.” Another kind of parsnip is grown either from the root transplanted, or else from seed, at the beginning of spring or in the autumn; Hyginus says that this may be done in February, August, September, and October, the ground being dug to a very considerable depth for the purpose. The parsnip begins to be fit for eating at the end of a year, but it is still better at the end of two: it is reckoned more agreeable eating in autumn, and more particularly if cooked in the saacepan; even then, however, it preserves its strong pungent flavour, which it is found quite impossible to get rid of.

The hibiscum differs from the parsnip in being more slender: it is rejected as a food, but is found useful for its medicinal properties. There is a fourth kind, also, which bears a similar degree of resemblance to the parsnip; by our people it is called the “gallica,” while the Greeks, who have distinguished four varieties of it, give it the name of “daucus.” We shall have further occasion to mention it among the medicinal plants.

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CHAP. 28.

THE SKIRRET.

The skirret, too, has had its reputation established by the Emperor Tiberius, who demanded a supply of it every year from Germany. It is at Gelduba, a fortress situate on the banks of the Rhenus, that the finest are grown; from which it would appear that they thrive best in a cold climate. There is a string running through the whole length of the skirret, and which is drawn out after it is boiled; but still, for all this, a considerable proportion of its natural pungency is retained; indeed, when modified by the addition of honied wine, this is even thought to impart to dishes an additional relish. The larger parsnip has also a similar sting inside, but only when it is a year old. The proper time for sowing the skirret is in the months of February, March, April, August, September, and October.

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CHAP. 29.

ELECAMPANE.

Elecampane is not so elongated as the preceding roots, but more substantial and more pungent; eaten by itself it is very injurious to the stomach, but when mixed with other condiments of a sweet nature, it is extremely wholesome. There are several methods employed for modifying its natural acridity and rendering it agreeable to the palate: thus, for instance, when dried it is reduced to a fine flour, and then mixed with some sweet liquid or other, or else it is boiled in vinegar and water, or kept in soak in it; it is also steeped in various other ways, and then mixed with boiled grape-juice, or else incorporated with honey or raisins, or dates with plenty of meat on them. Other persons, again, have a method of preparing it with quinces, or else sorbs or plums, while sometimes the flavour is varied by the addition of pepper or thyme.

This plant is particularly good for weakness of the stomach, and it has acquired a high reputation from the circumstance that Julia Augusta used to eat it daily. The seed of it is quite useless, as the plant is reproduced, like the reed, from eyes extracted from the root. This vegetable, as well as the skirret and the parsnip, is sown both in spring and autumn, a considerable distance being left between the plants; indeed, for elecampane, a space of no less than three feet is required, as it throws out its shoots to a very considerable distance. Skirrets, however, are best transplanted.

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CHAP. 30.

BULBS, SQUILLS, AND ARUM.

Next in affinity to these plants are the bulbs, which Cato, speaking in high terms of those of Megara, recommends most particularly for cultivation. Among these bulbs, the squill, we find, occupies the very highest rank, although by nature it is medicinal, and is employed for imparting an additional sharpness to vinegar: indeed, there is no bulb known that grows to a larger size than this, or is possessed of a greater degree of pungency. There are two varieties of it employed in medicine, the male squill, which has white leaves, and the female squill, with black ones. There is a third kind also, which is good to eat, and is known as the Epimenidian squill; the leaf is narrower than in the other kinds, and not so rough. All the squills have numerous seeds, but they come up much more quickly if propagated from the offsets that grow on the sides. To make them attain a still greater size, the large leaves that grow around them are turned down and covered over with earth; by which method all the juices are carried to the heads. Squills grow spontaneously and in vast numbers in the Baleares and the island of Ebusus, and in the Spanish provinces. The philosopher Pythagoras has written a whole volume on the merits of this plant, setting forth its various me- dicinal properties; of which we shall have occasion to speak more at length in the succeeding Book.

The other species of bulbs are distinguished by their colour, size, and sweetness; indeed, there are some that are eaten raw even — those found in the Tauric Chersonesus, for instance. Next to these, the bulbs of Africa are held in the highest esteem, and after them those of Apulia. The Greeks have distinguished the following varieties: the bulbine, the seta- nion, the opition, the cyix, the leucoion, the ægilips, and the sisyrinchion — in the last there is this remarkable feature, that the extremities of the roots increase in winter, but during the spring, when the violet appears, they diminish in size and gradually contract, and then it is that the bulb begins to increase in magnitude. Among the varieties of the bulb, too, there is

the plant known in Egypt by the name of “aron.” In size it is very nearly as large as the squill, with a leaf like that of lapathum, and a straight stalk a couple of cubits in length, and the thickness of a walking-stick: the root of it is of a milder nature, so much so, indeed, as to admit of being eaten raw.

Bulbs are taken up before the spring, for if not, they are apt to spoil very quickly. It is a sign that they are ripe when the leaves become dry at the lower extremities. When too old they are held in disesteem; the same, too, with the long and the smaller ones; those, on the other hand, which are red and round are greatly preferred, as also those of the largest size. In most of them there is a certain degree of pungency in the upper part, but the middle is sweet. The ancients have stated that bulbs are reproduced from seed only, but in the champaign country of Præneste they grow spontaneously, and they grow to an unlimited extent in the territory of the Remi.

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CHAP. 31. (6.)

THE ROOTS, FLOWERS, AND LEAVES OF ALL THESE PLANTS. GARDEN PLANTS WHICH LOSE THEIR LEAVES.

Nearly all the garden plants have a single root only, radishes, beet, parsley, and mallows, for example; it is lapathum, however, that has the longest root of them all, it attaining the length of three cubits even. The root of the wild kind is smaller and of a humid nature, and when up it will keep alive for a considerable period. In some of these plants, however, the roots are fibrous, as we find the case in parsley and mallows, for instance; in others, again, they are of a ligneous nature, as in ocimum, for example; and in others they are fleshy, as in beet, and in saffron even more so. In some, again, the root is composed of rind and flesh, as in the radish and the rape; while in others it is jointed, as in hay grass. Those plants which have not a straight root throw out immediately a great number of hairy fibres, orage and blite, for instance: squills again, bulbs, onions, and garlic never have any but a vertical root. Among the plants that grow spontaneously, there are some which have more numerous roots than leaves, spalax, for example, pellitory, and saffron.

Wild thyme, southernwood, turnips, radishes, mint, and rue blossom all at once; while others, again, shed their blossom directly they have begun to flower. Ocimum blossoms gradu- ally, beginning at the lower parts, and hence it is that it is so very long in blossom: the same is the case, too, with the plant known as heliotropium. In some plants the flower is white, in others yellow, and in others purple. The leaves fall first from the upper part in wild-marjoram and elecampane, and in rue sometimes, when it has been injured accidentally. In some plants the leaves are hollow, the onion and the scallion, more particularly.

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CHAP. 32.

VARIETIES OF THE ONION.

Garlic and onions are invoked by the Egyptians, when taking an oath, in the number of their deities. The Greeks have many varieties of the onion, the Sardian onion, the Samothracian, the Alsidenian, the setanian, the schistan, and the Ascalonian, so called from Ascalon, a city of Judæa. They have, all of them, a pungent smell, which draws tears from the eyes, those of Cyprus more particularly, and those of Cnidos the least of all. In all of them the body is composed of a cartilage of an unctuous nature. The variety known as the setanian is the smallest of them all, with the exception of the Tusculan onion, but it is sweet to the taste. The schistan and the Ascalonian kinds are used for storing. The schistan onion is left during the winter with the leaves on; in the spring it is stripped of them, upon which offsets make their appearance at the same divisions as the leaves; it is to this circumstance that this variety owes its name. Taking the hint from this fact, it is recommended to strip the other kinds of their leaves, to make them bulb all the better, instead of running to seed.

The Ascalonian onion is of a peculiar nature, being barren in some measure in the root; hence it is that the Greeks have recommended it to be reproduced from seed, and not from roots: the transplanting, too, they say, should be done later in the spring, at the time the plant germinates, the result being that it bulbs with all the greater rapidity, and hastens, as it were, to make up for lost time; great dispatch, however, is requisite in taking it up, for when ripe it rots with the greatest rapidity. If propagated from roots, it throws out a long stalk, runs rapidly to seed, and dies.

There are considerable differences, too, in the colour of the onion; the whitest of all are those grown at Issus and Sardes. The onions, too, of Crete are held in high esteem, but there is some doubt whether they are not the same as the Ascalonian variety; for when grown from seed they produce a fine bulb, but when planted they throw out a long stalk and run to seed; in fact, they differ from the

Ascalonian kind only in the sweetness of their flavour.

Among us there are two principal varieties known of the onion; the scallion, employed for seasonings, is one, known to the Greeks by the name of “gethyon,” and by us as the “pallacana;” it is sown in March, April, and May. The other kind is the bulbed or headed onion; it is sown just after the autumnal equinox, or else after the west winds have begun to prevail. The varieties of this last kind, ranged according to their relative degrees of pungency, are the African onion, the Gallic, the Tusculan, the Ascalonian, and the Amiternian: the roundest in shape are the best. The red onion, too, is more pungent than the white, the stored than the fresh, the raw than the cooked, and the dried than the preserved. The onion of Amiternum is cultivated in cold, humid localities, and is the only one that is reproduced from heads, like garlic, the other kinds being grown from seed. This last kind yields no seed in the ensuing summer, but a bulb only, which dries and keeps; but in the summer after, the contrary is the case, for seed is produced, while the bulb very quickly spoils. Hence it is that every year there are two separate sowings, one of seed for the reproduction of bulbs, and one of bulbs for the growth of seed; these onions keep best in chaff. The scallion has hardly any bulb at all, but a long neck only — hence it is nothing but leaf, and is often cut down, like the leek; for this reason, too, like the leek, it is grown from seed, and not from plants.

In addition to these particulars, it is recommended that the ground intended for sowing onions should be turned up three times, care being taken to remove all roots and weeds; ten pounds of seed is the proper proportion for a jugerum. Savory too, they say, should be mixed with them, the onions being all the finer for it; the ground, too, should be stubbed and hoed four times at least, if not oftener. In Italy, the Ascalonian onion is sown in the month of February. The seed of the onion is gathered when it begins to turn black, and before it becomes dry and shrivelled.

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CHAP. 33.

THE LEEK.

While upon this subject, it will be as well, too, to speak of the leek, on account of the affinity which it bears to the plants just mentioned, and more particularly because cut-leek has recently acquired considerable celebrity from the use made of it by the Emperor Nero. That prince, to improve his voice, used to eat leeks and oil every month, upon stated days, abstaining from every other kind of food, and not touching so much as a morsel of bread even. Leeks are reproduced from seed, sown just after the autumnal equinox; if they are intended for cutting, the seed is sown thicker than otherwise. The leeks in the same bed are cut repeatedly, till it is quite exhausted, and they are always kept well manured. If they are wanted to bulb before being cut, when they have grown to some size they are transplanted to another bed, the extremities of the leaves being snipped off without touching the white part, and the heads stripped of the outer coats. The ancients were in the habit of placing a stone or potsherd upon the leek, to make the head grow all the larger, and the same with the bulbs as well; but at the present day it is the usual practice to move the fibrous roots gently with the weeding-hook, so that by being bent they may nourish the plant, and not withdraw the juices from it.

It is a remarkable fact, that, though the leek stands in need of manure and a rich soil, it has a particular aversion to water; and yet its nature depends very much upon the natural properties of the soil. The most esteemed leeks are those grown in Egypt, and next to them those of Ostia and Aricia. Of the leek for cutting, there are two varieties: that with grass-green leaves and incisions distinctly traced on them, and the leek with paler and rounder leaves, the incisions being more lightly marked. There is a story told, that Mela, a member of the Equestrian order, being accused of mal-administration by order of the Emperor Tiberius, swallowed in his despair leek-juice to the amount of three denarii in weight of silver, and expired upon the spot without the slightest symptom of pain. It is said, however,

that a larger dose than this is productive of no injurious effects whatever.

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CHAP. 34

GARLIC.

Garlic is generally supposed, in the country more particularly, to be a good specific for numerous maladies. The ex- ternal coat consists of membranes of remarkable fineness, which are universally discarded when the vegetable is used; the inner part being formed by the union of several cloves, each of which has also a separate coat of its own. The flavour of it is pungent, and the more numerous the cloves the more pungent it is. Like the onion, it imparts an offensive smell to the breath; but this is not the case when it is cooked. The various species of garlic are distinguished by the periods at which they ripen: the early kind becomes fit for use in sixty days. Another distinction, too, is formed by the relative size of the heads. Ulpicum, also, generally known to the Greeks as "Cyprian garlic," belongs to this class; by some persons it is called "antiscorodon," and in Africa more particularly it holds a high rank among the dishes of the rural population; it is of a larger size than ordinary garlic. When beaten up with oil and vinegar, it is quite surprising what a quantity of creaming foam is produced.

There are some persons who recommend that neither ulpicum nor garlic should be sown on level ground, but say that they should be planted in little mounds trenched up, at a distance of three feet apart. Between each clove, they say, there should be a distance of four fingers left, and as soon as ever three leaves are visible, the heads should be hoed; the oftener they are hoed, the larger the size they will attain. When they begin to ripen, the stalks are bent downwards, and covered over with earth, a precaution which effectually prevents them from running to leaf. In cold soils, it is considered better to plant them in spring than in autumn.

For the purpose of depriving all these plants of their strong smell, it is recommended to set them when the moon is below the horizon, and to take them up when she is in conjunction. Independently of these precautions, we find Menander, one of the Greek writers, recommending those who have been eating garlic to eat immediately

afterwards a root of beet roasted on hot coals; if this is done, he says, the strong smell of the garlic will be effectually neutralized. Some persons are of opinion, that the proper period for planting garlic and ulpicum is between the festival of the Compitalia and that of the Saturnalia. Garlic, too, can be grown from seed, but it is very slow, in such case, in coming to maturity; for in the first year, the head attains the size only of that of a leek, in the second, it separates into cloves, and only in the third it arrives at maturity; there are some, however, who think that garlic grown this way is the best. Garlic should never be allowed to run to seed, but the stalk should be twisted, to promote its growth, and to make the head attain a larger size.

If garlic or onions are wanted to keep some time, the heads should be dipped in salt water, made luke-warm; by doing this, they will be all the better for keeping, though quite worthless for reproduction. Some persons content themselves with hanging them over burning coals, and are of opinion that this is quite sufficient to prevent them from sprouting: for it is a well-known fact, that both garlic and onions sprout when out of the ground, and that after throwing out their thin shoots they shrivel away to nothing. Some persons are of opinion, too, that the best way of keeping garlic is by storing it in chaff. There is a kind of garlic that grows spontaneously in the fields, and is known by the name of "alum." To preserve the seeds that are sown there from the remorseless ravages of the birds, this plant is scattered over the ground, being first boiled, to prevent it from shooting. As soon as ever they have eaten of it, the birds become so stupefied as to be taken with the hand even, and if they remain but a few moments only on the spot, they fall fast asleep. There is a wild garlic, too, generally known as "bear's" garlic; it has exactly the smell of millet, with a very small head and large leaves.

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CHAP. 35. (7.)

THE NUMBER OF DAYS REQUIRED FOR THE RE- SPECTIVE PLANTS TO MAKE THEIR APPEARANCE ABOVE GROUND.

Among the garden plants which make their appearance most speedily above ground, are ocimum, blite, the turnip, and rocket; for they appear above the surface the third day after they are sown. Anise, again, comes up on the fourth day, the lettuce on the fifth, the radish on the sixth, the cucumber and the gourd on the seventh — the cucumber rather the first of the two — cresses and mustard on the fifth, beet on the sixth day in summer and the tenth in winter, orage on the eighth, onions on the nineteenth or twentieth, and scallions on the tenth or twelfth. Coriander, again, is more stubborn in its growth, cunila and wild marjoram do not appear till after the thirtieth day, and parsley comes up with the greatest difficulty of all, for at the very earliest it is forty days before it shows itself, and in most instances as much as fifty.

The age, too, of the seed is of some importance in this respect; for fresh seed comes up more rapidly in the case of the leek, the scallion, the cucumber, and the gourd, while in that of parsley, beet, cardamum, cunila, wild majoram, and coriander, seed that has been kept for some time is the best.

There is one remarkable circumstance in connection with the seed of beet; it does not all germinate in the first year, but some of it in the second, and some in the third even; hence it is that a considerable quantity of seed produces only a very moderate crop. Some plants produce only in the year in which they are set, and some, again, for successive years, parsley, leeks, and scallions for instance; indeed, these plants, when once sown, retain their fertility, and produce for many years.

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CHAP. 36.

THE NATURE OF THE VARIOUS SEEDS.

In most plants the seed is round, in some oblong; it is broad and foliaceous in some, orage for instance, while in others it is narrow and grooved, as in cummin. There are differences, also, in the colour of seeds, which is either black or white; while some seeds are woody and hard, in radishes, mustard, and rape, the seeds are enclosed in pods. In parsley, coriander, anise, fennel, and cummin, the seed has no covering at all, while in blite, beet, orage, and ocimum, it has an outer coat, and in the lettuce it is covered with a fine down. There is no seed more prolific than that of ocimum; it is generally recommended to sow it with the utterance of curses and imprecations, the result being that it grows all the better for it; the earth, too, is rammed down when it is sown, and prayers offered that the seed may never come up. The seeds which are enveloped in an outer coat, are dried with considerable difficulty, that of ocimum more particularly; hence it is that all these seeds are dried artificially, their fruitfulness being greatly promoted thereby.

Plants in general come up better when the seed is sown in heaps than when it is scattered broad-cast: leeks, in fact, and parsley are generally grown by sowing the seed in little bags: in the case of parsley, too, a hole is made with the dibble, and a layer of manure inserted.

All garden plants grow either from seed or from slips, and some from both seed and suckers, such as rue, wild marjoram, and ocimum, for example — this last being usually cut when it is a palm in height. Some kinds, again, are reproduced from both seed and root, as in the case of onions, garlic, and bulbs, and those other plants of which, though annuals themselves, the roots retain their vitality. In those plants which grow from the root, it lives for a considerable time, and throws out offsets, as in bulbs, scallions, and squills for example. — Others, again, throw out offsets, though not from a bulbous root, such as parsley and beet, for instance. When the stalk is cut, with the exception of those which have not a rough stem, nearly

all these plants put forth fresh shoots, a thing that may be seen in ocimum, the radish, and the lettuce, which are in daily use among us; indeed, it is generally thought that the lettuce which is grown from a fresh sprouting, is the sweetest. The radish, too, is more pleasant eating when the leaves have been removed before it has begun to run to stalk. The same is the case, too, with rape; for when the leaves are taken off, and the roots well covered up with earth, it grows all the larger for it, and keeps in good preservation till the en- suing summer.

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CHAP. 37.

PLANTS OF WHICH THERE IS BUT A SINGLE KIND PLANTS OF WHICH THERE ARE SEVERAL KINDS.

Of ocimum, lapathum, blite, cresses, rocket, orage, coriander, and anise respectively, there is but a single kind, these plants being the same everywhere, and no better in one place than in another. It is the general belief that stolen rue grows the best, while, on the other hand, bees that have been stolen will never thrive. Wild mint, cat-mint, endive, and pennyroyal, will grow even without any cultivation. With reference to the plants of which we have already spoken, or shall have occasion to speak, there are numerous varieties of many of them, parsley more particularly.

(8.) As to the kind of parsley which grows spontaneously in moist localities, it is known by the name of "helioselinum;" it has a single leaf only, and is not rough at the edges. In dry places, we find growing the kind known as "hipposelinum," consisting of numerous leaves, similar to helioselinum. A third variety is the oreoselinum, with leaves like those of hemlock, and a thin, fine, root, the seed being similar to that of anise, only somewhat smaller.

The differences, again, that are found to exist in cultivated parsley, consist in the comparative density of the leaves, the crispness or smoothness of their edges, and the thinness or thickness of the stem, as the case may be: in some kinds, again, the stem is white, in others purple, and in others mottled.

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CHAP. 38.

THE NATURE AND VARIETIES OF TWENTY-THREE GARDEN PLANTS.
THE LETTUCE; ITS DIFFERENT VARIETIES.

The Greeks have distinguished three varieties of the lettuce; the first with a stalk so large, that small garden gates, it is said, have been made of it: the leaf of this lettuce is somewhat larger than that of the herbaceous, or green lettuce, but extremely narrow, the nutriment seeming to be expended on the other parts of the plant. The second kind is that with a rounded stalk; and the third is the low, squat lettuce generally known as the Laconian lettuce.

Some persons have made distinctions in reference to their respective colours, and the times for sowing them: the black lettuce is sown in the month of January, the white in March, and the red in April; and they are fit for transplanting, all of them, at the end of a couple of months. Those, again, who have pursued these enquiries even further than this, have distinguished a still greater number of varieties of them — the purple, the crisped, the Cappadocian, and the Greek lettuce, this last having a longer leaf than the rest, and a broad stalk: in addition to which, there is one with a long, narrow leaf, very similar to endive in appearance. The most inferior kind, however, of all, is the one to which the Greeks, censuring it for its bitterness, have given the name of "picris." There is still another variety, a kind of white lettuce, called "meconis," a name which it derives from the abundance of milk, of a narcotic quality, which it produces; though, in fact, it is generally thought that they are all of them of a soporific tendency. In former times, this last was the only kind of lettuce that was held in any esteem in Italy, the name "lactuca" having been given it on account of the milk which it contains.

The purple kind, with a very large root, is generally known as the Cæcilian lettuce; while the round one, with an extremely diminutive root and broad leaves, is known to some persons as the "astytis," and to others as the "eunychion," it having the effect, in a remarkable degree, of quenching the amorous propensities. Indeed, they are, all of them, possessed of cooling and refreshing properties, for which

reason it is, that they are so highly esteemed in summer; they have the effect, also, of removing from the stomach distaste for food, and of promoting the appetite. At all events, we find it stated, that the late Emperor Augustus, when ill, was saved on one occasion, thanks to the skill of his physician, Musa, by eating lettuces, a food which the excessive scruples of his former physician, C. Æmilius, had forbidden him. At the present day, however, lettuces have risen into such high estimation, that a method has been discovered even of preserving them during the months in which they are out of season, by keeping them in oxymel. It is generally supposed, also, that lettuces have the effect of making blood.

In addition to the above varieties, there is another kind of lettuce known as the "goats' lettuce," of which we shall have occasion to make further mention when we come to the medicinal plants: at the moment, too, that I am writing this, a new species of cultivated lettuce has been introduced, known as the Cilician lettuce, and held in very considerable esteem; the leaf of it is similar to that of the Cappadocian lettuce, except that it is crisped, and somewhat larger.

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CHAP. 39.

ENDIVE.

Endive, though it cannot exactly be said to be of the same genus as the lettuce, still cannot be pronounced to belong to any other. It is a plant better able to endure the rigours of the winter than the lettuce, and possessed of a more acrid taste, though the flavour of the stalk is equally agreeable. Endive is sown at the beginning of spring, and transplanted at the end of that season. There is also a kind of spreading endive, known in Egypt as "cichorium," of which we shall have occasion to speak elsewhere more at length.

A method has been discovered of preserving all the thyrsi or leaves of the lettuce in pots, the object being to have them fresh when wanted for boiling. Lettuces may be sown all the year through in a good soil, well-watered and carefully manured; two months being allowed to intervene between sowing and transplanting, and two more between transplanting and gathering them when ripe. The rule is, however, to sow them just after the winter solstice, and to transplant when the west winds begin to prevail, or else to sow at this latter period, and to plant out at the vernal equinox. The white lettuce is the best adapted for standing the rigours of the winter.

All the garden plants are fond of moisture; lettuces thrive, more particularly, when well manured, and endive even more so. Indeed, it is found an excellent plan to plant them out with the roots covered up in manure, and to keep up the supply, the earth being cleared away for that purpose. Some, again, have another method of increasing their size; they cut them down when they have reached half a foot in height, and cover them with fresh swine's dung. It is the general opinion that those lettuces only will admit of being blanched which are produced from white seed; and even then, as soon as they begin to grow, sand from the sea-shore should be spread over them, care being taken to tie the leaves as soon as ever they begin to come to any size.

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CHAP. 40.

BEET: FOUR VARIETIES OF IT.

Beet is the smoothest of all the garden plants. The Greeks distinguish two kinds of beet, according to the colour, the black and the white. The last, which is the kind generally preferred, has but very little seed, and is generally known as the Sicilian beet; just as it is the white lettuce that is held in the highest degree of esteem. Our people, also, distinguish two varieties of beet, the spring and the autumn kinds, so called from the periods of sowing; although sometimes we find beet sown in June even. This is a plant, too, that is sometimes transplanted; and it thrives all the better, like the lettuce, if the roots are well covered with manure, in a moist soil. Beet is mostly eaten with lentils and beans; it is prepared also in the same way as cabbage, with mustard more particularly, the pungency of which relieves its insipidity. Medical men are of opinion that beet is a more unwholesome vegetable than cabbage; hence it is that I never remember seeing it served at table. Indeed, there are some persons who scruple to taste it even, from a conviction that it is a food suitable only for persons of a robust constitution.

Beet is a vegetable with twofold characteristics, partaking of the nature of the cabbage in its leaves and resembling a bulb in the root; that which grows to the greatest breadth being the most highly esteemed. This plant, like the lettuce, is made to grow to head by putting a light weight upon it the moment it begins to assume its proper colour. Indeed, there is no garden plant that grows to a larger head than this, as it sometimes spreads to a couple of feet in breadth, the nature of the soil contributing in a very considerable degree to its size: those found in the territory of Circeii attain the largest size. Some persons think that the best time for sowing beet is when the pomegranate is in flower, and are of opinion that it ought to be transplanted as soon as it has thrown out five leaves. There is a singular difference — if indeed it really exists — between the two varieties of beet, the white kind being remarkable for its purgative qualities, and the black being equally astringent. When wine in the

vat has been deteriorated by assuming a flavour like that of cabbage, its original flavour is restored, it is said, by plunging beet leaves into it.

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CHAP. 41

CABBAGES; THE SEVERAL VARIETIES OF THEM.

Cabbage and coleworts, which at the present day are the most highly esteemed of all the garden vegetables, were held in little repute, I find, among the Greeks; but Cato, on the other hand, sings the wondrous praises of the cabbage, the medicinal properties of which we shall duly enlarge upon when we come to treat of that subject. Cato distinguishes three varieties of the cabbage; the first, a plant with leaves wide open, and a large stalk; a second, with crisped leaves, to which he gives the name of "apiaca;" and a third, with a thin stalk, and a smooth, tender leaf, which with him ranks the lowest of all. Cabbages may be sown the whole year through, as we find that they are cut at all periods of the year; the best time, however, for sowing them is at the autumnal equinox, and they are usually transplanted as soon as five leaves are visible. In the ensuing spring after the first cutting, the plant yields sprouts, known to us as "cymæ." These sprouts, in fact, are small shoots thrown out from the main stem, of a more delicate and tender quality than the cabbage itself. The exquisite palate, however, of Apicius rejected these sprouts for the table, and his example was followed by the fastidious Drusus Cæsar; who did not escape, however, the censures of his father, Tiberius, for being so over-nice. After the cymæ have made their appearance the cabbage throws out its summer and autumn shoots, and then its winter ones; after which, a new crop of cymæ is produced, there being no plant so productive as this, until, at last, it is quite exhausted by its extreme fertility. A second time for sowing cabbages is immediately after the vernal equinox, the plants of this growth being transplanted at the end of spring, that they may not run up into sprouts before coming to a top: and a third sowing takes place about the summer solstice, the transplanting being done in summer if the soil is moist, but, if too dry, in autumn. When moisture and manure are supplied in small quantities, the flavour of the cabbage is all the more agreeable, but when they are supplied in greater abundance, the plants attain a larger size. Asses' dung is the

best adapted for its growth.

The cabbage, too, is one of those articles so highly esteemed by epicures; for which reason it will not be amiss if we speak of it at somewhat greater length. To obtain plants equally remarkable for their size and flavour, care must be taken first of all to sow the seed in ground that has had a couple of turnings up, and then to follow up the shoots as they appear above ground by moulding them up, care being taken to throw up the earth over them as they increase in luxuriance, and to let nothing but the summit appear above the surface. This kind is known as the Tritian cabbage: in money and labour it costs twice as much as any of the others.

The other varieties of the cabbage are numerous — there is the Cumanian cabbage, with leaves that lie close to the ground, and a wide, open head; the Aricinian cabbage, too, of no greater height, but with more numerous leaves and thinner — this last is looked upon as the most useful of them all, for beneath nearly all of the leaves there are small shoots thrown out, peculiar to this variety. The cabbage, again, of Pompeii is considerably taller, the stalk, which is thin at the root, increasing in thickness as it rises among the leaves, which are fewer in number and narrower; the great merit of this cabbage is its remarkable tenderness, although it is not able to stand the cold. The cabbage of Bruttium, on the other hand, thrives all the better for cold; the leaves of it are remarkably large, the stalk thin, and the flavour pungent. The leaves, again, of the Sabine cabbage are crisped to such a degree as to excite our surprise, and their thickness is such as to quite exhaust the stem; in sweetness, however, it is said to surpass all the others.

There have lately come into fashion the cabbages known as the "Lacuturres;" they are grown in the valley of Aricia, where there was formerly a lake, now no longer in existence, and a tower which is still standing. The head of this cabbage is very large, and the leaves are almost without number, some of them being round and smooth, and others long and sinewy; indeed, there is no cabbage that runs to a larger head than this, with the sole exception of the Tritian variety, which has a head sometimes as much as a foot in thickness, and throws out its cymæ the latest of all.

In all kinds of cabbages, hoar-frost contributes very materially to

their sweetness; but it is apt to be productive of considerable injury, if care is not taken to protect the pith by cutting them aslant. Those plants which are intended for seed are never cut.

There is another kind, again, that is held in peculiar esteem, and which never exceeds the height of an herbaceous plant; it is known by the name of "halmyridia," from the circumstance of its growing on the sea-shore only. It will keep green and fresh during a long voyage even, if care is taken not to let it touch the ground from the moment that it is cut, but to put it into oil-vessels lately dried, and then to bung them so as to effectually exclude all air. There are some who are of opinion, that the plant will come to maturity all the sooner if some sea-weed is laid at the root when it is transplanted, or else as much pounded nitre as can be taken up with three fingers; and others, again, sprinkle the leaves with trefoil seed and nitre pounded together. Nitre, too, preserves the greenness of cabbage when cooked, a result which is equally ensured by the Apician mode of boiling, or in other words, by steeping the plants in oil and salt before they are cooked.

There is a method of grafting vegetables by cutting the shoots and the stalk, and then inserting in the pith the seed of another plant; a plan which has been adopted with the wild cucumber even. There is another kind of wild cabbage, also, the lapsana, which has become famous since the triumphs of the late Emperor Julius, in consequence of the songs and jokes of his soldiers more particularly; for in the alternate lines sung by them, they used to reproach him for having made them live on lapsana at the siege of Dyrrhachium, and to rally him upon the parsimonious scale on which he was in the habit of recompensing their services. The lapsana is nothing more than a wild cyma.

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CHAP. 42.

WILD AND CULTIVATED ASPARAGUS.

Of all the garden plants, asparagus is the one that requires the most delicate attention in its cultivation. We have already spoken at considerable length of its origin, when treating of the wild plants, and have mentioned that Cato recommends it to be grown in reed-beds. There is another kind, again, of a more uncultivated nature than the garden asparagus, but less pungent than corruda; it grows upon the mountains in different countries, and the plains of Upper Germany are quite full of it, so much so, indeed, that it was a not unhappy remark of Tiberius Cæsar, that a weed grows there which bears a remarkably strong resemblance to asparagus. That which grows spontaneously upon the island of Nesis, off the coast of Campania, is looked upon as being by far the best of all.

Garden asparagus is reproduced from roots, the fibres of which are exceedingly numerous, and penetrate to a considerable depth. When it first puts forth its shoots, it is green; these in time lengthen out into stalks, which afterwards throw out streaked branches from the head: asparagus admits, also, of being grown from seed.

Cato has treated of no subject with greater care than this, the last Chapter of his work being devoted to it, from which we may conclude that it was quite new to him, and a subject which had only very recently occupied his attention. He recommends that the ground prepared for it should be a moist or dense soil, the seed being set at intervals of half a foot every way, to avoid treading upon the heads; the seed, he says, should be put two or three into each hole, these being made with the dibble as the line runs — for in his day, it should be remembered, asparagus was only grown from seed — this being done about the vernal equinox. It requires, he adds, to be abundantly manured, and to be kept well hoed, due care being taken not to pull up the young plants along with the weeds. The first year, he says, the plants must be protected from the severity of the winter with a covering of straw, care being taken to uncover them in the spring, and to hoe and stub up the ground about them. In the spring

of the third year, the plants must be set fire to, and the earlier the period at which the fire is applied, the better they will thrive. Hence it is, that as reed-beds grow all the more rapidly after being fired, asparagus is found to be a crop remarkably well suited for growing with them. The same author recommends, however, that asparagus should not be hoed before the plants have made their appearance above-ground, for fear of disturbing the roots; and he says that in gathering the heads, they should be cut close to the root, and not broken off at the surface, a method which is sure to make them run to stalk and die. They should be cut, he says, until they are left to run to seed, and after the seed is ripe, in spring they must be fired, care being taken, as soon as they appear again, to hoe and manure them as before. After eight or nine years, he says, when the plants have become old, they must be renewed, after digging and manuring the ground, by replanting the roots at intervals of a foot, care being taken to employ sheep's dung more particularly for the purpose, other kinds of manure being apt to produce weeds.

No method of cultivating this plant that has since been tried has been found more eligible than this, with the sole exception that the seed is now sown about the ides of February, by laying it in heaps in small trenches, after steeping it a considerable time in manure; the result of which is that the roots become matted, and form into spongy tufts, which are planted out at intervals of a foot after the autumnal equinox, the plants continuing to be productive so long as ten years even. There is no soil more favourable to the growth of asparagus, than that of the gardens of Ravenna.

We have already spoken of the corruda, by which term I mean the wild asparagus, by the Greeks called "orminos," or "myacanthos," as well as by other names. I find it stated, that if rams' horns are pounded, and then buried in the ground, asparagus will come up.

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CHAP. 43.

THISTLES.

It really might have been thought that I had now given an account of all the vegetable productions that are held in any degree of esteem, did there not still remain one plant, the cultivation of which is extremely profitable, and of which I am unable to speak without a certain degree of shame. For it is a well-known fact, that some small plots of land, planted with thistles, in the vicinity of Great Carthage and of Corduba more particularly, produce a yearly income of six thousand sesterces; this being the way in which we make the monstrous productions even of the earth subservient to our gluttonous appetites, and that, too, when the very four-footed brutes instinctively refuse to touch them.

Thistles are grown two different ways, from plants set in autumn, and from seed sown before the nones of March; in which latter case they are transplanted before the ides of November, or, where the site is a cold one, about the time that the west winds prevail. They are sometimes manured even, and if such is the will of heaven, grow all the better for it. They are preserved, too, in a mixture of honey and vinegar, with the addition of root of laser and cummin — so that a day may not pass without our having thistles at table.

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CHAP. 44.

OTHER PLANTS THAT ARE SOWN IN THE GARDEN: OCIMUM; ROCKET; AND NASTURTIUM.

For the remaining plants a brief description will suffice. The best time for sowing ocimum, it is said, is at the festival of the Parilia; though some say that it may be done in autumn as well, and recommend, when it is sown in winter, to drench the seed thoroughly with vinegar. Rocket, too, and nasturtium may be grown with the greatest facility either in summer or winter. Rocket, more particularly, is able to stand the cold, and its properties are quite different form those of the lettuce, as it is a great provocative of lust. Hence it is that we are in the habit of mixing these two plants in our dishes, the excess of cold in the one being compensated by the equal degree of heat in the other. Nasturtium has received that name from the smarting sensation which its pungency causes to the nostrils, and hence it is that a certain notion of smartness has attached itself to the word, it having become quite a proverbial saying, that a sluggish man should eat nasturtium, to arouse him from his torpidity. In Arabia, it is said, this plant attains a size that is quite marvellous.

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CHAP. 45.

RUE.

Rue, too, is generally sown while the west winds prevail, as well as just after the autumnal equinox. This plant has an extreme aversion to cold, moisture, and dung; it loves dry, sunny localities, and a soil more particularly that is rich in brick clay; it requires to be nourished, too, with ashes, which should be mixed with the seed as well, as a preservative against the attacks of caterpillars. The ancients held rue in peculiar esteem; for I find that honied wine flavoured with rue was distributed to the people, in his consulship, by Cornelius Cethegus, the colleague of Quintus Flamininus, after the closing of the Comitia. This plant has a great liking for the fig-tree, and for that tree only; indeed, it never thrives better than when grown beneath that tree. It is generally grown from slips, the lower end of which is inserted in a perforated bean, which holds it fast, and so nurtures the young plant with its juices. It also reproduces itself; for the ends of the branches bending downwards, the moment they reach the ground, they take root again. Ocimum is of a very similar nature to rue, except that it dries with greater difficulty. When rue has once gained strength, there is considerable difficulty in stubbing it, as it causes itching ulcerations on the hands, if they are not covered or previously protected by being rubbed with oil. Its leaves, too, are preserved, being packed in bundles for keeping.

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CHAP. 46.

PARSLEY.

Parsley is sown immediately after the vernal equinox, the seed being lightly beaten first in a mortar. It is thought that, by doing this, the parsley will be all the more crisped, or else by taking care to beat it down when sown with a roller or the feet. It is a peculiarity of this plant, that it changes colour: it has the honour, in Achaia, of forming the wreath of the victors in the sacred contests of the Nemean Games.

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CHAP. 47.

MINT.

It is at the same season, too, that mint is transplanted; or, if it has not yet germinated, the matted tufts of the old roots are used for the purpose. This plant, too, is no less fond of a humid soil than parsley; it is green in summer and turns yellow in winter. There is a wild kind of mint, known to us as "mentastrum:" it is reproduced by layers, like the vine, or else by planting the branches upside down. It was the sweetness of its smell that caused this plant to change its name among the Greeks, its former name with them being "mintha," from which the ancient Romans derived their name for it; whereas now, of late, it has been called by them ἡδύοσμον. The mint that is used in the dishes at rustic entertainments pervades the tables far and wide with its agreeable odour. When once planted, it lasts a considerable length of time; it bears, too, a strong resemblance to pennyroyal, a property of which is, as mentioned by us more than once, to flower when kept in our larders.

These other herbs, mint, I mean, and catmint, as well as pennyroyal, are all kept for use in a similar manner; but it is cummin that is the best suited of all the seasoning herbs to squeamish and delicate stomachs. This plant grows on the surface of the soil, seeming hardly to adhere to it, and raising itself aloft from the ground: it ought to be sown in the middle of the summer, in a crumbly, warm soil, more particularly. There is another wild kind of cummin, known by some persons as "rustic," by others as "Thebaic" cummin: bruised and drunk in water, it is good for pains in the stomach. The cummin most esteemed in our part of the world is that of Carpetania, though elsewhere that of Africa and Æthiopia is more highly esteemed; with some, indeed, this last is pre- ferred to that of Egypt.

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CHAP. 48.

OLUSATRUM.

But it is olusatrum, more particularly, that is of so singular a nature, a plant which by the Greeks is called “hippose- linum,” and by others “smyrnium.” This plant is repro- duced from a tear-like gum which exudes from the stem: it is also grown from the roots as well. Those whose business it is to collect the juice of it, say that it has just the flavour of myrrh; and, according to Theophrastus, it is obtained by planting myrrh. The ancients recommended that hipposelinum should be grown in uncultivated spots covered with stones, and in the vicinity of garden walls; but at the present day it is sown in ground that has been twice turned up, between the prevalence of the west winds and the autumnal equinox.

The caper, too, should be sown in dry localities more particularly, the plot being hollowed out and surrounded with an embankment of stones erected around it: it this precaution is not taken, it will spread all over the adjoining land, and entail sterility upon the soil. The caper blossoms in summer, and retains its verdure till the setting of the Vergiliæ; it thrives the best of all in a sandy soil. As to the bad qualities of the caper which grows in the parts beyond the sea, we have already enlarged upon them when speaking of the exotic shrubs.

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CHAP. 49.

THE CARAWAY.

The caraway is an exotic plant also, which derives its name, “careum,” from the country in which it was first grown; it is principally employed for culinary purposes. This plant will grow in any kind of soil, and requires to be cultivated just the same way as olusatrum; the most esteemed, however, is that which comes from Caria, and the next best is that of Phrygia.

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CHAP. 50.

LOVAGE.

Lovage grows wild in the mountains of Liguria, its native country, but at the present day it is grown everywhere. The cultivated kind is the sweetest of the two, but is far from powerful; by some persons it is known as “panax.” Crateuas, a Greek writer, gives this name, however, to the plant known to us as “cunila bubula;” and others, again, call the conyza or cunilago, cunila, while they call cunila, properly so called, by the name of “thymbra.” With us cunila has another appellation, being generally known as “satureia,” and reckoned among the seasoning plants. It is usually sown in the month of February, and for utility rivals wild marjoram. These two plants are never used together, their properties being so extremely similar; but it is only the wild marjoram of Egypt that is considered superior to cunila.

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CHAP. 51.

DITTANDER.

Dittander, too, was oiginally an exotic plant: it is usually sown after the west winds have begun to prevail. As soon as it begins to shoot, it is cut down close to the ground, after which it is hoed and manured, a process which is repeated the succeeding year. After this, the shoots are fit for use, if the rigour of the winter has not injured them; for it is a plant quite unable to withstand any inclemency of the weather. It grows to the height of a cubit, and has a leaf like that of the laurel, but softer; it is never used except in combination with milk.

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CHAP. 52.

GITH.

Gith is employed by bakers, dill and anise by cooks and medical men. Sacopenium, so extensively used for adulter- ating laser, is also a garden plant, but is only employed for medicinal purposes.

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CHAP. 53.

THE POPPY.

There are certain plants which are grown in company with others, the poppy, for instance, sown with cabbages and purs- lain, and rocket with lettuce. Of the cultivated poppy there are three kinds, the first being the white poppy, the seed of which, parched, and mixed with honey, used to be served up in the second course at the tables of the ancients; at the present day, too, the country people sprinkle it on the upper crust of their bread, making it adhere by means of the yolk of eggs, the under crust being seasoned with parsley and gith to heighten the flavour of the flour. The second kind is the black poppy, from which, upon an incision being made in the stalk, a milky juice distils; and the third is that known to the Greeks by the name of "rhœas;" and by us as the wild poppy. This last grows spontaneously, but in fields, more particularly, which have been sown with barley: it bears a strong resemblance to rocket, grows to the height of a cubit, and bears a red flower, which quickly fades; it is to this flower that it is indebted for its Greek name.

As to the other kinds of poppies which spring up spontaneously, we shall have occasion to speak of them when treating of the medicinal plants. That the poppy has always been held in esteem among the Romans, we have a proof in the story related of Tarquinius Superbus, who, by striking down the tallest poppies in his garden, surreptitiously conveyed, unknown to them, his sanguinary message through the envoys who had been sent by his son.

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CHAP. 54.

OTHER PLANTS WHICH REQUIRE TO BE SOWN AT THE AUTUMNAL EQUINOX.

There are some other plants, again, which require to be sown together at the time of the autumnal equinox; coriander, for instance, anise, orage, mallows, lapathum, chervil, known to the Greeks as “pæderos,” and mustard, which has so pun- gent a flavour, that it burns like fire, though at the same time it is remarkably wholesome for the body. This last, though it will grow without cultivation, is considerably improved by being transplanted; though, on the other hand, it is extremely difficult to rid the soil of it when once sown there, the seed when it falls germinating immediately. This seed, when cooked in the saucepan, is employed even for making ragouts, its pungency being rendered imperceptible by boiling; the leaves, too, are boiled just the same way as those of other vegetables.

There are three different kinds of mustard, the first of a thin, slender form, the second, with a leaf like that of the rape, and the third, with that of rocket: the best seed comes from Egypt. The Athenians have given mustard the name of “napy,” others, “thapsi,” and others, again, “saurion.”

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CHAP. 55.

WILD THYME; SISYMBRIUM.

Most mountains abound with wild thyme and sisymbriurm, those of Thrace, for example, where branches of these wild plants are torn up and brought away for planting, So, too. the people of Sicyon seek for wild thyme on their mountains, and the Athenians on the slopes of Hymettus. Sisymlbrium, too, is planted in a similar manner; it grows to the greatest perfection upon the walls of wells, and around fish preserves and ponds.

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CHAP. 56. (9.)

FOUR KINDS OF FERULACEOUS PLANTS. HEMP.

The other garden plants are of the ferulaceous kind, such as fennel, for instance, very grateful to serpents, as already stated, and used for numerous seasonings when dried; thapsia, too, which bears a close resemblance to fennel, and already mentioned by us when speaking of the exotic shrubs. Then, too, there is hemp, a plant remarkably useful for making ropes, and usually sown after the west winds have begun to prevail: the more thickly it is sown, the thinner are the stalks. The seed is gathered when ripe, just after the autumnal equinox, and is dried by the agency of the sun, the wind, or smoke. The hemp itself is plucked just after vintage-time, and is peeled and cleaned by the labourers at night.

The best hemp is that of Alabanda, which is used more particularly for making hunting-nets, and of which there are three varieties. The hemp which lies nearest the bark or the pith is the least valuable, while that which lies in the middle, and hence has the name of “mesa,” is the most esteemed. The hemp of Mylasa occuplies the second rank. With reference to the size to which it grows, that of Rosea in the Sabine territory, equals the trees in height.

We have already mentioned two kinds of fennel-giant when speaking of the exotic shrubs: the seed of it is used in Italy for food; the plant, too, admits of being preserved, and, if stored in earthen pots, will keep for a whole year. There are two parts of it that are used for this purpose, the upper stalks and the umbels of the plant. This kind of fennel is sometimes known by the name of “corymbia,” and the parts preserved are called “corymbi.”

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CHAP. 57. (10.)

THE MALADIES OF GARDEN PLANTS.

The garden plants, too, like the rest of the vegetable productions, are subject to certain maladies. Thus, for instance, ocimum, when old, degenerates into wild thyme, and sisymbrium into mint, while the seed of an old cabbage produces rape, and vice versâ. Cummin, too, if not kept well hoed, is killed by hæmodorum, a plant with a single stalk, a root si- milar to a bulb in appearance, and never found except in a thin, meagre soil. Besides this, cummin is liable to a peculiar disease of its own, the scab: ocimum, too, turns pale at the rising of the Dog-star. All plants, indeed, will turn of a yellow complexion on the approach of a woman who has the menstrual discharge upon her.

There are various kinds of insects, too, that breed upon the garden plants — fleas, for instance, upon turnips, and caterpillars and maggots upon radishes, as well as lettuces and cabbages; besides which, the last two are exposed to the attacks of slugs and snails. The leek, too, is infested with peculiar insects of its own; which may very easily be taken, however, by laying dung upon the plants, the insects being in the habit of burrowing in it. Sabinus Tiro says, in his book entitled “Cepurica,” which he dedicated to Mæcenas, that it is not advisable to touch rue, cunila, mint, or ocimum with any implement of iron.

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CHAP. 58.

THE PROPER REMEDIES FOR THESE MALADIES. HOW ANTS ARE BEST DESTROYED. THE BEST REMEDIES AGAINST CATER- PILLARS AND FLIES.

The same author recommends as a remedy against ants, which are by no means the slightest plague in a garden that is not kept well watered, to stop up the mouths of their holes with sea-slime or ashes. But the most efficient way of destroying them is with the aid of the plant heliotropium; some persons, too, are of opinion that water in which an unburnt brick has been soaked is injurious to them. The best protection for turnips is to sow a few fitches with them, and for cabbages chickpeas, these having the effect of keeping away caterpillars. If, however, this precaution should have been omitted, and the caterpillars have already made their appearance, the best remedy is to throw upon the vegetables a decoction of wormwood, or else of house-leek, known to some as "aïzoüm," a kind of herb already mentioned by us. If cabbage-seed, before it is sown, is steeped in the juice of house-leek, the cabbages, it is said, are sure not be attacked by any insect.

It is said, too, that all caterpillars may be effectually exterminated, if the skull of a beast of burden is set up upon a stake in the garden, care being taken to employ that of a female only. There is a story related, too, that a river crab, hung up in the middle of the garden, is a preservative against the attacks of caterpillars. Again, there are some persons who are in the habit of touching with slips of blood-red cornel such plants as they wish to preserve from caterpillars. Flies, too, infest well-watered gardens, and more particularly so, if there happen to be any shrubs there; they may be got rid of; how- ever, by burning galbanum.

(11.) With reference to the deterioration to which seed is subject, there are some seeds which keep better than others, such, for instance, as that of coriander, beet, leeks, cresses, mustard, rocket, cunila, nearly all the pungent plants in fact. The seed, on the other hand, of orage, ocimum, gourds, and cucumbers, is not so good for

keeping. All the summer seeds, too, last longer than the winter ones; but scallion seed is the very worst for keeping of them all. But of those, even, which keep the very longest, there is none that will keep beyond four years — for sowing purposes, at least; for culinary purposes, they are fit for use beyond that period.

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CHAP. 59.

WHAT PLANTS ARE BENEFITTED BY SALT WATER.

A peculiar remedy for the maladies to which radishes, beet, rue, and cunila are subject, is salt water, which has also the additional merit of conducing very materially to their sweetness and fertility. Other plants, again, are equally benefitted by being watered with fresh water, the most desirable for the purpose being that which is the coldest and the sweetest to drink: pond and drain-water, on the other hand, are not so good, as they are apt to carry the seeds of weeds along with them. It is rain, however, that forms the principal aliment of plants; in addition to which, it kills the insects as they develope themselves upon them.

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CHAP. 60. (12.)

THE PROPER METHOD OF WATERING GARDENS.

The proper times for watering are the morning and the evening, to prevent the water from being heated by the sun with the sole exception, however, of ocimum, which requires to be watered at midday; indeed, this plant, it is generally thought, will grow with additional rapidity, if it is watered with boiling water when sown. All plants, when trans- planted, grow all the better and larger for it, leeks and turnips more particularly. Transplanting, too, is attended with certain remedial effects, and acts as a preservative to certain plants, such as scallions, for instance, leeks, radishes, parsley, lettuces, rape, and cucumbers. All the wild plants are generally smaller in the leaf and stalk than the cultivated ones, and have more acrid juices, cunila, wild marjoram, and rue, for example. Indeed, it is only the lapathum that is better in a wild state than cultivated: in its cultivated state it is the same plant that is known to us as the "rumix," being the most vigorous by far of all the plants that are grown; so much so, indeed, that it is said that when it has once taken root, it will last for ever, and can never be extirpated from the soil, more particu- larly if water happens to be near at hand. Its juices, which are employed only in ptisans, as an article of food, have the effect of imparting to them a softer and more exquisite flavour. The wild variety is employed for many medicinal purposes.

So true it is, that the careful research of man has omitted nothing, that I have even met with a poem, in which I find it stated, that if pellets of goats' dung, the size of a bean, are hollowed out, and the seed of leeks, rocket, lettuces, parsley, endive, and cresses is inserted in them, and then sown, the plants will thrive in a marvellous degree. Plants in a wild state, it is generally thought, are more dry and acrid than when cultivated.

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CHAP. 61.

THE JUICES AND FLAVOURS OF GARDEN HERBS.

This, too, reminds me that I ought to make some mention of the difference between the juices and flavours of the garden herbs, a difference which is more perceptible here than in the fruits even. In cunila, for instance, wild marjoram, cresses, and mustard, the flavour is acrid; in wormwood and cen- taury, bitter; in cucumbers, gourds, and lettuces, watery; and in parsley, anise, and fennel, pungent and odoriferous. The salt flavour is the only one that is not to be found in plants, with the sole exception, indeed, of the chicheling vetch, though even then it is to be found on the exterior surface only of the plant, in the form of a kind of dust which settles there.

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CHAP. 62.

PIPERITIS, LIBANOTIS, AND SMYRNIUM.

To come to a full understanding, too, both here as elsewhere, how unfounded are the notions which are generally entertained, I shall take this opportunity of remarking that panax has the flavour of pepper, and siliquastrum even more so, a circum- stance to which it owes its name of piperitis: libanotis again, has just the odour of frankincense, and smyrnium of myrrh. As to panax, we have spoken of it at sufficient length already. Libanotis grows in a thin, crumbly soil, and is generally sown in spots exposed to the falling dews; the root, which is just like that of olusatrum, has a smell in no way differing from that of frankincense; when a year old, it is extremely wholesome for the stomach; some persons give it the name of rosmarinum. Smyrnium is a garden herb that grows in similar soils, and has a root which smells like myrrh: siliquastrum, too, is grown in a similar manner.

Other plants, again, differ from the preceding ones, both in smell and taste, anise for example; indeed, so great is the difference in this respect, and in their relative virtues, that not only are the properties of each modified by the other, but quite neutralized even. It is in this way that our cooks correct the flavour of vinegar in their dishes with parsley, and our butlers employ the same plant, enclosed in sachets, for removing a bad odour in wine.

Thus far, then, we have treated of the garden plants, viewed as articles of food only; it remains for us now (for up to the present we have only spoken of their various methods of culti- vation, with some succinct details relative thereto), to enlarge upon the more elaborate operations of Nature in this respect; it being quite impossible to come to a full understanding as to the true characteristics of each individual plant, without a knowledge of its medicinal effects, a sublime and truly mysterious manifestation of the wisdom of the Deity, than which nothing can possibly be found of a nature more elevated. It is upon principle that we have thought proper not to enlarge upon the medicinal properties of each plant when treating of

it; for it is a quite different class of persons that is interested in knowing their curative properties, and there is no doubt that both classes of readers would have been inconvenienced in a very material degree, if these two points of view had engaged our attention at the same moment. As it is, each class will have its own portion to refer to, while those who desire to do so, will experience no difficulty in uniting them, with reference to any subject of which we may happen to treat.

SUMMARY. — Remarkable facts, narratives, and observations, one thousand one hundred and forty-four.

ROMAN AUTHORS QUOTED. — Maccius Plautus,. M. Varro, D. Silanus, Cato the Censor, Hyginus, Virgil, Mucianus, Celsus, Columella, Calpurnius Bassus, Mamilius Sura, Sabinus Tiro, Licinius Macer, Quintus Hirtius, Vibius Rufus, Cæsennius who wrote the Cepurica, Castritius who wrote on the same subject, Firmus who wrote on the same subject, Petrichus who wrote on the same subject.

FOREIGN AUTHORS QUOTED. — Herodotus, Theophrastus, Democritus, Aristomachus, Menander who wrote the Biochresta, Anaxiläus.

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BOOK XX. REMEDIES DERIVED FROM THE GARDEN PLANTS.

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CHAP. 1.

INTRODUCTION.

WE are now about to enter upon an examination of the greatest of all the operations of Nature — we are about to discourse to man upon his aliments, and to compel him to admit that he is ignorant by what means he exists. And let no one, misled by the apparent triviality of the names which we shall have to employ, regard this subject as one that is frivolous or contemptible: for we shall here have to set forth the state of peace or of war which exists between the various departments of Nature, the hatreds or friendships which are maintained by objects dumb and destitute of sense, and all, too, created — a wonderful subject for our contemplation! — for the sake of man alone. To these states, known to the Greeks by the respective appellations "sympathia" and "antipathia," we are indebted for the first principles of all things; for hence it is that water has the property of extinguishing fire, that the sun absorbs water, that the moon produces it, and that each of those heavenly bodies is from time to time eclipsed by the other.

Hence it is, too, descending from the contemplation of a loftier sphere, that the loadstone possesses the property of at- tracting iron, and another stone, again, that of repelling it: and that the diamond, that pride of luxury and opulence, though infrangible by every other object, and presenting a resistance that cannot be overcome, is broken asunder by a he-goat's blood — in addition to numerous other marvels of which we shall have to speak on more appropriate occasions, equal to this or still more wonderful even. My only request is that pardon may be accorded me for beginning with objects of a more humble nature, though still so greatly conducive to our health — I mean the garden plants, of which I shall now proceed to speak.

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CHAP. 2. (1.)

THE WILD CUCUMBER; TWENTY-SIX REMEDIES.

We have already stated that there is a wild cucumber, considerably smaller than the cultivated one. From this cucumber the medicament known as “elaterium” is prepared, being the juice extracted from the seed. To obtain this juice the fruit is cut before it is ripe — indeed, if this precaution is not taken at an early period, the seed is apt to spirt out and be productive of danger to the eyes. After it is gathered, the fruit is kept whole for a night, and on the following day an incision is made in it with a reed. The seed, too, is generally sprinkled with ashes, with the view of retaining in it as large a quantity of the juice as possible. When the juice is extracted, it is received in rain water, where it falls to the bottom; after which it is thickened in the sun, and then divided into lozenges, which are of singular utility to mankind for healing dimness of sight, diseases of the eyes, and ulcerations of the eyelids. It is said that if the roots of a vine are touched with this juice, the grapes of it will be sure never to be attacked by birds.

The root, too, of the wild cucumber, boiled in vinegar, is employed in fomentations for the gout, and the juice of it is used as a remedy for tooth-ache. Dried and mixed with resin, the root is a cure for impetigo and the skin diseases known as “psora” and “lichen:” it is good, too, for imposthumes of the parotid glands and inflammatory tumours, and restores the natural colour to the skin when a cicatrix has formed. — The juice of the leaves, mixed with vinegar, is used as an injection for the ears, in cases of deafness.

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CHAP. 3.

ELATERIUM; TWENTY-SEVEN REMEDIES.

The proper season for making elaterium is the autumn; and there is no medicament known that will keep longer than this. It begins to be fit for use when three years old; but if it is found desirable to make use of it at an earlier period than this, the acridity of the lozenges may be modified by putting them with vinegar upon a slow fire, in a new earthen pot. The older it is the better, and before now, as we learn from Theophrastus, it has been known to keep so long as two hundred years. Even after it has been kept so long as fifty years, it retains its property of extinguishing a light; indeed, it is the proper way of testing the genuineness of the drug to hold it to the flame and make it scintillate above and below, before finally extinguishing it. The elaterium which is pale, smooth, and slightly bitter, is superior to that which has a grass-green appearance and is rough to the touch.

It is generally thought that the seed of this plant will facilitate conception if a woman carries it attached to her person, before it has touched the ground; and that it has the effect of aiding parturition, if it is first wrapped in ram's wool, and then tied round the woman's loins, without her knowing it, care being taken to carry it out of the house the instant she is delivered.

Those persons who magnify the praises of the wild cucumber say that the very best is that of Arabia, the next being that of Arcadia, and then that of Cyrenæ: it bears a resemblance to the heliotropium, they say, and the fruit, about the size of a walnut, grows between the leaves and branches. The seed, it is said, is very similar in appearance to the tail of a scorpion thrown back, but is of a whitish hue. Indeed, there are some persons who give to this cucumber the name of "scorpionium," and say that its seed, as well as the elaterium, is remarkably efficacious as a cure for the sting of the scorpion. As a purgative, the proper dose of either is from half an obolus to an obolus, according to the strength of the patient, a larger dose than this being fatal. It is in the same proportions, too, that it is taken in drink for phthiriasis and dropsy; applied externally with

honey or old olive oil, it is used for the cure of quinsy and affections of the trachea.

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CHAP. 4. (2.)

THE ANGUINE OR ERRATIC CUCUMBER: FIVE REMEDIES.

Many authors are of opinion that the wild cucumber is identical with the plant known among us as the “anguine,” and by some persons as the “erratic” cucumber. Objects sprinkled with a decoction of this plant will never be touched by mice. The same authors say, too, that a decoction of it in vinegar, externally applied, gives instantaneous relief in cases of gout and diseases of the joints. As a remedy, too, for lumbago, the seed of it is dried in the sun and pounded, being given in doses of twenty denarii to half a sextarius of water. Mixed with woman’s milk and applied as a liniment, it is a cure for tumours which have suddenly formed.

Elaterium promotes the menstrual discharge; but if taken by females when pregnant, it is productive of abortion. It is good, also, for asthma, and, injected into the nostrils, for the jaundice. Rubbed upon the face in the sun, it removes freckles and spots upon the skin.

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CHAP. 5.

THE CULTIVATED CUCUMBER: NINE REMEDIES.

Many persons attribute all these properties to the cultivated cucumber as well, a plant which even without them would be of very considerable importance, in a medicinal point of view. A pinch of the seed, for instance, in three fingers, beaten up with cummin and taken in wine, is extremely beneficial for a cough: for phrenitis, also, doses of it are administered in woman's milk, and doses of one acetabulum for dysentery. As a remedy for purulent expectorations, it is taken with an equal quantity of cummin; and it is used with hydromel for diseases of the liver. Taken in sweet wine, it is a diuretic; and, in combination with cummin, it is used as an injection for affections of the kidneys.

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CHAP. 6.

PEPONES: ELEVEN REMEDIES.

The fruit known as pepones are a cool and refreshing diet, and are slightly relaxing to the stomach. Applications are used of the pulpy flesh in defluxions or pains of the eyes. The root, too, of this plant cures the hard ulcers known to us as “ceria,” from their resemblance to a honeycomb, and it acts as an emetic. Dried and reduced to a powder, it is given in doses of four oboli in hydromel, the patient, immediately after taking it, being made to walk half a mile. This powder is employed also in cosmetics for smoothing the skin. The rind, too, has the effect of promoting vomiting, and, when applied to the face, of clearing the skin; a result which is equally produced by an external application of the leaves of all the cultivated cucumbers. These leaves, mixed with honey, are employed for the cure of the pustules known as “epinyctis;” steeped in wine, they are good, too, for the bites of dogs and of multipedes, insects known to the Greeks by the name of “seps,” of an elongated form, with hairy legs, and noxious to cattle more particularly; the sting being followed by swelling, and the wound rapidly putrifying.

The smell of the cucumber itself is a restorative in fainting fits. It is a well-known fact, that if cucumbers are peeled and then boiled in oil, vinegar, and honey, they are all the more pleasant eating for it.

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CHAP. 7. (3.)

THE GOURD: SEVENTEEN REMEDIES. THE SOMPHUS: ONE REMEDY.

There is found also a wild gourd, called “somphos” by the Greeks, empty within (to which circumstance it owes its name), and long and thick in shape, like the finger: it grows nowhere except upon stony spots. The juice of this gourd, when chewed, is very beneficial to the stomach.

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CHAP. 8.

THE COLOCYNTHIS: TEN REMEDIES.

There is another variety of the wild gourd, known as the "colocynthis:" this kind is full of seeds, but not so large as the cultivated one. The pale colocynthis is better than those of a grass-green colour. Employed by itself when dried, it acts as a very powerful purgative; used as an injection, it is a remedy for all diseases of the intestines, the kidneys, and the loins, as well as for paralysis. The seed being first removed, it is boiled down in hydromel to one half; after which it is used as an injection, with perfect safety, in doses of four oboli. It is good, too, for the stomach, taken in pills composed of the dried powder and boiled honey. In jaundice seven seeds of it may be taken with beneficial effects, with a draught of hydromel immediately after.

The pulp of this fruit, taken with wormwood and salt, is a remedy for toothache, and the juice of it, warmed with vinegar, has the effect of strengthening loose teeth. Rubbed in with oil, it removes pains of the spine, loins, and hips: in addition to which, really a marvellous thing to speak of! the seeds of it, in even numbers, attached to the body in a linen cloth, will cure, it is said, the fevers to which the Greeks have given the name of "periodic." The juice, too, of the cultivated gourd shred in pieces, applied warm, is good for ear-ache, and the flesh of the inside, used without the seed, for corns on the feet and the suppurations known to the Greeks as "apostemata." When the pulp and seeds are boiled together, the decoction is good for strengthening loose teeth, and for preventing toothache; wine, too, boiled with this plant, is curative of defluxions of the eyes. The leaves of it, bruised with fresh cypress-leaves, or the leaves alone, boiled in a vessel of potters' clay and beaten up with goose-grease, and then applied to the part affected, are an excellent cure for wounds. Fresh shavings of the rind are used as a cooling application for gout, and burning pains in the head, in infants more particularly; they are good, too, for erysipelas, whether it is the shavings of the rind or the seeds of the plant that are applied to the part affected. The

juice of the scrapings, employed as a liniment with rose-oil and vinegar, moderates the burning heats of fevers; and the ashes of the dried fruit applied to burns are efficacious in a most remarkable degree.

Chrysippus, the physician, condemned the use of the gourd as a food: it is generally agreed, however, that it is extremely good for the stomach, and for ulcerations of the intestines and of the bladder.

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CHAP. 9.

RAPE; NINE REMEDIES.

Rape, too, has its medicinal properties. Warmed, it is used as an application for the cure of chilblains, in addition to which, it has the effect of protecting the feet from cold. A hot decoction of rape is employed for the cure of cold gout; and raw rape, beaten up with salt, is good for all maladies of the feet. Rape-seed, used as a liniment, and taken in drink, with wine, is said to have a salutary effect against the stings of serpents, and various narcotic poisons; and there are many persons who attribute to it the properties of an antidote, when taken with wine and oil.

Democritus has entirely repudiated the use of rape as an article of food, in consequence of the flatulence which it produces; while Diocles, on the other hand, has greatly extolled it, and has even gone so far as to say that it acts as an aphrodisiac. Dionysius, too, says the same of rape, and more particularly if it is seasoned with rocket; he adds, also, that roasted, and then applied with grease, it is excellent for pains in the joints.

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CHAP. 10.

WILD RAPE: ONE REMEDY.

Wild rape is mostly found growing in the fields; it has a tufted top, with a white seed, twice as large as that of the poppy. This plant is often employed for smoothing the skin of the face and the body generally, meal of fitches, barley, wheat, and lupines, being mixed with it in equal proportions.

The root of the wild rape is applied to no useful purpose whatever.

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CHAP. 11. (4.)

TURNIPS; THOSE KNOWN AS BUNION AND BUNIAS: FIVE REMEDIES.

The Greeks distinguish two kinds of turnips, also, as em- ployed in medicine. The turnip with angular stalks and a flower like that of anise, and known by them as “bunion,” is good for promoting the menstrual discharge in females and for affections of the bladder; it acts, also, as a diuretic. For these purposes, a decoction of it is taken with hydromel, or else one drachma of the juice of the plant. The seed, parched, and then beaten up, and taken in warm water, in doses of four cyathi, is a good remedy for dysentery; it will stop the passage of the urine, however, if linseed is not taken with it.

The other kind of turnip is known by the name of “bunias,” and bears a considerable resemblance to the radish and the rape united, the seed of it enjoying the reputation of being a remedy for poisons; hence it is that we find it employed in antidotes.

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CHAP. 12.

THE WILD RADISH, OR ARMORACIA: ONE REMEDY.

We have already said, that there is also a wild radish. The most esteemed is that of Arcadia, though it is also found growing in other countries as well. It is only efficacious as a diuretic, being in other respects of a heating nature. In Italy, it is known also by the name of “armoracia.”

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CHAP. 13.

THE CULTIVATED RADISH: FORTY-THREE REMEDIES.

The cultivated radish, too, in addition to what we have already said of it, purges the stomach, attenuates the phlegm, acts as a diuretic, and detaches the bilious secretions. A decoction of the rind of radishes in wine, taken in the morning in doses of three cyathi, has the effect of breaking and expelling calculi of the bladder. A decoction, too, of this rind in vinegar and water, is employed as a liniment for the stings of serpents. Taken fasting in the morning with honey, radishes are good for a cough. Parched radish-seed, as well as radishes themselves, chewed, is useful for pains in the sides. A decoction of the leaves, taken in drink, or else the juice of the plant taken in doses of two cyathi, is an excellent remedy for phthiriasis. Pounded radishes, too, are employed as a liniment for inflammations under the skin, and the rind, mixed with honey, for bruises of recent date. Lethargic persons are recommended to eat them as hot as possible, and the seed, parched and then pounded with honey, will give relief to asthmatic patients.

Radishes, too, are useful as a remedy for poisons, and are employed to counteract the effects of the sting of the cerastes and the scorpion: indeed, after having rubbed the hands with radishes or radish-seed, we may handle those reptiles with impunity. If a radish is placed upon a scorpion, it will cause its death. Radishes are useful, too, in cases of poisoning by fungi or henbane; and according to Nicander, they are salutary against the effects of bullock's blood, when drunk. The two physicians of the name of Apollodorus, prescribe radishes to be given in cases of poisoning by mistletoe; but whereas Apollodorus of Citium recommends radish-seed pounded in water, Apollodorus of Tarentum speaks of the juice. Radishes diminish the volume of the spleen, and are beneficial for maladies of the liver and pains in the loins: taken, too, with vinegar or mustard, they are good for dropsy and lethargy, as well as epilepsy and melancholy. Praxagoras recom- mends that radishes should be given for the iliac passion, and Plistonicus for the cœliac disease.

Radishes are good, too, for curing ulcerations of the intestines and suppurations of the thoracic organs, if eaten with honey. Some persons say, however, that for this purpose they should be boiled in earth and water; a decoction which, according to them, promotes the menstrual discharge. Taken with vinegar or honey, radishes expel worms from the intestines; and a decoction of them boiled down to one-third, taken in wine, is good for intestinal hernia. Employed in this way, too, they have the effect of drawing off the superfluous blood. Medius recommends them to be given boiled to persons troubled with spitting of blood, and to women who are suckling, for the purpose of increasing the milk. Hippocrates recommends females whose hair falls off, to rub the head with radishes, and he says that for pains of the uterus, they should be applied to the navel.

Radishes have the effect, too, of restoring the skin, when scarred, to its proper colour; and the seed, steeped in water, and applied topically, arrests the progress of ulcers known as phagedænic. Democritus regards them, taken with the food, as an aphrodisiac; and it is for this reason, perhaps, that some persons have spoken of them as being injurious to the voice. The leaves, but only those of the long radish, are said to have the effect of improving the eye-sight.

When radishes, employed as a remedy, act too powerfully, it is recommended that hyssop should be given immediately; there being an antipathy between these two plants. For dulness of hearing, too, radish-juice is injected into the ear. To promote vomiting, it is extremely beneficial to eat radishes fasting.

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CHAP. 14.

THE PARSNIP: FIVE REMEDIES. THE HIBISCUM, WILD MALLOW, OR PLISTOLOCHIA: ELEVEN REMEDIES.

The hibiscum, by some persons known as the wild mallow, and by others as the "plistolochia," bears a strong resemblance to the parsnip; it is good for ulcerations of the cartilages, and is employed for the cure of fractured bones. The leaves of it, taken in water, relax the stomach; they have the effect, also, of keeping away serpents, and, employed as a liniment, are a cure for the stings of bees, wasps, and hornets. The root, pulled up before sunrise, and wrapped in wool of the colour known as "native," taken from a sheep which has just dropped a ewe lamb, is employed as a bandage for scrofulous swellings, even after they have suppurated. Some persons are of opinion, that for this purpose the root should be dug up with an implement of gold, and that care should be taken not to let it touch the ground.

Celsus, too, recommends this root to be boiled in wine, and applied in cases of gout unattended with swelling.

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CHAP. 15. (5.)

THE STAPHYLINOS, OR WILD PARSNIP: TWENTY-TWO REMEDIES.

The staphylinos, or, as some persons call it, "erratic parsnip," is another kind. The seed of this plant, pounded and taken in wine, reduces swelling of the abdomen, and alleviates hysterical suffocations and pains, to such a degree as to restore the uterus to its natural condition. Used as a liniment, also, with raisin wine, it is good for pains of the bowels in females; for men, too, beaten up with an equal proportion of bread, and taken in wine, it may be found beneficial for similar pains. It is a diuretic also, and it will arrest the progress of phagedænic ulcers, if applied fresh with honey, or else dried and sprinkled on them with meal.

Dieuches recommends the root of it to be given, with hydromel, for affections of the liver and spleen, as also the sides, loins, and kidneys; and Cleophantus prescribes it for dysentery of long standing. Philistio says that it should be boiled in milk, and for strangury he prescribes four ounces of the root. Taken in water, he recommends it for dropsy, as well as in cases of opisthotony, pleurisy, and epilepsy. Persons, it is said, who carry this plant about them, will never be stung by serpents, and those who have just eaten of it will receive no hurt from them. Mixed with axle-grease, it is applied to parts of the body stung by reptiles; and the leaves of it are eaten as a remedy for indigestion.

Orpheus has stated that the staphylinos acts as a philtre, most probably because, a very-well-established fact, when employed as a food, it is an aphrodisiac; a circumstance which has led some persons to state that it promotes conception. In other respects the cultivated parsnip has similar properties; though the wild kind is more powerful in its operation, and that which grows in stony soils more particularly. The seed, too, of the cultivated parsnip, taken in wine, or vinegar and water, is salutary for stings inflicted by scorpions. By rubbing the teeth with the root of this plant, tooth-ache is removed.

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CHAP. 16.

GINGIDION: ONE REMEDY.

The Syrians devote themselves particularly to the cultivation of the garden, a circumstance to which we owe the Greek proverb, “There is plenty of vegetables in Syria.”

Among other vegetables, that country produces one very similar to the staphylinos, and known to some persons as “gingidion,” only that it is smaller than the staphylinos and more bitter, though it has just the same properties. Eaten either raw or boiled, it is very beneficial to the stomach, as it entirely absorbs all humours with which it may happen to be surcharged.

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CHAP. 17.

THE SKIRRET: ELEVEN REMEDIES.

The wild skirret, too, is very similar to the cultivated kind, and is productive of similar effects. It sharpens the stomach, and, taken with vinegar flavoured with silphium, or with pepper and hydromel, or else with garum, it promotes the appetite. According to Opion, it is a diuretic, and acts as an aphrodisiac. Diocles is also of the same opinion; in addition to which, he says that it possesses cordial virtues for convalescents, and is extremely beneficial after frequent vomitings.

Heraclides has prescribed it against the effects of mercury, and for occasional impotence, as also generally for patients when convalescent. Hicesius says that skirrets would appear to be prejudicial to the stomach, because no one is able to eat three of them following; still, however, he looks upon them as beneficial to patients who are just resuming the use of wine. The juice of the cultivated skirret, taken in goats-milk, arrests looseness of the stomach.

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CHAP. 18.

SILE, OR HARTWORT: TWELVE REMEDIES.

As the similitude which exists between their Greek names has caused most persons to mistake the one for the other, we have thought it as well to give some account here of sile or hartwort, though it is a plant which is very generally known. The best hartwort is that of Massilia, the seed of it being broad and yellow; and the next best is that of Æthiopia, the seed of which is of a darker hue. The Cretan hartwort is the most odoriferous of the several kinds. The root of this plant has a pleasant smell; the seed of it is eaten by vultures, it is said. Hartwort is useful to man for inveterate coughs, ruptures, and convulsions, being usually taken in white wine; it is employed also in cases of opisthotony, and for diseases of the liver, as well as for griping pains in the bowels and for strangury, in doses of two or three spoonfuls at a time.

The leaves of this plant are useful also, and have the effect of aiding parturition — in animals even: indeed, it is generally said that roes, when about to bring forth, are in the habit of eating these leaves in particular. They are topically applied, also, in erysipelas; and either the leaves or the seed, taken fasting in the morning, are very beneficial to the digestion. Hartwort has the effect, too, of arresting looseness in cattle, either bruised and put into their drink, or else eaten by them after it has been chewed with salt. When oxen are in a diseased state, it is beaten up and poured into their food.

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CHAP. 19.

ELECAMPANE: ELEVEN REMEDIES.

Elecampane, too, chewed fasting, has the effect of strengthening the teeth, if, from the moment that it is plucked, it is not allowed to touch the ground: a confection of it is a cure for cough. The juice of the root boiled is an expellent of intestinal tapeworm; and dried in the shade and reduced to powder, the root is curative in cases of cough, convulsions, flatulency, and affections of the trachea. It is useful too, for the bites of venomous animals; and the leaves steeped in wine are applied topically for pains in the loins.

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CHAP. 20.

ONIONS: TWENTY-SEVEN REMEDIES.

There are no such things in existence as wild onions. The cultivated onion is employed for the cure of dimness of sight, the patient being made to smell at it till tears come into the eyes: it is still better even if the eyes are rubbed with the juice. It is said, too, that onions are soporific, and that they are a cure for ulcerations of the mouth, if chewed with bread. Fresh onions in vinegar, applied topically, or dried onions with wine and honey, are good for the bites of dogs, care being taken not to remove the bandage till the end of a couple of days. Applied, too, in the same way, they are good for healing excoriations. Roasted in hot ashes, many persons have applied them topically, with barley meal, for defluxions of the eyes and ulcerations of the genitals. The juice, too, is employed as an ointment for sores of the eyes, albugo, and argema. Mixed with honey, it is used as a liniment for the stings of serpents and all kinds of ulcerous sores. In combination with woman's milk, it is employed for affections of the ears; and in cases of singing in the ears and hardness of hearing, it is injected into those organs with goose-grease or honey. In cases where persons have been suddenly struck dumb, it has been administered to them to drink, mixed with water. In cases, too, of toothache, it is sometimes introduced into the mouth as a gargle for the teeth; it is an excellent remedy also for all kinds of wounds made by animals, scorpions more particularly.

In cases of alopecy and itch-scab, bruised onions are rubbed on the parts affected: they are also given boiled to persons afflicted with dysentery or lumbago. Onion peelings, burnt to ashes and mixed with vinegar, are employed topically for stings of serpents and multipedes.

In other respects, there are remarkable differences of opinion among medical men. The more modern writers have stated that onions are good for the thoracic organs and the digestion, but that they are productive of flatulency and thirst. The school of Asclepiades maintains that, used as an aliment, onions impart a florid

colour to the complexion, and that, taken fasting every day, they are promoters of robustness and health; that as a diet, too, they are good for the stomach by acting upon the spirits, and have the effect of relaxing the bowels. He says, too, that, employed as a suppository, onions disperse piles, and that the juice of them, taken in combination with juice of fennel, is wonderfully beneficial in cases of incipient dropsy. It is said, too, that the juice, taken with rue and honey, is good for quinsy, and has the effect of dispelling lethargy. Varro assures us that onions, pounded with salt and vinegar and then dried, will never be attacked by worms.

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CHAP. 21. (6.)

CUTLEEK: THIRTY-TWO REMEDIES.

Cutleek has the effect of stanching bleeding at the nose, the nostrils being plugged with the plant, pounded, or else mixed with nut-galls or mint. The juice of it, taken with woman's milk, arrests floodings after a miscarriage; and it is remedial in cases even of inveterate cough, and of affections of the chest and lungs. The leaves, applied topically, are employed for the cure of pimples, burns, and epinyctis — this last being the name given to an ulcer, known also as "syce," situate in the corner of the eye, from which there is a continual running: some persons, however, give this name to livid pustules, which cause great restlessness in the night. Other kinds of ulcers, too, are treated with leeks beaten up with honey: used with vinegar, they are extensively employed also for the bites of wild beasts, as well as of serpents and other venomous creatures. Mixed with goats' gall, or else honied wine in equal proportions, they are used for affections of the ears, and, combined with woman's milk, for singing in the ears. In cases of head-ache, the juice is injected into the nostrils, or else into the ear at bed-time, two spoonfuls of juice to one of honey.

This juice is taken too with pure wine, for the stings of serpents and scorpions, and, mixed with a semi-sextarius of wine, for lumbago. The juice, or the leek itself, eaten as a food, is very beneficial to persons troubled with spitting of blood, phthisis, or inveterate catarrhs; in cases also of jaundice or dropsy, and for nephretic pains, it is taken in barley-water, in doses of one acetabulum of juice. The same dose, too, mixed with honey, effectually purges the uterus. Leeks are eaten, too, in cases of poisoning by fungi, and are applied topically to wounds: they act also as an aphrodisiac, allay thirst, and dispel the effects of drunkenness; but they have the effect of weakening the sight and causing flatulency, it is said, though, at the same time, they are not injurious to the stomach, and act as an aperient. Leeks impart a remarkable clearness to the voice.

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CHAP. 22.

BULBED LEEK: THIRTY-NINE REMEDIES.

Bulbed leek produces the same effects as cut-leek, but in a more powerful degree. To persons troubled with spitting of blood, the juice of it is given, with powdered nut-galls or frankincense, or else gum acacia. Hippocrates, however, prescribes it without being mixed with anything else, and expressed himself of opinion that it has the property of opening the uterus when contracted, and that taken as an aliment by females, it is a great promoter of fecundity. Beaten up and mixed with honey, it cleanses ulcerous sores. It is good for the cure of coughs, catarrhs, and all affections of the lungs and of the trachea, whether given in the form of a ptisan, or eaten raw, the head excepted: it must be taken, however, without bread, and upon alternate days, and this even if there should be purulent expectorations.

Taken in this form, it greatly improves the voice, and acts as an aphrodisiac, and as a promoter of sleep. The heads, boiled in a couple of waters, arrest looseness of the bowels, and fluxes of long standing; and a decoction of the outer coat acts as a dye upon grey hair.

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CHAP. 23.

GARLIC: SIXTY-ONE REMEDIES.

Garlic has very powerful properties, and is of great utility to persons on changes of water or locality. The very smell of it drives away serpents and scorpions, and, according to what some persons say, it is a cure for wounds made by every kind of wild beast, whether taken with the drink or food, or applied topically. Taken in wine, it is a remedy for the sting of the hæmorrhoïs more particularly, acting as an emetic. We shall not be surprised too, that it acts as a powerful remedy for the bite of the shrew-mouse, when we find that it has the property of neutralizing aconite, otherwise known as "pardalianches." It neutralizes henbane, also, and cures the bites of dogs, when applied with honey to the wound. It is taken in drink also for the stings of serpents; and of its leaves, mixed with oil, a most valuable liniment is made for bruises on the body, even when they have swelled and formed blisters.

Hippocrates is of opinion also, that fumigations made with garlic have the effect of bringing away the after-birth; and he used to employ the ashes of garlic, mixed with oil, for the cure of running ulcers of the head. Some persons have prescribed boiled garlic for asthmatic patients; while others, again, have given it raw. Diocles prescribes it, in combina- tion with centaury, for dropsy, and to be taken in a split fig, to promote the alvine evacuations: taken fresh, however, in unmixed wine, with coriander, it is still more efficacious for that purpose. Some persons have given it, beaten up in milk, for asthma. Praxagoras used to prescribe garlic, mixed with wine, for jaundice, and with oil and pottage for the iliac passion: he employed it also in a similar form, as a liniment for scrofulous swellings of the neck.

The ancients used to give raw garlic in cases of madness, and Diocles administered it boiled for phrenitis. Beaten up, and taken in vinegar and water, it is very useful as a gargle for quinsy. Three heads of garlic, beaten up in vinegar, give relief in toothache: and a similar result is obtained by rinsing the mouth with a decoction of

garlic, and inserting pieces of it in the hollow teeth. Juice of garlic is sometimes injected into the ears with goose-grease, and, taken in drink, or simi- larly injected, in combination with vinegar and nitre, it arrests phthiriasis and porrigo. Boiled with milk, or else beaten up and mixed with soft cheese, it is a cure for catarrhs. Employed in a similar manner, and taken with pease or beans, it is good for hoarseness, but in general it is found to be more serviceable cooked than raw, and boiled than roasted: in this last state, however, it is more beneficial to the voice. Boiled in oxymel, it has the effect of expelling tape-worm and other intestinal worms; and a pottage made of it is a cure for te- nesmus. A decoction of garlic is applied topically for pains in the temples; and first boiled and then beaten up with honey, it is good for blisters. A decoction of it, with stale grease, or milk, is excellent for a cough; and where persons are troubled with spitting of blood or purulent matter, it may be roasted in hot ashes, and taken with honey in equal proportions. For convulsions and ruptures it is administered in combination with salt and oil; and, mixed with grease, it is employed for the cure of suspected tumours.

Mixed with sulphur and resin, garlic draws out the humours from fistulous sores, and employed with pitch, it will extract an arrow even from the wound. In cases of leprosy, lichen, and eruptions of the skin, it acts as a detergent, and effects a cure, in combination with wild marjoram, or else reduced to ashes, and applied as a liniment with oil and garum. It is employed in a similar manner, too, for erysipelas; and, reduced to ashes, and mixed with honey, it restores contused or livid spots on the skin to their proper colour. It is generally believed, too, that taken in the food and drink, garlic is a cure for epilepsy, and that a clove of it, taken in astringent wine, with an obolus' weight of silphium, will have the effect of dispelling quartan fever. Garlic cures coughs also, and sup- purations of the chest, however violent they may be; to obtain which result, another method is followed, it being boiled with broken beans, and employed as a diet till the cure is fully effected. It is a soporific also, and in general imparts to the body an additional ruddiness of colour.

Garlic acts as an aphrodisiac, beaten up with fresh coriander, and taken in pure wine. The inconveniences which result from the use of

it, are dimness of the sight and flatulency; and if taken in too large quantities, it does injury to the stomach, and creates thirst. In addition to these particulars, mixed with spelt flour, and given to poultry in their food, it preserves them from attacks of the pip. Beasts of burden, it is said, will void their urine all the more easily, and without any pain, if the genitals are rubbed with garlic.

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CHAP. 24.

THE LETTUCE: FORTY-TWO REMEDIES. THE GOAT- LETTUCE: FOUR REMEDIES.

The first kind of lettuce which grows spontaneously, is the one that is generally known as “goat-lettuce;” thrown into the sea, this vegetable has the property of instantaneously killing all the fish that come into its vicinity. The milky juice of this lettuce, left to thicken and then put into vinegar, is given in doses of two oboli, with the addition of one cyathus of water, to patients for dropsy. The stalk and leaves, bruised and sprinkled with salt, are used for the cure of wounds of the sinews. Pounded with vinegar, and employed as a gargle in the morning twice a month, they act as a preventive of tooth-ache.

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CHAP. 25.

CÆSAPON: ONE REMEDY. ISATIS: ONE REMEDY. THE WILD LETTUCE: SEVEN REMEDIES.

There is a second kind of wild lettuce, known by the Greeks as “cæsapon.” The leaves of this lettuce, applied as a liniment with polenta, are used for the cure of ulcerous sores. This plant is found growing in the fields. A third kind, again, grows in the woods; the name given to it is “isatis.” The leaves of this last, beaten up and applied with polenta, are very useful for the cure of wounds. A fourth kind is used by dyers of wool; in the leaves it would resemble wild lapa- thum, were it not that they are more numerous and darker. This lettuce has the property of stanching blood, and of healing phagedænic sores and putrid spreading ulcers, as well as tumours before suppuration. Both the root as well as the leaves are good, too, for erysipelas; and a decoction of it is drunk for affections of the spleen. Such are the properties peculiar to each of these varieties.

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CHAP. 26.

HAWK-WEED: SEVENTEEN REMEDIES.

The properties which are common to all the wild varieties are whiteness, a stem sometimes as much as a cubit in length, and a roughness upon the stalk and leaves. Among these plants there is one with round, short leaves, known to some persons as “hieracion;” from the circumstance that the hawk tears it open and sprinkles its eyes with the juice, and so dispels any dimness of sight of which it is apprehensive. The juice of all these plants is white, and in its properties resembles that of the poppy. It is collected at harvest-time, by making incisions in the stalk, and is kept in new earthen vessels, being renowned as a remedy for numerous maladies. Mixed with woman’s milk, it is a cure for all diseases of the eyes, such as argema for instance, films on the eyes, scars and inflammations of all kinds, and dimness of the sight more particularly. It is applied to the eyes, too, in wool, as a remedy for defluxions of those organs.

This juice also purges the bowels, taken in doses of two oboli in vinegar and water. Drunk in wine it is a cure for the stings of serpents, and the leaves and stalk of the plant are pounded and taken in vinegar. They are employed also as a liniment for wounds, the sting of the scorpion more particu- larly; combined, too, with oil and vinegar, they are similarly applied for the bite of the phalangium. They have the effect, also, of neutralizing other poisons, with the exception of those which kill by suffocation or by attacking the bladder, as also with the exception of white lead. Steeped in oxymel, they are applied to the abdomen for the purpose of drawing out vicious humours of the intestines. The juice is found good, also, in cases of retention of the urine. Crateuas prescribes it to be given to dropsical patients, in doses of two oboli, with vinegar and one cyathus of wine.

Some persons collect the juice of the cultivated lettuce as well, but it is not so efficacious as the other. We have already made mention, to some extent, of the peculiar properties of the cultivated lettuce, such

as promoting sleep, allaying the sexual passions, cooling the body when heated, purging the stomach, and making blood. In addition to these, it possesses no few properties besides; for it has the effect of removing flatulency, and of dispelling eructations, while at the same time it promotes the digestion, without ever being indigestible itself. Indeed, there is no article of diet known that is a greater stimulant to the appetite, or which tends in a greater degree to modify it; it being the extent, either way, to which it is eaten that promotes these opposite results. In the same way, too, lettuces eaten in too large quantities are laxative, but taken in moderation they are binding. They have the effect, also, of attenuating the tough, viscous, phlegm, and, according to what some persons say, of sharpening the senses. They are extremely serviceable, too, to debilitated stomachs; for which purpose * * oboli of sour sauce is added to them, the sharp ness of which is modified by the application of sweet wine, to make it of the same strength as vinegar-sauce. If, again, the phlegm with which the patient is troubled is extremely tough and viscous, wine of squills or of wormwood is em- ployed; and if there is any cough perceptible, hyssop wine is mixed as well.

Lettuces are given with wild endive for cœliac affections, and for obstructions of the thoracic organs. White lettuces, too, are prescribed in large quantities for melancholy and affections of the bladder. Praxagoras recommends them for dysentery. Lettuces are good, also, for recent burns, before blisters have made their appearance: in such cases they are applied with salt. They arrest spreading ulcers, being applied at first with saltpetre, and afterwards with wine. Beaten up, they are applied topically for erysipelas; and the stalks, beaten up with polenta, and applied with cold water, are soothing for luxations of the limbs and spasmodic contractions; used, too, with wine and polenta, they are good for pimples and eruptions. For cholera lettuces have been given, cooked in the saucepan, in which case it is those with the largest stalk and bitter that are the best: some persons administer them, also, as an injection, in milk. These stalks boiled, are remarkably good, it is said, for the stomach: the summer lettuce, too, more particularly, and the bitter, milky lettuce, of which we have already made mention as the “meconis,”

have a soporific effect. This juice, in combination with woman's milk, is said to be extremely beneficial to the eyesight, if applied to the head in good time; it is a remedy, too, for such maladies of the eyes as result from the action of cold.

I find other marvellous praises lavished upon the lettuce, such, for instance, as that, mixed with Attic honey, it is no less beneficial for affections of the chest than abrotonum; that the menstrual discharge is promoted in females by using it as a diet; that the seed, too, of the cultivated lettuce is administered as a remedy for the stings of scorpions, and that pounded, and taken in wine, it arrests all libidinous dreams and imaginations during sleep; that water, too, which affects the brain will have no injurious effects upon those who eat lettuce. Some persons have stated, however, that if lettuces are eaten too frequently they will prove injurious to the eye sight.

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CHAP. 27. (8.)

BEET: TWENTY-FOUR REMEDIES.

Nor are the two varieties of the beet without their remedial properties. The root of either white or black beet, if hung by a string, fresh-gathered, and softened with water, is said to be efficacious for the stings of serpents. White beet, boiled and eaten with raw garlic, is taken for tapeworm; the root, too, of the black kind, similarly boiled in water, removes porrigo; indeed, it is generally stated, that the black beet is the more efficacious of the two. The juice of black beet is good for inveterate head-aches and vertigo, and injected into the ears, it stops singing in those organs. It is a diuretic, also, and employed in injections is a cure for dysentery and jaundice.

This juice, used as a liniment, allays tooth-ache, and is good for the stings of serpents; but due care must be taken that it is extracted from this root only. A decoction, too, of beet-root is a remedy for chilblains.

A liniment of white beet-root applied to the forehead, arrests defluxions of the eyes, and mixed with a little alum it is an excellent remedy for erysipelas. Beaten up, and applied without oil, it is a cure for excoriations. In the same way, too, it is good for pimples and eruptions. Boiled, it is applied topically to spreading ulcers, and in a raw state it is employed in cases of alopecy, and running ulcers of the head. The juice, injected with honey into the nostrils, has the effect of clearing the head. Beet-root is boiled with lentils and vinegar, for the purpose of relaxing the bowels; if it is boiled, however, some time longer, it will have the effect of arresting fluxes of the stomach and bowels.

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CHAP. 28.

LIMONION, OR NEUROIDES: THREE REMEDIES.

There is a wild beet, too, known by some persons as “limonion,” and by others as “neuroides;” it has leaves much smaller and thinner than the cultivated kind, and lying closer together. These leaves amount often to eleven in number, the stalk resembling that of the lily. The leaves of this plant are very useful for burns, and have an astringent taste in the mouth: the seed, taken in doses of one acetabulum, is good for dysentery. It is said that a decoction of beet with the root has the property of taking stains out of cloths and parchment.

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CHAP. 29.

ENDIVE: THREE REMEDIES.

Endive, too, is not without its medicinal uses. The juice of it, employed with rose oil and vinegar, has the effect of allaying headache; and taken with wine, it is good for pains in the liver and bladder: it is used, also, topically, for defluxions of the eyes. The spreading endive has received from some per- sons among us the name of “ambula.” In Egypt, the wild endive is known as “cichorium,” the cultivated kind being called “seris.” This last is smaller than the other, and the leaves of it more full of veins.

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CHAP. 30.

CICHORIUM OR CHRESTON, OTHERWISE CALLED PANCRATION, OK AMBULA: TWELVE REMEDIES.

Wild endive or cichorium has certain refreshing qualities, used as an aliment. Applied by way of liniment, it disperses abscesses, and a decoction of it loosens the bowels. It is also very beneficial to the liver, kidneys, and stomach. A decoction of it in vinegar has the effect of dispelling the pains of strangury; and, taken in honied wine, it is a cure for the jaundice, if unattended with fever. It is beneficial, also, to the bladder, and a decoction of it in water promotes the menstrual discharge to such an extent as to bring away the dead fœtus even.

In addition to these qualities, the magicians state that persons who rub themselves with the juice of the entire plant, mixed with oil, are sure to find more favour with others, and to obtain with greater facility anything they may desire. This plant, in consequence of its numerous salutary virtues, has been called by some persons "chreston," and "pancration" by others.

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CHAP. 31.

HEDYPNOÏS: FOUR REMEDIES.

There is a sort of wild endive, too, with a broader leaf, known to some persons as “hedypnoïs.” Boiled, it acts as an astringent upon a relaxed stomach, and eaten raw, it is productive of constipation. It is good, too, for dysentery, when eaten with lentils more particularly. This variety, as well as the preceding one, is useful for ruptures and spasmodic con- tractions, and relieves persons who are suffering from spermatorrhœa.

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CHAP. 32.

SERIS, THREE VARIETIES OF IT: SEVEN REMEDIES BORROWED FROM IT.

The vegetable, too, called “seris,” which bears a considerable resemblance to the lettuce, consists of two kinds. The wild, which is of a swarthy colour, and grows in summer, is the best of the two; the winter kind, which is whiter than the other, being inferior. They are both of them bitter, but are extremely beneficial to the stomach, when distressed by humours more particularly. Used as food with vinegar, they are cooling, and, employed as a liniment, they dispel other humours besides those of the stomach. The roots of the wild variety are eaten with polenta for the stomach; and in cardiac diseases they are applied topically above the left breast. Boiled in vinegar, all these vegetables are good for the gout, and for patients troubled with spitting of blood or spermatorrhœa; the decoction being taken on alternate days.

Petronius Diodotus, who has written a medical Anthology, utterly condemns seris, and employs a multitude of arguments to support his views: this opinion of his is opposed, however, to that of all other writers on the subject.

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CHAP. 33. (9).

THE CABBAGE: EIGHTY-SEVEN REMEDIES. RE- CIPES MENTIONED BY CATO.

It would be too lengthy a task to enumerate all the praises of the cabbage, more particularly as the physician Chrysippus has devoted a whole volume to the subject, in which its virtues are described in reference to each individual part of the human body. Dieuches has done the same, and Pythagoras too, in particular. Cato, too, has not been more sparing in its praises than the others; and it will be only right to examine the opinions which he expresses in relation to it, if for no other purpose than to learn what medicines the Roman people made use of for six hundred years.

The most ancient Greek writers have distinguished three varieties of the cabbage; the curly cabbage, to which they have given the name of "selinoïdes," from the resemblance of its leaf to that of parsley, beneficial to the stomach, and moderately relaxing to the bowels; the "helia," with broad leaves running out from the stalk — a circumstance, owing to which some persons have given it the name of "caulodes" — of no use whatever in a medicinal point of view; and a third, the name of which is properly "crambe," with thinner leaves, of simple form, and closely packed, more bitter than the others, but extremely efficacious in medicine.

Cato esteems the curly cabbage the most highly of all, and next to it, the smooth cabbage with large leaves and a thick stalk. He says that it is a good thing for headache, dimness of the sight, and dazzling of the eyes, the spleen, stomach, and thoracic organs, taken raw in the morning, in doses of two acetabula, with oxymel, coriander, rue, mint, and root of silphium. He says, too, that the virtue of it is so great that the very person even who beats up this mixture feels himself all the stronger for it; for which reason he recommends it to be taken mixed with these condiments, or, at all events, dressed with a sauce compounded of them. For the gout, too, and diseases of the joints, a liniment of it should be used, he says, with a little rue and coriander, a sprinkling of salt, and some barley

meal: the very water even in which it has been boiled is wonderfully efficacious, according to him, for the sinews and joints. For wounds, either recent or of long standing, as also for carcinoma, which is incurable by any other mode of treatment, he recommends fomentations to be made with warm water, and, after that, an application of cabbage, beaten up, to the parts affected, twice a-day. He says, also, that fistulas and sprains should be treated in a similar way, as well as all humours which it may be desirable to bring to a head and disperse; and he states that this vegetable, boiled and eaten fasting, in considerable quantities, with oil and salt, has the effect of preventing dreams and wakefulness; also, that if, after one boiling, it is boiled a second time, with the addition of oil, salt, cummin, and polenta, it will relieve gripings in the stomach; and that, if eaten in this way with- out bread, it is more beneficial still. Among various other particulars, he says, that if taken in drink with black wine, it has the effect of carrying off the bilious secretions; and he recommends the urine of a person who has been living on a cabbage diet to be preserved, as, when warmed, it is a good remedy for diseases of the sinews. I will, however, here give the identical words in which Cato expresses himself upon this point: “If you wash little children with this urine,” says he, “they will never be weak and puny.”

He recommends, also, the warm juice of cabbage to be injected into the ears, in combination with wine, and assures us that it is a capital remedy for deafness: and he says that the cabbage is a cure for impetigo without the formation of ulcers.

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CHAP. 34.

PINIONS OF THE GREEKS RELATIVE THERETO.

As we have already given those of Cato, it will be as well to set forth the opinions entertained by the Greek writers on this subject, only in relation, however, to those points upon which he has omitted to touch. They are of opinion that cabbage, not thoroughly boiled, carries off the bile, and has the effect of loosening the bowels; while, on the other hand, if it is boiled twice over, it will act as an astringent. They say, too, that as there is a natural enmity between it and the vine, it combats the effects of wine; that, if eaten before drinking, it is sure to prevent drunkenness, being equally a dispellent of crapulence if taken after drinking: that cabbage is a food very beneficial to the eyesight, and that the juice of it raw is even more so, if the corners of the eyes are only touched with a mixture of it with Attic honey. Cabbage, too, according to the same testimony, is extremely easy of digestion, and, as an aliment, greatly tends to clear the senses.

The school of Erasistratus proclaims that there is nothing more beneficial to the stomach and the sinews than cabbage; for which reason, he says, it ought to be given to the paralytic and nervous, as well as to persons affected with spitting of blood. Hippocrates prescribes it, twice boiled, and eaten with salt, for dysentery and cœliac affections, as also for tenesmus and diseases of the kidneys; he is of opinion, too, that, as an aliment, it increases the quantity of the milk in women who are nursing, and that it promotes the menstrual discharge. The stalk, too, eaten raw, is efficacious in expelling the dead fœtus. Apollodorus prescribes the seed or else the juice of the cabbage to be taken in cases of poisoning by fungi; and Philistion recommends the juice for persons affected with opisthotony, in goats'-milk, with salt and honey.

I find, too, that persons have been cured of the gout by eating cabbage and drinking a decoction of that plant. This decoction has been given, also, to persons afflicted with the cardiac disease and epilepsy, with the addition of salt; and it has been ad- ministered in

white wine, for affections of the spleen, for a period of forty days.

According to Philistion, the juice of the raw root should be given as a gargle to persons afflicted with icterus or phrenitis, and for hiccup he prescribes a mixture of it, in vinegar, with coriander, anise, honey, and pepper. Used as a liniment, cabbage, he says, is beneficial for inflations of the stomach; and the very water, even, in which it has been boiled, mixed with barley-meal, is a remedy for the stings of serpents and foul ulcers of long standing; a result which is equally effected by a mixture of cabbage-juice with vinegar or fenugreek. It is in this manner, too, that some persons employ it topically, for affections of the joints and for gout. Applied topically, cabbage is a cure for epinyetis, and all kinds of spreading eruptions on the body, as also for sudden attacks of dimness; indeed, if eaten with vinegar, it has the effect of curing the last. Applied by itself, it heals contusions and other livid spots; and mixed with a hall of alum in vinegar, it is good as a liniment for leprosy and itch-scabs: used in this way, too, it prevents the hair from falling off.

Epicharmus assures us that, applied topically, cabbage is extremely beneficial for diseases of the testes and genitals, and even better still when employed with bruised beans; he says, too, that it is a cure for convulsions; that, in combination with rue, it is good for the burning heats of fever and maladies of the stomach; and that, with rue-seed, it brings away the after-birth. It is of use, also, for the bite of the shrew-mouse. Dried cabbage-leaves, reduced to a powder, are a cathartic both by vomit and by stool.

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CHAP. 35.

CABBAGE-SPROUTS.

In all varieties of the cabbage, the part most agreeable to the taste is the cyma, although no use is made of it in medicine, as it is difficult to digest, and by no means beneficial to the kidneys. At the same time, too, it should not be omitted, that the water in which it has been boiled, and which is so highly praised for many purposes, gives out a very bad smell when poured upon the ground. The ashes of dried cabbage-stalks are generally reckoned among the caustic substances: mixed with stale grease, they are employed for sciatica, and, used as a liniment, in the form of a depilatory, toge- ther with silphium and vinegar, they prevent hair that has been once removed from growing again. These ashes, too, are taken lukewarm in oil, or else by themselves, for convulsions, internal ruptures, and the effects of falls with violence.

And are we to say then that the cabbage is possessed of no evil qualities whatever? Certainly not, for the same authors tell us, that it is apt to make the breath smell, and that it is injurious to the teeth and gums. In Egypt, too, it is never eaten, on account of its extreme bitterness.

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CHAP. 36.

THE WILD CABBAGE: THIRTY-SEVEN REMEDIES.

Cato extols infinitely more highly the properties of wild or erratic cabbage; so much so, indeed, as to affirm that the very powder of it, dried and collected in a scent-box, has the property, on merely smelling at it, of removing maladies of the nostrils and the bad smells resulting therefrom. Some persons call this wild cabbage "petræa:" it has an extreme antipathy to wine, so much so, indeed, that the vine invariably avoids it, and if it cannot make its escape, will be sure to die. This vegetable has leaves of uniform shape, small, rounded, and smooth: bearing a strong resemblance to the cultivated cabbage, it is whiter, and has a more downy leaf.

According to Chrysippus, this plant is a remedy for flatu- lency, melancholy, and recent wounds, if applied with honey, and not taken off before the end of six days: beaten up in water, it is good also for scrofula and fistula. Other writers, again, say that it is an effectual cure for spreading sores on the body, known as "nomæ;" that it has the property, also, of removing excrescences, and of reducing the scars of wounds and sores; that if chewed raw with honey, it is a cure for ulcers of the mouth and tonsils; and that a decoction of it used as a gargle with honey, is productive of the same effect. They say, too, that, mixed in strong vinegar with alum, in the proportion of three parts to two of alum, and then applied as a liniment, it is a cure for itch-scabs and leprous sores of long standing. Epicharmus informs us, that for the bite of a mad dog, it is quite sufficient to apply it topically to the part affected, but that if used with silphium and strong vinegar, it is better still: he says, too, that it will kill a dog, if given to it with flesh to eat.

The seed of this plant, parched, is remedial in cases of poisoning, by the stings of serpents, eating fungi, and drinking bulls' blood. The leaves of it, either boiled and taken in the food or else eaten raw, or applied with a liniment of sulphur and nitre, are good for affections of the spleen, as well as hard tumours of the mamillæ. In swelling of the uvula, if the parts affected are only touched with the

ashes of the root, a cure will be the result; and applied topically with honey, they are equally beneficial for reducing swellings of the parotid glands, and curing the stings of serpents. We will add only one more proof of the virtues of the cabbage, and that a truly marvellous one — in all vessels in which water is boiled, the incrustations which adhere with such tenacity that it is otherwise impossible to detach them, will fall off immediately if a cabbage is boiled therein.

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CHAP. 37.

THE LAPSANA: ONE REMEDY.

Among the wild cabbages, we find also the lapsana, a plant which grows a foot in height, has a hairy leaf, and strongly resembles mustard, were it not that the blossom is whiter. It is eaten cooked, and has the property of soothing and gently relaxing the bowels.

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CHAP. 38.

THE SEA-CABBAGE: ONE REMEDY.

Sea-cabbage is the most strongly purgative of all these plants. It is cooked, in consequence of its extreme pungency, with fat meat, and is extremely detrimental to the stomach.

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CHAP. 39.

THE SQUILL: TWENTY-THREE REMEDIES.

In medicine, we give the name of white squill to the male plant, and of black to the female: the whiter the squill, the better it is for medicinal purposes. The dry coats being first taken off of it, the remaining part, or so much of it as retains life, is cut into pieces, which are then strung and suspended on a string, at short distances from each other. After these pieces are thoroughly dried, they are thrown into a jar of the very strongest vinegar, suspended in such a way, however, as not to touch any portion of the vessel. This is done forty-eight days before the summer solstice. The mouth of the jar is then tightly sealed with plaster; after which it is placed beneath some tiles which receive the rays of the sun the whole day through. At the end of forty-eight days the vessel is removed, the squills are taken out of it, and the vinegar poured into another jar.

This vinegar has the effect of sharpening the eyesight, and, taken every other day, is good for pains in the stomach and sides: the strength of it, however, is so great, that if taken in too large a quantity, it will for some moments produce all the appearance of death. Squills, too, if chewed by themselves even, are good for the gums and teeth; and taken in vinegar and honey they expel tapeworm and other intestinal worms. Put fresh beneath the tongue, they prevent persons afflicted with dropsy from experiencing thirst.

Squills are cooked in various ways; either in a pot with a lining of clay or grease, which is put into an oven or furnace, or else cut into pieces and stewed in a saucepan. They are dried also in a raw state, and then cut into pieces and boiled with vinegar; in which case, they are employed as a liniment for the stings of serpents. Sometimes, again, they are roasted and then cleaned; after which, the middle of the bulb is boiled again in water.

When thus boiled, they are used for dropsy, as a diuretic, being taken in doses of three oboli, with oxymel: they are employed also in a similar manner for affections of the spleen, and of the stomach, when it is too weak to digest the food, provided no ulcerations have

made their appearance; also for gripings of the bowels, jaundice, and inveterate cough, accompanied with asthma. A cataplasm of squill leaves, taken off at the end of four days, has the effect of dispersing scrofulous swellings of the neck; and a decoction of squills in oil, applied as a liniment, is a cure for dandriff and running ulcers of the head.

Squills are boiled with honey also for the table, with the view of aiding the digestion more particularly; used in this way, too, they act upon the inside as a purgative. Boiled with oil, and then mixed with resin, they are a cure for chaps on the feet; and the seed, mixed with honey, is applied topically, for the cure of lumbago. Pythagoras says that a squill, suspended at the threshold of the door, effectually shuts all access to evil spells and incantations.

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CHAP. 40.

BULBS: THIRTY REMEDIES.

Bulbs, steeped in vinegar and sulphur, are good for the cure of wounds in the face; beaten up and used alone, they are beneficial for contractions of the sinews, mixed with wine, for porrigo, and used with honey, for the bites of dogs; in this last case, however, Erasistratus says that they ought to be mixed with pitch. The same author states that, applied topically with honey, they stanch the flowing of blood; other writers say, however, that in cases of bleeding at the nose, coriander and meal should be employed in combination with them. Theodorus prescribes bulbs in vinegar for the cure of lichens, and for eruptions in the head he recommends bulbs mixed with astringent wine, or an egg beaten up; he treats defluxions of the eyes also with bulbs, applied topically, and uses a similar method for the cure of ophthalmia. The red bulbs more particularly, will cause spots in the face to disappear, if rubbed upon them with honey and nitre in the sun: and applied with wine or boiled cucumber they will remove freckles. Used either by themselves, or as Damion recommends, in combination with honied wine, they are remarkably efficacious for the cure of wounds, care being taken, however, not to remove the application till the end of four days. The same author prescribes them, too, for the cure of fractured ears, and collections of crude humours in the testes.

For pains in the joints, bulbs are used with meal; boiled in wine, and applied to the abdomen, they reduce hard swellings of the viscera. In dysentery, they are given in wine mixed with rain water; and for convulsions of the intestines they are employed, in combination with silphium, in pills the size of a bean: bruised, they are employed externally, for the purpose of checking perspiration. Bulbs are good, too, for the sinews, for which reason it is that they are given to paralytic patients. The red bulb, mixed with honey and salt, heals sprains of the feet with great rapidity. The bulbs of Megara act as a strong aphrodisiac, and garden bulbs, taken with boiled must or raisin wine, aid delivery.

Wild bulbs, made up into pills with silphium, effect the cure of wounds and other affections of the intestines. The seed, too, of the cultivated kinds is taken in wine as a cure for the bite of the phalangium, and the bulbs themselves are applied in vinegar for the cure of the stings of serpents. The ancients used to give bulb-seed to persons afflicted with madness, in drink. The blossom, beaten up, removes spots upon the legs, as well as scorches produced by fire. Diodes is of opinion that the sight is impaired by the use of bulbs; he adds, too, that when boiled they are not so wholesome as roasted, and that, of whatever nature they may be, they are difficult of digestion.

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CHAP. 41.

BULBINE; ONE REMEDY. BULB EMETIC.

The Greeks give the name bulbine to a plant with leaves resembling those of the leek, and a red bulbous root. This plant, it is said, is marvellously good for wounds, but only when they are of recent date. The bulbous plant known as the “emetic” bulb, from the effects which it produces, has dark leaves, and longer than those of the other kinds.

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CHAP. 42. (10.)

GARDEN ASPARAGUS; WITH THE NEXT TWENTY-FOUR REMEDIES.

Asparagus is said to be extremely wholesome as an aliment to the stomach. With the addition of cummin, it dispels flatulency of the stomach and colon; it sharpens the eyesight also, acts as a mild aperient upon the stomach, and, boiled with wine, is good for pains in the chest and spine, and diseases of the intestines. For pains in the loins and kidneys asparagus- seed is administered in doses of three oboli, taken with an equal proportion of cummin-seed. It acts as an aphrodisiac, and is an extremely useful diuretic, except that it has a tendency to ulcerate the bladder.

The root, also, pounded and taken in white wine, is highly extolled by some writers, as having the effect of disengaging calculi, and of soothing pains in the loins and kidneys; there are some persons, too, who administer this root with sweet wine for pains in the uterus. Boiled in vinegar the root is very beneficial in cases of elephantiasis. It is said that if a person is rubbed with asparagus beaten up in oil, he will never be stung by bees.

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CHAP. 43.

CORRUDA, LIBYCUM, OR ORMINUM.

Wild asparagus is by some persons called “corruda,” by others “libycum,” and by the people of Attica “orminus.” For all the affections above enumerated it is more efficacious even than the cultivated kind, that which is white more particularly. This vegetable has the effect of dispelling the jaundice, and a decoction of it, in doses of one hemina, is recommended as an aphrodisiac; a similar effect is produced also by a mixture of asparagus seed and dill in doses of three oboli respectively. A decoction of asparagus juice is given also for the stings of serpents; and the root of it, mixed with that of marathrum, is reckoned in the number of the most valuable remedies we are acquainted with.

In cases of hæmaturia, Chrysippus recommends a mixture of asparagus, parsley, and cummin seed, to be given to the patient every five days, in doses of three oboli, mixed with two cyathi of wine. He says, however, that though employed this way, it is a good diuretic, it is bad for dropsy, and acts as an antaphrodisiac; and that it is injurious to the bladder, unless it is boiled first. He states also, that if the water in which it is boiled is given to dogs, it will kill them; and that the juice of the root boiled in wine, kept in the mouth, is an effectual cure for tooth-ache.

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CHAP. 44. (11.)

PARSLEY; SEVENTEEN REMEDIES.

Parsley is held in universal esteem; for we find sprigs of it swimming in the draughts of milk given us to drink in country-places; and we know that as a seasoning for sauces, it is looked upon with peculiar favour. Applied to the eyes with honey, which must also be fomented from time to time with a warm decoction of it, it has a most marvellous efficacy in cases of defluxion of those organs or of other parts of the body; as also when beaten up and applied by itself, or in combination with bread or with polenta. Fish, too, when found to be in an ailing state in the preserves, are greatly refreshed by giving them green parsley. As to the opinions entertained upon it among the learned, there is not a single production dug out of the earth in reference to which a greater diversity exists.

Parsley is distinguished as male and female: according to Chrysippus, the female plant has a hard leaf and more curled than the other, a thick stem, and an acrid, hot taste. Dionysius says, that the female is darker than the other kind, has a shorter root, and engenders small worms. Both of these writers, however, agree in saying that neither kind of parsley should be admitted into the number of our aliments; indeed, they look upon it as nothing less than sacrilege to do so, seeing that parsley is consecrated to the funereal feasts in honour of the dead. They say, too, that it is injurious to the eyesight, that the stalk of the female plant engenders small worms, for which reason it is that those who eat of it become barren — males as well as females; and that children suckled by females who live on a parsley diet, are sure to be epileptic. They agree, however, in stating that the male plant is not so injurious in its effects as the female, and that it is for this reason that it is not absolutely condemned and classed among the forbidden plants. The leaves of it, employed as a cataplasm, are used for dispersing hard tumours in the mamillæ; and when boiled in water, it makes it more agreeable to drink. The juice of the root more particularly, mixed with wine, allays the pains of lumbago, and, injected into the ears, it

diminishes hardness of hearing. The seed of it acts as a diuretic, promotes the menstrual discharge, and brings away the afterbirth.

Bruises and livid spots, if fomented with a decoction of parsley-seeed, will resume their natural colour. Applied topically, with the white of egg, or boiled in water, and then drunk, it is remedial for affections of the kidneys; and beaten up in cold water it is a cure for ulcers of the mouth. The seed, mixed with wine, or the root, taken with old wine, has the effect of breaking calculi in the bladder. The seed, too, is given in white wine, to persons afflicted with the jaundice.

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CHAP. 45.

APIASTRUM, OR MELISSOPHYLLUM.

Hyginus gave the name of “apiastrum” to melissophyl- lum: but that which grows in Sardinia is poisonous, and universally condemned. I speak here of this plant, because I feel it my duty to place before the reader every object which has been classified, among the Greeks, under the same name.

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CHAP. 46.

OLUSATRUM OR HIPPOSELINON: ELEVEN REMEDIES. OREOSELINON; TWO REMEDIES. HELIOSELINON; ONE REMEDY.

Olusatrum, usually known as hipposelinon, is particularly repulsive to scorpions. The seed of it, taken in drink, is a cure for gripings in the stomach and intestinal complaints, and a decoction of the seed, drunk in honied wine, is curative in cases of dysuria. The root of the plant, boiled in wine, expels calculi of the bladder, and is a cure for lumbago and pains in the sides. Taken in drink and applied topically, it is a cure for the bite of a mad dog, and the juice of it, when drunk, is warming for persons benumbed with cold.

Some persons make out oreoselinon to be a fourth species of parsley: it is a shrub about a palm in height, with an elongated seed, bearing a strong resemblance to that of cummin, and efficacious for the urine and the catamenia. Helioselinon is possessed of peculiar virtues against the bites of spiders: and oreoselinon is used with wine for promoting the menstrual discharge.

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CHAP. 47. (12.)

PETROSELINON; ONE REMEDY. BUSELINON; ONE REMEDY.

Another kind again, which grows in rocky places, is known by some persons as “petroselinon:” it is particularly good for abscesses, taken in doses of two spoonfuls of the juice to one cyathus of juice of horehound, mixed with three cyathi of warm water. Some writers have added buselinon to the list, which differs only from the cultivated kind in the shortness of the stalk and the red colour of the root, the medicinal properties being just the same. Taken in drink or applied topically, it is an excellent remedy for the stings of serpents.

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CHAP. 48.

OCIMUM; THIRTY-FIVE REMEDIES.

Chrysippus has exclaimed as strongly, too, against ocimum as he has against parsley, declaring that it is prejudicial to the stomach and the free discharge of the urine, and is injurious to the sight; that it produces insanity, too, and lethargy, as well as diseases of the liver; and that it is for this reason that goats refuse to touch it. Hence he comes to the conclusion, that the use of it ought to be avoided by man. Some persons go so far as to say, that if beaten up, and then placed beneath a stone, a scorpion will breed there; and that if chewed, and then placed in the sun, worms will breed in it. The people of Africa maintain, too, that if a person is stung by a scorpion the same day on which he has eaten ocimum, his life cannot possibly be saved. Even more than this, there are some who assert, that if a handful of ocimum is beaten up with ten sea or river crabs, all the scorpions in the vicinity will be attracted to it. Diodotus, too, in his Book of Recipes, says, that ocimum, used as an article of food, breeds lice.

Succeeding ages, again, have warmly defended this plant; it has been maintained, for instance, that goats do eat it, that the mind of no one who has eaten of it is at all affected, and, that mixed with wine, with the addition of a little vinegar, it is a cure for the stings of land scorpions, and the venom of those found in the sea. Experience has proved, too, that the smell of this plant in vinegar is good for fainting fits and lethargy, as well as inflammations; that employed as a cooling liniment, with rose oil, myrtle oil, or vinegar, it is good for headache; and that applied topically with wine, it is beneficial for defluxions of the eyes. It has been found also, that it is good for the stomach; that taken with vinegar, it dispels flatulent eructations; that applications of it arrest fluxes of the bowels; that it acts as a diuretic, and that in this way it is good for jaundice and dropsy, as well as cholera and looseness of the bowels.

Hence it is that Philistio has prescribed it even for cœliac affections, and boiled, for dysentery. Some persons, too, though

contrary to the opinion of Plistonicus, have given it in wine for tenesmus and spitting of blood, as also for obstructions of the viscera. It is employed, too, as a liniment for the mamillæ, and has the effect of arresting the secretion of the milk. It is very good also for the ears of infants, when applied with goose-grease more particularly. The seed of it, beaten up, and inhaled into the nostrils, is provocative of sneezing, and applied as a liniment to the head, of running at the nostrils: taken in the food, too, with vinegar, it purges the uterus. Mixed with copperas it removes warts. It acts, also, as an aphrodisiac, for which reason it is given to horses and asses at the season for covering.

(13.) Wild ocimum has exactly the same properties in every respect, though in a more active degree. It is particularly good, too, for the various affections produced by excessive vo- miting, and for abscesses of the womb. The root, mixed with wine, is extremely efficacious for bites inflicted by wild beasts.

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CHAP. 49.

ROCKET: TWELVE REMEDIES.

The seed of rocket is remedial for the venom of the scorpion and the shrew-mouse: it repels, too, all parasitical insects which breed on the human body, and applied to the face, as a liniment, with honey, removes spots upon the skin. Used with vinegar, too, it is a cure for freckles; and mixed with ox-gall it restores the livid marks left by wounds to their natural colour. It is said that if this plant is taken in wine by persons who are about to undergo a flogging, it will impart a certain degree of insensibility to the body. So agreeable is its flavour as a savouring for food, that the Greeks have given it the name of "euzomon." It is generally thought that rocket, lightly bruised, and employed as a fomentation for the eyes, will restore the sight to its original goodness, and that it allays coughs in young infants. The root of it, boiled in water, has the property of extracting the splinters of broken bones.

As to the properties of rocket as an aphrodisiac, we have mentioned them already. Three leaves of wild rocket plucked with the left hand, beaten up in hydromel, and then taken in drink, are productive of a similar effect.

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CHAP. 50.

NASTURTIUM: FORTY-TWO REMEDIES.

Nasturtium, on the other hand, is an antiaphrodisiac; it has the effect also of sharpening the senses, as already stated. There are two varieties of this plant: one of them is purgative, and, taken in doses of one denarius to seven of water, carries off the bilious secretions. Applied as a liniment to scrofulous sores, with bean-meal, and then covered with a cabbage-leaf, it is a most excellent remedy. The other kind, which is darker than the first, has the effect of carrying off vicious humours of the head, and sharpening the sight: taken in vinegar it calms the troubled spirits, and, drunk with wine or taken in a fig, it is good for affections of the spleen; taken in honey, too, fasting daily, it is good for a cough. The seed of it, taken in wine, expels all kinds of intestinal worms, and with the addition of wild mint, it acts more efficaciously still. It is good, too, for asthma and cough, in combination with wild marjoram and sweet wine; and a decoction of it in goats' milk is used for pains in the chest. Mixed with pitch it disperses tumours, and extracts thorns from the body; and, employed as a liniment, with vinegar, it removes spots upon the body. When used for the cure of carcinoma, white of eggs is added to it. With vinegar it is employed also as a liniment for affections of the spleen, and with honey it is found to be very useful for the complaints of infants.

Sextius adds, that the smell of burnt nasturtium drives away serpents, neutralizes the venom of scorpions, and gives relief in head-ache; with the addition too, of mustard, he says, it is a cure for alopecy, and applied to the ears with a fig, it is a remedy for hardness of hearing. The juice of it, he says, if injected into the ears, will effect the cure of tooth-ache, and employed with goose-grease it is a remedy for porrigo and ulcerous sores of the head. Applied with leaven it brings boils to a head, and makes carbuncles suppurate and break: used with honey, too, it is good for cleansing phagedænic ulcers. Topical applications are made of it, combined with vinegar and polenta, in cases of sciatica aud lumbago: it is similarly

employed, too, for lichens and malformed nails, its qualities being naturally caustic. The best nasturtium of all is that of Babylonia; the wild variety possesses the same qualities as the cultivated in every respect, but in a more powerful degree.

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CHAP. 51.

RUE: EIGHTY-FOUR REMEDIES.

One of the most active, however, of all the medicinal plants, is rue. The cultivated kind has broader leaves and more numerous branches than the other. Wild rue is more violent in its effects, and more active in every respect. The juice of it is extracted by beating it up, and moistening it moderately with water; after which it is kept for use in boxes of Cyprian copper. Given in large doses, this juice has all the baneful effects of poison, and that of Macedonia more particularly, which grows on the banks of the river Aliac- mon. It is a truly wonderful thing, but the juice of hemlock has the property of neutralizing its effects. Thus do we find one thing acting as the poison of another poison, for the juice of hemlock is very beneficial, rubbed upon the hands and [face] of persons employed in gathering rue.

In other respects, rue is one of the principal ingredients employed in antidotes, that of Galatia more particularly. Every species of rue, employed by itself, has the effect also of an antidote, if the leaves are bruised and taken in wine. It is good more particularly in cases of poisoning by wolf's bane and mistletoe, as well as by fungi, whether administered in the drink or the food. Employed in a similar manner, it is good for the stings of serpents; so much so, in fact, that weasels, when about to attack them, take the precaution first of protecting themselves by eating rue. Rue is good, too, for the injuries by scorpions and spiders, the stings of bees, hornets, and wasps, the noxious effects produced by cantharides and salamanders, and the bites of mad dogs. The juice is taken in doses of one acetabulum, in wine; and the leaves, beaten up or else chewed, are applied topically, with honey and salt, or boiled with vinegar and pitch. It is said that people rubbed with the juice of rue, or even having it on their person, are never attacked by these noxious creatures, and that serpents are driven away by the stench of burning rue. The most efficacious, however, of all, is the root of wild rue, taken with wine; this too, it is said, is more beneficial still, if drunk in the open air.

Pythagoras has distinguished this plant also into male and female, the former having smaller leaves than the other, and of a grass-green colour; the female plant, he says, has leaves of a larger size and a more vivid hue. The same author, too, has considered rue to be injurious to the eyes; but this is an error, for engravers and painters are in the habit of eating it with bread, or else nasturtium, for the benefit of the sight; wild goats, too, eat it for the sight, they say. Many persons have dispersed films on the eyes by rubbing them with a mixture of the juice of rue with Attic honey, or the milk of a woman just delivered of a male child: the same result has been produced also by touching the corners of the eyes with the pure juice of the plant. Applied topiclly, with polenta, rue carries off defluxions of the eyes; and, taken with wine, or applied topically with vinegar and rose oil, it is a cure for head-ache. If, however, the pain attacks the whole of the head, the rue should be applied with barley-meal and vin- egar. This plant has the effect also of dispelling crudities, flatulency, and inveterate pains of the stomach; it opens the uterus, too, and restores it when displaced; for which purpose it is applied as a liniment, with honey, to the whole of the abdomen and chest. Mixed with figs, and boiled down to one half, it is administered in wine for dropsy; and it is taken in a similar manner for pains of the chest, sides, and loins, as well as for coughs, asthma, and affections of the lungs, liver, and kidneys, and for shivering fits. Persons about to indulge in wine, take a decoction of the leaves, to prevent head-ache and surfeit. Taken in food, too, it is wholesome, whether eaten raw or boiled, or used as a confection: boiled with hyssop, and taken with wine, it is good for gripings of the stomach. Employed in the same way, it arrests internal hæmorrhage, and, applied to the nostrils, bleeding at the nose: it is beneficial also to the teeth if rinsed with it. In cases of ear-ache, this juice is injected into the ears, care being taken to moderate the dose, as already stated, if wild rue is employed. For hardness of hearing, too, and singing in the ears, it is similarly employed in combination with oil of roses, or oil of laurel, or else cummin and honey.

Juice of rue pounded ill vinegar, is applied also to the temples and the region of the brain in persons affected with phrenitis; some persons, however, have added to this mixture wild thyme and laurel

leaves, rubbing the head and neck as well with the liniment. It has been given in vinegar to lethargic patients to smell at, and a decoction of it is administered for epilepsy, in doses of four cyathi, as also just before the attacks in fever of intolerable chills. It is likewise given raw to persons for shivering fits Rue is a provocative of the urine to bleeding even: it promotes the menstrual discharge, also, and brings away the after-birth, as well as the dead fœtus even, according to Hippocrates, if taken in sweet red wine. The same author, also, recommends applications of it, as well as fumigations, for affections of the uterus.

For cardiac diseases, Diocles prescribes applications of rue, in combination with vinegar, honey, and barley-meal: and for the iliac passion, he says that it should be mixed with meal, boiled in oil, and spread upon the wool of a sheep's fleece. Many persons recommend, for purulent expectorations, two drachmæ of dried rue to one and a half of sulphur; and, for spitting of blood, a decoction of three sprigs in wine. It is given also in dysentery, with cheese, the rue being first beaten up in wine; and it has been prescribed, pounded with bitumen, as a potion for habitual shortness of breath. For persons suffering from violent falls, three ounces of the seed is recommended. A pound of oil, in which rue leaves have been boiled, added to one sextarius of wine, forms a liniment for parts of the body which are frost-bitten. If rue really is a diuretic, as Hippocrates thinks, it is a singular thing that some persons should give it, as being an anti-diuretic, for the suppression of incontinence of urine.

Applied topically, with honey and alum, it cures itch-scabs, and leprous sores; and, in combination with nightshade and hogs'-lard, or beef-suet, it is good for morphew, warts, scrofula, and maladies of a similar nature. Used with vinegar and oil, or else white lead, it is good for erysipelas; and, applied with vinegar, for carbuncles. Some persons prescribe silphium also as an ingredient in the liniment; but it is not employed by them for the cure of the pustules known as epinyctis. Boiled rue is recommended, also, as a cataplasm for swellings of the mamillæ, and, combined with wax, for eruptions of pituitous matter. It is applied with tender sprigs of laurel, in cases of defluxion of the testes; and it exercises so peculiar an effect upon those organs, that old rue, it is said, employed in a liniment, with

axle-grease, is a cure for hernia. The seed pounded, and applied with wax, is remedial also for broken limbs. The root of this plant, applied topically, is a cure for effusion of blood in the eyes, and, employed as a liniment, it removes scars or spots on all parts of the body.

Among the other properties which are attributed to rue, it is a singular fact, that, though it is universally agreed that it is hot by nature, a bunch of it, boiled in rose-oil, with the addition of an ounce of aloes, has the effect of checking the perspiration in those who rub themselves with it; and that, used as an aliment, it impedes the generative functions. Hence it is, that it is so often given in cases of spermatorrhœa, and where persons are subject to lascivious dreams. Every precaution should be taken by pregnant women to abstain from rue as an article of diet, for I find it stated that it is productive of fatal results to the fœtus.

Of all the plants that are grown, rue is the one that is most generally employed for the maladies of cattle, whether arising from difficulty of respiration, or from the stings of noxious creatures — in which cases it is injected with wine into the nostrils — or whether they may happen to have swallowed a horse-leech, under which circumstances it is administered in vinegar. In all other maladies of cattle, the rue is prepared just as for man in a similar case.

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CHAP. 52. (14.)

WILD MINT: TWENTY REMEDIES.

Mentastrum, or wild mint, differs from the other kind in the appearance of the leaves, which have the form of those of ocimum and the colour of pennyroyal; for which reason, some persons, in fact, give it the name of wild pennyroyal. The leaves of this plant, chewed and applied topically, are a cure for elephantiasis; a discovery which was accidentally made in the time of Pompeius Magnus, by a person affected with this malady covering his face with the leaves for the purpose of neutralizing the bad smell that arose therefrom. These leaves are employed also as a liniment, and in drink, with a mixture of salt, oil, and vinegar, for the stings of scorpions; and, in doses of two drachmæ to two cyathi of wine, for those of scolopendræ and serpents. A decoction, too, of the juice is given for the sting of the scolopendra. Leaves of wild mint are kept, dried and reduced to a fine powder, as a remedy for poisons of every description. Spread on the ground or burnt, this plant has the effect of driving away scorpions.

Taken in drink, wild mint carries off the lochia in females after parturition; but, if taken before, it is fatal to the fœtus. It is extremely efficacious in cases of rupture and convulsions, and, though in a somewhat less degree, for orthopnœa, gripings of the bowels, and cholera: it is good, too, as a topical application for lumbago and gout. The juice of it is injected into the ears for worms breeding there; it is taken also for jaundice, and is employed in liniments for scrofulous sores. It prevents the recurrence of lascivious dreams; and taken in vinegar, it expels tape-worm. For the cure of porrigo, it is put in vinegar, and the head is washed with the mixture in the sun.

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CHAP. 53.

MINT: FORTY-ONE REMEDIES.

The very smell of mint reanimates the spirits, and its flavour gives a remarkable zest to food: hence it is that it is so generally an ingredient in our sauces. It has the effect of preventing milk from turning sour, or curdling and thickening; hence it is that it is so generally put into milk used for drinking, to prevent any danger of persons being choked by it in a curdled state. It is administered also for this purpose in water or honied wine. It is generally thought, too, that it is in consequence of this property that it impedes generation, by preventing the seminal fluids from obtaining the requisite consistency. In males as well as females it arrests bleeding, and it has the property, with the latter, of suspending the menstrual discharge. Taken in water, with amylum, it prevents looseness in cœliac complaints. Syriation employed this plant for the cure of abscesses of the uterus, and, in doses of three oboli, with honied wine, for diseases of the liver: he prescribed it also, in pottage, for spitting of blood. It is an admirable remedy for ulcerations of the head in children, and has the effect equally of drying the trachea when too moist, and of bracing it when too dry. Taken in honied wine and water, it carries off purulent phlegm.

The juice of mint is good for the voice when a person is about to engage in a contest of eloquence, but only when taken just before. It is employed also with milk as a gargle for swelling of the uvula, with the addition of rue and coriander. With alum, too, it is good for the tonsils of the throat, and, mixed with honey, for roughness of the tongue. Employed by itself, it is a remedy for internal convulsions and affections of the lungs. Taken with pomegranate juice, as Democrites tells us, it arrests hiccup and vomiting. The juice of mint fresh gathered, inhaled, is a ready for affections of the nostrils. Beaten up and taken in vinegar, mint is a cure for cholera, and for internal fluxes of blood: applied externally, with polenta, it is remedial for the iliac passion and tension of the mamillæ. It is applied, too, as a liniment to the temples for head-ache; and it is

taken internally, as an antidote for the stings of scolopendræ, sea-scorpions, and serpents. As a liniment it is applied also for defluxions of the eyes, and all eruptions of the head, as well as maladies of the rectum.

Mint is an effectual preventive, too, of chafing of the skin, even if held in the hand only. In combination with honied wine, it is employed as an injection for the ears. It is said, too, that this plant will cure affections of the spleen, if tasted in the garden nine days consecutively, without plucking it, the person who bites it saying at the same moment that he does so for the benefit of the spleen: and that, if dried, and re- duced to powder, a pinch of it with three fingers taken in water, will cure stomach-ache. Sprinkled in this form in drink, it is said to have the effect of expelling intestinal worms.

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CHAP. 54.

PENNYROYAL: TWENTY-FIVE REMEDIES.

Pennyroyal partakes with mint, in a very considerable degree, the property of restoring consciousness in fainting fits; slips of both plants being kept for the purpose in glass bottles filled with vinegar. It is for this reason that Varro has declared that a wreath of pennyroyal is more worthy to grace our chambers than a chaplet of roses: indeed, it is said that, placed upon the head, it materially alleviates head-ache. It is generally stated, too, that the smell of it alone will protect the head against the injurious effects of cold or heat, and that it acts as a preventive of thirst; also, that persons exposed to the sun, if they carry a couple of sprigs of pennyroyal behind the ears, will never be incommoded by the heat. For various pains, too, it is employed topically, mixed with polenta and vinegar.

The female plant is the more efficacious of the two; it has a purple flower, that of the male being white. Taken in cold water with salt and polenta it arrests nausea, as well as pains of the chest and abdomen. Taken, too, in water, it prevents gnawing pains of the stomach, and, with vinegar and polenta, it arrests vomiting. In combination with salt and vinegar, and polenta, it loosens the bowels. Taken with boiled honey and nitre, it is a cure for intestinal complaints. Employed with wine it is a diuretic, and if the wine is the produce of the Aminean grape, it has the additional effect of dispersing calculi of the bladder and removing all internal pains. Taken in conjunction with honey and vinegar, it modifies the menstrual discharge, and brings away the after-birth, restores the uterus, when displaced, to its natural position, and expels the dead fœtus. The seed is given to persons to smell at, who have been suddenly struck dumb, and is prescribed for epileptic patients in doses of one cyathus, taken in vinegar. If water is found unwholesome for drinking, bruised pennyroyal should be sprinkled in it; taken with wine it modifies acridities of the body.

Mixed with salt, it is employed as a friction for the sinews, and with honey and vinegar, in cases of opisthotony. Decoctions of it are

prescribed as a drink for persons stung by serpents; and, beaten up in wine, it is employed for the stings of scorpions, that which grows in a dry soil in particular. This plant is looked upon as efficacious also for ulcerations of the mouth, and for coughs. The blossom of it, fresh gathered, and burnt, kills fleas by its smell. Xenocrates, among the other remedies which he mentions, says that in tertian fevers, a sprig of pennyroyal, wrapped in wool, should be given to the patient to smell at, just before the fit comes on, or else it should be put under the bed-clothes and laid by the patient's side.

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CHAP. 55.

WILD PENNYROYAL: SEVENTEEN REMEDIES.

For all the purposes already mentioned, wild pennyroyal has exactly the same properties, but in a still higher degree. It bears a strong resemblance to wild marjoram, and has a smaller leaf than the cultivated kind: by some persons it is known as “dictamnos.” When browsed upon by sheep and goats, it makes them bleat, for which reason, some of the Greeks, changing a single letter in its name, have called it “blechon,” [instead of “glechon.”]

This plant is naturally so heating as to blister the parts of the body to which it is applied. For a cough which results from a chill, it is a good plan for the patient to rub himself with it before taking the bath; it is similarly employed, too, in shivering fits, just before the attacks come on, and for convulsions and gripings of the stomach. It is also remarkably good for the gout.

To persons afflicted with spasms, this plant is administered in drink, in combination with honey and salt; and it renders expectoration easy in affections of the lungs. Taken with salt it is beneficial for the spleen and bladder, and is curative of asthma and flatulency. A decoction of it is equally as good as the juice: it restores the uterus when displaced, and is prescribed for the sting of either the land or the sea scolopen- dra, as well as the scorpion. It is particularly good, too, for bites inflicted by a human being. The root of it, newly taken up, is extremely efficacious for corroding ulcers, and in a dried state tends to efface the deformities produced by scars.

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CHAP. 56.

NEP: NINE REMEDIES.

Nep has also some affinity in its effects with pennyroyal. Boiled down in water to one third, these plants dispel sudden chills: they promote the menstrual discharge also in females, and allay excessive heats in summer. Nep possesses certain virtues against the stings of serpents; at the very smoke and smell of it they will instantly take to flight, and persons who have to sleep in places where they are apprehensive of them, will do well to place it beneath them. Bruised, it is employed topically for lacrymal fistulas of the eye: fresh gathered and mixed in vinegar with one third part of bread, it is applied as a liniment for head-ache. The juice of it, injected into the nostrils, with the head thrown back, arrests bleeding at the nose, and the root has a similar effect. This last is employed also, with myrtle-seed, in warm raisin wine, as a gargle for the cure of quinsy.

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CHAP. 57.

CUMMIN: FORTY-EIGHT REMEDIES. WILD CUMMIN: TWENTY-SIX REMEDIES.

Wild cummin is a remarkably slender plant, consisting of four or five leaves indented like a saw; like the cultivated kind, it is much employed in medicine, among the stomachic remedies more particularly. Bruised and taken with bread, or else drunk in wine and water, it dispels phlegm and flatulency, as well as gripings of the bowels and pains in the intestines. Both varieties have the effect, however, of producing paleness in those who drink these mixtures; at all events, it is generally stated that the disciples of Porcius Latro, so celebrated among the professors of eloquence, used to employ this drink for the purpose of imitating the paleness which had been contracted by their master, through the intensity of his studies: and that Julius Vindex, in more recent times, that assertor of our liberties against Nero, adopted this method of playing upon those who were looking out for a place in his will. Applied in the form of lozenges, or fresh with vinegar, cummin has the effect of arresting bleeding at the nose, and used by itself, it is good for defluxions of the eyes. Combined with honey, it is used also for swellings of the eyes. With children of tender age, it is sufficient to apply it to the abdomen. In cases of jaundice, it is administered in white wine, immediately after taking the bath.

(15.) The cummin of Æthiopia, more particularly, is given in vinegar and water, or else as an electuary with honey. It is thought, too, that the cummin of Africa has the peculiar property of arresting incontinence of urine. The cultivated plant is given, parched and beaten up in vinegar, for affections of the liver, as also for vertigo. Beaten up in sweet wine, it is taken in cases, also, where the urine is too acrid; and for affections of the uterus, it is administered in wine, the leaves of it being employed topically as well, in layers of wool. Parched and beaten up with honey, it is used as an application for swellings of the testes, or else with rose oil and wax.

For all the purposes above-mentioned, wild cummin is more

efficacious than cultivated; as also, in combination with oil, for the stings of serpents, scorpions, and scolopendræ. A pinch of it with three fingers, taken in wine, has the effect of arresting vomiting and nausea; it is used, too, both as a drink and a liniment for the colic, or else it is applied hot, in dossils of lint, to the part affected, bandages being employed to keep it in its place. Taken in wine, it dispels hysterical affections, the proportions being three drachmæ of cummin to three cyathi of wine. It is used as an injection, too, for the ears, when affected with tingling and singing, being mixed for the purpose with veal suet or honey. For contusions, it is applied as a liniment, with honey, raisins, and vinegar, and for dark freckles on the skin with vinegar.

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CHAP. 58.

AMMI: TEN REMEDIES.

There is another plant, which bears a very strong resem- blance to cummin, known to the Greeks as “ammi;” some persons are of opinion, that it is the same as the Æthiopian cummin. Hippocrates gives it the epithet of “royal;” no doubt, because he looks upon it as possessed of greater virtues than Egyptian cummin. Many persons, however, consider it to be of a totally different nature from cummin, as it is so very much thinner, and of a much whiter colour. Still, it is employed for just the same purposes as cummin, for we find it used at Alexandria for putting under loaves of bread, and forming an ingredient in various sauces. It has the effect of dispelling flatulency and gripings of the bowels, and of promoting the secretion of the urine and the menstrual discharge. It is employed, also, for the cure of bruises, and to assuage defluxions of the eyes. Taken in wine with linseed, in doses of two drachmæ, it is a cure for the stings of scorpions; and, used with an equal proportion of myrrh, it is particularly good for the bite of the cerastes.

Like cummin, too, it imparts paleness of complexion to those who drink of it. Used as a fumigation, with raisins or with resin, it acts as a purgative upon the uterus. It is said, too, that if women smell at this plant during the sexual congress, the chances of conception will be greatly promoted thereby.

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CHAP. 59.

THE CAPPARIS OR CAPER: EIGHTEEN REMEDIES.

We have already spoken of the caper at sufficient length when treating of the exotic plants. The caper which comes from beyond sea should never be used; that of Italy is not so dangerous. It is said, that persons who eat this plant daily, are never attacked by paralysis or pains in the spleen. The root of it, pounded, removes white eruptions of the skin, if rubbed with it in the sun. The bark of the root, taken in wine, in doses of two drachmæ, is good for affections of the spleen; the patient, however, must forego the use of the bath. It is said, too, that in the course of thirty-five days the whole of the spleen may be discharged under this treatment, by urine and by stool. The caper is also taken in drink for lumbago and paralysis; and the seed of it boiled, and beaten up in vinegar, or the root chewed, has a soothing effect in tooth-ache. A decoction of it in oil is employed, also, as an injection for ear-ache.

The leaves and the root, fresh out of the ground, mixed with honey, are a cure for the ulcers known as phagedænic. In the same way, too, the root disperses scrofulous swellings; and a decoction of it in water removes imposthumes of the parotid glands, and worms. Beaten up and mixed with barley-meal, it is applied topically for pains in the liver; it is a cure, also, for diseases of the bladder. In combination with oxymel, it is prescribed for tapeworm, and a decoction of it in vinegar removes ulcerations of the mouth. It is generally agreed among writers that the caper is prejudicial to the stomach.

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CHAP. 60.

LIGUSTICUM, OR LOVAGE: FOUR REMEDIES.

Ligusticum, by some persons known as “panax,” is good for the stomach, and is curative of convulsions and flatulency. There are persons who give this plant the name of “cunila bubula;” but, as we have already stated, they are in error in so doing.

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CHAP. 61. (16.)

CUNILA BUBULA: FIVE REMEDIES.

In addition to garden cunila, there are numerous other varieties of it employed in medicine. That known to us as “cunila bubula,” has a very similar seed to that of pennyroyal. This seed, chewed and applied topically, is good for wounds: the plaster, however, must not be taken off till the fifth day. For the stings of serpents, this plant is taken in wine, and the leaves of it are bruised and applied to the wound; which is also rubbed with them as a friction. The tortoise, when about to engage in combat with the serpent, employs this plant as a preservative against the effects of its sting; some persons, for this reason, have given it the name of “panacea.” It has the effect also of dispersing tumours and maladies of the male organs, the leaves being dried for the purpose, or else beaten up fresh and applied to the part affected. For every purpose for which it is employed it combines remarkably well with wine.

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CHAP. 62.

CUNILA GALLINACEA, OR ORIGANUM: FIVE REMEDIES.

There is another variety, again, known to our people as “cunila gallinacea,” and to the Greeks as Heracleotic origanum. Beaten up with salt, this plant is good for the eyes; and it is a remedy for cough and affections of the liver. Mixed with meal, and taken as a broth, with oil and vine- gar, it is good for pains in the side, and the stings of serpents in particular.

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CHAP. 63.

CUNILAGO: EIGHT REMEDIES.

There is a third species, also, known to the Greeks as “male cunila,” and to us as “cunilago.” This plant has a fœtid smell, a ligneous root, and a rough leaf. Of all the varieties of cunila, this one, it is said, is possessed of the most active properties. If a handful of it is thrown anywhere, all the beetles in the house, they say, will be attracted to it; and, taken in vinegar and water, it is good for the stings of scorpions more particularly. It is stated, also, that if a person is rubbed with three leaves of it, steeped in oil, it will have the effect of keeping all serpents at a distance.

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CHAP. 64.

SOFT CUNILA: THREE REMEDIES. LIBANOTIS: THREE REMEDIES.

The variety, on the other hand, known as soft cunila, has a more velvety leaf, and branches covered with thorns; when rubbed it has just the smell of honey, and it adheres to the fingers when touched. There is another kind, again, known to us as “libanotis,” a name which it owes to the resemblance of its smell to that of frankincense. Both of these plants, taken in wine or vinegar, are antidotes for the stings of serpents. Beaten up in water, also, and sprinkled about a place, they kill fleas.

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CHAP. 65.

CULTIVATED CUNILA; THREE REMEDIES. MOUNTAIN CUNILA; SEVEN REMEDIES.

Cultivated cunila has also its medicinal uses. The juice of it, in combination with rose oil, is good for the ears; and the plant itself is taken in drink, to counteract the effects of violent blows.

A variety of this plant is the mountain cunila, similar to wild thyme in appearance, and particularly efficacious for the stings of serpents. This plant is diuretic, and promotes the lochial discharge: it aids the digestion, too, in a marvellous degree. Both varieties have a tendency to sharpen the appetite, even when persons are troubled with indigestion, if taken fasting in drink: they are good, too, for sprains, and, taken with barley-meal, and vinegar and water, they are extremely useful for stings inflicted by wasps and insects of a similar nature.

We shall have occasion to speak of other varieties of libanotis in their appropriate places.

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CHAP. 66. (17.)

PIPERITIS, OR SILIQUASTRUM: FIVE REMEDIES.

Piperitis, which we have already mentioned as being called “siliquastrum,” is taken in drink for epilepsy. Castor used to give a description of it to the following effect: “The stalk of it is long and red, with the knots lying close together; the leaves are similar to those of the laurel, and the seed is white and slender, like pepper in taste.” He described it also as being beneficial to the gums and teeth, imparting sweetness to the breath, and dispelling flatulency.

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CHAP. 67.

ORIGANUM, ONITIS, OR PRASION: SIX REMEDIES.

Origanum, which, as we have already stated, rivals cunila in flavour, includes many varieties employed in medicine. Onitis, or prasion, is the name given to one of these, which is not unlike hyssop in appearance: it is employed more particularly, with warm water, for gnawing pains at the stomach, and for indigestion. Taken in white wine it is good for the stings of spiders and scorpions; and, applied with vinegar and oil, in wool, it is a cure for sprains and bruises.

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CHAP. 68.

TRAGORIGANUM: NINE REMEDIES.

Tragoriganum bears a strong resemblance to wild thyme. It is diuretic, disperses tumours, and taken in drink is extremely efficacious in cases of poisoning by mistletoe and stings by serpents. It is very good for acid eructations from the stomach, and for the thoracic organs. It is given also for a cough, with honey, as well as for pleurisy and peripneumony.

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CHAP. 69.

THREE VARIETIES OF HERACLEOTIC ORIGANUM: THIRTY REMEDIES.

Heraclium, again, comprehends three varieties; the first, which is the darkest, has broader leaves than the others, and is of a glutinous nature; the second, which has leaves of a more slender form, and not unlike sampsuchum in appearance, is by some persous called "prasion," in preference: the third is of an intermediate nature between the other two, but is less efficacious for medicinal purposes than either. But the best kind of all is that of Crete, for it has a particularly agreeable smell; the next best being that of Smyrna, which has even a more powerful odour than the last. The Heracleotic origanum, however, known by the name of "onitis," is the one that is the most esteemed for taking in drink.

Origanum, in general, is employed for repelling serpents; and it is given boiled to persons suffering from wounds. Taken in drink, it is diuretic; and mixed with root of panax, it is given for the cure of ruptures and convulsions. In combination with figs or hyssop, it is prescribed for dropsical patients in doses of one acetabulum, being reduced by boiling to one sixth. It is good also for the itch, prurigo, and leprosy, taken just before the bath. The juice of it is injected into the ears with milk; it being a cure, also, for affections of the tonsils and the uvula, and for ulcers of the head. A decoction of it, taken with the ashes in wine, neutralizes poison by opium or gypsum. Taken in doses of one acetabulum, it relaxes the bowels. It is applied as a liniment for bruises and for tooth-ache; and mixed with honey and nitre, it imparts whiteness to the teeth. It has the effect, also, of stopping bleeding at the nose.

A decoction of this plant, with barley-meal, is employed for imposthumes of the parotid glands; and, beaten up with nutgalls and honey, it is used for roughness of the trachea: the leaves of it, with honey and salt, are good, too, for the spleen. Boiled with vinegar and salt, and taken in small doses, it at- tenuates the phlegm, when very thick and black; and beaten up with oil, it is injected into the nostrils for jaundice. When persons are affected with lassitude, the body is

well rubbed with it, care being taken not to touch the abdomen. Used with pitch, it is a cure for epinyctis, and, applied with a roasted fig, it brings boils to a head. Employed with oil and vinegar, and barley-meal, it is good for scrofulous swellings; and applied topically in a fig, it is a cure for pains in the sides. Beaten up, and applied with vinegar, it is employed as a liniment for bloody fluxes of the generative organs, and it accelerates the lochial discharge after child-birth.

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CHAP. 70.

DITTANDER: THREE REMEDIES.

Dittander is generally considered to rank among the caustic plants. It is owing to this property that it clears the skin of the face, not, however, without excoriating it; though, at the same time, the excoriations are easily healed by employing wax and rose oil. It is owing to this property, too, that it always removes, without difficulty, leprous sores and itch-scabs, as well as the scars left by ulcers. It is said, that in cases of toothache, if this plant is attached to the arm on the suffering side, it will have the effect of drawing the pain to it.

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CHAP. 71.

GITH, OR MELANTHION: TWENTY-THREE REMEDIES.

Gith is by some Greek writers called “melanthion,” and by others “melaspermon.” That is looked upon as the best which has the most pungent odour and is the darkest in appearance. It is employed as a remedy for wounds made by serpents and scorpions: I find that for this purpose it is applied topically with vinegar and honey, and that by burning it serpents are kept at a distance. It is taken, also, in doses of one drachma for the bites of spiders. Beaten up, and smelt at in a piece of linen cloth, it is a cure for running at the nostrils; and, applied as a liniment with vinegar and injected into the nostrils, it dispels head-ache. With oil of iris it is good for defluxions and tumours of the eyes, and a decoction of it with vinegar is a cure for tooth-ache. Beaten up and applied topically, or else chewed, it is used for ulcers of the mouth, and combined with vinegar, it is good for leprous sores and freckles on the skin. Taken in drink, with the addition of nitre, it is good for hardness of breathing, and, employed as a liniment, for indurations, tumours of long standing, and suppurations. Taken several days in succession, it augments the milk in women who are nursing.

The juice of this plant is collected in the same manner as that of henbane; and, like it, if taken in too large doses, it acts as a poison, a surprising fact, seeing that the seed is held in esteem as a most agreeable seasoning for bread. The seed cleanses the eyes also, acts as a diuretic, and promotes the menstrual discharge; and not only this, but I find it stated also, that it thirty grains only are attached to the body, in a linen cloth, it will have the effect of accelerating the after-birth. It is stated, also, that beaten up in urine, it is a cure for corns on the feet; and that when burnt it kills gnats and flies with the smell.

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CHAP. 72.

ANISE: SIXTY-ONE REMEDIES.

Anise, too, one of the comparatively small number of plants that have been commended by Pythagoras, is taken in wine, either raw or boiled, for the stings of scorpions. Both green and dried, it is held in high repute, as an ingredient in all seasonings and sauces, and we find it placed beneath the under-crust of bread. Pat with bitter-almonds into the cloth strainers for filtering wine, it imparts an agreeable flavour to the wine: it has the effect, also, of sweetening the breath, and removing all bad odours from the mouth, it chewed in the morning with smyrnion and a little honey, the mouth being then rinsed with wine.

This plant imparts a youthful look to the features; and if suspended to the pillow, so as to be smelt by a person when asleep, it will prevent all disagreeable dreams. It has the effect of promoting the appetite, also — for this, too, has been made by luxury one of the objects of art, ever since labour has ceased to stimulate it. It is for these various reasons that it has received the name of “anicetum,” given to it by some.

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CHAP. 73.

WHERE THE BEST ANISE IS FOUND: VARIOUS REMEDIES DERIVED FROM THIS PLANT.

The most esteemed anise is that of Crete, and, next to it, that of Egypt. This plant is employed in seasonings to supply the place of lovage; and the perfume of it, when burnt and inhaled, alleviates headache. Evenor prescribes an application of the root, pounded, for defluxions of the eyes; and lollas employs it in a similar manner, in combination with saffron and wine, or else beaten up by itself and mixed with polenta, for violent defluxions and the extraction of such ob- jects as have got into the eyes: applied, too, as a liniment in water, it arrests cancer of the nose. Mixed with hyssop and oxymel, and employed as a gargle, it is a cure for quinsy; and, in combination with rose oil, it is used as an injection for the ears. Parched anise purges off phlegm from the chest, and, if taken with honey, it is better still.

For a cough, beat up fifty bitter almonds, shelled, in honey, with one acetabulum of anise. Another very easy remedy, too, is to mix three drachmæ of anise with two of poppies and some honey, a piece the size of a bean being taken three times a-day. Its main excellence, however, is as a carminative; hence it is that it is so good for flatulency of the stomach, griping pains of the intestines, and cœliac affections. A decoction of it, smelt at and drunk, arrests hiccup, and a decoction of the leaves removes indigestion. A decoction of it with parsley, if applied to the nostrils, will arrest sneezing. Taken in drink, anise promotes sleep, disperses calculi of the bladder, arrests vomiting and swelling of the viscera, and acts as an excellent pectoral for affections of the chest, and of the dia- phragm, where the body is tightly laced. It is beneficial, also, to pour a decoction of it, in oil, upon the head for head-ache.

It is generally thought that there is nothing in existence more beneficial to the abdomen and intestines than anise; for which reason it is given, parched, for dysentery and tenesmus. Some persons add opium to these ingredients, and prescribe three pills a-day, the size of

a bean, with one cyathus of wine. Dieuches has employed the juice of this plant for lumbago, and prescribes the seed of it, pounded with mint, for dropsy and cœliac affections: Evenor recommends the root, also, for affections of the kidneys. Dalion, the herbalist, employed it, with parsley, as a cataplasm for women in labour, as also for pains of the uterus; and, for women in labour, he prescribes a decoction of anise and dill to be taken in drink. It is used as a liniment also in cases of phrenitis, or else applied fresh gathered and mixed with polenta; in which form it is used also for infants attacked with epilepsy or convulsions. Pythagoras, indeed, assures us that persons, so long as they hold this plant in the hand, will never be attacked with epilepsy, for which reason, as much of it as possible should be planted near the house; he says, too, that women who inhale the odour of it have a more easy delivery, it being his advice also, that, immediately after they are delivered, it should be given them to drink, with a sprinkling of polenta.

Sosimenes employed this plant, in combination with vinegar, for all kinds of indurations, and for lassitude he prescribes a decoction of it in oil, with the addition of nitre. The same writer pledges his word to all wayfarers, that, if they take aniseed in their drink, they will be comparatively exempt from fatigue on their journey. Heraclides prescribes a pinch of aniseed with three fingers, for inflations of the stomach, to be taken with two oboli of castoreum in honied wine; and he recommends a similar preparation for inflations of the abdomen and intestines. In cases of orthopnœa, he recommends a pinch of aniseed with three fingers, and the same quantity of henbane, to be mixed in asses'-milk. It is the advice of many to those who are liable to vomit, to take, at dinner, one ace- tabulum of aniseed and ten laurel-leaves, the whole to be beaten up and drunk in water.

Anise, chewed and applied warm, or else taken with castoreum in oxymel, allays suffocations of the uterus. It also dispels vertigo after child-birth, taken with a pinch of cucumber seed in three fingers and the same quantity of linseed, in three cyathi of white wine. Tlepolemus has employed a pinch of aniseed and fennel in three fingers, mixed with vinegar and one cyathus of honey, for the cure of quartan fever. Applied topically with bitter almonds, aniseed is

beneficial for maladies of the joints. There are some persons who look upon it as, by nature, an antidote to the venom of the asp. It is a diuretic, assuages thirst, and acts as an aphrodisiac. Taken in wine, it promotes a gentle perspiration, and it has the property of protecting cloth from the ravages of moths. The more recently it has been gathered, and the darker its colour, the greater are its virtues: still, however, it is injurious to the stomach, except when suffering from flatulency.

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CHAP. 74. (18.)

DILL: NINE REMEDIES.

Dill acts also as a carminative, allays gripings of the stomach, and arrests looseness of the bowels. The roots of this plant are applied topically in water, or else in wine, for defluxions of the eyes. The seed of it, if smelt at while boiling, will arrest hiccup; and, taken in water, it dispels indi- gestion. The ashes of it are a remedy for swellings of the uvula; but the plant itself weakens the eyesight and the generative powers.

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CHAP. 75.

SACOPENIUM, OR SAGAPENON: THIRTEEN REMEDIES.

The sacopenium which grows in Italy is totally different from that which comes from beyond sea. This last, in fact, is similar to gum ammoniac, and is known as “sagapenon.”

Sacopenium is good for pains of the sides and chest, for convulsions, coughs of long standing, expectorations, and swellings of the thoracic organs: it is a cure also for vertigo, palsy, opisthotony, affections of the spleen and loins, and for shivering fits. For suffocations of the uterus, this plant is given in vinegar to smell at; in addition to which, it is sometimes administered in drink, or employed as a friction with oil. It is a good antidote, also, for medicaments of a noxious nature.

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CHAP. 76.

THE WHITE POPPY: THREE REMEDIES. THE BLACK POPPY: EIGHT REMEDIES. REMARKS ON SLEEP. OPIUM. REMARKS IN DISFAVOUR OF THE POTIONS KNOWN AS "ANODYNES, FEBRIFUGES, DIGESTIVES, AND CŒLIACS." IN WHAT WAY THE JUICES OF THESE PLANTS ARE TO BE COLLECTED.

We have already stated that there are three varieties of the cultivated poppy, and, on the same occasion, we promised to describe the wild kinds. With reference to the cultivated varieties, the calyx of the white poppy is pounded, and is taken in wine as a soporific; the seed of it is a cure, also, for elephantiasis. The black poppy acts as a soporific, by the juice which exudes from incisions made in the stalk — at the time when the plant is beginning to flower, Diagoras says; but when the blossom has gone off, according to Iollas. This is done at the third hour, in a clear, still, day, or, in other words, when the dew has thoroughly dried upon the poppy. It is recommended to make the incision just beneath the head and calyx of the plant; this being the only kind, in fact, into the head of which the incision is made. This juice, like that of any other plant, is received in wool; or else, if it is in very minute quantities, it is scraped off with the thumb nail just as it is from the lettuce, and so again on the following day, with the portion that has since dried there. If obtained from the poppy in sufficiently large quantities, this juice thickens, after which it is kneaded out into lozenges, and dried in the shade. This juice is possessed not only of certain soporific qualities, but, if taken in too large quantities, is productive of sleep unto death even: the name given to it is "opium." It was in this way, we learn, that the father of P. Licinius Cæcina, a man of Prætorian rank, put an end to his life at Bavilum in Spain, an incurable malady having rendered existence quite intolerable to him. Many other persons, too, have ended their lives in a similar way. It is for this reason that opium has been so strongly exclaimed against by Diagoras and Erasistratus; for they have altogether condemned it as a deadly poison, forbidding it to be used for infusions even, as being injurious to the sight. Andreas says, in addition to this, that the only reason why it does not cause

instantaneous blindness, is the fact that they adulterate it at Alexandria. In later times, however, the use of it has not been disapproved of — witness the celebrated preparation known as "diacodion." Lozenges are also made of ground poppy-seed, which are taken in milk as a soporific. The seed is employed, too, with rose-oil for head-ache; and, in combination with that oil, is injected into the ears for ear-ache. Mixed with woman's milk, this seed is used as a liniment for gout: the leaves, too, are employed in a similar manner. Taken in vinegar, the seed is prescribed as a cure for erysipelas and wounds.

For my own part, however, I do not approve of opium entering into the composition of eye-salves, and still less of the preparations from it known as febrifuges, digestives, and cœliacs: the black poppy, however, is very generally prescribed, in wine, for cœliac affections. All the cultivated poppies are larger than the others, and the form of the head is round. In the wild poppy the head is elongated and small, but it is possessed of more active properties than the others in every respect. This head is often boiled, and the decoction of it taken to promote sleep, the face being fomented also with the water. The best poppies are grown in dry localities, and where it seldom rains.

When the heads and leaves of the poppy are boiled together, the name given to the decoction is "meconium;" it is much less powerful, however, in its effects than opium.

The principal test of the purity of opium is the smell, which, when genuine, is so penetrating as to be quite insupportable. The next best test is that obtained by lighting it at a lamp; upon which it ought to burn with a clear, brilliant flame, and to give out a strong odour when extinguished; a thing that never happens when opium has been drugged, for, in such case, it lights with the greatest difficulty, and the flame repeatedly goes out. There is another way of testing its genuineness, by water; for, if it is pure, it will float like a thin cloud upon the surface, but, if adulterated, it will unite in the form of blisters on the water. But the most surprising thing of all is the fact, that the sun's heat in summer furnishes a test; for, if the drug is pure, it will sweat and gradually melt, till it has all the appearance of the juice when fresh gathered.

Mnesides is of opinion that the best way of preserving opium is to mix henbane seed with it; others, again, recommend that it should be kept with beans.

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CHAP. 77. (19.)

THE POPPY CALLED RHŒAS: TWO REMEDIES.

The poppy which we have spoken of under the names of “rhœas” and the “erratic” poppy, forms an intermediate variety between the cultivated and the wild poppy; for it grows in the fields, it is true, but it is self-set nevertheless. Some persons eat it, calyx and all, immediately after it is gathered. This plant is an extremely powerful purgative: five heads of it, boiled in three semi-sextarii of wine, and taken in drink, have the effect of producing sleep.

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CHAP. 78.

THE WILD POPPY CALLED CERATITIS, GLAUCIUM, OR PARALIUM: SIX REMEDIES.

There is one variety of wild poppy known as “ceratitis.” It is of a black colour, a cubit in height, and has a thick root covered with bark, with a head resembling a small bud, bent and pointed at the end like a horn. The leaves of this plant are smaller and thinner than those of the other wild poppies, and the seed, which is very diminutive, is ripe at harvest. Taken with honied wine, in doses of half an acetabulum, the seed acts as a purgative. The leaves, beaten up in oil, are a cure for the white specks which form on the eyes of beasts of burden. The root, boiled down to one half, in doses of one acetabulum to two sextarii of water, is prescribed for maladies of the loins and liver, and the leaves, employed with honey, are a cure for carbuncles.

Some persons give this kind of poppy the name of “glaucion,” and others of “paralium,” for it grows, in fact, in spots exposed to exhalations from the sea, or else in soils of a nitrous nature.

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CHAP. 79.

THE WILD POPPY CALLED HERACLIUM, OR APHRON: FOUR REMEDIES. DIACODION.

There is another kind of wild poppy, known as “heraclion” by some persons, and as “aphron” by others. The leaves of it, when seen from a distance, have all the appearance of sparrows; the root lies on the surface of the ground, and the seed has exactly the colour of foam. This plant is used for the purpose of bleaching linen cloths in summer. It is bruised in a mortar for epilepsy, being given in white wine, in doses of one acetabulum, and acting as an emetic.

This plant is extremely useful, also, for the composition of the medicament known as “diacodion,” and “arteriace.” This preparation is made with one hundred and twenty heads of this or any other kind of wild poppy, steeped for two days in three sextarii of rain water, after which they are boiled in it. You must then dry the heads; which done, boil them down with honey to one half, at a slow heat. More recently, there have been added to the mixture, six drachmæ of saffron, hypocisthis, frankincense, and gum acacia, with one sextarius of raisin wine of Crete. All this, however, is only so much ostentation; for the virtue of this simple and ancient prepara- tion depends solely upon the poppy and the honey.

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CHAP. 80.

THE POPPY CALLED TITHYMALON, OR PARALION: THREE REMEDIES.

There is a third kind, again, called “tithymalon;” some persons give it the name of “mecon,” others of “paralion.” It has a white leaf, resembling that of flax, and a head the size of a bean. It is gathered when the vine is in blossom, and dried in the shade. The seed, taken in drink, purges the bowels, the dose being half an acetabulum, in honied wine. The head of every species of poppy, whether green or dry, used as a fomentation, assuages defluxions of the eyes. Opium, if taken in pure wine immediately after the sting of a scorpion, prevents any dangerous results. Some persons, however, attribute this virtue to the black poppy only, the head or leaves being beaten up for the purpose.

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CHAP. 81. (20.)

PORCILLACA OR PURSLAIN, OTHERWISE CALLED PEPLIS: TWENTY-FIVE REMEDIES.

There is a wild purslain, too, called "peplis," not much superior in its virtues to the cultivated kind, of which such remarkable properties are mentioned. It neutralizes the effects, it is said, of poisoned arrows, and the venom of the serpents known as hæmorrhois and prester; taken with the food and applied to the wound, it extracts the poison. The juice, too, they say, taken in raisin wine, is an antidote for henbane. When the plant itself cannot be procured, the seed of it is found to be equally efficacious. It is a corrective, also, of impurities in water; and beaten up in wine and applied topically, it is a cure for head-ache and ulcers of the head. Chewed in combination with honey, it is curative of other kinds of sores. It is similarly applied to the region of the brain in infants, and in cases of umbilical hernia; as also for defluxions of the eyes, in persons of all ages, being applied to the forehead and temples with polenta. If employed as a liniment for the eyes, milk and honey are added, and when used for proptosis of the eyes, the leaves are beaten up with bean-shells. In combination with polenta, salt, and vinegar, it is employed as a fomentation for blisters.

Chewed raw, purslain reduces ulcerations of the mouth and gum-boils, and cures tooth-ache; a decoction of it is good, too, for ulcers of the tonsils. Some persons have added a little myrrh to it, when so employed. Chewed, it strengthens such teeth as may happen to be loose, dispels crudities, imparts additional strength to the voice, and allays thirst. Used with nutgalls, linseed, and honey, in equal proportions, it assuages pains in the neck; and, combined with honey or Cimolian chalk, it is good for diseases of the mamillæ. The seed of it, taken with honey, is beneficial for asthma. Eaten in salads, this plant is very strengthening to the stomach. In burning fevers, applications of it are made with polenta; in addition to which, if chewed, it will cool and refresh the intestines. It arrests vomiting, also, and for dysentery and abscesses, it is eaten with vinegar, or else

taken with cummin in drink: boiled, it is good for tenesmus. Taken either in the food or drink, it is good for epilepsy; and, taken in doses of one acetabulum in boiled wine, it promotes the menstrual discharge. Employed, also, as a liniment with salt, it is used as a remedy for fits of hot gout and erysipelas.

The juice of this plant, taken in drink, strengthens the kidneys and bladder, and expels intestinal worms. In conjunction with oil, it is applied, with polenta, to assuage the pain of wounds, and it softens indurations of the sinews. Metrodorus, who wrote an Abridgment of Botany, says that it should be given after delivery, to accelerate the lochial discharge. It is also an antaphrodisiac, and prevents the recurrence of lascivious dreams. One of the principal personages of Spain, whose son has been Prætor, is in the habit of carrying the root of it, to my knowledge, suspended by a string from his neck, except when he is taking the bath, for an incurable affection of the uvula; a precaution by which he has been spared all inconvenience.

I have found it stated, too, in some authors, that if the head is rubbed with a liniment of this plant, there will be no de. fluxions perceptible the whole year through. It is generally thought, however, that purslain weakens the sight.

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CHAP. 82.

CORIANDER: TWENTY-ONE REMEDIES.

There is no wild coriander to be found; the best, it is generally agreed, is that of Egypt. Taken in drink and ap- plied to the wound, it is a remedy for the sting of one kind of serpent, known as the amphisbæna: pounded, it is healing also for other wounds, as well as for epinyctis and blisters. Employed in the same state with honey or raisins, it disperses all tumours and gatherings, and, beaten up in vinegar, it re- moves abscesses of an inflammatory nature. Some persons recommend three grains of it to be taken for tertian fevers, just before the fit comes on, or else in larger quantities, to be bruised and applied to the forehead. There are others, again, who think that it is attended with excellent results, to put coriander under the pillow before sunrise.

While green, it is possessed of very cooling and refreshing properties. Combined with honey or raisins, it is an excellent remedy for spreading ulcers, as also for diseases of the testes, burns, carbuncles, and maladies of the ears. Applied with woman's milk, it is good for defluxions of the eyes; and for fluxes of the belly and intestines, the seed is taken with water in drink; it is also taken in drink for cholera, with rue. Coriander seed, used as a potion with pomegranate juice and oil, expels worms in the intestines.

Xenocrates states a very marvellous fact, if true; he says, that if a woman takes one grain of this seed, the menstrual discharge will be retarded one day, if two grains, two days, and so on, according to the number of grains taken. Marcus Varro is of opinion, that if coriander is lightly pounded, and sprinkled over it with cummin and vinegar, all kinds of meat may be kept in summer without spoiling.

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CHAP. 83.

ORAGE: FOURTEEN REMEDIES.

Orage, again, is found both wild and cultivated. Pytha- goras has accused this plant of producing dropsy, jaundice, and paleness of the complexion, and he says that it is extremely difficult of digestion. He asserts, also, to its disparagement, that every thing that grows near it in the garden is sure to be drooping and languid. Diodes and Dionysius have added a statement, that it gives birth to numerous diseases, and that it should never be boiled without changing the water repeatedly; they say, too, that it is prejudicial to the stomach, and that it is productive of freckles and pimples on the skin.

I am at a loss to imagine why Solo of Smyrna has stated that this plant is cultivated in Italy with the greatest difficulty. Hippocrates prescribes it with beet, as a pessary for affections of the uterus; and Lycus of Neapolis recommends it to be taken in drink, in cases of poisoning by cantharides. He is of opinion, also, that either raw or boiled, it may be advantageously employed as a liniment for inflammatory swellings, incipient boils, and all kinds of indurations; and that, mixed with oxymel and nitre, it is good for erysipelas and gout. This plant, it is said, will bring away mal-formed nails, without producing sores. There are some persons who give orage-seed with honey for jaundice, and rub the throat and tonsils with it, nitre being added as well. They employ it, also, to purge the bowels, and use the seed, boiled, as an emetic, either taken by itself, or in conjunction with mallows or lentils.

Wild orage is used for dyeing the hair, as well as the other purposes above enumerated.

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CHAP. 84. (21.)

THE MALLOW CALLED MALOPE: THIRTEEN REME- DIES. THE MALLOW CALLED MALACHE: ONE REMEDY. THE MALLOW CALLED ALTHÆA, OR PLISTOLOCHIA: FIFTY-NINE REME- DIES.

Both kinds of mallows, on the other hand, the cultivated and the wild, are held in very general esteem. These kinds are subdivided, each of them, into two varieties, according to the size of the leaf. The cultivated mallow with large leaves is known to the Greeks by the name of "malope," the other being called "malache," — from the circumstance, it is generally thought, that it relaxes the bowels. The wild mallow, again, with large leaves and white roots, is called "althæa," and by some persons, on account of its salutary properties, "plistolochia." Every soil in which mallows are sown, is rendered all the richer thereby. This plant is possessed of remarkable virtues, as a cure for all kinds of stings, those of scorpions, wasps, and similar insects, as well as the bite of the shrew-mouse, more particularly; nay, what is even more than this, if a person has been rubbed with oil in which any one of the mallows has been beaten up, or even if he carries them on his person, he will never be stung. A leaf of mallow put upon a scorpion, will strike it with torpor.

The mallow is an antidote, also, against the poisonous effects of white lead; and applied raw with saltpetre, it extracts all kinds of pointed bodies from the flesh. A decoction of it with the root, taken in drink, neutralizes the poison of the sea-hare, provided, as some say, it is brought off the stomach by vomiting.

Other marvels are also related in connection with the>e mallow, but the most surprising thing of all is, that if a person takes half a cyathus of the juice of any one of them daily, he will be exempt from all diseases. Left to putrefy in wine, mallows are remedial for running sores of the head, and, mixed with honey, for lichens and ulcerations of the mouth; a decoction of the root, too, is a remedy for dandriff of the head and looseness of the teeth. With the root of the mallow which has a single stem, it is a good plan to prick the parts about a tooth when it aches, until the pain has ceased. With the

addition of human saliva, the mallow cleanses scrofulous sores, imposthumes of the parotid glands, and inflammatory tumours, without producing a wound. The seed of it, taken in red wine, disperses phlegm and relieves nausea; and the root, attached to the person with black wool, is a remedy for affections of the mamillæ. Boiled in milk, and taken as a pottage, it cures a cough within five days.

Sextius Niger says that mallows are prejudicial to the stomach, and Olympias, the Theban authoress, asserts that, employed with goose-grease, they are productive of abortion. Some persons are of opinion, that a good handful of the leaves, taken in oil and wine, promotes the menstrual discharge. At all events, it is a well-known fact, that if the leaves are strewed beneath a woman in labour, the delivery will be accelerated; but they must be taken away immediately after the birth, or prolapsus of the uterus will be the consequence. Mallow-juice, also, is given to women in labour, a decoction of it being taken fasting in wine, in doses of one hemina.

Mallow seed is attached to the arms of patients suffering from spermatorrhœa; and, so naturally adapted is this plant for the promotion of lustfulness, that the seed of the kind with a single stem, sprinkled upon the genitals, will increase the sexual desire in males to an infinite degree, according to Xenocrates; who says, too, that if three roots are attached to the person, in the vicinity of those parts, they will be productive of a similar result. The same writer informs us also, that injections of mallows are good for tenesmus and dysentery, and for maladies of the rectum even, if used as a fomentation only. The juice is given warm to patients afflicted with melan- choly, in doses of three cyathi, and to insane persons in doses of four. One hemina of the decoction is prescribed, also, for epilepsy. A warm decoction of the juice is employed, too, as a fomentation for calculus, flatulency, gripings of the stomach, and opisthotony. The leaves are boiled, and applied with oil, as a poultice for erysipelas and burns, and raw, with bread, to arrest inflammation in wounds. A decoction of mallows is beneficial for affections of the sinews and bladder, and for gnawing pains of the intestines; taken, too, as an aliment, or an injection, they are relaxing to the uterus, and the decoction, taken with oil, facilitates the passage of the urine.

The root of the althæa is even more efficacious for all the purposes above enumerated, and for convulsions and ruptures more particularly. Boiled in water, it arrests looseness of the bowels; and taken in white wine, it is a cure for scrofulous sores, imposthumes of the parotid glands, and inflammations of the mamillæ. A decoction of the leaves in wine, applied as a liniment, disperses inflammatory tumours; and the leaves, first dried, and then boiled in milk, are a speedy cure for a cough, however inveterate. Hippocrates prescribes a decoction of the root to be drunk by persons wounded or thirsty from loss of blood, and the plant itself as an application to wounds, with honey and resin. He also recommends it to be employed in a similar manner for contusions, sprains, and tumours of the muscles, sinews, and joints, and prescribes it to be taken in wine for asthma and dysentery. It is a singular thing, that water in which this root has been put, thickens when exposed in the open air, and congeals like ice. The more recently, however, it has been taken up, the greater are the virtues of the root.

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CHAP. 85.

WILD LAPATHUM OR OXALIS, OTHERWISE CALLED LAPATHUM CANTHERINUM, OR RUMEX: ONE REMEDY. HYDROLAPATHUM: TWO REMEDIES. HIPPOLAPATHUM: SIX REMEDIES. OXYLAPATHUM: FOUR REMEDIES.

Lapathum, too, has pretty nearly the same properties. There is a wild variety, known to some as "oxalis," very similar in taste to the cultivated kind, with pointed leaves, a colour like that of white beet, and an extremely diminutive root: our people call it "rumex," while others, again, give it the name of "lapathum cantherinum." Mixed with axle-grease, this plant is very efficacious for scrofulous sores. There is another kind, again, hardly forming a distinct variety, known as "oxylapathon," which resembles the cultivated kind even more than the last, though the leaves are more pointed and redder: it grows only in marshy spots. Some authors are found who speak of a "hydrolapathon," which grows in the water, they say. There is also another variety, known as "hippolapathon," larger than the cultivated kind, whiter, and more compact.

The wild varieties of the lapathum are a cure for the stings of scorpions, and protect those who carry the plant on their person from being stung. A decoction of the root in vinegar, employed as a gargle, is beneficial to the teeth, and if drunk, is a cure for jaundice. The seed is curative of the most obstinate maladies of the stomach. The root of hippolapathum, in particular, has the property of bringing off malformed nails; and the seed, taken in wine, in doses of two drachmæ, is a cure for dysentery. The seed of oxylapathum, washed in rain-water, with the addition of a piece of gum acacia, about the size of a lentil, is good for patients troubled with spitting of blood. Most excellent lozenges are made of the leaves and root of this plant, with the addition of nitre and a little incense. When wanted for use, they are first steeped in vinegar.

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CHAP. 86.

CULTIVATED LAPATHUM: TWENTY-ONE REMEDIES. BULAPATHUM: ONE REMEDY.

As to garden lapathum, it is good in liniments on the forehead for defluxions of the eyes. The root of it cures lichens and leprous sores, and a decoction of it in wine is remedial for scrofulous swellings, imposthumes of the parotid glands, and calculus of the bladder. Taken in wine it is a cure for affections of the spleen, and employed as a fomentation, it is equally good for cœliac affections, dysentery, and tenesmus. For all these purposes, the juice of lapathum is found to be even still more efficacious. It acts as a carminative and diuretic, and dispels films on the eyes: put into the bath, or else rubbed upon the body, without oil, before taking the bath, it effectually removes all itching sensations. The root of it, chewed, strengthens the teeth, and a decoction of it in wine arrests looseness of the stomach: the leaves, on the other hand, relax it.

Not to omit any particulars, Solo has added to the above varieties a bulapathon, which differs only from the others in the length of the root. This root, taken in wine, is very beneficial for dysentery.

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CHAP. 87. (22.)

MUSTARD, THE THREE KINDS OF IT: FORTY-FOUR REMEDIES.

Mustard, of which we have mentioned three different kinds, when speaking of the garden herbs, is ranked by Pythagoras among the very first of those plants the pungency of which mounts upwards; for there is none to be found more penetrating to the brain and nostrils.

Pounded with vinegar, mustard is employed as a liniment for the stings of serpents and scorpions, and it effectually neutralizes the poisonous properties of fungi. To cure an immoderate secretion of phlegm it is kept in the mouth till it melts, or else it is mixed with hydromel, and employed as a gargle. Mustard is chewed for tooth-ache, and is taken as a gargle with oxymel for affections of the uvula; it is very beneficial, also, for all maladies of the stomach. Taken with the food, it facilitates expectoration from the lungs: it is given, too, for asthma and epileptic fits, in combination with cucumber seed. It has the effect of quickening the senses, and effectually clears the head by sneezing, relaxes the stomach, and promotes the menstrual discharge and the urinary secretions: beaten up with figs and cummin, in the proportion of one-third of each ingredient, it is used as an external application for dropsy.

Mixed with vinegar, mustard resuscitates by its powerful odour persons who have swooned in fits of epilepsy or lethargy, as well as females suffering from hysterical suffocations. For the cure of lethargy tordylon is added-that being the name given to the seed of hartwort — and if the lethargic sleep should happen to be very profound, an application of it, with figs and vinegar, is made to the legs, or to the head even. Used as an external application, mustard is a cure for inveterate pains of the chest, loins, hips, shoulders, and, in general, for all deep-seated pains in any part of the body, raising blisters by its caustic properties. In cases of extreme indurations of the skin, the mustard is applied to the part without figs; and a cloth is employed doubled, where it is apprehended that it may burn too powerfully. It is used also, combined with red-earth, for alopecy, itch-scabs, leprosy, phthiriasis, tetanus, and opisthotony. They

employ it also as a liniment with honey for styes on the eyelids and films on the eyes.

The juices of mustard are extracted in three different ways, in earthen vessels in which it is left to dry gradually in the sun. From the thin stem of the plant there exudes also a milky juice, which when thus hardened is remedial for tooth-ache. The seed and root, after they have been left to steep in must, are beaten up together in a mortar; and a good handful of the mixture is taken to strengthen the throat, stomach, eyes, head, and all the senses. This mixture is extremely good, too, for fits of lassitude in females, being one of the most wholesome medicines in existence. Taken in vinegar, mustard disperses calculi in the bladder; and, in combination with honey and goose-grease, or else Cyprian wax, it is employed as a liniment for livid spots and bruises. From the seed, first steeped in olive-oil, and then subjected to pressure, an oil is extracted, which is employed for rigidity of the sinews, and chills and numbness in the loins and hips.

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CHAP. 88.

ADACA: FORTY-EIGHT REMEDIES.

It is said that adarca, of which we have already made mention when speaking of the forest-trees, has a similar nature to that of mustard, and is productive of the same effects: it grows upon the outer coat of reeds, below the head.

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CHAP. 89.

MARRUBIUM OR PRASION, OTHERWISE LINOSTROPHON, PHILOPAIS, OR PHILOCHARES: TWENTY-NINE REMEDIES.

Most medical writers have spoken in high terms of marru- bium, or horehound, as a plant of the very greatest utility. Among the Greeks, it is called "prasion" by some, by others "linostrophon," and by others, again, "philopais" or "philochares:" it is a plant too well known to require any description. The leaves and seed beaten up, together, are good for the stings of serpents, pains of the chest and side, and inveterate coughs. The branches, too, boiled in water with panic, so as to modify its acridity, are remarkably useful for persons troubled with spitting of blood. Horehound is applied also, with grease, to scrofulous swellings. Some persons recommend for a cough, a pinch of the fresh seed with two fingers, boiled with a handful of spelt and a little oil and salt, the mixture to be taken fasting. Others, again, regard as quite incomparable for a similar purpose an extract of the juices of horehound and fennel. Taking three sextarii of the extract, they boil it down to two, and then add one sextarius of honey; after which they again boil it down to two, and administer one spoonful of the preparation daily, in one cyathus of water.

Beaten up with honey, horehound is particularly beneficial for affections of the male organs; employed with vinegar, it cleanses lichens, and is very salutary for ruptures, convulsions, spasms, and contractions of the sinews. Taken in drink with salt and vinegar, it relaxes the bowels, promotes the menstrual discharge, and accelerates the after-birth. Dried, powdered, and taken with honey, it is extremely efficacious for a dry cough, as also for gangrenes and hang-nails. The juice, too, taken with honey, is good for the ears and nostrils: it is a remedy also for jaundice, and diminishes the bilious secretions. Among the few antidotes for poisons, it is one of the very best known.

The plant itself, taken with iris and honey, purges the stomach and promotes expectorations: it acts, also, as a strong diuretic, though, at

the same time, care must be taken not to use it when the bladder is ulcerated and the kidneys are affected. It is said, too, that the juice of horehound improves the eyesight. Castor speaks of two varieties of it, the black horehound and the white, which last he considers to be the best. He puts the juice of it into an empty eggshell, and then mixes the egg with it, together with honey, in equal pro- portions: this preparation used warm, he says, will bring abscesses to a head, and cleanse and heal them. Beaten up, too, with stale axle-grease and applied topically, he says, hore- hound is a cure for the bite of a dog.

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CHAP. 90.

WILD THYME: EIGHTEEN REMEDIES.

Wild thyme, it is said, borrows its name, “serpyllum,” from the fact that it is a creeping plant, a property peculiar to the wild kind, that which grows in rocky places more particularly. The cultivated thyme is not a creeping plant, but grows up- wards, as much a palm in height. That which springs up spontaneously, grows the most luxuriantly, its leaves and branches being whiter than those of the other kinds. Thyme is efficacious as a remedy for the stings of serpents, the cun- chris more particularly; also for the sting of the scolopendra, both sea and land, the leaves and branches being boiled for the purpose in wine. Burnt, it puts to flight all venomous creatures by its smell, and it is particularly beneficial as an antidote to the venom of marine animals.

A decoction of it in vinegar is applied for head-ache, with rose oil, to the temples and forehead, as also for phrenitis and lethargy: it is given, too, in doses of four drachmæ, for gripings of the stomach, strangury, quinsy, and fits of vomiting. It is taken in water, also, for liver complaints. The leaves are given in doses of four oboli, in vinegar, for diseases of the spleen. Beaten up in two cyathi of oxymel, it is used for spitting of blood.

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CHAP. 91.

SISYMBRIUM OR THYMBRÆUM: TWENTY-THREE REMEDIES.

Wild sisymbrium, by some persons called “thymbræum.” does not grow beyond a foot in height. The kind which grows in watery places, is similar to nasturtium, and they are both of them efficacious for the stings of certain insects, such as hornets and the like. That which grows in dry localities is odoriferous, and is employed for wreaths: the leaf of it is narrower than in the other kind. They both of them alleviate head-ache, and defluxions of the eyes, Philinus says. Some persons, however, employ bread in addition; while others, again, use a decoction of the plant by itself in wine It is a cure, also, for epinyctis, and removes spots on the face in females, by the end of four days; for which purpose, it is applied at night and taken off in the day-time. It arrests vomiting, hiccup, gripings, and fluxes of the stomach, whether taken with the food, or the juice extracted and given in drink.

This plant, however, should never be eaten by pregnant women, except in cases where the fœtus is dead, for the very application of it is sufficient to produce abortion. Taken with wine, it is diuretic, and the wild variety expels calculi even. For persons necessitated to sit up awake, an infusion of it in vinegar is applied as a liniment to the head.

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CHAP. 92.

LINSEED: THIRTY REMEDIES.

Linseed is not only used in combination with other substances, but, employed by itself, it disperses spots on the face in women: its juice, too, is very beneficial to the sight. Combined with incense and water, or else with myrrh and wine, it is a cure for defluxions of the eyes, and employed with honey, grease, or wax, for imposthumes of the parotid glands. Prepared like polenta, it is good for fluxes of the stomach; and a decoction of it in water and oil, applied topi- cally with anise, is prescribed for quinsy. It is sometimes used parched, also, to arrest looseness of the bowels, and ap- plications of it are used, with vinegar, for cœliac affections and dysentery. It is eaten with raisins, also, for pains in the liver, and excellent electuaries are made of it for the treatment of phthisis.

Linseed-meal, with the addition of nitre, salt, or ashes, softens rigidities of the muscles, sinews, joints, and vertebræ, as well as of the membranous tissues of the brain. Employed with figs, linseed-meal ripens abscesses and brings them to a head: mixed with the root of wild cucumber, it extracts all foreign bodies from the flesh, as well as splinters of broken bones. A decoction of linseed-meal in wine prevents ulcers from spreading, and mixed with honey, it is remedial for pituitous eruptions. Used with nasturtium, in equal quantities, it rectifies malformed nails; mixed with resin and myrrh, it cures affections of the testes and hernia, and with water, gangrenous sores. A decoction of linseed-meal with fenugreek, in the proportion of one sextarius of each, in hydromel, is recommended for pains in the stomach; and employed as an injection, with oil or honey, it is beneficial for dangerous affections of the chest and intestines.

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CHAP. 93.

BLITE: SIX REMEDIES.

Blite seems to be a plant of an inert nature, without flavour or any pungency whatever; hence it is that, in Menander, we find husbands giving this name to their wives, by way of reproach. It is prejudicial to the stomach, and disturbs the bowels to such a degree, as to cause cholera in some. It is stated, however, that, taken in wine, it is good for the stings of scorpions; and that it is sometimes used as a liniment for corns on the feet, and, with oil, for affections of the spleen and pains in the temples. Hippocrates is of opinion, that if taken with the food, it will arrest the menstrual discharge.

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CHAP. 94. (23.)

MEUM, AND MEUM ATHAMANTICUM: SEVEN REMEDIES.

Meum is never cultivated in Italy except by medical men, and by very few of those. There are two varieties of it, the finer kind being known as “athamanticum,” because, according to some, it was first discovered by Athamas; or else because, as others think, that of the best quality is found upon Mount Athamas. The leaf of it is similar to that of dill, and the stem is sometimes as much as two cubits in length: the roots, which run obliquely, are numerous and mostly black, though sometimes white: it is not of so red a hue as the other kind.

The root of this plant, pounded or boiled, and taken in water, is diuretic, and is marvellously efficacious for dispelling flatu- lency of the stomach. It is good, too, for gripings of the bowels and affections of the bladder: applied with honey to the region of the uterus, it acts as a diuretic; and used as a liniment with parsley, upon the lower regions of the abdomen in infants, it has a similar effect.

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CHAP. 95.

FENNEL: TWENTY-TWO REMEDIES.

Fennel has been rendered famous by the serpent, which tastes it, as already stated, when it casts its old skin, and sharpens its sight with the juice of this plant: a fact which has led to the conclusion that this juice must be beneficial, also, in a high degree to the human sight. Fennel-juice is gathered when the stem is swelling with the bud; after which it is dried in the sun and applied as an ointment with honey. This plant is to be found in all parts of the world. The most esteemed preparation from it, is that made in Iberia, from the tear-like drops which exude from the stalk and the seed fresh-ga- thered. The juice is extracted, also, from incisions made in the root at the first germination of the plant.

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CHAP. 96.

HIPPOMARATHRON, OR MYRSINEUM: FIVE REMEDIES.

There is, also, a wild variety of fennel, known by some persons as "hippomarathron," and by others as "myrsineum;" it has a larger leaf and a more acrid taste than the other kind. It is taller, also, about the thickness of a walking-stick, and has a white root: it grows in warm, but stony localities. Diocles speaks, too, of another variety of hippomarathron, with a long narrow leaf, and a seed like that of coriander.

The seed of the cultivated fennel is medicinally employed in wine, for the stings of scorpions and serpents, and the juice of it, injected into the ears, has the effect of destroying small worms that breed there. Fennel is employed as an ingredient in nearly all our seasonings, vinegar sauces more particularly: it is placed also beneath the undercrust of bread. The seed, in fevers even, acts as an astringent upon a relaxed stomach, and beaten up with water, it allays nausea: it is highly esteemed, also, for affections of the lungs and liver. Taken in moderate quantities, it arrests looseness of the bowels, and acts as a diuretic; a decoction of it is good for gripings of the stomach, and taken in drink, it restores the milk. The root, taken in a ptisan, purges the kidneys — an effect which is equally produced by a decoction of the juice or of the seed; the root is good too, boiled in wine, for dropsy and convulsions. The leaves are applied to burning tumours, with vinegar, expel calculi of the bladder, and act as an aphrodisiac.

In whatever way it is taken in drink, fennel has the pro- perty of promoting the secretion of the seminal fluids; and it is extremely beneficial to the generative organs, whether a de- coction of the root in wine is employed as a fomentation, or whether it is used beaten up in oil. Many persons apply fennel with wax to tumours and bruises, and employ the root, with the juice of the plant, or else with honey, for the bites of dogs, and with wine for the stings of multipedes.

Hippomarathron is more efficacious, in every respect, than cultivated fennel; it expels calculi more particularly, and, taken with

weak wine, is good for the bladder and irregularities of the menstrual discharge.

In this plant, the seed is more efficacious than the root; the dose of either of them being a pinch with two fingers, beaten up, and mixed with the usual drink. Petrichus, who wrote a work “On Serpents,” and Micton, who wrote a treatise “On Botany,” are of opinion that there is nothing in existence of greater efficacy against serpents than hippomarathron: indeed, Nicander has ranked it by no means among the lowest of antidotes.

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CHAP. 97.

HEMP: NINE REMEDIES.

Hemp originally grew in the forests, where it is found with a blacker and rougher leaf than in the other kinds. Hempseed, it is said, renders men impotent: the juice of this seed will extract worms from the ears, or any insect which may have entered them, though at the cost of producing head-ache. The virtues of hemp, it is said, are so great, that an infusion of it in water will cause it to coagulate: hence it is, that if taken in water, it will arrest looseness in beasts of burden. A decoction of the root in water, relaxes contractions of the joints, and cures gout and similar maladies. It is applied raw to burns, but it must be frequently changed, so as not to let it dry.

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CHAP. 98.

FENNEL-GIANT: EIGHT REMEDIES.

Fennel-giant has a seed similar to that of dill. That which has a single stem, bifurcated at the top, is generally thought to be the female plant. The stalks of it are eaten boiled; and, pickled in brine and honey, they are recom- mended as particularly beneficial to the stomach; if taken, however, in too large quantities, they are apt to produce head-ache. The root of it in doses of one denarius to two cyathi of wine, is used in drink for the stings of serpents, and the root itself is applied topically for the same purpose, as also for the cure of gripings of the stomach. Taken in oil and vinegar, it is used as a check for excessive perspirations, in fevers even. The inspissated juice of fennel-giant, taken in quantities the size of a bean, acts as a purgative; and the pith of it is good for the uterus, as well as all the maladies previously mentioned. To arrest hæmorrhage, ten of the seeds are taken in drink, bruised in wine, or else with the pith of the plant. There are some persons who think that the seed should be administered for epilepsy, from the fourth to the seventh day of the moon, in doses of one spoonful.

Fennel-giant is naturally so inimical to the muræna, that the very touch of it even will kill that fish. Castor was of opinion that the juice of the root is extremely beneficial to the sight.

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CHAP. 99.

THE THISTLE OR SCOLYMOS: SIX REMEDIES.

We have already spoken, when treating of the garden plants, of the cultivation of the thistle; we may as well, therefore, not delay to mention its medicinal properties. Of wild thistles there are two varieties; one of which throws out numerous stalks immediately it leaves the ground, the other being thicker, and having but a single stem. They have, both of them, a few leaves only, and covered with prickles, the head of the plant being protected by thorny points: the last mentioned, however, puts forth in the middle of these points a purple blossom, which turns white with great rapidity, and is carried off by the wind; the Greeks give it the name of "scolymos."

This plant, gathered before it blossoms, and beaten up and subjected to pressure, produces a juice, which, applied to the head, makes the hair grow again when it has fallen off through alopecy. The root of either kind, boiled in water, creates thirst, it is said, in those who drink it. It strengthens the stomach also, and if we are to believe what is said, has some influence upon the womb in promoting the conception of male offspring: at all events, Glaucias, who seems to have paid the most attention to the subject, has written to that effect. The thin juice, like mastich, which exudes from these plants, imparts sweetness to the breath.

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CHAP. 100. (24.)

THE COMPOSITION OF THERIACA.

But as we are now about to leave the garden plants, we will take this opportunity of describing a very famous preparation extracted from them as an antidote against the stings of all kinds of venomous animals: it is inscribed in verse upon a stone in the Temple of Æsculapius at Cos.

Take two denarii of wild thyme, and the same quantity of opopanax and meum respectively; one denarius of trefoil seed; and of aniseed, fennel-seed, ammi, and parsley, six denarii respectively, with twelve denarii of meal of fitches. Beat up these ingredients together, and pass them through a sieve; after which they must be kneaded with the best wine that can be had, and then made into lozenges of one victoriatus each: one of these is to be given to the patient, steeped in three cyathi of wine. King Antiochus the Great, it is said, employed this theriaca against all kinds of venomous animals, the asp excepted.

SUMMARY. — Remarkable facts, narratives, and observations, one thousand, five hundred, and six.

ROMAN AUTHORS QUOTED. — Cato the Censor, M. Varro, Pompeius Linnæus, C. Valgius, Hyginus, Sextius Niger who wrote in Greek, Julius Bassus who wrote in Greek, Celsus, Antonius Castor.

FOREIGN AUTHORS QUOTED. — Democritus, Theophrastus, Orpheus, Monander who wrote the "Biochresta," Pythagoras, Nicander.

MEDICAL AUTHORS QUOTED. — Chrysippus, Diocles, Ophelion, Heraclides, Hicesius, Dionysius, Apollodorus of Citium, Apollodorus of Tarentum, Praxagoras, Plistoni- cus, Medius, Dieuches, Cleophantus, Philistion, Asclepiades, Crateuas, Petronius Diodotus, lollas, Erasistratus, Diagoras, Andreas, Mnesides, Epicharmus, Damion, Dalion, Sosimenes, Tlepolemus, Metrodo- rus, Solo, Lycus, Olympias of Thebes, Philinus, Petrichus, Micton, Glaucias, Xenocrates.

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BOOK XXI. AN ACCOUNT OF FLOWERS. AND THOSE USED FOR CHAPLETS MORE PARTICULARLY.

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CHAP. 1. (1.)

THE NATURE OF FLOWERS AND GARLANDS.

Cato has recommended that flowers for making chaplets should also be cultivated in the garden; varieties remarkable for a delicacy which it is quite impossible to express, inas- much as no individual can find such facilities for describing them as Nature does for bestowing on them their numerous tints — Nature, who here in especial shows herself in a sportive mood, and takes a delight in the prolific display of her varied productions. The other plants she has produced for our use and our nutriment, and to them accordingly she has granted years and even ages of duration: but as for the flowers and their perfumes, she has given them birth for but a day — a mighty lesson to man, we see, to teach him that that which in its career is the most beauteous and the most attractive to the eye, is the very first to fade and die.

Even the limner's art itself possesses no resources for reproducing the colours of the flowers in all their varied tints and combinations, whether we view them in groups alternately blending their hues, or whether arranged in festoons, each variety by itself, now assuming a circular form, now running obliquely, and now disposed in a spiral pattern: or whether, as we see sometimes, one wreath is interwoven within another.

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CHAP. 2. (2.)

GARLANDS AND CHAPLETS.

The ancients used chaplets of diminutive size, called “struppi;” from which comes our name for a chaplet, “stro- phiolum.” Indeed, it was only by very slow degrees that this last word became generalized, as the chaplets that were used at sacrifices, or were granted as the reward of military valour, asserted their exclusive right to the name of “corona.” As for garlands, when they came to be made of flowers, they received the name of “serta,” from the verb “sero,” or else from our word “series.” The use of flowers for garlands is not so very ancient, among the Greeks even.

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CHAP. 3.

WHO INVENTED THE ART OF MAKING GARLANDS: WHEN THEY FIRST RECEIVED THE NAME OF "COROLLÆ," AND FOR WHAT REASON.

For in early times it was the usage to crown the victors in the sacred contests with branches of trees: and it was only at a later period, that they began to vary their tints by the combination of flowers, to heighten the effect in turn by their colour and their smell — an invention due to the ingenuity of the painter Pausias, at Sicyon, and the garland-maker Glyccra, a female to whom he was greatly attached, and whose handiwork was imitated by him in colours. Challenging him to a trial of skill, she would repeatedly vary her designs, and thus it was in reality a contest between art and Nature; a fact which we find attested by pictures of that artist even still in existence, more particularly the one known as the "Stephane-plocos," in which he has given a likeness of Glycera herself. This invention, therefore, is only to be traced to later than the Hundredth Olympiad.

Chaplets of flowers being now the fashion, it was not long before those came into vogue which are known to us as Egyptian chaplets; and then the winter chaplets, made for the time at which Earth refuses her flowers, of thin laminæ of horn stained various colours. By slow degrees, too, the name was introduced at Rome, these garlands being known there at first as "corollæ," a designation given them to express the remarkable delicacy of their texture. In more recent times, again, when the chaplets presented were made of thin plates of copper, gilt or silvered, they assumed the name of "corollaria."

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CHAP. 4. (3.)

WHO WAS THE FIRST TO GIVE CHAPLETS WITH LEAVES OF SILVER AND GOLD. LEMNISCI: WHO WAS THE FIRST TO EMBOSS THEM.

Crassus Dives was the first who gave chaplets with artificial leaves of silver and gold, at the games celebrated by him. To embellish these chaplets, and to confer additional honour on them, lemnisci were added, in imitation of the Etruscan chaplets, which ought properly to have none but lemnisci made of gold. For a long period these lemnisci were destitute of ornament: P. Claudius Pulcher was the first who taught us to emboss them, and added leaves of tinsel to the laminæ of which the lemniscus was formed.

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CHAP. 5.

THE GREAT HONOUR IN WHICH CHAPLETS WERE HELD BY THE ANCIENTS.

Chaplets, however, were always held in a high degree of estimation, those even which were acquired at the public games. For it was the usage of the citizens to go down in person to take part in the contests of the Circus, and to send their slaves and horses thither as well. Hence it is that we find it thus written in the laws of the Twelve Tables: “If any person has gained a chaplet himself, or by his money, let the same be given to him as the reward of his prowess.” There is no doubt that by the words “gained by his money,” the laws meant a chaplet which had been gained by his slaves or horses. Well then, what was the honour acquired thereby? It was the right secured by the victor, for himself and for his parents, after death, to be crowned without fail, while the body was laid out in the house, and on its being carried to the tomb.

On other occasions, chaplets were not indiscriminately worn, not even those which had been won in the games.

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CHAP. 6.

THE SEVERITY OF THE ANCIENTS IN REFERENCE TO CHAPLETS.

Indeed the rules upon this point were remarkably severe. L. Fulvius, a banker, having been accused, at the time of the Second Punic War, of looking down from the balcony of his house upon the Forum, with a chaplet of roses upon his head, was imprisoned by order of the Senate, and was not liberated before the war was brought to a close. P. Munatius, having placed upon his head a chaplet of flowers taken from the statue of Marsyas, was condemned by the Triumviri to be put in chains. Upon his making appeal to the tribunes of the people, they refused to intercede in his behalf — a very different state of things to that at Athens, where the young men, in their drunken revelry, were in the habit, before midday, of making their way into the very schools of the philosophers even. Among ourselves, no such instance of a similar licentiousness is to be found, unless, indeed, in the case of the daughter of the late Emperor Augustus, who, in her nocturnal debaucheries, placed a chaplet on the statue of Marsyas, conduct deeply deplored in the letters of that god.

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CHAP. 7.

A CITIZEN DECKED WITH FLOWERS BY THE ROMAN PEOPLE.

Scipio is the only person that ever received from the Roman people the honour of being decked with flowers. This Scipio received the surname of Serapio, from his remarkable resemblance to a certain person of that name who dealt in pigs. He died in his tribuneship, greatly beloved by the people, and in every way worthy of the family of the Africani. The property he left was not sufficient to pay the expenses of his burial; upon which the people made a subscription and contracted for his funeral, flowers being scattered upon the body from every possible quarter as it was borne along.

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CHAP. 8.

PLAITED CHAPLETS. NEEDLE-WORK CHAPLETS. NARD-LEAF CHAPLETS. SILKEN CHAPLETS.

In those days, too, chaplets were employed in honour of the gods, the Lares, public as well as domestic, the sepulchres, and the Manes. The highest place, however, in public estimation, was held by the plaited chaplet; such as we find used by the Salii in their sacred rites, and at the solemnization of their yearly banquets. In later times, the rose chaplet has been adopted, and luxury arose at last to such a pitch that a chaplet was held in no esteem at all if it did not consist entirely of leaves sown together with the needle. More recently, again, they have been imported from India, or from nations beyond the countries of India.

But it is looked upon as the most refined of all, to present chaplets made of nard leaves, or else of silk of many colours steeped in unguents. Such is the pitch to which the luxuriousness of our women has at last arrived!

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CHAP. 9.

AUTHORS WHO HAVE WRITTEN ON FLOWERS. AN ANECDOTE RELATIVE TO QUEEN CLEOPATRA AND CHAPLETS.

Among the Greeks, the physicians Mnesitheus and Callimachus have written separate treatises on the subject of chaplets, making mention of such flowers as are injurious to the head. For, in fact, the health is here concerned to some extent, as it is at the moments of carousal and gaiety in particular that penetrating odours steal insidiously upon the brain — witness an instance in the wicked cunning displayed upon one occasion by Cleopatra.

At the time when preparations were making for the battle that was eventually fought at Actium, Antonius held the queen in such extreme distrust as to be in dread of her very attentions even, and would not so much as touch his food, unless another person had tasted it first. Upon this, the queen, it is said, wishing to amuse herself with his fears, had the extremities of the flowers in a chaplet dipped in poison, and then placed it upon her head. After a time, as the hilarity increased apace, she challenged Antonius to swallow the chap- lets, mixed up with their drink. Who, under such circumstances as these, could have apprehended treachery? Accordingly, the leaves were stripped from off the chaplet, and thrown into the cup. Just as Antonius was on the very point of drinking, she arrested his arm with her hand.— "Behold, Marcus Antonius," said she, "the woman against whom you are so careful to take these new precautions of yours in employing your tasters! And would then, if I could exist without you, either means or opportunity of effecting my purpose be wanting to me?" Saying this, she ordered a man to be brought from prison, and made him drink off the potion; he did so, and fell dead upon the spot.

Besides the two authors above-mentioned, Theophrastus, among the Greeks, has written on the subject of flowers. Some of our own writers also have given the title of "Anthologica" to their works, but no one, to my knowledge at least, has treated expressly of flowers. In fact, we ourselves have no intention here of discussing the mode of

wearing chaplets, for that would be frivolous indeed; but shall proceed to state such particulars in relation to flowers as shall appear to us deserving of remark.

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CHAP. 10. (4.)

THE ROSE: TWELVE VARIETIES OF IT.

The people of our country were acquainted with but very few garland flowers among the garden plants, and those few hardly any but the violet and the rose. The plant which bears the rose is, properly speaking, more of a thorn than a shrub — indeed, we sometimes find it growing on a bramble even; the flower having, even then, a pleasant smell, though by no means penetrating. The flower in all roses is originally enclosed in a bud, with a grained surface within, which gradually swells, and assumes the form of a green pointed cone, similar to our alabaster unguent boxes in shape. Gradually acquiring a ruddy tint, this bud opens little by little, until at last it comes into full blow, developing the calyx, and embracing the yellow-pointed filaments which stand erect in the centre of it.

The employment of the rose in chaplets is, so to say, the least use that is made of it. The flower is steeped in oil, a practice which has prevailed from the times of the Trojan war, as Homer bears witness; in addition to which, it now forms an ingredient in our unguents, as mentioned on a previous occasion. It is employed also by itself for certain medicinal purposes, and is used in plasters and eye-salves for its penetrating qualities: it is used, also, to perfume the delicacies of our banquets, and is never attended with any noxious results.

The most esteemed kinds of rose among us are those of Præneste and Campania. Some persons have added to these varieties the rose of Miletus, the flower of which is an ex- tremely brilliant red, and has never more than a dozen petals. The next to it is the rose of Trachyn, not so red as the last, and then that of Alabanda, with whitish petals, but not so highly esteemed. The least esteemed of all, however, is the thorn rose, the petals of which are numerous, but extremely small. The essential points of difference in the rose are the number of the petals, the comparative number of thorns on the stem, the colour, and the smell. The number of the petals, which is never less than five, goes on increasing in amount, till we find one variety with as many as a hundred, and thence known as the “centifolia:” in

Italy, it is to be found in Campania, and in Greece, in the vicinity of Philippi, though this last is not the place of its natural growth. Mount Pan- gæus, in the same vicinity, produces a rose with numerous petals of diminutive size: the people of those parts are in the habit of transplanting it, a method which greatly tends to im- prove its growth. This kind, however, is not remarkable for its smell, nor yet is the rose which has a very large or very broad petal: indeed, we may state in a few words, that the best proof of the perfume of the flower is the comparative roughness of the calyx.

Cæpio, who lived in the reign of the Emperor Tiberius, asserts that the centifolia is never employed for chaplets, except at the extreme points of union as it were, being remarkable neither for its smell nor its beauty. There is another variety of rose, too, called the "Grecian" rose by our people, and "lychnis" by the Greeks: it grows nowhere except in humid soils, and has never more than five petals: it does not exceed the violet in size, and is destitute of smell. There is another kind, again, known to us as the "Græcula," the petals of which are tightly rolled together, and which never open except when pressed in the hand, it having always the appearance, in fact, of being in bud: the petals of it are remarkably large. Another kind, again, springs from a stem like that of the mallow, the leaves being similar to those of the olive — the name given to it is "macetum." There is the rose of autumn, too, known to us as the "coroniola," which is of a middle size, between the varieties just mentioned. All these kinds, however, are destitute of smell, with the exception of the coroniola, and the one which grows on the bramble: so extended is the scope for fictitious productions!

And, indeed, the genuine rose, for the most part, is indebted for its qualities to the nature of the soil. That of Cyrenæ is the most odoriferous of all, and hence it is that the unguents of that place are so remarkably fine: at Carthage, again, in Spain, there are early roses throughout all the winter. The temperature, too, of the climate is not without its influence: for in some years we find the roses much less odoriferous than in others; in addition to which, their smell is always more powerful when grown in dry soils than in humid ones. The rose does not admit of being planted in either a rich or an argillaccous soil, nor yet on irrigated land; being contented with a thin, light

earth, and more particularly attached to ground on which old building rubbish has been laid.

The rose of Campania is early, that of Miletus late, but it is the rose of Præneste that goes off the very latest of all. For the rose, the ground is generally dug to a greater depth than it is for corn, but not so deep as for the vine. It grows but very slowly from the seed, which is found in the calyx beneath the petals of the flower, covered with a sort of down; hence it is that the method of grafting is usually the one preferred, or else propagation from the eyes of the root, as in the reed. One kind is grafted, which bears a pale flower, with thorny branches of a remarkable length; it belongs to the quinquefolia variety, being one of the Greek roses. All roses are improved by being pruned and cauterized; transplanting, too, makes them grow, like the vine, all the better, and with the greatest rapidity. The slips are cut some four fingers in length or more, and are planted immediately after the setting of the Vergiliæ; then, while the west winds are prevalent, they are transplanted at intervals of a foot, the earth being frequently turned up about them.

Persons whose object it is to grow early roses, make a hole a foot in width about the root, and pour warm water into it, at the period when the buds are beginning to put forth.

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CHAP. 11. (5.)

THE LILY: FOUR VARIETIES OF IT.

The lily holds the next highest rank after the rose, and has a certain affinity with it in respect of its unguent and the oil extracted from it, which is known to us as "lirinon." Blended, too, with roses, the lily produces a remarkably fine effect; for it begins to make its appearance, in fact, just as the rose is in the very middle of its season. There is no flower that grows to a greater height than the lily, sometimes, indeed, as much as three cubits; the head of it being always drooping, as though the neck of the flower were unable to support its weight. The whiteness of the lily is quite remarkable, the petals being striated on the exterior; the flower is narrow at the base, and gradually expanding in shape like a tapering cup with the edges curving outwards, the fine pistils of the flower, and the stamens with their antheræ of a saffron colour, standing erect in the middle. Hence the perfume of the lily, as well as its colour, is two-fold, there being one for the petals and another for the stamens. The difference, however, between them is but very small, and when the flower is employed for making lily unguents and oils, the petals are never rejected.

There is a flower, not unlike the lily, produced by the plant known to us as the "convolvulus." It grows among shrubs, is totally destitute of smell, and has not the yellow antheræ of the lily within: only vying with it in its whiteness, it would almost appear to be the rough sketch made by Nature when she was learning how to make the lily. The white lily is propagated in all the various ways which are employed for the cultivation of the rose, as also by means of a certain tearlike gum which belongs to it, similarly to hipposelinum in fact: indeed, there is no plant that is more prolific than this, a single root often giving birth to as many as fifty bulbs. There is, also, a red lily, known by the name of "crinon" to the Greeks, though there are some authors who call the flower of it "cynorrodon." The most esteemed are those of Antiochia and Laodicea in Syria, and next to them that of Phaselis. To the fourth rank belongs the flower that grows in Italy.

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CHAP. 12.

THE NARCISSUS: THREE VARIETIES OF IT.

There is a purple lily, too, which sometimes has a double stem; it differs only from the other lilies in having a more fleshy root and a bulb of larger size, but undivided: the name given to it is “narcissus” A second variety of this lily has a white flower, with a purple corolla. There is also this difference between the ordinary lily and the narcissus, that in the latter the leaves spring from the root of the plant. The finest are those which grow on the mountains of Lycia. A third variety is similar to the others in every respect, except that the corolla of the plant is green. They are all of them late flowers: indeed, they only bloom after the setting of Arcturus, and at the time of the autumnal equinox.

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CHAP. 13.

HOW SEED IS STAINED TO PRODUCE TINTED FLOWERS.

There has been invented also a method of tinting the lily, thanks to the taste of mankind for monstrous productions. The dried stalks of the lily are tied together in the month of July, and hung up in the smoke: then, in the following March, when the small knots are beginning to disclose themselves, the stalks are left to steep in the lees of black or Greek wine, in order that they may contract its colour, and are then planted out in small trenches, some semi-sextarii of wine-lees being poured around them. By this method purple lilies are obtained, it being a very remarkable thing that we should be able to dye a plant to such a degree as to make it produce a coloured flower.

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CHAP. 14. (6.)

HOW THE SEVERAL VARIETIES OF THE VIOLET ARE RESPECTIVELY PRODUCED, GROWN, AND CULTIVATED. THE THREE DIFFERENT COLOURS OF THE VIOLET. THE FIVE VARIETIES OF THE YELLOW VIOLET.

Next after the roses and the lilies, the violet is held in the highest esteem: of this there are several varieties, the purple, the yellow, and the white, all of them reproduced from plants, like the cabbage. The purple violet, which springs up spontaneously in sunny spots, with a thin, meagre soil, has larger petals than the others, springing immediately from the root, which is of a fleshy substance. This violet has a name, too, distinct from the other wild kinds, being called “ion,” and from it the ianthine cloth takes its name.

Among the cultivated kinds, the yellow violet is held in the greatest esteem. The Tusculan violet, and that known as the “marine” violet, have petals somewhat broader than the others, but not so odoriferous; the Calatian violet, too, which has a smaller leaf, is entirely destitute of smell. This last is a present to us from the autumn, the others from the spring.

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CHAP. 15.

THE CALTHA. THE SCOPA REGIA.

Next to it comes the caltha, the flowers of which are of similar colour and size; in the number of its petals, however, it surpasses the marine violet, the petals of which are never more than five in number. The marine violet is surpassed, too, by the other in smell; that of the caltha being very powerful. The smell, too, is no less powerful in the plant known as the "scopa regia;" but there it is the leaves of the plant, and not the flowers, that are odoriferous.

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CHAP. 16.

THE BACCHAR. THE COMBRETUM. ASARUM.

The bacchar, too, by some persons known as “field nard,” is odoriferous in the root only. In former times, it was the practice to make unguents of this root, as we learn from the poet Aristophanes, a writer of the Ancient Comedy; from which circumstance some persons have erroneously given the name of “exotic” to the plant. The smell of it strongly resembles that of cinnamomum; and the plant grows in thin soils, which are free from all humidity.

The name of “combretum” is given to a plant that bears a very strong resemblance to it, the leaves of which taper to the fineness of threads; in height, however, it is taller than the bacchar. These are the only * * * * The error, however, ought to be corrected, on the part of those who have bestowed upon the bacchar the name of “field nard;” for that in reality is the surname given to another plant, known to the Greeks as “asaron,” the description and features of which we have already mentioned, when speaking of the different va- rieties of nard. I find, too, that the name of “asaron” has been given to this plant, from the circumstance of its never being employed in the composition of chaplets.

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CHAP. 17.

SAFFRON: IN WHAT PLACES IT GROWS BEST. WHAT FLOWERS WERE KNOWN AT THE TIME OF THE TROJAN WAR.

The wild saffron is the best; indeed, in Italy it is of no use whatever to attempt to propagate it, the produce of a whole bed of saffron being boiled down to a single scruple; it is reproduced by offsets from the bulb. The cultivated saffron is larger, finer, and better looking than the other kinds, but has much less efficacy. This plant is everywhere degenerating, and is far from prolific at Cyrenæ even, a place where the flowers are always of the very finest quality. The most esteemed saffron, however, is that of Cilicia, and there of Mount Corycus in particular; next comes the saffron of Mount Olympus, in Lycia, and then of Centuripa, in Sicily; some persons, however, have given the second rank to the Phlegræan saffron.

There is nothing so much adulterated as saffron: the best proof of its goodness is when it snaps under pressure by the fingers, as though it were friable; for when it is moist, a state which it owes to being adulterated, it is limp, and will not snap asunder. Another way of testing it, again, is to apply it with the hand to the face, upon which, if, good, it will be found to be slightly caustic to the face and eyes. There is a peculiar kind, too, of cultivated saffron, which is in general extremely mild, being only of middling quality; the name given to it is "dialeucon." The saffron of Cyrenaica, again, is faulty in the opposite extreme; for it is darker than any other kind, and is apt to spoil very quickly. The best saffron everywhere is that which is of the most unctuous quality, and the filaments of which are the shortest; the worst being that which emits a musty smell.

Mucianus informs us that in Lycia, at the end of seven or eight years, the saffron is transplanted into a piece of ground which has been prepared for the purpose, and that in this way it is prevented from degenerating. It is never used for chaplets, being a plant with an extremely narrow leaf, as fine almost as a hair; but it combines remarkably well with wine, sweet wine in particular. Reduced to a powder, it is used to perfume the theatres.

Saffron blossoms about the setting of the Vergiliæ, for a few days only, the leaf expelling the flower. It is verdant at the time of the winter solstice, and then it is that they gather it; it is usually dried in the shade, and if in winter, all the better. The root of this plant is fleshy, and more long-lived than that of the other bulbous plants. It loves to be beaten and trodden under foot, and in fact, the worse it is treated the better it thrives: hence it is, that it grows so vigorously by the side of foot-paths and fountains. (7.) Saffron was already held in high esteem in the time of the Trojan War; at all events, Homer, we find, makes mention of these three flowers, the lotus, the saffron, and the hyacinth.

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CHAP. 18.

THE NATURE OF ODOURS.

All the odoriferous substances, and consequently the plants, differ from one another in their colour, smell, and juices. It is but rarely that the taste of an odoriferous substance is not bitter; while sweet substances, on the other hand, are but rarely odoriferous. Thus it is, too, that wine is more odoriferous than must, and all the wild plants more so than the cultivated ones. Some flowers have a sweet smell at a distance, the edge of which is taken off when they come nearer; such is the case with the violet, for instance. The rose, when fresh gathered, has a more powerful smell at a distance, and dried, when brought nearer. All plants have a more penetrating odour, also, in spring and in the morning; as the hour of midday approaches, the scent becomes gradually weakened. The flowers, too, of young plants are less odoriferous than those of old ones; but it is at mid-age that the odour is most penetrating in them all.

The rose and the crocus have a more powerful smell when gathered in fine weather, and all plants are more powerfully scented in hot climates than in cold ones. In Egypt, however, the flowers are far from odoriferous, owing to the dews and exhalations with which the air is charged, in consequence of the extended surface of the river. Some plants have an agreeable, though at the same time extremely powerful smell; some, again, while green, have no smell at all, owing to the excess of moisture, the buceros for example, which is the same as fenugreek. Not all flowers which have a penetrating odour are destitute of juices, the violet, the rose, and the crocus, for example; those, on the other hand, which have a penetrating odour, but are destitute of juices, have all of them a very powerful smell, as we find the case with the two varieties of the lily. The abrotonum and the amaracus have a pungent smell. In some plants, it is the flower only that is sweet, the other parts being inodorous, the violet and the rose, for example.

Among the garden plants, the most odoriferous are the dry ones, such as rue, mint, and parsley, as also those which grow on dry soils.

Some fruits become more odoriferous the older they are, the quince, for example, which has also a stronger smell when gathered than while upon the tree. Some plants, again, have no smell but when broken asunder, or when bruised, and others only when they are stripped of their bark. Certain vegetable substances, too, only give out a smell when subjected to the action of fire, such as frankincense and myrrh, for example. All flowers are more bitter to the taste when bruised than when left untouched. Some plants preserve their smell a longer time when dried, the melilote, for example; others, again, make the place itself more odoriferous where they grow, the iris for instance, which will even render the whole of a tree odoriferous, the roots of which it may happen to have touched. The hesperis has a more powerful odour at night, a property to which it owes its name.

Among the animals, we find none that are odoriferous, unnless, indeed, we are inclined to put faith in what has been said about the panther.

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CHAP. 19.

THE IRIS.

There is still another distinction, which ought not to be omitted, — the fact, that many of the odoriferous plants never enter into the composition of garlands, the iris and the saliunca, for example, although, both of them, of a most exquisite odour. In the iris, it is the root only that is held in esteem, it being extensively employed in perfumery and medicine. The iris of the finest quality is that found in Illyricum, and in that country, even, not in the maritime parts of it, but in the forests on the banks of the river Drilon and near Narona. The next best is that of Macedonia, the plant being extremely elongated, white, and thin. The iris of Africa occupies the third rank, being the largest of them all, and of an extremely bitter taste.

The iris of Illyricum comprehends two varieties — one of which is the raphanitis, so called from its resemblance to the radish, of a somewhat red colour, and superior in quality to the other, which is known as the "rhizotomus." The best kind of iris is that which produces sneezing when handled. The stem of this plant is a cubit in length, and erect, the flower being of various colours, like the rainbow, to which circumstance it is indebted for its name. The iris, too, of Pisidia is far from being held in disesteem. Persons who intend taking up the iris, drench the ground about it some three months before with hydromel, as though a sort of atonement offered to appease the earth; with the point of a sword, too, they trace three circles round it, and the moment they gather it, they lift it up towards the heavens.

The iris is a plant of a caustic nature, and when handled, it causes blisters like burns to rise. It is a point particularly recommended, that those who gather it should be in a state of chastity. The root, not only when dried, but while still in the ground, is very quickly attacked by worms. In former times, it was Leucas and Elis that supplied us with the best oil of iris, for there it has long been cultivated; at the present day, however, the best comes from Pamphylia, though that of Cilicia and the northern climates is held in high esteem.

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CHAP. 20.

THE SALIUNCA.

The saliunca has a rather short leaf, which does not admit of its being plaited for garlands, and numerous roots, by which it is held together; being more of a herb than a flower, and so closely matted and tangled that it would almost appear to have been pressed together with the hand — in short, it is a turf of a peculiar nature. This plant grows in Pannonia and the sunny regions of Noricum and the Alps, as also the vicinity of the city of Eporedia; the smell being so remarkably sweet that the crops of it have been of late quite as profitable as the working of a mine. This plant is particularly valued for the pleasant smell it imparts to clothes among which it is kept.

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CHAP. 21.

THE POLIUM, OR TEUTHRION.

It is the same, too, with the polium, a herb employed for a similar purpose among the Greeks, and highly extolled by Musæus and Hesiod, who assert that it is useful for every purpose, and more particularly for the acquisition of fame and honour; indeed, it is a truly marvellous production, if it is the fact, as they state, that its leaves are white in the morning, purple at midday, and azure at sunset. There are two varieties of it, the field polium, which is larger, and the wild, which is more diminutive. Some persons give it the name of "teuthrion." The leaves resemble the white hairs of a human being; they take their rise immediately from the root, and never exceed a palm in height.

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CHAP. 22. (8.)

FABRICS WHICH RIVAL THE COLOURS OF FLOWERS.

We have now said enough on the subject of the odoriferous flowers; in relation to which, luxury not only glories in having vanquished Nature in the composition of unguents, but has even gone so far as to challenge, in her fabrics, those flowers which are more particularly recommended by the beauty of their tints. I remark that the following are the three principal colours; the red, that of the kermes for instance, which, beginning in the tints of the rose, reflects, when viewed sideways and held up to the light, the shades that are found in the Tyrian purple, and the colours of the dibapha and Laconian cloths: the amethystine colour, which is borrowed from the violet, and to which, bordering as it does on the purple, we have given the name of "ianthinum" — it must, however, be remembered, that we here give a general name to a colour which is subdivided into numerous tints — and a third, properly known as the "conchyliated" colour, but which comprehends a variety of shades, such, for instance, as the tints of the heliotropium, and others of a deeper colour, the hues of the mallow, inclining to a full purple, and the colours of the late violet; this last being the most vivid, in fact, of all the conchyliated tints. The rival colours being now set side by side, Nature and luxury may enter the lists, to vie for the mastery.

I find it stated that, in the most ancient times, yellow was held in the highest esteem, but was reserved exclusively for the nuptial veils of females; for which reason it is perhaps that we do not find it included among the principal colours, those being used in common by males and females: indeed, it is the circumstance of their being used by both sexes in common that gives them their rank as principal colours.

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CHAP. 23.

THE AMARANTH.

There is no doubt that all the efforts of art are surpassed by the amaranth, which is, to speak correctly, rather a purple ear than a flower, and, at the same time, quite inodorous. It is a marvellous feature in this plant, that it takes a delight in being gathered; indeed, the more it is plucked, the better it grows. It comes into flower in the month of August, and lasts throughout the autumn. The finest of all is the amaranth of Alexandria, which is generally gathered for keeping; for it is a really marvellous fact, that when all the other flowers have gone out, the amaranth, upon being dipped in water, comes to life again: it is used also for making winter chaplets. The peculiar quality of the amaranth is sufficiently indicated by its name, it having been so called from the circumstance that it never fades.

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CHAP. 24.

THE CYANOS: THE HOLOCHRYSOS.

The name, too, of the cyanos indicates its colour, and so does that of the holochrysos. None of these flowers were in use in the time of Alexander the Great, for the authors, we find, who flourished at a period immediately after his decease, have made not the slightest mention of them; from which circumstance it is very clear that they only came into fashion at a later period. Still, however, who can entertain any doubt that they were first introduced by the Greeks, from the fact that Italy has only their Greek names by which to designate them?

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CHAP. 25.

THE PETILIUM: THE BELLIO.

But, by Hercules! it is Italy herself that has given its name to the petilium, an autumnal flower, which springs up in the vicinity of thorny brakes, and recommends itself solely by its colour, which is that of the wild rose. The petals of it are small, and five in number; and it is a remarkable circumstance in this plant, that the head of it droops at first, and it is only after it becomes erect that the petals make their appearance, forming a small corolla of various colours, enclosing a yellow seed.

The bellio, too, is a yellow flower, formed of fifty-five filaments circularly arranged, in the shape of a chaplet. These are, both of them, meadow flowers, which are mostly of no use whatever, and consequently without names: even the flowers just mentioned are known sometimes by one name, and sometimes by another.

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CHAP. 26.

THE CHRYSOCOME, OR CHRYSITIS.

The chrysocome, or chrysitis, has no Latin appellation: it is a palm in height, the flowers forming clusters of a golden colour. The root of it is black, and it has a taste both rough and sweet: it is found growing in stony and umbrageous spots.

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CHAP. 27. (9.)

SHRUBS, THE BLOSSOMS OF WHICH ARE USED FOR CHAPLETS.

Having thus passed in review nearly all the best-known colours, we must now give our attention to the chaplets which are pleasing merely on account of the variety of their materials. Of such chaplets there are two kinds, one composed of flowers, the other of leaves. The flowers so employed, I may say, are those of broom — the yellow blossom gathered from it — the rhododendron, and the jujube, also known as the tree of Cappadocia, which bears an odoriferous flower similar to that of the olive. Among the brambles, too, we find the cyclaminum growing, of which we shall have to speak more at length on a future occasion: its flower, which reflects the hues of the purple of Colossæ, is used as an ingredient in chaplets.

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CHAP. 28.

SHRUBS, THE LEAVES OF WHICH ARE USED FOR CHAPLETS.

The leaves, also, of smilax and ivy are employed in chaplets; indeed, the clusters of these plants are held in the very highest esteem for this purpose: we have already spoken of them at sufficient length when treating of the shrubs. There are also other kinds of shrubs, which can only be indicated by their Greek names, little attention having been paid by the framers of our language to this branch of nomenclature. Most of them grow in foreign countries, it is true; but still, it is our duty to make some mention of them, as it is of Nature in general that we are speaking, and not of Italy in particular.

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CHAP. 29.

THE MELOTHRON, SPIRÆA, AND ORIGANUM. THE CNEORUM OR CASSIA; TWO VARIETIES OF IT. THE MELISSOPHYLLUM OR MELITTÆNA. THE MELILOTE, OTHERWISE KNOWN AS CAMPANIAN GARLAND.

Thus it is, that we find employed for chaplets, the leaves of the melothron, spiræa, origanum, cneorum, by Hyginus called “cassia,” conyza or cunilago, melissophyllon or apiastrum, and melilote, known to us by the name of “Campanian garland,” the best kind of melilote in Italy being that of Campania, in Greece that of Cape Sunium, and next to that the produce of Chalcidice and Crete: but wherever this plant grows it is only to be found in rugged and wild localities. The name “sertula” or “garland,” which it bears, sufficiently proves that this plant was formerly much used in the composition of chaplets. The smell, as well as the flower, closely resembles that of saffron, though the stem itself is white; the shorter and more fleshy the leaves, the more highly it is esteemed.

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CHAP. 30.

THREE VARIETIES OF TREFOIL: THE MYOPHONUM.

The leaves of trefoil also are employed for making chaplets. There are three varieties: the first being called by the Greeks sometimes “minyanthes,” and sometimes “asphaltion;” the leaves of it, which the garland-makers employ, are larger than those of the other kinds. The second variety, known as the “oxytriphyllon,” has a pointed leaf; and the third has the smallest leaf of them all. Among these plants there are some which have a tough, sinewy stem, such as marathron, for instance, hippomarathron, and the myophonum. The umbels, too, of fennel-giant and the purple flowers of the ivy are employed for this purpose; as also another kind of ivy very similar to the wild rose, the colour only of which is attractive, the flower being quite inodorous. There are also two varieties used of the cneorum, the black and the white, this last being odoriferous: they are both of them provided with branches, and they blossom after the autumnal equinox.

(10.) There are the same number of varieties, also, of origanum employed in making chaplets, one of which is destitute of seed, the other, which is also odoriferous, being known as the Cretan origanum.

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CHAP. 31.

TWO VARIETIES OF THYME. PLANTS PRODUCED FROM BLOSSOMS AND NOT FROM SEED.

There are also as many varieties of thyme employed, the one white, the other dark: it flowers about the summer solstice, when the bees cull from it. From this plant a sort of augury is derived, as to how the honey is likely to turn out: for the bee-keepers have reason to look for a large crop when the thyme blossoms in considerable abundance. Thyme receives great injury from showers of rain, and is very apt to shed its blossom. The seed of thyme is so minute as to be imperceptible, and yet that of origanum, which is also extremely minute, does not escape the sight. But what matters it that Nature has thus concealed it from our view? For we have reason to conclude that it exists in the flower itself; which, when sown in the ground, gives birth to the plant — what is there, in fact, that the industry of man has left untried?

The honey of Attica is generally looked upon as the best in all the world; for which reason it is that the thyme of that country has been transplanted, being reproduced, as already stated, with the greatest difficulty, from the blossom. But there is also another peculiarity in the nature of the thyme of Attica, which has greatly tended to frustrate these attempts — it will never live except in the vicinity of breezes from the sea. In former times, it was the general belief that this is the case with all kinds of thyme, and that this is the reason why it does not grow in Arcadia: at a period when it was universally supposed, too, that the olive never grows beyond three hundred stadia from the sea. But, at the present day, we know for certain that in the province of Gallia Narbonensis the Stony Plains are quite overgrown with thyme; this being, in fact, the only source of revenue to those parts, thousands of sheep being brought thither from distant countries to browse upon the plant.

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CHAP. 32.

CONYZA.

There are two varieties of conyza, also, employed in making chaplets, the male plant and the female. The difference consists in the leaves, those of the female plant being thinner, more tapering, and narrower, and those of the male being of an imbricated shape, the plant having a greater number of branches. The blossom, too, of the male plant is more vivid than that of the female: in both kinds it is late in making its appearance, not till after the rising of Arcturus.

The smell of the male conyza is more powerful than that of the female plant: the latter, however, is of a more penetrating nature, for which reason it is that the female plant is held in higher esteem for the treatment of the bites of animals. The leaves of the female plant have exactly the smell of honey; and the root of the male has received the name of “libanotis” from some: we have already made mention of it on a previous occasion.

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CHAP. 33.

THE FLOWER OF JOVE. THE HEMEROCALLES. THE HELENIUM. THE PHLOX. PLANTS IN WHICH THE BRANCHES AND ROOTS ARE ODORIFEROUS.

Of the following plants, too, it is only the leaves that are employed for chaplets — the flower of Jove, the amaracus, the hemerocalles, the abrotonum, the helenium, sisymbrium, and wild thyme, all of them ligneous plants, growing in a manner similar to the rose. The flower of Jove is pleasing only for its colours, being quite inodorous; which is the case also with the plant known by the Greek name of "phlox." All the plants, too, which we have just mentioned are odoriferous, both in the branches and the leaves, with the sole exception of wild thyme. The helenium is said to have had its origin in the tears of Helen, and hence it is that the kind grown in the island of Helena is so highly esteemed. It is a shrub which throws out its tiny branches along the ground, some nine inches in length, with a leaf very similar to that of wild thyme.

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CHAP. 34.

THE ABROTONUM. THE ADONIUM: TWO VARIETIES OF IT. PLANTS WHICH REPRODUCE THEMSELVES. THE LEUCANTHEMUM.

The flower of the abrotonum, which makes its appearance in summer, has a powerful but agreeable smell; it is of a bright golden colour. Left to range at large, it reproduces itself by layers from the tops of the branches: but when it is propagated by the hand of man, it is better to grow it from the seed than from the roots or slips, though even from the seed it is not grown without considerable trouble. The young plants are transplanted in summer, which is the case also with the adonium. They are both of them plants of a very chilly nature, though, at the same time, they are apt to receive injury if too much exposed to the sun: when, however, they have gained sufficient strength, they throw out branches like those of rue.

The leucanthemum has a similar smell to that of the abrotonum: it is a foliated plant, with a white flower.

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CHAP. 35. (11.)

TWO VARIETIES OF THE AMARACUS.

Diodes, the physician, and the people of Sicily have given the name of “amaracus” to the plant known in Egypt and Syria as sampsuchum. It is reproduced two ways, from seed and from cuttings, being more long-lived than the preceding plants, and possessed of a more agreeable smell. The amaracus, like the abrotonum, has a great abundance of seed, but while the abrotonum has a single root, which penetrates deep into the ground, those of the other plant adhere but lightly to the surface of the earth. Those of the other plants which love the shade, water, and manure, are generally set at the beginning of autumn, and even, in some localities, in spring.

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CHAP. 36.

THE NYCTEGRETON, CHENOMYCHE, OR NYCTALOPS.

Democritus has regarded the nyctegreton as one of the most singular of plants. According to that author, it is of a dark red colour, has leaves like those of a thorn, and creeps upon the ground. He says that it grows in Gedrosia more particularly, and that it is taken up by the roots immediately after the vernal equinox, and dried in the moonlight for thirty days; after which preparation it emits light by night. He states also, that the Magi and the kings of Parthia employ this plant in their ceremonies when they make a vow to perform an undertaking; that another name given to it is "chenomyche," from the circumstance that, at the very sight of it, geese will manifest the greatest alarm; and that by some persons, again, it is known as the "nyctalops," from the light which it emits at a considerable distance by night.

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CHAP. 37.

WHERE THE MELILOTE IS FOUND.

The melilote is found growing everywhere, though that of Attica is held in the highest esteem. In all countries, however, it is preferred when fresh gathered; that too, the colour of which is not white, but approaches as nearly as possible to the colour of saffron. In Italy, however, it is the white kind that is the most odoriferous.

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CHAP. 38.

THE SUCCESSION IN WHICH FLOWERS BLOSSOM: THE SPRING FLOWERS. THE VIOLET. THE CHAPLET ANEMONE. THE ŒNANTHE. THE MELANION. THE HELICHRYSOS. THE GLADIOLUS. THE HYACINTH.

The first of the flowers that announce the approach of spring is the white violet; indeed, in warm localities, it is seen peeping out in the winter even. Next to it comes the violet known as the ion, and the purple violet; then the flame-coloured flower, the name of which is phlox, but only the wild one. The cyclaminum blossoms twice a year, in spring and autumn, standing equally in awe as it does of summer and of winter. The narcissus and the lily, in the parts beyond sea, are a little later than the preceding plants: but in Italy, as we have already stated, they are in blossom with the rose. In Greece, too, the anemone blooms even later; it is the flower of a wild bulb, and is altogether different from the one which we shall have occasion to mention among the medicinal plants.

Next, after these, come the œnanthe, the melanion, and, among the wild plants, the helichrysos; then, another kind of anemone, known as the "limonia," and after that the gladiolus, accompanied by the hyacinth. Last of all, among the spring flowers, is the rose, which, with the exception indeed of the cultivated kinds, is also the first to fade. Among the others, the flowers which last the longest, are the hyacinth, the white violet, and the œnanthe; but to make this last keep any time in flower, it is necessary to gather it repeatedly, to prevent it from running to seed. The œnanthe grows in warm localities, and has exactly the smell of the vine when in blossom, to which circumstance it is indebted for its name.

There are two fabulous stories attached to the hyacinth; according to one of them, it bears the impress of the grief which Apollo felt for the youth whom he had so tenderly loved; and we learn from the other, that it derives its name from the blood of Ajax, the veins being so arranged in the flower as to form the Greek letters αι inscribed upon it.

The helichrysos has a flower resembling gold in appearance, a

small leaf, and a fine, slender, but hard, stem. According to the Magi, the person who crowns himself with a chaplet composed of this flower, and takes his unguents from a box of gold, of the kind generally known as “apyron,” will be sure to secure esteem and glory among his fellowmen. Such are the flowers of spring.

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CHAP. 39.

THE SUMMER FLOWERS — THE LYCHNIS: THE TIPHYON. TWO VARIETIES OF THE POTHOS. TWO VARIETIES OF THE ORSI- NUM. THE VINCAPERIVINCA OR CHAMÆDAPHNE — A PLANT WHICH IS AN EVER-GREEN.

The summer flowers come next, the lychnis the flower of Jove, and another kind of lily, as also the tiphyon and the amaracus, surnamed that of Phrygia. But the most remarkable flower of all is the pothos, of which there are two varieties, one with the flower of the hyacinth, and another with a white flower, which is generally found growing about graves, and is better able to stand bad weather. The iris, also, blossoms in summer. All these flowers pass away, however, and fade; upon which others assume their places in autumn, a third kind of lily, for instance, saffron, and two varieties of the orsinum — one of them inodorous and the other scented — making their appearance, all of them, as soon as the first autumnal showers fall.

The garland-makers employ the flowers of the thorn even for making chaplets; the tender shoots, too, of the white thorn are sometimes preserved as a choice morsel to tempt the palate.

Such is the succession of the summer flowers in the parts beyond sea: in Italy, the violet is succeeded by the rose, the lily comes on while the rose is still in flower, the cyanus suc- ceeds the rose, and the amaranth the cyanus. As to the vin- capervinca, it is an evergreen, the branches from which run out like so many strings, the leaves surrounding the stem at each of the knots: though more generally used for the purposes of ornamental gardening, it is sometimes employed in chaplets when there is a deficiency of other flowers. From the Greeks this plant has received the name of “chamædaphne.”

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CHAP. 40.

THE DURATION OF LIFE IN THE VARIOUS KINDS OF FLOWERS.

At the very utmost, the white violet never lasts longer than three years: should it exceed that period, it is sure to degenerate. The rose-tree will last so long as five years without being pruned or cauterized, methods by which it is made to grow young again. We have already stated that the nature of the soil is of the very greatest importance; for in Egypt, we find, all these plants are perfectly inodorous, and it is only the myrtle that has any particular smell. In some countries, too, the germination of all the plants precedes that in other parts of the world by so long a period as two months even. The rose-beds should be well spaded immediately after the west winds begin to prevail, and, a second time, at the summer solstice: every care, however, should be paid, between these two periods, to keeping the ground well raked and cleaned.

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CHAP. 41. (12.)

PLANTS WHICH SHOULD BE SOWN AMONG FLOWERS FOR BEES. THE CERINTHA.

Bees and beehives, too, are a subject extremely well suited to a description of gardens and garland plants, while, at the same time, where they are successfully managed, they are a source, without any great outlay, of very considerable profit. For bees, then, the following plants should be grown — thyme, apiastrum, the rose, the various violets, the lily, the cytisus, the bean, the fitch, cunila, the poppy, conyza, cassia, the me- lilote, melissophyllum, and the cerintha. This last is a plant with a white leaf, bent inwards, the stem of it being a cubit in height, with a flower at the top presenting a concavity full of a juice like honey. Bees are remarkably fond of the flowers of these plants, as also the blossoms of mustard, a thing that is somewhat surprising, seeing that it is a well-known fact that they will not so much as touch the blossoms of the olive: for which reason, it will be as well to keep that tree at a distance from them.

There are other trees, again, which should be planted as near the hives as possible, as they attract the swarm when it first wings its flight, and so prevent the bees from wandering to any considerable distance.

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CHAP. 42.

THE MALADIES OF BEES, AND THE REMEDIES FOR THEM.

The greatest care, too, should be taken to keep the cornel at a distance from the hives: for if the bees once taste the blossoms of it, they will speedily die of flux and looseness. The best remedy in such case is to give them sorb apples beaten up with honey, or else human urine or that of oxen, or pomegranate seeds moistened with Aminean wine. It is a very good plan, too, to plant broom about the hives, the bees being extremely fond of the blossoms.

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CHAP. 43.

THE FOOD OF BEES.

In relation to the food of bees, I have ascertained a very singular fact, and one that well deserves to be mentioned. There is a village, called Hostilia, on the banks of the river Padus: the inhabitants of it, when food fails the bees in their vicinity, place the hives in boats and convey them some five miles up the river in the night. In the morning the bees go forth to feed, and then return to the boats; their locality being changed from day to day, until at last, as the boats sink deeper and deeper in the water, it is ascertained that the hives are full, upon which they are taken home, and the honey is withdrawn.

(13.) In Spain, too, for the same purpose, they have the hives carried from place to place on the backs of mules.

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CHAP. 44.

POISONED HONEY, AND THE REMEDIES TO BE EMPLOYED BY THOSE WHO HAVE EATEN OF IT.

Indeed, the food of bees is of the very greatest importance, as it is owing to this that we meet with poisonous honey even. At Heraclia in Pontus, the honey is extremely pernicious in certain years, though it is the same bees that make it at other times. Authors, however, have not informed us from what flowers this honey is extracted; we shall, therefore, take this opportunity of stating what we have ascertained upon the subject.

There is a certain plant which, from the circumstance that it proves fatal to beasts of burden, and to goats in particular, has obtained the name of "ægolcthron," and the blossoms of which, steeped in the rains of a wet spring, contract most noxious properties, Hence it is that it is not every year that these dangerous results are experienced. The following are the signs of the honey being poisonous: it never thickens, the colour is redder than usual, and it emits a peculiar smell which immediately produces sneezing; while, at the same time, it is more weighty than a similar quantity of good honey. Persons, when they have eaten of it, throw themselves on the ground to cool the body, which is bathed with a profuse perspiration. There are numerous remedies, of which we shall have occasion to speak in a more appropriate place; but as it will be as well to mention some of them on the present occasion, by way of being provided for such insidious accidents, I will here state that old honied wine is good, mixed with the finest honey and rue; salt meats, also, taken repeatedly in small quantities, and as often brought up again.

It is a well-known fact that dogs, after tasting the excretions of persons suffering from these attacks, have been attacked with similar symptoms, and have experienced the same kind of pains.

Still, however, it is equally well ascertained, that honied wine prepared from this honey, when old, is altogether innoxious; and that there is nothing better than this honey, mixed with costus, for softening the skin of females, or, combined with aloes, for the

treatment of bruises.

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CHAP. 45.

MADDENING HONEY.

In the country of the Sanni, in the same part of Pontus, there is another kind of honey, which, from the madness it produces, has received the name of "mænomenon." This evil effect is generally attributed to the flowers of the rhododendron, with which the woods there abound; and that people, though it pays a tribute to the Romans in wax, derives no profit whatever from its honey, in consequence of these dangerous properties. In Persis, too, and in Gætulia, a district of Mauritania Cœsariensis, bordering on the country of the Massæsyli, there are poisonous honeycombs found; and some, too, only partly so, one of the most insidious things that possibly could happen, were it not that the livid colour of the honey gives timely notice of its noxious qualities. What can we suppose to have possibly been the intention of Nature in thus laying these traps in our way, giving us honey that is poisonous in some years and good in others, poisonous in some parts of the combs and not in others, and that, too, the produce in all cases of the self-same bees? It was not enough, forsooth, to have produced a substance in which poison might be administered without the slightest difficulty, but must she herself administer it as well in the honey, to fall in the way of so many animated beings? What, in fact, can have been her motive, except to render mankind a little more cautious and somewhat less greedy?

And has she not provided the very bees, too, with pointed weapons, and those weapons poisoned to boot? So it is, and I shall, therefore, without delay, set forth the remedies to counteract the effects of their stings. It will be found a very excellent plan to foment the part stung with the juice of mallows or of ivy leaves, or else for the person who has been stung to take these juices in drink. It is a very astonishing thing, however, that the insects which thus carry these poisons in their mouths and secrete them, should never die themselves in consequence; unless it is that Nature, that mistress of all things, has given to bees the same immunity from the effects of poison which she has granted against the attacks of serpents to the

Psylli and the Marsi among men.

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CHAP. 46. (14.)

HONEY THAT FLIES WILL NOT TOUCH.

Another marvellous fact, again, connected with honey in Crete. Upon Mount Carma in that island, which is nine miles in circuit, there is not a fly to be found, and the honey that is made there no fly will touch. It is by this circum- stance that honey said to have come from that district is usually tested, it being highly prized for medicinal preparations.

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CHAP. 47.

BEEHIVES, AND THE ATTENTION WHICH SHOULD BE PAID TO THEM.

The hives ought to have an aspect due east, but never looking towards the north-east or the west. The best hives are those made of bark, the next best those of fennel-giant, and the next of osier: many persons, too, have them made of mirror-stone, for the purpose of watching the bees at work within. It is the best plan to anoint the hives all over with cow-dung. The lid of the hive should be made to slide from behind, so as to admit of being shut to within, in case the hive should prove too large or their labours unproductive; for, if this is not done, the bees are apt to become discouraged and abandon their work. The slide may then be gradually withdrawn, the increase of space being imperceptible to the bees as the work progresses. In winter, too, the hives should be covered with straw, and subjected to repeated fumigations, with burnt cow- dung more particularly. As this is of kindred origin with the bees, the smoke produced by it is particularly beneficial in killing all such insects as may happen to breed there, such as spiders, for instance, moths, and wood-worms; while, at the same time, it stimulates the bees themselves to increased activity. In fact, there is little difficulty in getting rid of the spiders, but to destroy the moths, which are a much greater plague, a night must be chosen in spring, just when the mallow is ripening, there being no moon, but a clear sky: flam- beaux are then lighted before the hives, upon which the moths precipitate themselves in swarms into the flame.

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CHAP. 48.

THAT BEES ARE SENSIBLE OF HUNGER.

If it is found that the bees are in want of aliment, it will be a good plan to place at the entrance of the hive raisins or dried figs beaten up, as also carded wool soaked in raisin wine, boiled must, or hydromel, and sometimes even the raw flesh of poultry. In certain summers, too, when long-con- tinued drought has deprived them of the nutriment which they usually derive from flowers, similar food must be provided for them.

When the honey is taken, the outlets of the hive should be well rubbed with melissophyllum or broom, beaten up, or else the middle of it should be encircled with bands of white vine, to prevent the bees from taking to flight. It is recommended, too, that the honey-pots and combs should be washed with water: this water, boiled, it is said, will make an extremely wholesome vinegar.

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CHAP. 49.

THE METHOD OF PREPARING WAX. THE BEST KINDS OF WAX. PUNIC WAX.

Wax is made from the honeycombs after the honey has been extracted. For this purpose, they are first cleaned with water, and then dried three days in the shade: on the fourth day they are melted on the fire in a new earthen vessel, with sufficient water to cover them, after which the liquor is strained off in a wicker basket. The wax is then boiled again with the same water and in the same pot, and poured into vessels of cold water, the interior of which has been well rubbed with honey. The best wax is that known as Punic wax, the next best being that of a remarkably yellow colour, with the smell of honey. This last comes from Pontus, and, to my surprise, it is in no way affected by the poisonous honey which it has contained. The next in quality is the Cretan wax, which contains the largest proportion of propolis, a substance of which we have previously made mention when treating of bees. Next to these varieties comes the Corsican wax, which, being the produce of the box-tree, is generally thought to be possessed of certain medicinal properties.

The Punic wax is prepared in the following manner: yellow wax is first blanched in the open air, after which it is boiled in water from the open sea, with the addition of some nitre. The flower of the wax, or, in other words, the whitest part of it, is then skimmed off with spoons, and poured into a vessel containing a little cold water. After this, it is again boiled in sea-water by itself, which done, the vessel is left to cool. When this operation has been three times repeated, the wax is left in the open air upon a mat of rushes, to dry in the light of the sun and moon; for while the latter adds to its whiteness, the sun helps to dry it. In order, however, that it may not melt, it is the practice to cover it with a linen cloth: if, when it has been thus refined, it is boiled once more, the result is a wax of the greatest possible whiteness.

Punic wax is considered the best for all medicinal preparations. Wax is made black by the addition of ashes of papyrus, and a red

colour is given to it by the admixture of alkanet; indeed, by the employment of various pigments, it is made to assume various tints, in which state it is used for making models, and for other purposes without number, among which we may mention varnishing walls and armour, to protect them from the air. We have given the other particulars relative to bees and honey, when speaking of the nature of those insects. We have now stated pretty nearly all that we have to say on the subject of the pleasure garden.

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CHAP. 50. (15.)

PLANTS WHICH GROW SPONTANEOUSLY: THE USE MADE OF THEM BY VARIOUS NATIONS, THEIR NATURE, AND REMARKABLE FACTS CONNECTED WITH THEM. THE STRAW- BERRY, THE TAMNUS, AND THE BUTCHER'S BROOM. THE BATIS, TWO VARIETIES OF IT. THE MEADOW PARSNIP. THE HOP.

We now come to the plants which grow spontaneously, and which are employed as an aliment by most nations, the people of Egypt in particular, where they abound in such vast quantities, that, extremely prolific as that country is in corn, it is perhaps the only one that could subsist without it: so abundant are its resources in the various kinds of food to be obtained from plants.

In Italy, however, we are acquainted with but very few of them; those few being the strawberry, the tamnus, the butcher's broom, the sea batis, and the garden batis, known by some persons as Gallic asparagus; in addition to which we may mention the meadow parsnip and the hop, which may be rather termed amusements for the botanist than articles of food.

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CHAP. 51.

THE COLOCASIA.

But the plant of this nature that is the most famous in Egypt is the colocasia, known as the “cyamos” to some. It is gathered in the river Nilus, and the stalk of it, boiled, separates into fine filaments when chewed, like those of the spider’s web. The head, protruding from among the leaves, is very remarkable; and the leaves, which are extremely large, even when compared with those of trees, are very similar to those of the plant found in our rivers, and known by the name of “personata.” So much do the people of that country take advantage of the bounteousness displayed by their river, that they are in the habit of plaiting the leaves of the colocasia with such skill as to make vessels of various shapes, which they are extremely fond of using for drinking vessels. At the present day, however, this plant is cultivated in Italy.

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CHAP. 52.

THE CICHORIUM. THE ANTHALIUM OR ANTICELLIUM, OR ANTHYLLUM. THE ŒTUM. THE ARACHIDNA. THE ARACOS. THE CANDRYALA. THE HYPOCHŒRIS. THE CAUCALIS. THE ANTHRISCUM. THE SCANDIX. THE TRAGOPOGON. THE PAR- THENIUM OR LEUCANTHES, AMARACUS, PERDICIUM, OR MURALIS. THE TRYCHNUM OR STRYCHNUM, HALICACABUM, CALLIAS, DOR- YCNION, MANICON, PERITTON, NEURAS, MORIO, OR MOLY. THE CORCHORUS. THE APHACE. THE ACYNOPOS. THE EPIPETRON. PLANTS WHICH NEVER FLOWER. PLANTS WHICH ARE ALWAYS IN FLOWER.

In Egypt, next to the colocasia, it is the cichorium that is held in the highest esteem, a plant which we have already spoken of under the name of wild endive. It springs up after the rising of the Vergiliæ, and the various portions of it blossom in succession: the root is supple, and hence is used for making withes even. The anthalium grows at a greater distance from the river; the fruit of it is round, and about the size of a medlar, but without either kernel or rind; the leaves of the plant are similar to those of the cyperus. The people there eat the fruit of it cooked upon the fire, as also of the œtum, a plant which has a few leaves only, and those extremely diminutive, though the root is large in proportion. The arachidna, again, and the aracos have numerous branchy roots, but neither leaves nor any herbaceous parts, nor, indeed, anything that makes its appearance above ground.

The other plants that are commonly eaten in Egypt are the chondrylla, the hypochœris, the caucalis, the anthriscum the scandix, the come, by some persons known as the tragopogon, with leaves very similar to those of saffron, the par- thenium, the trychnum, and the corchorus; with the aphace and acynopos, which make their appearance at the equinox. There is a plant also, called the epipetron, which never blossoms; while the aphace, on the other hand, as its flowers die, from time to time puts forth fresh ones, and remains in blossom throughout the winter and the spring, until the following summer.

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CHAP. 53.

FOUR VARIETIES OF THE CNECOS.

The Egyptians have many other plants also, of little note; but they speak in the highest terms of the cnecos; a plant unknown to Italy, and which the Egyptians hold in esteem, not as an article of food, but for the oil it produces, and which is extracted from the seed. The principal varieties are the wild and the cultivated kinds; of the wild variety, again, the are two sorts, one of which is less prickly than the other, but with a similar stem, only more upright: hence it is that in former times females used it for distaffs, from which circumstance it has received the name of “atractylis” from some; the seed of it is white, large, and bitter. The other variety is more prickly, and has a more sinewy stem, which may be said almost to creep upon the ground; the seed is small. The cnecos belongs to the thorny plants: indeed, it will be as well to make some classification of them.

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CHAP. 54.

PLANTS OF A PRICKLY NATURE: THE ERYNGE, THE GLYCYRRIZA, THE TRIBULUS, THE ANONIS, THE PHEOS OR STŒBE, AND THE HIPPOPHAES.

For some plants, in fact, are thorny, while others, again, are destitute of prickles: the species of thorny plants are very numerous. The asparagus and the scorpio are essentially thorny plants, having no leaves at all upon them. Some plants, again, that are prickly have leaves as well, such as the thistle, for instance, the erynge, the glycyrriza, and the nettle; all these plants being provided with leaves that prick or sting.

Some plants have thorns at the base of their leaves, the tribulus and the anonis for instance; others, again, have thorns, not on the leaves but on the stem, the pheos for example, known as the stœbe to some. The hippophaës has thorns at the joints; the tribulus presents the peculiarity of bearing a fruit that is thorny.

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CHAP. 55.

FOUR VARIETIES OF THE NETTLE. THE LAMIUM AND THE SCORPIO.

But of all these plants, it is the nettle that is the best known to us, the calyces of the blossoms of which produce a purple down: it frequently exceeds two cubits even in height. There are numerous varieties of this plant; the wild nettle, known also as the female nettle, does not inflict so bad a sting as the others. Among the several varieties of the wild nettle, the one known as the dog-nettle, stings the worst, the stem of it even possessing that property; the leaves of the nettle are indented at the edge. There is one kind also, which emits a smell, known as the Herculanean nettle. The seed of all the nettles is copious, and black. It is a singular fact that, though possessed of no spinous points, the down of the nettle is of a noxious nature, and that, though ever so lightly touched, it will immediately produce an itching sensation, and raise a blister on the flesh similar in appearance to a burn: the well-known remedy for it is olive oil.

The stinging property of the nettle does not belong to the plant at the earliest period of its growth, but only developes itself under the influence of the sun. The plant first begins to grow in the spring, at which period it is by no means a disagreeable food; indeed, it has become quite a religious observance to employ it as such, under the impression that it is a preventive from diseases the whole year through. The root, too, of the wild nettle, has the effect of rendering all meat more tender that is boiled with it. The kind that is innoxious and destitute of all stinging properties, is known as the “la- mium.” Of the scorpio we shall have occasion to speak when treating of the medicinal plants.

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CHAP. 56. (16).

THE CARDUUS, THE ACORNA, THE PHONOS, THE LEUCACANTHOS, THE CHALCEOS, THE CNECOS, THE POLYACAN- THOS, THE ONOPYXOS, THE HELXINE, THE SCOLYMOS, THE CHA- MÆLEON, THE TETRALIX, AND ACANTHICE MASTICHE.

The carduus has leaves and a stem covered with a prickly down; the same is the case, too, with the acorna, the leucacanthos, the chalceos, the cnecos, the polyacanthos, the onopyxos, the helxine, and the scolymos; the chamæleon, however, has no prickles upon the leaves. There is, however, this difference among these plants, that some of them have numerous stems and branches, such as the carduus, for instance; while others, again, have a single stem and no branches, the cnecos, for example. Some, again, such as the erynge, are prickly at the head only; and some blossom in the summer, the tetralix and the helxine, for instance. The scolymos blossoms late, and remains a considerable period in flower: the acorna being distinguished only for its red colour and its unctuous juice. The atractylis would be similar in every respect to the last, were it not that it is somewhat whiter, and produces a juice the colour of blood, a circumstance to which it owes the name of "phonos," given to it by some. The smell of this plant is powerful, and the seed only ripens at a late period, and never before autumn, although the same may be said of all the prickly plants, in fact. All of them are capable, however, of being reproduced from either seed or root.

The scolymos, which belongs to the thistle genus, differs from the rest of them in the circumstance that the root of it is boiled and eaten. It is a singular fact that this genus of plants bears blossoms, buds, and fruit the whole of the summer through, without any interruption: when the leaf is dried, the prickles lose their pungency. The helxine is a plant but rarely seen, and in some countries only. It throws out leaves at the root, from the middle of which there is a protuberance in the shape of an apple, covered with leaves of its own: the head of it contains a thick juice, of a sweet flavour, the name given to which is "acanthice mastiche."

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CHAP. 57.

THE CACTOS; THE PIERNIX, PAPPUS, AND ASCALIAS.

The cactos, too, is a plant that grows only in Sicily, having peculiar characteristics of its own: the root throws out stalks which creep along the ground, the leaves being broad and thorny. The name given to these stalks is “cactos,” and they are not disliked as an article of food, even when old. The plant, however, has one stem which grows upright, and is known by the name of “pternix;” it has the same sweet flavour as the other parts, though it will not keep. The seed of it is covered with a kind of down, known as “pappus:” when this is removed, as well as the rind of the fruit, it is tender, and like the pith of the palm: the name given to it is “ascalias.”

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CHAP. 58.

THE TRIBULUS: THE ANONIS.

The tribulus grows nowhere except in marshy places though held in abomination elsewhere, it is employed on the banks of the Nilus and Strymon as an article of food. It always bends towards the water, and has a leaf like that of the elm, with a long stalk. In other parts of the world there are two varieties of this plant; the one with leaves like those of the chicheling vetch, the other with leaves protected by prickles. This last variety blossoms also at a later period than the other, and is mostly found in the hedge-rows about farm-houses. The seed of it is black, rounder than that of the other, and enclosed in pods: that of the other variety bears a resemblance to sand.

Among the prickly plants there is also another kind, known as the "anonis:" indeed, it has thorns upon the branches, to which leaves are attached similar to those of rue, the stem being entirely covered also with leaves, in form resembling a garland. It comes up in land that has been newly ploughed, being highly prejudicial to the corn, and long-lived in the extreme.

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CHAP. 59.

PLANTS CLASSIFIED ACCORDING TO THEIR STEMS: THE CORONOPUS, THE ANCHUSA, THE ANTHEMIS, THE PHYLLANTHES, THE CREPIS, AND THE LOTUS.

Some, again, among the prickly plants have a stem which creeps along the ground, that, for instance, known as the “coronopus.” On the other hand, the anchusa, the root of which is employed for dyeing wood and wax, has an upright stem; which is the case also with some of the plants that are prickly in a less degree, the anthemis, for example, the phyl- lanthes, the anemone, and the aphace: the crepis, again, and the lotus, have a foliated stem.

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CHAP. 60.

PLANTS CLASSIFIED ACCORDING TO THEIR LEAVES. PLANTS WHICH NEVER LOSE THEIR LEAVES: PLANTS WHICH BLOSSOM A LITTLE AT A TIME: THE HELIOTROPIUM AND THE ADIANTUM, THE REMEDIES DERIVED FROM WHICH WILL BE MENTIONED IN THE FOLLOWING BOOK.

The leaves of plants, as well as those of trees, differ from one another in the length of the footstalk, and in the breadth or narrowness of the leaf, and the angles and indentations perceptible on its edge. Other differences are also constituted in respect of their smell and blossom. The blossom remains on longer in some of those plants which flower only a little at a time, such as the ocimum, the heliotropium, the aphace, and the onochilis, for example.

(17.) Many of these plants, the same as certain among the trees, never lose their leaves, the heliotropium, the adiantum and the polium, for instance.

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CHAP. 61.

THE VARIOUS KINDS OF EARED PLANTS: THE STAN- YOPS; THE ALOPECUROS; THE STELEPHUROS, ORTYX, OR PLAN- TAGO; THE THRYALLIS.

The eared plants form another variety: among them we find the cynops, the alopecuros, the stelephuros, also known to some persons as the ortyx, and to others as the plantago, of which last we shall have occasion to speak more at length among the medicinal plants, and the thryallis. The alopecuros, among these, has a soft ear and a thick down, not unlike a fox's tail in fact, to which resemblance it owes its name. The plant most like it is the stelephuros, were it not that it blossoms only a little at a time. In the cichorium and similar plants, the leaves are near the ground, the buds springing from the root just after the rising of the Vergiliæ.

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CHAP. 62

THE PERDICIUM. THE ORNITHOGALE.

It is not in Egypt only that the perdicium is eaten; it owes its name to the partridge, which bird is extremely fond of digging it up. The roots of it are thick and very numerous: and so, too, with the ornithogale, which has a tender white stalk, and a root half a foot in thickness, bulbous, soft, and provided with three or four other offsets attached to it. It is generally used boiled in pottage.

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CHAP. 63.

PLANTS WHICH ONLY MAKE THEIR APPEARANCE AT THE END OF A YEAR. PLANTS WHICH BEGIN TO BLOSSOM AT THE TOP. PLANTS WHICH BEGIN TO BLOSSOM AT THE LOWER PART.

It is a remarkable thing that the herb lotus and the ægilops never make their appearance above ground till the end of a year after the seed has been sown. The anthemis, too, offers the singular peculiarity that it begins to blossom at the top, while in all the other plants which flower gradually, it is at the lower part that the blossom first makes its appearance.

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CHAP. 64.

THE LAPPA, A PLANT WHICH PRODUCES WITHIN ITSELF. THE OPUNTIA, WHICH THROWS OUT A ROOT FROM THE LEAF.

In the lappa, too, which clings so tenaciously, there is this remarkable peculiarity, that within it there grows a flower, which does not make its appearance, but remains concealed and there produces the seed, like those among the animals which produce within themselves. In the vicinity of Opus there grows a plant which is very pleasant eating to man, and the leaf of which, a most singular thing, gives birth to a root by means of which it reproduces itself.

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CHAP. 65.

THE IASIONE. THE CHONDRYLLA. THE PICRIS, WHICH REMAINS IN FLOWER THE WHOLE YEAR THROUGH.

The iasione has a single leaf only, but that so folded and involved, as to have all the appearance of being several in number. The chondrylla is bitter, and the juice of the root is of an acrid taste. The aphace, too, is bitter, and so is the plant called “picris,” which also remains in flower the whole year through: it is to this bitterness that it is indebted for its name.

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CHAP. 66.

PLANTS IN WHICH THE BLOSSOM MAKES ITS APPEAR- ANCE BEFORE THE STEM. PLANTS IN WHICH THE STEM APPEARS BEFORE THE BLOSSOM. PLANTS WHICH BLOSSOM THREE TIMES IN THE YEAR.

The peculiarities also of the squill and saffron deserve remark; for while all other plants put forth their leaves first, and then a round stem, these show the stem before the leaf makes its appearance: in the saffron, however, the blossom is protruded by the stem, but in the squill it is the stem that first makes its appearance, and then the flower emerges from it. This plant blossoms three times in the year, indicating thereby, as previously stated, the three seasons for ploughing.

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CHAP. 67.

THE CYPIROS. THE THESION.

Some authors reckon among the bulbs the root of the cypiros, or gladiolus; it is a pleasant food, and when boiled and kneaded up with bread, makes it more agreeable to the taste, and at the same time more weighty. Not unlike it in appear- ance is the plant known to us as the “thesion,” but it is of an acrid flavour.

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CHAP. 68.

THE ASPHODEL, OR ROYAL SPEAR. THE ANTHERICUS OR ALBUCUS.

Other plants of the bulbous kind differ in the leaf: that of the asphodel is long and narrow, that of the squill broad and supple, and the form of that of the gladiolus is bespoken by its name. The asphodel is used as an article of food, the seed of it being parched, and the bulb roasted; this last, however, should be cooked in hot ashes, and then eaten with salt and oil. It is beaten up also with figs, and forms, as Hesiod assures us, a very delicate dish. It is said, too, that the asphodel, planted before the doors of a farm-house, will act as a preservative against the effects of noxious spells.

Homer, too, makes mention of the asphodel. The bulbs of it are like moderately-sized turnips, and there is no plant the root of which has more of them, as many as eighty bulbs being often grouped together. Theophrastus, and nearly all the Greek writers, with Pythagoras at the head of them, have given the name of "anthericos" to its stem, which is one cubit, and often two, in length, the leaves being very similar to those of the wild leek; it is to the root, or in other words, the bulbs, that they have given the name of asphodel. The people of our country call this plant "albucus," and they give the name of "royal spear" to the asphodel the stem of which bears berries, thus distinguishing two varieties of it. The albucus has a stalk a cubit in length, large, naked, and smooth, in reference to which, Mago recommends that it should be cut at the end of March and the beginning of April, the period at which it blossoms, and before the seed has begun to swell; he says, too, that the stalks should be split, and exposed on the fourth day in the sun, after which, when dry, they should be made up into bundles.

The same author states, also, that the Greeks give the name of "pistana" to the aquatic plant known to us as the "sagitta;" and he recommends that it should be stripped of its bark, and dried in a mild sun, between the ides of May and the end of October. He says, too, that it is usual to cut down to the root, throughout all the month of July, the variety of the gladiolus called "cypiros," which is a marsh-

plant also, and at the end of three days to dry it in the sun, until it turns white; but that care must be taken every day to carry it under cover before sunset, the night dews being very injurious to marsh plants when cut.

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CHAP. 69. (18.)

SIX VARIETIES OF THE RUSH: FOUR REMEDIES DERIVED FROM THE CYPIROS.

Mago has likewise given similar recommendations as to the rush known to us as the "mariscus," and which is so extensively employed for weaving mats. He says that it should be gathered in the month of June, up to the middle of July, and for drying it he gives the same precepts that have been already mentioned, in the appropriate place, when speaking of sedge. He describes a second kind, also, which I find is generally called the "marine" rush, and is known to the Greeks as the "oxyschœnos."

Generally speaking, there are three varieties of this last rush: the pointed rush, which is barren, and by the Greeks is called the male rush and the "oxys:" the female rush, which bears a black seed, and is called the "melancranis," thicker and more bushy than the preceding one: and a third kind, called the "holoschœbnus," which is larger still. Of these varieties, the melancranis grows separately from the others, but the oxys and the holoschœnus will grow upon the self-same clod. The holoschœnus is the most useful for all kinds of basket-work, being of a particularly supple and fleshy nature; it bears a fruit, which resembles eggs attached to one another. The rush, again, which we have spoken of as the male rush, is reproduced from itself, the summit of it being bent down into the earth; the melancranis, however, is propagated from seed. Beyond this, the roots of all the varieties of the rush die every year.

The rush is in general use for making kipes for sea-fishing, the more light and elegant kinds of basket-work, and the wicks of lamps, for which last purpose the pith is more particularly employed. In the vicinity of the maritime Alps, the rushes grow to such a vast size, that when split they measure nearly an inch in diameter; while in Egypt, on the other hand, they are so extremely fine, that the people there make sieves of them, for which, indeed, there can be nothing better.

Some authors, again, distinguish another kind of rush, of a

triangular shape, to which they give the name of cyperos, though many persons make no distinction between it and the “cypiros,” in consequence of the resemblance of the names; for our own part, however, we shall observe the distinction. The cypiros, as we have already stated, is identical with the gladiolus, a plant with a bulbous root, the most esteemed being those grown in the Isle of Crete, the next best those of Naxos, and the next those of Phœnicia. The cypiros of Crete is white, with an odour strongly resembling that of nard; the produce of Naxos has a more pungent smell, that of Phœnicia but little odour of any kind, and that of Ægypt none at all for it grows in that country as well.

This plant disperses hard tumours of the body — for we shall here begin to speak of the remedies derived from the various flowers and odoriferous plants, they being, all of them, of very considerable utility in medicine. As to the cypiros, then, I shall follow Apollodorus, who forbids it to be taken in drink, though at the same time he admits that it is extremely useful for calculi of the bladder, and recommends it in fomentations for the face. He entertains no doubt, however, that it is pro- ductive of abortion, and he mentions, as a remarkable fact, that the barbarians, by inhaling the fumes of this plant at the mouth, thereby diminish the volume of the spleen. They never go out of the house, he says, till they have inhaled these fumes, through the agency of which they daily become stronger and stronger, and more robust. He states, also, that the cypiros, employed as a liniment with oil, is an undoubted remedy for chafing of the skin, and offensive odours of the arm-pits.

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CHAP. 70.

THE CYPEROS: FOURTEEN REMEDIES. THE CYPERIS. THE CYPIRA.

The cyperos, as we have just stated, is a rush of angular shape, white near the ground, and black and solid at the top. The lower leaves are more slender than those of the leek, and those at the top are small, with the seed of the plant lying between them. The root resembles a black olive, and when it is of an oblong shape, the plant is known as the "cyperis," being employed in medicine to a great extent. The cyperos most highly esteemed is that of the vicinity of the Temple of Jupiter Hammon, the next best being that of Rhodes, the next that of Thrsæ, and the worst of all that of Egypt, a circumstance which tends greatly to add to the misunderstanding on the subject, as that country produces the cypiros as well: but the cypiros which grows there is extremely hard, and has hardly any smell at all, while all the other varieties of it have an odour strongly resembling that of nard.

There is also an Indian plant, called the "cypira," of a totally different character, and similar to ginger in appearance; when chewed, it has exactly the flavour of saffron.

The cyperos, employed medicinally, is possessed of certain depilatory properties. It is used in liniments for hang-nails and ulcerous sores of the genitals and of all parts of the body which are of a humid nature, ulcers of the mouth, for instance. The root of it is a very efficacious remedy for the stings of serpents and scorpions. Taken in drink, it removes obstructions of the uterus, but if employed in too large doses, it is liable to cause prolapsus of that organ. It acts also as a diuretic, and expels calculi of the bladder; properties which render it extremely useful in dropsy. It is employed topically, also, for serpiginous ulcers, those of the throat more particularly, being usually applied with wine or vinegar.

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CHAP. 71.

THE HOLOSCHŒNUS.

The root of the rush, boiled down to one third in three heminæ of water, is a cure for cough; the seed of it, parched and taken in water, arrests looseness of the bowels and the menstrual discharge, though at the same time it causes headache. The name given to this rush is holoschœnus; the parts of it nearest the root are chewed, as a cure for the bites of spiders.

I find mention made, also, of one other kind of rush, the name of which is “euripice;” the seed, they say, is narcotic, but the greatest care is necessary, not to throw the patient into a lethargy.

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CHAP. 72.

TEN REMEDIES DERIVED FROM THE SWEET-SCENTED RUSH, OR TEUCHITES.

We will also take this opportunity of mentioning the medicinal properties of the sweet-scented rush, which is found in Cœle-Syria, as already stated by us in the appropriate place The most esteemed kind, however, is that which grows in the country of the Nabatæi, and is known as the “teuchites;” the next best being the produce of Babylonia, and the very worst that of Africa, which is entirely destitute of smell. This rush is round, and when applied to the tongue, has a pungent, vinous flavour. The genuine kind, when rubbed, gives out an odour like that of the rose, and when broken asunder it is red within. It dispels flatulency, and hence it is very good for the stomach, and for persons when vomiting the bile or blood. It arrests hiccup also, promotes eructations, acts as a diuretic, and is curative of affections of the bladder. A decoction of it is used for female complaints; and in cases of opisthotony, it is applied in plasters with dry resin, these being highly valued for their warming properties.

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CHAP. 73.

REMEDIES DERIVED FROM THE FLOWERS BEFORE MEN- TIONED: THIRTY-TWO REMEDIES DERIVED FROM THE ROSE.

The rose is of an astringent and refreshing nature. For medicinal purposes the petals, the flowers, and the heads are used. Those portions of the petals which are quite white are known as the unglets. In the flower there is the seed, as distinguished from the filaments, and in the head there is the bud, as well as the calyx. The petals are dried, or else the juice is extracted from them, by one of the three following methods: Either the leaves are employed whole for the purpose, the unglets not being removed — for these are the parts, in fact, that contain the most juice — or else the unglets are first taken off and the residue is then macerated with oil or wine, in glass vessels placed in the sun. Some persons add salt as well, and others alkanet, or else aspalathus or sweetscented rush; as it is, when thus prepared, a very valuable remedy for diseases of the uterus and for dysentery. According to the third process, the unglets are removed from the petals, and pounded, after which they are subjected to pressure in a coarse linen cloth, the juice being received in a copper vessel; it is then boiled on a slow fire, until it has acquired the consistence of honey; for this purpose, however, the most odoriferous of the petals should be selected.

(19.) We have already stated, when speaking of the various kinds of wines, how rose wine is made. Rose juice is much used in injections for the ears, and as a gargle for ulcerations of the mouth, and for the gums and tonsils; it is employed also for the stomach, maladies of the uterus, diseases of the rectum, and for head-ache. In fevers, it is used, either by itself or in combination with vinegar, as a remedy for sleeplessness and nausea. The petals, charred, are used as a cosmetic for the eyebrows; and the thighs, when chafed, are rubbed with them dried; reduced to powder, too, they are soothing for defluxions of the eyes. The flower of the rose is soporific, and taken in oxycrate it arrests fluxes in females, the white flux in particular; also spitting of blood, and pains in the stomach, if taken in three

cyathi of wine, in sufficient quantity to flavour it.

As to the seed of the rose, the best is that which is of a saffron colour, and not more than a year old; it should be dried, too, in the shade. The black seed is worthless. In cases of tooth-ache, the seed is employed in the form of a liniment; it acts also as a diuretic, and is used as a topical application for the stomach, as also in cases of erysipelas which are not inveterate: inhaled at the nostrils, it has the effect of clearing, the brain. The heads of roses, taken in drink, arrest looseness of the bowels and hæmorrhage. The unglets of the rose are wholesome in cases of defluxion of the eyes; but the rose is very apt to taint all ulcerous sores of the eyes, if it is not applied at the very beginning of the defluxion, dried, and in combination with bread. The petals, too, taken internally, aro extremely wholesome for gnawing pains of the stomach, and for maladies of the abdomen or intestines; as also for the thoracic organs, if applied externally even: they are preserved, too, for eating, in a similar manner to apathum. Great care must be taken in drying rose-leaves, as they are apt to turn mouldy very quickly.

The petals, too, from which the juice has been extracted, may be put to some use when dried: powders, for instance, may be made from them, for the purpose of checking the perspiration. These powders are sprinkled on the body, upon leaving the bath, and are left to dry on it, after which they are washed off with cold water. The little excrescences of the wild rose, mixed with bears'-grease, are a good remedy for alopecy.

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CHAP. 74.

TWENTY-ONE REMEDIES DERIVED FROM THE LILY.

The roots of the lily ennoble that flower in manifold ways by their utility in a medicinal point of view. Taken in wine, they are good for the stings of serpents, and in cases of poisoning by fungi. For corns on the feet, they are applied boiled in wine, not being taken off before the end of three days. A decoction of them with grease or oil, has the effect of making the hair grow again upon burns. Taken with honied wine, they carry off corrupt blood by stool; they are good, also, for the spleen and for hernia, and act as an emmenagogue. Boiled in wine and applied with honey, they are curative of wounds of the sinews. They are good, too, for lichens, leprous sores, and scurf upon the face, and they efface wrinkles of the body.

The petals of the lily are boiled in vinegar, and applied, in combination with polium, to wounds; if it should happen, however, to be a wound of the testes, it is the best plan to apply the other ingredients with henbane and wheat-meal. Lily-seed is applied in cases of erysipelas, and the flowers and leaves are used as a cataplasm for inveterate ulcers. The juice which is extracted from the flower is called “honey” by some persons, and “syrium” by others; it is employed as an emollient for the uterus, and is also used for the purpose of promoting perspirations, and for bringing suppurations to a head.

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CHAP. 75.

SIXTEEN REMEDIES DERIVED FROM THE NARCISSUS.

Two varieties of the narcissus are employed in medicine, the one with a purple flower, and the herbaceous narcissus. This last is injurious to the stomach, and hence it is that it acts both as an emetic and as a purgative: it is prejudicial, also, to the sinews, and produces dull, heavy pains in the head: hence it is that it has received its name, from "narce," and not from the youth Narcissus, mentioned in fable. The roots of both kinds of narcissus have a flavour resembling that of wine mixed with honey. This plant is very useful, applied to burns with a little honey, as also to other kinds of wounds, and sprains. Applied topically, too, with honey and oatmeal, it is good for tumours, and it is similarly employed for the extraction of foreign substances from the body.

Beaten up in polenta and oil it effects the cure of contusions and blows inflicted by stones; and, mixed with meal, it effectually cleanses wounds, and speedily removes black morphews from the skin. Of this flower oil of narcissus is made, good for softening indurations of the skin, and for warming parts of the body that have been frost-bitten. It is very beneficial, also, for the ears, but is very apt to produce head-ache.

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CHAP. 76.

SEVENTEEN REMEDIES DERIVED FROM THE VIOLET.

There are both wild and cultivated violets. The purple violet is of a cooling nature: for inflammations they are applied to the stomach in the burning heats, and for pains in the head they are applied to the forehead. Violets, in particular, are used for defluxions of the eyes, prolapsus of the fundament and uterus, and suppurations. Worn in chaplets upon the head, or even smelt at, they dispel the fumes of wine and headache; and, taken in water, they are a cure for quinsy. The purple violet, taken in water, is a remedy for epilcpsy, in children more particularly: violet seed is good for the stings of scorpions.

On the other hand, the flower of the white violet opens suppurations, and the plant itself disperses them. Both the white and the yellow violet check the menstrual discharge, and act as diuretics. When fresh gathered, they have less virtue, and hence it is that they are mostly used dry, after being kept a year. The yellow violet, taken in doses of half a cyathus to three cyathi of water, promotes the eatamenia; and the roots of it, applied with vinegar, assuage affections of the spleen, as also the gout. Mixed with myrrh and saffron, they are good for inflammation of the eyes. The leaves, applied with honey, cleanse ulcerous sores of the head, and, combined with cerate, they are good for chaps of the fundament and other moist parts of the body. Employed with vinegar, they effect the cure of abscesses.

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CHAP. 77.

SEVENTEEN REMEDIES DERIVED FROM THE BACCHAR. ONE REMEDY DERIVED FROM THE COMBRETUM.

The bacchar that is used in medicine is by some of our writers called the “perpressa.” It is very useful for the stings of serpents, head-ache and burning heats in the head, and for defluxions of the eyes. It is applied topically for swellings of the mamillæ after delivery, as also incipient fistulas of the eyes, and erysipelas; the smell of it induces sleep. It is found very beneficial to administer a decoction of the root for spasms, falls with violence, convulsions, and asthma. For an inveterate cough, three or four roots of this plant are boiled down to one-third; this decoction acting also as a purgative for women after miscarriage, and removing stitch in the side, and calculi of the bladder. Drying powders for perspiration are prepared also from this plant; and it is laid among garments for the smell. The combretum which we have spoken of as resembling the bacchar, beaten up with axle-grease, is a marvellous cure for wounds.

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CHAP. 78.

EIGHT REMEDIES DERIVED FROM ASARUM.

It is generally stated that asarum is good for affections of the liver, taken in doses of one ounce to a semisextarius of honied wine mixed with water. It purges the bowels like hellebore, and is good for dropsy and affections of the thoracic organs and uterus, as also for jaundice. When mixed with must, it makes a wine with strongly diuretic qualities. It is taken up as soon as it begins to put forth its leaves, and is dried in the shade. It is apt however to turn mouldy very speedily.

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CHAP. 79. (20.)

EIGHT REMEDIES DERIVED FROM GALLIC NARD.

Some authors, as we have already stated, having given the name of "field nard" to the root of the bacchar, we will here mention the medicinal properties of Gallic nard, of which we have already spoken, when treating of the foreign trees, deferring further notice of it till the present occasion. In doses of two drachmæ, taken in wine, it is good for the stings of serpents; and taken in water or in wine it is employed for inflations of the colon, maladies of the liver or kidneys, and suffusions of the gall. Employed by itself or in combination with wormwood it is good for dropsy. It has the property, also, of arresting excessive discharges of the catamenia.

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CHAP. 80.

FOUR REMEDIES DERIVED FROM THE PLANT CALLED “PHU.”

The root of the plant which we have mentioned in the same place under the name of “phu,” is given in drink, either bruised or boiled, in cases of hysterical suffocation, and for pains of the chest or sides. It acts as an emmenagogue, and is generally taken in wine.

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CHAP. 81.

TWENTY REMEDIES DERIVED FROM SAFFRON.

Saffron does not blend well with honey, or, indeed, with any sweet substance, though very readily with wine or water: it is extremely useful in medicine, and is generally kept in horn boxes. Applied with egg it disperses all kinds of inflammation, those of the eyes in particular: it is employed also for hysterical suffocations, and for ulcerations of the stomach, chest, kidneys, liver, lungs, and bladder. It is particularly useful also in cases of inflammation of those parts, and for cough and pleurisy. It likewise removes itching sensations, and acts as a diuretic. Persons who have used the precaution of first taking saffron in drink will never experience surfeit or headache, and will be proof against inebriation. Chaplets too, made of saffron, and worn on the head, tend to dispel the fumes of wine. The flower of it is employed topically with Cimolian chalk for erysipelas. It is used also in the composition of numerous other medicaments.

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CHAP. 82.

SYRIAN CROCOMAGNA: TWO REMEDIES.

There is also an eye-salve which is indebted to this plant for its name. The lees of the extract of saffron, employed in the saffron unguent known as “crocomagma,” have their own peculiar utility in cases of cataract and strangury. These lees are of a more warming nature than saffron itself; the best kind is that which, when put into the mouth, stains the teeth and saliva the colour of saffron.

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CHAP. 83.

FORTY-ONE REMEDIES DERIVED FROM THE IRIS: TWO REMEDIES DERIVED FROM THE SALIUNCA.

The red iris is better than the white one. It is very beneficial to attach this plant to the bodies of infants more particularly when they are cutting their teeth, or are suffering from cough; it is equally good, too, to inject a few drops of it when children are suffering from tape-worm. The other properties of it differ but very little from those of honey. It cleanses ulcerous sores of the head, and inveterate abscesses more particularly. Taken in doses of two drachmæ with honey, it relaxes the bowels; and an infusion of it is good for cough, gripings of the stomach, and flatulency: taken with vinegar, too, it cures affections of the spleen. Mixed with oxycrate it is good for the bites of serpents and spiders, and, in doses of two drachmæ with bread or water, it is employed for the cure of the stings of scorpions. It is applied also topically with oil to the bites of dogs, and to parts that are excoriated: employed in a similar manner, too, it is good for pains in the sinews, and in combination with resin it is used as a liniment for lumbago and sciatica. The properties of this plant are of a warming nature. Inhaled at the nostrils, it produces sneezing and cleanses the brain, and in cases of head-ache it is applied topically in combination with the quince or the strutheum. It dispels the fumes of wine also, and difficulties of breathing and taken in doses of two oboli it acts as an emetic: applied as a plaster with honey, it extracts splinters of broken bones. Powdered iris is employed also for whitlows, and, mixed with wine, for corns and warts, in which case it is left for three days on the part affected.

Chewed, it is a corrective of bad breath and offensive exhalations of the arm-pits, and the juice of it softens all kinds of indurations of the body. This plant acts as a soporific, but it wastes the seminal fluids: it is used also for the treatment of chaps of the fundament and condylomata, and it heals all sorts of excrescences on the body.

Some persons give the name of “xyris” to the wild iris. This plant disperses scrofulous sores, as well as tumours and inguinal swellings;

but it is generally recommended that when wanted for these purposes it should be pulled up with the left hand, the party gathering it mentioning the name of the pa- tient and of the disease for which it is intended to be employed. While speaking of this subject, I will take the opportunity of disclosing the criminal practices of some herbalists — they keep back a portion of the iris, and of some other plants as well, the plantago for instance, and, if they think that they have not been sufficiently well paid and wish to be employed a second time, bury the part they have kept back in the same place; their object being, I suppose, to revive the malady which has just been cured.

The root of the saliunca boiled in wine, arrests vomiting and strengthens the stomach.

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CHAP. 84.

EIGHTEEN REMEDIES DERIVED FROM THE POLIUM.

Those persons, according to Musæus and Hesiod, who are desirous of gaining honour and glory, should rub the body all over with polium, and handle and cultivate it as much as possible. They say, too, that it should be kept about the person as an antidote to poison, and that to keep serpents away it should be strewed beneath the bed, burnt, or else carried on the person; decoctions of it in wine, either fresh-gathered or dried, should be used too as a liniment for the body. Medical men prescribe it in vinegar for affections of the spleen, and in wine for the jaundice; a decoction of it in wine is recommended also for incipient dropsy; and in this way too, it is employed as a liniment for wounds. This plant has the effect of bringing away the after-birth and the dead fœtus, and of dispelling pains in various parts of the body: it empties the bladder also, and is employed in liniments for defluxions of the eyes. In- deed, there is no plant known that better deserves to form an ingredient in the medicament known to us as the "alexipharmacon:" though there are some who say that it is injurious to the stomach and is apt to stuff the head, and that it produces abortion — assertions which others, again, totally deny.

There is a superstitious observance also, to the effect that, for cataract, it ought to be attached to the neck the moment it is found, every precaution being taken not to let it touch the ground. The same persons state too that the leaves of it are similar to those of thyme, except that they are softer and more white and downy. Beaten up with wild rue in rain water, it is said to assuage the pain of the sting of the asp; it is quite as astringent too as the flower of the pomegranate, and as efficacious for closing wounds and preventing them from spreading.

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CHAP. 85.

THREE REMEDIES DERIVED FROM THE HOLOCHRYSOS. SIX REMEDIES DERIVED FROM THE CHRYSOCOME.

The holochrysos, taken in wine, is a cure for strangury, and it is employed in liniments for defluxions of the eyes. Mixed with burnt lees of wine and polenta, it is curative of lichens.

The root of the chrysocome is warming and astringent; it is taken in drink for affections of the liver and lungs, and a decoction of it in hydromel is good for pains of the uterus. It acts as an emmenagogue also, and, administered raw, draws off the water in dropsy.

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CHAP. 86.

TWENTY-ONE REMEDIES DERIVED FROM MELISSOPHYLLUM.

If the bee-hives are rubbed all over with melissophyllum or melittæna, the bees will never desert them; for there is no flower in which they take greater delight. If branches of this plant are used, the bees may be kept within bounds without any difficulty. It is an excellent remedy, also, for the stings of bees, wasps, and similar insects, as also for wounds made by spiders and scorpions; it is used, too, for hysterical suffocations, in combination with nitre, and for gripings of the bowels, with wine. The leaves of it are employed topically for scrofulous sores, and, in combination with salt, for maladies of the fundament. A decoction of the juice promotes the menstrual discharge, dispels inflammations, and heals ulcerous sores: it is good, too, for diseases of the joints and the bites of dogs, and is beneficial in cases of inveterate dysentery, and for cœliac affections, hardness of breathing, diseases of the spleen, and ulcerations of the thoracic organs. For films on the eyes, it is considered a most excellent plan to anoint them with the juice of this plant mixed with honey.

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CHAP. 87.

THIRTEEN REMEDIES DERIVED FROM THE MELILOTE.

The melilote, again, applied with the yolk of an egg, or else linseed, effects the cure of diseases of the eyes. It assuages pains, too, in the jaws and head, applied with rose oil; and, employed with raisin wine, it is good for pains in the ears, and all kinds of swellings or eruptions on the hands. A decoction of it in wine, or else the plant itself beaten up raw, is good for pains in the stomach. It is equally beneficial, too, for maladies of the uterus; and for diseases of the testes, prolapsus of the fundament, and all other diseases of those parts, a decoction is made of it, fresh-gathered, in water or in raisin wine. With the addition of rose oil, it is used as a liniment for carcinoma. Boiled in sweet wine, it is particularly useful for the treatment of the ulcers known as “melicerides.”

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CHAP. 88. (21.)

FOUR REMEDIES DERIVED FROM TREFOIL.

The trefoil, I know, is generally looked upon as being par- ticularly good for the stings of serpents and scorpions, the seed being taken in doses of twenty grains, with either wine or oxycrate; or else the leaves and the plant itself are boiled together, and a decoction made of them; indeed, it is stated, that a serpent is never to be seen among trefoil. Celebrated authors, too, I find, have asserted that twenty-five grains of the seed of the kind of trefoil which we have spoken of as the "minyanthes," are a sufficient antidote for all kinds of poisons: in addition to which, there are numerous other remedial virtues ascribed to it.

But these notions, in my opinion, are counterbalanced by the authority of a writer of the very highest repute: for we find the poet Sophocles asserting that the trefoil is a venomous plant. Simus, too, the physician, maintains that a decoction of it, or the juice, poured upon the human body, is productive of burning sensations similar to those experienced by persons when they have been stung by a serpent and have trefoil applied to the wound. It is my opinion, then, that trefoil should never be used in any other capacity than as a counter-poison; for it is not improbable that the venom of this plant has a natural antipathy to all other kinds of poisons, a phænomenon which has been observed in many other cases as well. I find it stated, also, that the seed of the trefoil with an extremely diminutive leaf, applied in washes to the face, is extremely beneficial for preserving the freshness of the skin in females.

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CHAP. 89.

TWENTY-EIGHT REMEDIES DERIVED FROM THYME.

Thyme should be gathered while it is in flower, and dried in the shade. There are two kinds of thyme: the white thyme with a ligneous root, which grows upon declivities, and is the most esteemed of the two, and another variety, which is of a darker colour, and bears a swarthy flower. They are, both of them, considered to be extremely beneficial to the sight, whether used as an article of food or as a medicament, and to be good for inveterate coughs. Used as an electuary, with vinegar and salt, they facilitate expectoration, and taken with honey, they prevent the blood from coagulating. Applied ex- ternally with mustard, they dispel chronic fluxes of the fauces, as well as various affections of the stomach and bowels. Still, however, these plants must be used in moderation, as they are of a heating nature, for which reason it is that they act so astringently upon the bowels. In cases of ulceration of the intestines, the dose should be one denarius of thyme to one sextarius of oxymel; the same proportions, too, should be taken for pains in the sides, between the shoulder-blades, or in the thoracic organs. Taken with oxymel, these plants are used for the cure of intestinal diseases, and a similar draught is administered in cases of alienation of the senses and melancholy.

Thyme is given also for epilepsy, when the fits come on, the smell of it reviving the patient; it is said, too, that epileptic persons should sleep upon soft thyme. It is good, also, for hardness of breathing, and for asthma and obstructions of the catamenia. A decoction of thyme in water, boiled down to one-third, brings away the dead fœtus, and it is given to males with oxymel, as a remedy for flatulency, and in cases of swelling of the abdomen or testes and of pains in the bladder. Applied with wine, it removes tumours and fluxes, and, in combination with vinegar, callosities and warts. Mixed with wine, it is used as an external application for sciatica; and, beaten up with oil and sprinkled upon wool, it is employed for diseases of the joints, and for sprains. It is applied, also, to burns, mixed with hogs' lard.

For maladies of the joints of recent date, thyme is administered in drink, in doses of three oboli to three cyathi of oxymel. For loss of appetite, it is given, beaten up with salt.

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CHAP. 90.

FOUR REMEDIES DERIVED FROM THE HEMEROCALLES.

The hemerocalles has a soft, pale green leaf, with an odo- riferous, bulbous root. This root, applied with honey to the abdomen, draws off the aqueous humours and all corrupt blood. The leaves of it are applied for defluxions of the eyes, and for pains in the mamillæ, after childbirth.

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CHAP. 91.

FIVE REMEDIES DERIVED FROM THE HELENIUM.

The helenium, which springs, as we have already stated, from the tears of Helena, is generally thought to have been produced for improving the appearance, and to maintain unimpaired the freshness of the skin in females, both of the face and of other parts of the body. Besides this, it is generally supposed that the use of it confers additional graces on the person, and ensures universal attraction. They say, too, that, taken with wine, it promotes gaiety of spirit, having, in fact, a similar effect to the nepenthes, which has been so much vaunted by Homer, as producing forgetfulness of all sorrow. The juice of this plant is remarkably sweet, and the root of it, taken fasting in water, is good for hardness of breathing; ‘it is white within, and sweet. An infusion of it is taken in wine for the stings of serpents; and the plant, bruised, it is said, will kill mice.

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CHAP. 92.

TWENTY-TWO REMEDIES DERIVED FROM THE ABROTONUM.

We find two varieties of abrotonum mentioned, the field, and the mountain kind; this last, it is generally understood, is the female plant, the other the male. They are both of them bitter, like wormwood. That of Sicily is the most esteemed, and next to it, that of Galatia. The leaves of it are sometimes employed, but it is the seed that possesses the most warming properties; hence it is, that it is so beneficial for maladies of the sinews, for cough, hardness of breathing, convulsions, ruptures, lumbago, and strangury. Several handfuls of this plant are boiled down to one-third, and the decoction of it, in doses of four cyathi, is administered in drink. The seed is given, pounded, in water, in doses of one drachma; it is very good for affections of the uterus.

Mixed with barley-meal, this plant brings tumours to a head, and boiled with quinces, it is employed as a liniment for inflammations of the eyes. It keeps away serpents, and for their stings it is either taken in wine, or else employed in combination with it as a liniment. It is extremely efficacious, also, for the stings of those noxious insects by which shivering fits and chills are produced, such as the scorpion and the spider called “phalangium,” for example; taken in a potion, it is good for other kinds of poison, as also for shivering fits, however produced, and for the extraction of foreign substances adhering to the flesh; it has the effect, also, of expelling intestinal worms. It is stated that a sprig of this plant, if put beneath the pillow, will act as an aphrodisiac, and that it is of the very greatest efficacy against all those charms and spells by which impotence is produced.

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CHAP. 93. (22.)

ONE REMEDY DERIVED FROM THE LEUCANTHEMUM. NINE REMEDIES DERIVED FROM THE AMARACUS.

The leucanthemum, mixed with two-thirds of vinegar, is curative of asthma. The sampsuchum or amaracus, — that of Cyprus being the most highly esteemed, and possessed of the finest smell — is a remedy for the stings of scorpions, applied to the wound with vinegar and salt. Used as a pessary, too, it is very beneficial in cases of menstrual derangement; but when taken in drink, its properties are not so powerfully developed. Used with polenta, it heals defluxions of the eyes; and the juice of it, boiled, dispels gripings of the stomach. It is useful, too, for strangury and dropsy; and in a dry state, it promotes sneezing. There is an oil extracted from it, known as "sampsuchinum," or "amaracinum," which is very good for warming and softening the sinews; it has a warming effect, also, upon the uterus. The leaves are good for bruises, beaten up with honey, and, mixed with wax, for sprains.

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CHAP. 94. (23.)

TEN REMEDIES DERIVED FROM THE ANEMONE OR PHRENION.

We have as yet spoken only of the anemone used for making chaplets; we will now proceed to describe those kinds which are employed for medicinal purposes. Some persons give the name of "phrenion" to this plant: there are two species of it; one of which is wild, and the other grows on cultivated spots; though they are, both of them, attached to a sandy soil. Of the cultivated anemone there are numerous varieties; some, and these are the most abundant, have a scarlet flower, while others, again, have a flower that is purple or else milk-white. The leaves of all these three kinds bear a strong resemblance to parsley, and it is not often that they exceed half a foot in height, the head being very similar to that of asparagus. The flower never opens, except while the wind is blowing, a circumstance to which it owes its name. The wild anemone is larger than the cultivated one, and has broader leaves, with a scarlet flower.

Some persons erroneously take the wild anemone to be the same as the argemone, while others, again, identify it with the poppy which we have mentioned under the name of "rhœas:" there is, however, a great difference between them, as these two other plants blossom later than the anemone, nor does the anemone possess a juice or a calyx like theirs; besides which, it terminates in a head like that of asparagus.

The various kinds of anemone are good for pains and inflammations of the head, diseases of the uterus, and stoppage of the milk in females; taken, too, in a ptisan, or applied as a pessary in wool, they promote the menstrual discharge. The root, chewed, has a tendency to bring away the phlegm, and is a cure for tooth-ache: a decoction of it is good, too, for defluxions of the eyes, and effaces the scars left by wounds. The Magi have attributed many very wonderful properties to these plants: they recommend it to be gathered at the earliest moment in the year that it is seen, and certain words to be repeated, to the effect that it is being gathered as a remedy for tertian and quartan fevers; after which the flower must be wrapped up in red

cloth and kept in the shade, in order to be attached to the person when wanted. The root of the anemone with a scarlet flower, beaten up and applied to the body of any animated being, produces an ulcer there by the agency of its acrid qualities; hence it is that it is so much employed as a detergent for ulcerous sores.

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CHAP. 95. (24.)

SIX REMEDIES DERIVED FROM THE ŒNANTHE.

The œnanthe is a plant which is found growing upon rocks, has the leaf of the parsnip, and a large root with numerous fibres. The stalk of it and the leaves, taken with honey and black wine, facilitate delivery and bring away the after-birth: taken with honey, also, they are a cure for cough, and act as a powerful diuretic. The root of this plant is curative of diseases of the bladder.

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CHAP. 96. (25.)

ELEVEN REMEDIES DERIVED FROM THE HELICHRYSOS.

The helichrysos is by some persons called the “chrysanthemon. It has small, white branches, with leaves of a whitish colour, similar to those of the abrotonum. The clusters, disposed around it, and glistening like gold in the rays of the sun, are never known to fade; hence it is that they make chaplets of it for the gods, a custom which was most faithfully observed by Ptolemæus, the king of Egypt. This plant grows in shrubberies: taken in wine, it acts as a diuretic and emmenagogue, and, in combination with honey, it is employed topically for burns. It is taken also in potions for the stings of serpents, and for pains in the loins; and, with honied wine, it removes coagulated blood in the abdominal regions and the bladder. The leaves of it, beaten up and taken in doses of three oboli, in white wine, arrest the menstrual discharge when in excess.

The smell of this plant is far from disagreeable, and hence it is kept with clothes, to protect them from the attacks of vermin.

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CHAP. 97. (26.)

EIGHT REMEDIES DERIVED FROM THE HYACINTH.

The hyacinth grows in Gaul more particularly, where it is employed for the dye called “hysginum.” The root of it is bulbous, and is well known among the dealers in slaves: applied to the body, with sweet wine, it retards the signs of puberty, and prevents them from developing themselves. It is curative, also, of gripings of the stomach, and of the bites of spiders, and it acts as a diuretic. The seed is administered, with abrotonum, for the stings of serpents and scorpions, and for jaundice.

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CHAP. 98.

SEVEN REMEDIES DERIVED FROM THE LYCHNIS.

The seed of the lychnis, too, which is just the colour of fire, is beaten up and taken in drink for the stings of serpents, scorpions, hornets, and other insects of similar nature: the wild variety, however, is prejudicial to the stomach. It acts as a laxative to the bowels; and, taken in doses of two drachmæ, is remarkably efficacious for carrying off the bile. So extremely baneful is it to scorpions, that if they so much as see it, they are struck with torpor. The people of Asia call the root of it "bolites," and they say that if it is attached to the body it will effectually disperse albugo.

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CHAP. 99. (27.)

FOUR REMEDIES DERIVED FROM THE VINCAPERVINCA.

The vincapervinca, too, or chamædaphne, is dried and pounded, and given to dropsical patients in water, in doses of one spoonful; a method of treatment which speedily draws off the water. A decoction of it, in ashes, with a sprinkling of wine, has the effect of drying tumours: the juice, too, is employed as a remedy for diseases of the ears. Applied to the regions of the stomach, this plant is said to be remarkably good for diarrhœa.

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CHAP. 100.

THREE REMEDIES DERIVED FROM BUTCHER'S BROOM.

A decoction of the root of butcher's broom is recommended to be taken every other day for calculus in the bladder, strangury, and bloody urine. The root, however, should be taken up one day, and boiled the next, the proportion of it being one sextarius to two cyathi of wine. Some persons beat up the root raw, and take it in water: it is generally considered, too, that there is nothing in existence more beneficial to the male organs than the young stalks of the plant, beaten up and used with vinegar.

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CHAP. 101.

TWO REMEDIES DERIVED FROM THE BATIS.

The batis, too, relaxes the bowels, and, beaten up raw, it is employed topically for the gout. The people of Egypt cultivate the acinos, too, both as an article of food and for making chaplets. This plant would be the same thing as ocimum, were it not that the leaves and branches of it are rougher, and that it has a powerful smell. It promotes the catamenia, and acts as a diuretic.

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CHAP. 102. (28.)

TWO REMEDIES DERIVED FROM THE COLOCASIA.

The colocasia, according to Glaucias, softens the acridity of humours of the body, and is beneficial to the stomach.

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CHAP. 103. (29.)

SIX REMEDIES DERIVED FROM THE ANTHYLLIUM OR ANTHYLLUM.

The people of Egypt eat the anthalium, but I cannot find that they make any other use of it; but there is another plant called the "anthyllium," or, by some persons, the "anthyllum," of which there are two kinds: one, similar in its leaves and branches to the lentil, a palm in height, growing in sandy soils exposed to the sun, and of a somewhat saltish taste; the other, bearing a strong resemblance to the chamæpitys, but smaller and more downy, with a purple flower, a strong smell, and growing in stony spots.

The first kind, mixed with rose-oil and applied with milk, is extremely good for affections of the uterus and all kinds of sores: it is taken as a potion for strangury and gravel in the kidneys, in doses of three drachmæ. The other kind is taken in drink, with oxymel, in doses of four drachmæ, for indurations of the uterus, gripings of the bowels, and epilepsy.

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CHAP. 104. (30.)

EIGHT REMEDIES DERIVED FROM THE PARTHENIUM, LEUCANTHES, OR AMARACUS.

The parthenium is by some persons called the “leucanthes,” and by others the “amaracus.” Celsus, among the Latin writers, gives it the names of “perdicium” and “muralis.” It grows in the hedge-rows of gardens, and has the smell of an apple, with a bitter taste. With the decoction of it, fomentations are made for maladies of the fundament, and for inflammations and indurations of the uterus: dried and applied with honey and vinegar, it carries off black bile, for which reason it is considered good for vertigo and calculus in the bladder. It is employed as a liniment, also, for erysipelas, and, mixed with stale axle-grease, for scrofulous sores. For tertian fevers the Magi recommend that it should be taken up with the left hand, it being mentioned at the time for whom it is gathered, care being also taken not to look back while doing so: a leaf of it should be laid beneath the patient’s tongue, after which it must be eaten in a cyathus of water.

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CHAP. 105. (31.)

EIGHT REMEDIES DERIVED FROM THE STRYCHNUM OR STRYCHNUM, HALICACABUM, CALLIAS, DORCYNION, MANICON, NEURAS, MORIO, OR MOLY.

The trychnon is by some called "strychnon;" I only wish that the garland-makers of Egypt would never use this plant in making their chaplets, being deceived as they are by the resemblance in the leaves of both kinds to those of ivy. One of these kinds, bearing scarlet berries with a stone, enclosed in follicules, is by some persons called the "halicacabum," by others the "callion," and by the people of our country, the "vesicaria," from the circumstance of its being highly beneficial to the bladder and in cases of calculus.

The trychnon is more of a woody shrub than a herb, with large follicules, broad and turbinated, and a large berry within, which ripens in the month of November. A third kind, again, has a leaf resembling that of ocimum — but it is not my intention to give an exact description of it, as I am here speaking of remedies, and not of poisons; for a few drops of the juice, in fact, are quite sufficient to produce insanity. The Greek writers, however, have even turned this property into matter for jesting; for, according to them, taken in doses of one drachma, this plant is productive of delusive and prurient fancies, and of vain, fantastic visions, which vividly present all the appearance of reality: they say, too, that it the dose is doubled, it will produce downright madness, and that any further addition to it, will result in instant death.

This is the same plant which the more well-meaning writers have called in their innocence "dorycnion," from the circumstance that weapons used in battle are poisoned with it — for it grows everywhere — while others, again, who have treated of it more at length, have given it the surname of "manicon." Those, on the other hand, who have iniquitously concealed its real qualities, give it the name of "erythron" or "neuras," and others "perisson" — details, however, which need not be entered into more fully, except for the purpose of putting persons upon their guard.

There is another kind, again, also called “halicacabum,” which possesses narcotic qualities, and is productive of death even more speedily than opium: by some persons it is called “morio,” and by others “moly.” It has, however, been highly extolled by Diocles and Evenor, and, indeed, Timaristus has gone so far as to sing its praises in verse. With a wonderful obliviousness of remedies really harmless, they tell us, forsooth, that it is an instantaneous remedy for loose teeth to rinse them with halicacabum steeped in wine: but at the same time they add the qualification that it must not be kept in the mouth too long, or else delirium will be the result. This, however, is pointing out remedies with a vengeance, the employment of which will be attended with worse results than the malady itself.

There is a third kind of halicacabum, that is esteemed as an article of food; but even though the flavour of it may be preferred to garden plants, and although Xenocrates assures us that there is no bodily malady for which the trychnos is not highly beneficial, they are none of them so valuable as to make me think it proper to speak more at length upon the subject, more particularly as there are so many other remedies, which are unattended with danger. Persons who wish to pass themselves off for true prophets, and who know too well how to impose upon the superstitions of others, take the root of the halicacabum in drink. The remedy against this poison — and it is with much greater pleasure that I state it — is to drink large quantities of honied wine made hot. I must not omit the fact, too, that this plant is naturally so baneful to the asp, that when the root is placed near that reptile, the very animal which kills others by striking them with torpor, is struck with torpor itself; hence it is, that, beaten up with oil, it is used as a cure for the sting of the asp.

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CHAP. 106.

SIX MEDICINES DERIVED FROM THE CORCHORUS.

The corchorus is a plant which is used at Alexandria as an article of food: the leaves of it are rolled up, one upon the other, like those of the mulberry, and it is wholesome, it is said, for the viscera, and in cases of alopecy, being good also for the removal of freckles. I find it stated also, that it cures the scab in cattle very rapidly: and, according to Nicander, it is a remedy for the stings of serpents, it gathered before it blossoms.

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CHAP. 107.

THREE REMEDIES DERIVED FROM THE CNECOS.

There would be no necessity to speak at any length of the cencos or atractylis, an Egyptian plant, were it not for the fact that it offers a most efficacious remedy for the stings of veno- mous animals, as also in cases of poisoning by fungi. It is a well-known fact, that persons, when stung by the scorpion, are not sensible of any painful effects so long as they hold this plant in their hand.

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CHAP. 108. (33.)

ONE REMEDY DERIVED FROM THE PESOLUTA.

The Egyptians also cultivate the pesoluta in their gardens, for chaplets. There are two kinds of this plant, the male and the female: either of them, it is said, placed beneath the person, when in bed, acts as an antaphrodisiac, upon the male sex more particularly.

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CHAP. 109. (34.)

AN EXPLANATION OF GREEK TERMS RELATIVE TO WEIGHTS AND MEASURES.

As we have occasion to make use of Greek names very fre- quently when speaking of weights and measures, I shall here subjoin, once for all, some explanation of them.

The Attic drachma — for it is generally the Attic reckoning that medical men employ — is much the same in weight as the silver denarius, and is equivalent to six oboli, the obolus being ten chalci; the cyathus is equal in weight to ten drachmmæ. When the measure of an acetabulum is spoken of, it is the same as one fourth part of a hemina, or fifteen drachmæ in weight. The Greek mna, or, as we more generally call it, "mina," equals one hundred Attic drachmæ in weight.

Summary. — Remedies, narratives, and observations, seven hundred and thirty.

Roman Authors Quoted. — Cato the Censor, M. Varro, Antias, Cæpio, Vestinus, Vibius Rufus, Hyginus, Pompo- nius Mela, Pompeius Lennæus, Cornelius Celsus, Calpurnius Bassus, C. Valgius, Licinius Macer, Sextius Niger who wrote in Greek, Julius Bassus who wrote in Greek, Autonius Castor.

Foreign Authors Quoted. — Theophrastus, Democritus, Orpheus, Pythagoras, Mago, Menander who wrote the Biochresta, Nicander, Homer, Hesiod, Musmæus, Sophocles, Anaxilaüs.

Medical Authors Quoted. — Mnesitheus who wrote on Chaplets, Callimachus who wrote on Chaplets, Phanias the physician, Simus, Timaristus, Hippocrates, Chrysippus, Diocles, Ophelion, Hieraclides, Hicesius, Dionysius, Apollodorus of Citium, Apollodorus of Tarentum, Praxagoras, Plistonicus, Medius, Dieuches, Cleophantus, Philistio, Asclepiades, Crateaus, Petronius Diodotus, Iollas, Erasistratus, Diagoras, Andreas, Mnesides, Epicharmus, Da- mion, Dalion, Sosimenes, Tlepolemus, Metrodorus, Solo, Lyeus, Olympias of Thebes, Phlilinus, Petrichus Micton, Glaucias, Xenocrates.

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BOOK XXII. THE PROPERTIES OF PLANTS AND FRUITS.

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CHAP. 1.

THE PROPERTIES OF PLANTS.

Nature and the earth might have well filled the measure of our admiration, if we had nothing else to do but to consider the properties enumerated in the preceding Book, and the numerous varieties of plants that we find created for the wants or the enjoyment of mankind. And yet, how much is there still left for us to describe, and how many discoveries of a still more astonishing nature! The greater part, in fact, of the plants there mentioned recommend themselves to us by their taste, their fragrance, or their beauty, and so invite us to make repeated trials of their virtues: but, on the other hand. the properties of those which remain to be described, furnish us with abundant proof that nothing has been created by Nature without some purpose to fulfil, unrevealed to us though it may be.

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CHAP. 2. (1.)

PLANTS USED BY NATIONS FOR THE ADORNMENT OF THE PERSON.

I remark, in the first place, that there are some foreign nations which, in obedience to long-established usage, employ certain plants for the embellishment of the person. That, among some barbarous peoples, the females stain the face by means of various plants, there can be little doubt, and among the Daci and the Sarmatæ we find the men even marking their bodies. There is a plant in Gaul, similar to the plantago in appearance, and known there by the name of "glastum:" with it both matrons and girls among the people of Britain are in tile habit of staining the body all over, when taking part in the performance of certain sacred rites; rivalling hereby tile swarthy hue of the Æthiopianls, they go in a state of nature.

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CHAP. 3. (2.)

EMPLOYMENT OF PLANTS FOR DYEING. EXPLANATION OF THE TERMS SAGMEN, VERBENA, AND CLARIGATIO.

We know, too, that from plants are extracted admirable colours for dyeing; and, not to mention the berries of Galatia, Africa, and Lusitania, which furnish the coccus, a dye reserved for the military costume of our generals, the people of Gaul beyond the Alps produce the Tyrian colours, the conchyliated, and all the other hues, by the agency of plants alone. They have not there to seek the murex at tine bottom of the sea, or to expose themselves to be the prey of the monsters of the deep, while tearing it from their jaws, nor have they to go searching in depths to which no anchor has penetrated — and all this for the purpose of finding the means whereby some mother of a family may appear more charming in the eyes of her paramour, or the seducer may make himself more captivating to the wife of another man. Standing on dry land, the people there gather in their dyes just as we do our crops of corn — though one great fault in them is, that they wash out; were it not for which, luxury would have the means of bedecking itself with far greater magnificence, or, at all events, at the price of far less danger.

It is not my purpose, however, here to enter further into these details, nor shall I make the attempt, by substituting resources attended with fewer risks, to circumscribe luxury within the limits of frugality; though, at the same time, I shall have to speak on another occasion how that vegetable productions are employed for staining stone and imparting their colours to walls. Still, however, I should not have omitted to enlarge upon the art of dyeing, had I found that it had ever been looked upon as forming one of our liberal arts. Meantime, I shall be actuated by higher considerations, and shall proceed to show in what esteem we are bound to hold the mute plants even, or in other words, the plants of little note. For, indeed, the authors and founders of the Roman sway have derived from these very plants even almost boundless results; as it was these same plants, and no others, that afforded them the “sagmen,” employed in

seasons of public calamity, and the "verbena" of our sacred rites and embassies. These two names, no doubt, originally signified the same thing, — a green turf torn up from the citadel with the earth attached to it; and hence, when envoys were dispatched to the enemy for the purpose of clarigation, or, in other words, with the object of *clearly* demanding restitution of property that had been carried off, one of these officers was always known as the "verbenarius."

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CHAP. 4. (3.)

THE GRASS GROWN: HOW RARELY IT HAS BEEN AWARDED.

Of all the crowns with which, in the days of its majesty, the all-sovereign people, the ruler of the earth, recompensed the valour of its citizens, there was none attended with higher glory than the crown of grass. The crowns bedecked with gems of gold, the vallar, mural, rostrate, civic, and triumphal crowns, were, all of them, inferior to this: great, indeed, was the difference between them, and far in the background were they thrown by it. As to all the rest, a single individual could confer them, a general or commander on his soldiers for instance, or, as on some occasions, on his colleague: the senate, too, exempt from the cares and anxieties of war, and the people in the enjoyment of repose, could award them, together with the honours of a triumph.

(4.) But as for the crown of grass, it was never conferred except at a crisis of extreme desperation, never voted except by the acclamation of the whole army, and never to any one but to him who had been its preserver. Other crowns were awarded by the generals to the soldiers, this alone by the soldiers, and to the general. This crown is known also as the "obsidional" crown, from the circumstance of a beleaguered army being delivered, and so preserved from fearful disaster. If we are to regard as a glorious and a hallowed reward the civic crown, presented for preserving the life of a single citizen, and him, perhaps, of the very humblest rank, what, pray, ought to be thought of a whole army being saved, and indebted for its preservation to the valour of a single individual?

The crown thus presented was made green grass, gathered on the spot where the troops so rescued had been beleaguered. Indeed, in early times, it was the usual token of victory for the vanquished to present to the conqueror a handful of grass; signifying thereby that they surrendered their na- tive soil, the land that had nurtured them, and the very right even there to be interred — a usage which, to my own knowledge, still exists among the nations of Germany.

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CHAP. 5. (5.)

THE ONLY PERSONS THAT HAVE BEEN PRESENTED WITH THIS CROWN.

L. Siccius Dentatus was presented with this crown but once, though he gained as many as fourteen civic crowns, and fought one hundred and twenty battles, in all of which he was victorious — so rarely is it that an army has to thank a single individual only for its preservation! Some generals, however, have been presented with more than one of these crowns, P. Decius Mus, the military tribune, for example, who received one from his own army, and another from the troops which he had rescued when surrounded. He testified by an act of devoutness in what high esteem he held such an honour as this, for, adorned with these insignia, he sacrificed a white ox to Mars, together with one hundred red oxen, which had been presented to him by the beleaguered troops as the recompense of his valour: it was this same Decius, who afterwards, when consul, with Imperiosus for his colleague, devoted his life to secure victory to his fellow-citizens.

This crown was presented also by the senate and people of Rome — a distinction than which I know of nothing in existence more glorious — to that same Fabius who restored the fortunes of Rome by avoiding a battle; not, however, on the occasion when he preserved the master of the horse and his army; for then it was deemed preferable by those who were indebted to him for their preservation to present him with a crown under a new title, that of "father." The crown of grass was, however, awarded to him, with that unanimity which I have mentioned, after Hannibal had been expelled from Italy; being the only crown, in fact, that has hitherto been placed upon the head of a citizen by the hands of the state itself, and, another remarkable distinction, the only one that has ever been conferred by the whole of Italy united.

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CHAP. 6. (6.)

THE ONLY CENTURION THAT HAS BEEN THUS HONOURED.

In addition to the persons already mentioned, the honour of this crown has been awarded to M. Calpurnius Flamma, then a military tribune in Sicily; but up to the present time it has been given to a single centurion only, Cneius Petreius Atinas, during the war with the Cimbri. This soldier, while acting as primipilus under Catulus, on finding all retreat for his legion cut off by the enemy, harangued the troops, and after slaying his tribune who hesitated to cut a way through the encampment of the enemy, brought away the legion in safety. I find it stated also by some authors, that, in addition to this honour, this same Petreius, clad in the prætexta, offered sacrifice at the altar, to the sound of the pipe, in presence of the then consuls, Marius and Catulus.

The Dictator Sylla has also stated in his memoirs, that when legatus in the Marsic War he was presented with this crown by the army, at Nola; an event which he caused to be com- memorated in a painting at his Tusculan villa, which afterwards became the property of Cicero. If there is any truth in this statement, I can only say that it renders his memory all the more execrable, and that, by his proscriptions, with his own hand he tore this crown from his brow, for few indeed were the citizens whom he thus preserved, in comparison with those he slaughtered at a later period. And let him even add to this high honour his proud surname of "Felix," if he will; all the glories of this crown he surrendered to Sertorius, from the moment that he put his proscribed fellow-citizens in a stage of siege throughout the whole world.

Varro, too, relates that Scipio Æmilianus was awarded the obsidional crown in Africa, under the consul Manilius, for the preservation of three cohorts, by bringing as many to their rescue; an event commemorated by an inscription upon the base of the statue erected in honour of him by the now deified Emperor Augustus, in the Forum which bears his name. Au- gustus himself was also presented by the senate with the obsidional crown, upon the ides of

September, in the consulship of M. Cicero the Younger, the civic crown being looked upon as not commensurate with his deserts. Beyond these, I do not find any one mentioned as having been rewarded with this honour.

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CHAP. 7.

REMEDIES DERIVED FROM OTHER CHAPLET PLANTS.

No plant in particular was employed in the composition of this crown, such only being used as were found growing on the spot so imperilled; and thus did they become the means, however humble and unnoted themselves, of conferring high honour and renown. All this, however, is but little known among us at the present day; a fact which I am the less surprised at, when I reflect that those plants even are treated with the same indifference, the purpose of which it is to preserve our health, to allay our bodily pains, and to repel the advances of death! And who is there that would not visit with censure, and justly visit, the manners of the present day? Luxury and effeminacy have augmented the price at which we live, and never was life more hankered after, or worse cared for, than it is at present. This, however, we look upon as the business of others, forsooth; other persons must see to it, without our troubling ourselves to request them, and the physicians must exercise the necessary providence in our behalves. As for ourselves, we go on enjoying our pleasures, and are con- tent to live — a thing that in my opinion reflects the highest possible disgrace — by putting faith in others.

Nay, even more than this, we ourselves are held in derision by many, for undertaking these researches, and are charged with busying ourselves with mere frivolities! It is some solace, however, in the prosecution of these our boundless labours, to have Nature as our sharer in this contempt: Nature who, as we will prove beyond a doubt, has never failed in coming to the assistance of man, and has implanted reme- dies for our use in the most despised even of the vegetable productions, medicaments in plants which repel us with their thorns.

It is of these, in fact, that it remains for us now to speak, as next in succession to those which we have mentioned in the preceding Book; and here we cannot sufficiently admire, and, indeed, adore, the wondrous providence displayed by Nature. She had given us, as already shewn, plants soft to the touch, and agreeable to the palate; in

the flowers she had painted the remedies for our diseases with her varied tints, and, while commingling the useful with the delicious, had attracted our attention by means of the pleasures of the eye. Here, how- ever, she has devised another class of plants, bristling and repulsive to the sight, and dangerous to the touch; so much so, indeed, that we fancy we all but hear the voice of her who made them as she reveals to us her motives for so doing. It is her wish, she says, that no ravening cattle may browse upon them, that no wanton hand may tear them up, that no heedless footstep may tread them down, that no bird, perching there, may break them: and in thus fortifying them with thorns, and arming them with weapons, it has been her grand object to save and protect the remedies which they afford to man. Thus we see, the very qualities even which we hold in such aversion, have been devised by Nature for the benefit and advantage of mankind.

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CHAP. 8. (7.)

THE ERYNGE OR ERYNGIUM.

In the first rank of the plants armed with prickles, the erynge, or eryngion stands pre-eminent, a vegetable production held in high esteem as an antidote formed for the poison of ser- pents and all venomous substances. For stings and bites of this nature, the root is taken in wine in doses of one drachma, or if, as generally is the case, the wound is attended with fever, in water. It is employed also, in the form of a lini- ment, for wounds, and is found to be particularly efficacious for those inflicted by water-snakes or frogs. The physician Heraclides states it as his opinion that, boiled in goose-broth, it is a more valuable remedy than any other known, for aconite and other poisons. Apollodorus recommends that, in cases of poisoning, it should be boiled with a frog, and other authorities, in water only. It is a hardy plant, having much the appearance of a shrub, with prickly leaves and a jointed stem; it grows a cubit or more in height. Sometimes it is found of a whitish colour, and sometimes black, the root of it being odoriferous. It is cultivated in gardens, but it is frequently to be found growing spontaneously in rugged and craggy localities. It grows, too, on the sea-shore, in which case it is tougher and darker than usual, the leaf resembling that of parsley.

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CHAP. 9. (8.)

THE ERYNGIUM, CALLED CENTUM CAPITA: THIRTY REMEDIES.

The white variety of the eryngium is known in our lan- guage as the "centum capita." It has all the properties above- mentioned, and the Greeks employ both the stalk and the root as an article of food, either boiled or raw. There are some marvellous facts related in connexion with this plant; the root of it, it is said, bears a strong resemblance to the organs of either sex; it is but rarely found, but if a root resembling the male organs should happen to fall in the way of a man, it will ensure him woman's love; hence it is that Phaon the Lesbian was so passionately beloved by Sappho. Upon this subject, too, there have been numerous other reveries, not only on the part of the Magi, but of Pythagorean philosophers even as well.

So far as its medicinal properties are concerned, in addition to those already mentioned, this plant, taken in hydromel, is good for flatulency, gripings of the bowels, diseases of the heart, stomach, liver, and thoracic organs, and, taken in oxycrate, for affections of the spleen. Mixed with hydromel, it is recommended also for diseases of the kidneys, strangury, opisthotony, spasms, lumbago, dropsy, epilepsy, suppression or excess of the catamenia, and all maladies of the uterus. Applied with honey, it extracts foreign substances from the body, and, with salted axle-grease and cerate, it disperses scrofulous sores, im- posthumes of the parotid glands, inflamed tumours, denudations of the bones, and fractures. Taken before drinking, it prevents the fumes of wine from rising to the head, and it arrests looseness of the bowels. Some of our authors have recommended that this plant should be gathered at the period of the summer solstice, and that it should be applied, in combi- nation with rain water, for all kinds of maladies of the neck. They say too, that, attached as an amulet to the person, it is a cure for albugo.

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CHAP. 10. (9.)

THE ACANOS; ONE REMEDY.

There are some authors, too, who make the acanos to be a species of eryngium. It is a thorny plant, stunted, and spreading, with prickles of a considerable size. Applied topically, they say, it arrests hæmorrhage in a most remarkable degree.

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CHAP. 11.

THE GLYCYRRHIZA OR ADIPSOS: FIFTEEN REMEDIES.

Other authors, again, have erroneously taken the glycyrrhiza to be a kind of eryngium: it will, therefore, be as well to take this opportunity of making some further mention of it. There can be no doubt, however, that this is one of the thorny plants, the leaves of it being covered with prickles, substantial, and viscous and gummy to the touch: it has much the appearance of a shrub, is a couple of cubits in height, and bears a flower like that of the hyacinth, and a fruit the size of the little round balls of the plane. The best kind is that grown in Cilicia, and the next best that of Pontus the root of it is sweet, and this is the only part that is used. It is gathered at the setting of the Vergiliæ, the root of it being long, like that of the vine. That which is yellow, the colour of boxwood in fact, is superior to the darker kind, and the flexible is better than the brittle. Boiled down to one-third, it is employed for pessaries; but, for general purposes, a decoction is made of it of the consistency of honey. Sometimes, also, it is used pounded, and it is in this form that it is applied as a liniment for wounds and all affections of the throat. The juice of it is also very good for the voice, for which purpose it is thickened and then placed beneath the tongue: it is good, too, for the chest and liver.

We have already stated that this plant has the effect of allaying hunger and thirst: hence it is that some authors have given it the name of "adipsos," and have prescribed it for dropsical patients, to allay thirst. It is for this reason, too, that it is chewed as a stomatic, and that the powder of it is often sprinkled on ulcerous sores of the mouth and films on the eyes: it heals, too, excrescences of the bladder, pains in the kidneys, condylomtata, and ulcerous sores of the genitals. Some persons have given it in potions for quartan fevers, the doses being two drachmæ, mixed with pepper in one hemina of water. Chewed, and applied to wounds, it arrests hæmorrhage: some authors have asserted, also, that it expels calculi of the bladder.

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CHAP. 12. (10.)

TWO VARIETIES OF THE TRIBULUS; TWELVE REMEDIES.

Of the two kinds of tribulus, the one is a garden plant, the other grows in rivers only. There is a juice extracted from them which is employed for diseases of the eyes, it being of a cool and refreshing nature, and, consequently, useful for inflammations and abscesses. Used with honey, this juice is curative of spontaneous ulcerations, those of the mouth in particular; it is good also for affections of the tonsils. Taken in a potion, it breaks calculi of the bladder.

The Thracians who dwell on the banks of the river Strymon feed their horses on the leaves of the tribulus, and employ the kernels as an article of food, making of them a very agreeable kind of bread, which acts astringently upon the bowels. The root, if gathered by persons in a state of chastity and purity, disperses scrofulous sores; and the seed, used as an amulet, allays the pains attendant upon varicose veins: pounded and mixed with water, it destroys fleas.

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CHAP. 13. (11.)

THE STŒBE OR PHEOS.

The stœbe, by some persons known as the “pheos,” boiled in wine, is particularly good for the cure of suppurations of the ears, and for extravasations of blood in the eyes from the effects of a blow. It is employed also in injections for hæmorrhage and dysentery.

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CHAP. 14. (12.)

TWO VARIETIES OF THE HIPPOPHAES: TWO REMEDIES.

The hippophaes grows in sandy soils, and on the sea-shore. It is a plant with white thorns, and covered with clusters, like the ivy, the berries being white, and partly red. The root of it is full of a juice which is either used by itself, or else is made up into lozenges with meal of fitches: taken in doses of one obolus, it carries off bile, and it is extremely beneficial if used with honied wine. There is another hippophaes, without either stalk or flowers, and consisting only of diminutive leaves: the juice of this also is wonderfully useful for dropsy.

These plants would appear, too, to be remarkably well adopted to the constitution of the horse, as it can be for no other reason than this that they have received their name. For, in fact, there are certain plants which have been created as remedies for the diseases of animals, the Divinity being bounteously lavish of his succours and resources: so much so, indeed, that we cannot sufficiently admire the wisdom with which he has arranged them according to the classes of animated beings which they are to serve, the causes which give rise to their various maladies, and the times at which they are likely to be in requisition: hence it is that there is no class of beings, no season, and, so to speak, no day, that is without its remedy.

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CHAP. 15. (13.)

THE NETTLE: SIXTY-ONE REMEDIES.

What plant can there possibly be that is more an object of our aversion than the nettle? And yet, in addition to the oil which we have already mentioned as being extracted from it in Egypt, it abounds in medicinal properties. The seed of it, according to Nicander, is an antidote to the poison of hem- lock, of fungi, and of quicksilver. Apollodorus prescribes it, too, taken in the broth of a boiled tortoise, for the bite of the salamander, and as an antidote for the poison of henbane, serpents, and scorpions. The stinging pungency even of the nettle has its uses; for, by its contact, it braces the uvula, and effects the cure of prolapsus of the uterus, and of procidence of the anus in infants. By touching the legs of persons in a lethargy, and the forehead more particularly, with nettles, they are awakened. Applied with salt, the nettle is used to heal the bites of dogs, and beaten up and applied topically, it arrests bleeding at the nostrils, the root in particular. Mixed with salt, also, it is employed for the cure of cancers and foul ulcers; and, applied in a similar manner, it cures sprains and inflamed tumours, as well as imposthumes of the parotid glands and denudations of the bones. The seed of it, taken with boiled must, dispels hysterical suffocations, and, applied topically, it arrests mucous discharges of the nostrils. Taken with hydromel, after dinner, in doses of two oboli, the seed produces a gentle vomit; and a dose of one obolus, taken in wine, has the effect of dispelling lassitude. The seed is prescribed also, parched, and in doses of one acetabulum, for affections of the uterus; and, taken in boiled must, it is a remedy for flatulency of the stomach. Taken in an electuary, with honey, it gives relief in hardness of breathing, and clears the chest by expectoration: applied with linseed, it is a cure for pains in the side, with the addition of some hyssop and a little pepper. The seed is employed also in the form of a liniment for affections of the spleen, and, parched and taken with the food, it acts as a laxative in constipation of the bowels. Hippocrates says that the seed, taken in drink, acts as a

purgative upon the uterus; and that taken, parched, with sweet wine, in doses of one acetabulum, or applied externally with juice of mallows, it alleviates pains in that organ. He states also that, used with hydromel and salt, it expels intestinal worms, and that a liniment made of the seed will restore the hair when falling off. Many persons, too, employ the seed topically, with old oil, for diseases of the joints, and for gout, or else the leaves beaten up with bears'-grease: the root, too, pounded in vinegar, is no less useful for the same purposes, as also for affections of the spleen. Boiled in wine, and applied with stale axle-grease and salt, the root disperses inflamed tumours, and, dried, it is used as a depilatory.

Phanias, the physician, has enlarged upon the praises of the nettle, and he assures us that, taken with the food, either boiled or preserved, it is extremely beneficial for affections of the trachea, cough, fluxes of the bowels, stomachic complaints, inflamed tumours, imposthumes of the parotid glands, and chilblains; that, taken with oil, it acts as a sudorific; and that, boiled with shell-fish, it relaxes the bowels. He says, too, that taken with a ptisan, it facilitates expectoration and acts as an emmenagogue, and that, applied with salt, it prevents ulcers from spreading. The juice of the nettle is also used: applied to the forehead, it arrests bleeding at the nose, taken in drink it acts as a diuretic and breaks calculi in the bladder, and, used as a gargle, it braces the uvula when relaxed.

Nettle-seed should be gathered at harvest-time: that of Alexandria is the most highly esteemed. For all these different purposes the milder and more tender plants are the best, the wild nettle in particular: this last, taken in wine, has the additional property of removing leprous spots on the face. When animals refuse to couple, it is recommended to rub the sexual organs with nettles.

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CHAP. 16. (14.)

THE LAMIUM: SEVEN REMEDIES.

The variety of nettle, too, which we have already spoken of under the name of “lamium,” the most innoxious of them all, the leaves not having the property of stinging, is used for the cure of bruises and contusions, with a sprinkling of salt, as also for burns and scrofulous sores, tumours, gout, and wounds. The middle of the leaf is white, and is used for the cure of erysipelas. Some of our authors have distinguished the various species of this plant according to their respective seasons; thus, for instance, the root of the autumn nettle, they say, carried on the person as an amulet, is a cure for tertian fevers, if due care is taken, when pulling up the root, to mention the patient’s name, and to state who he is and who are his parents. They say, too, that this plant is productive of similar results in quartan fever: and they pretend that the root of the nettle, with the addition of salt, will extract foreign substances from the body; and that the leaves, mixed with stale axle-grease, will disperse scrofulous sores, or if they suppurate, cauterize them and cause them to fill up with new flesh.

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CHAP. 17. (15.)

THE SCORPIO, TWO KINDS OF IT: ONE REMEDY.

The scorpio has received its appellation from the animal of that name, in consequence of the resemblance of its seeds to a scorpion's tail. The leaves of it are few in number, and it is efficacious for the sting of the animal from which it derives its name. There is also another plant known by the same name, and possessed of similar properties; it is destitute of leaves, has a stem like that of asparagus, and a sharp point at the top, to which it owes its appellation.

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CHAP. 18. (16.)

THE LEUCACANTHA, PHYLLOS, ISCHIAS, OR POLYGONATOS: FOUR REMEDIES.

The leucacantha, known also as the phyllos, ischias, or polygonatos, has a root like that of the cypirus, which, when chewed, has the effect of curing tooth-ache; as also pains in the sides and loins, according to Hicesius, the seed or juice being taken in drink, in doses of eight drachmæ. — This plant is employed also for the cure of ruptures and convulsions.

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CHAP. 19. (17).

THE HELXINE: TWELVE REMEDIES.

The helxine is called by some, “perdicium,” from the circumstance of its forming the principal food of partridges. Other persons, however, give it the name of “sideritis,” and to some it is known as “parthenium.” It has leaves, the shape of which is a mixture of those of the plantago and the marrubium; the stalks are slight and closely packed, and are of a light red colour. The seeds, enclosed in heads resembling those of the lappa, adhere to the clothes, a circumstance, it is said, to which it owes its name of “helxine.” We have already stated in the preceding Book what are the characteristics of the plant properly so called.

The one of which we are now speaking is used for dyeing wool, and is employed for the cure of erysipelas, tumours, all kinds of abscesses, and burns. The juice of it, taken in doses of one cyathus with white lead, is a cure for inflamed tumours, incipient swellings of the throat, and inveterate coughs. It is good, too, for all maladies of the humid parts of the body, the tonsillary glands, for instance; and, in combination with rose oil, it is useful for varicose veins. It is employed topically for the gout, with goat suet and Cyprian wax.

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CHAP. 20.

THE PERDICIUM, PARTHENIUM, URCEOLARIS, OR ASTERCUM: ELEVEN REMEDIES.

The perdicium or parthenium — for the sideritis is, in reality, a different plant — is known to the people of our country as the herb urceolaris, and to some persons as the "astercum." The leaf of it is similar to that of ocimum, but darker, and it is found growing on tiled roofs and walls. Beaten up with a sprinkling of salt, it has all the medicinal properties of the lamium, and is used in a similar manner. The juice of it, taken warm, is good, too, for suppurated abscesses; but for the cure of convulsions, ruptures, bruises, and the effects of falls from a height, or of the overturning of vehicles, it is possessed of singular virtues.

A slave, who was held in high esteem by Pericles, the ruler of the Athenians, being engaged upon the buildings of a temple in the citadel, while creeping along the top of the roof, happened to fall; from the effects of which he was relieved, it is said, by this plant, the virtues whereof had been disclosed to Pericles by Minerva in a dream. Hence it is that it was first called "parthenium," and was consecrated to that goddess. It is this slave of whom there is a famous statue in molten bronze, well known as the Splanchnoptes.

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CHAP. 21. (18.)

THE CHASMÆLEON, IXIAS, ULOPRONON, OR CYNOZOLON; TWO VARIEIES OF IT: TWELVE REMEDIES.

The chamæleon is spoken of as the "ixias," by some authors. There are two species of this plant; the white kind has a rougher leaf than the other, and creeps along the ground, erecting its prickles like the quills of a hedgehog; the root of it is sweet, and the odour very powerful. In some places it secretes, just as they say incense is produced, a white viscous substance beneath the axils of the leaves, about the rising of the Dog-star more particularly. To this viscous nature it owes its name of "ixias;" females make use of it as a substitute for mastich. As to its name of "chamæleon," that is given to it from the varying tints of the leaves; for it changes its colours, in fact, just according to the soil, being black in one place, green in another, blue in a third, yellow elsewhere, and of various other colours as well.

A decoction of the root of the white chameleon is employed for the cure of dropsy, being taken in doses of one drachma in raisin wine. This decoction, taken in doses of one acetabulum, in astringent wine, with some sprigs of origanum in it, has the effect of expelling intestinal worms: it is good, too, as a diuretic. Mixed with polenta, the juice of it will kill dogs and swine; with the addition of water and oil, it will attract mice to it and destroy them, unless they immediately drink water to counteract its effects. Some persons recommend the root of it to be kept, cut in small pieces, and suspended from the ceiling; when wanted, it must be boiled and taken with the food, for the cure of those fluxes to which the Greeks have given the name of "rheumatismi."

In reference to the dark kind, some writers say that the one which bears a purple flower is the male, and that with a violet flower, the female. They grow together, upon a stem, a cubit in length, and a finger in thickness. The root of these plants, boiled with sulphur and bitumen, is employed for the cure of lichens; and they are chewed, or a decoction of them made in vinegar, to fasten loose teeth. The juice

of them is employed for the cure of scab in animals, and it has the property of killing ticks upon dogs. Upon steers it takes effect like a sort of quinsy; from which circumstance it has received the name of "ulophonon" from some, as also that of cynozolon from its offensive smell. These plants produce also a viscus, which is a most excellent remedy for ulcers. The roots of all the different kinds are an antidote to the sting of the scorpion.

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CHAP. 22. (19.)

THE CORONOPUS.

The coronopus is an elongated plant, with fissures in the leaves. It is sometimes cultivated, as the root, roasted in hot ashes, is found to be an excellent remedy for cœliac com- plaints.

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CHAP. 23. (20.)

THE ANCHUSA: FOURTEEN REMEDIES.

The root of the anchusa, too, is made use of, a plant a finger in thickness. It is split into leaves like the papyrus, and when touched it stains the hands the colour of blood; it is used for imparting rich colours to wool. Applied with cerate it heals ulcerous sores, those of aged people in parti- cular: it is employed also for the cure of burns. It is insoluble in water, but dissolves in oil, this being, in fact, the test of its genuineness. It is administered also, in doses of one drachma, in wine, for nephretic pains, or else, if there is fever, in a decoction of balanus; it is employed in a similar manner, also, for affections of the liver and spleen, and for enlarged secretions of the bile. Applied with vinegar, it is used for the cure of leprosy and the removal of freckles. The leaves, beaten up with honey and meal, are applied topically for sprains; and taken in honied wine, in doses of two drachmæ, they arrest looseness of the bowels. A decoction of the root in water, it is said, kills fleas.

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CHAP. 24.

THE PSEUDOANCHUSA, ECHIS, OR DORIS: THREE REMEDIES.

There is another plant, similar to the preceding one, and hence known as the “pseudoanchusa,” though by some it is called “echis,” or “doris,” as well as by many other names. It is more downy than the other plant, however, and not so substantial; the leaves, too, are thinner, and more drooping. The root of it, treated with oil, does not give out any red juice, a sign by which it is distinguished from the genuine anchusa. The leaves of this plant, or the seed, taken in drink, are extremely efficacious for the stings of serpents; the leaves, too, are applied topically to the wound; and the powerful smell of them will keep serpents at a distance. A preparation of this plant is taken, also, as a potion, for affections of the vertebræ. The Magi recommend that the leaves of it should be plucked with the left hand, it being mentioned at the same time for whom they are being gathered: after which, they are to be worn as an amulet, attached to the person, for the cure of tertian fevers.

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CHAP. 25. (21.)

THE ONOCHILON, ARCHEBION, ONOCHELIS, RHEXIA, OR ENCHRYSA: THIRTY REMEDIES.

There is another plant, too, the proper name of which is “onochilon,” but which some people call “anchusa,” others “archebion,” and others, again, “onochelis,” or “rhexia,” and, more universally, “enchrysa.” This plant has a diminu- tive stem, a purple flower, rough leaves and branches, and a root the colour of blood at harvest-time, though dark and swarthy at other times. It grows in sandy soils, and is extremely efficacious for the stings of serpents, vipers in particular, the roots or leaves of it being taken indifferently with the food, or in the drink. It developes its virtues at harvest-time. more especially: the leaves of it, when bruised, have just the smell of a cucumber. This plant is prescribed, in doses of three cyathi, for prolapsus of the uterus, and, taken with hyssop, it expels tape-worms. For pains in the liver or kidneys, it is taken in hydromel, if the patient shows symptoms of fever, but if not, in wine. With the root of it a liniment is made, for the removal of freckles and leprous sores; and it is asserted that persons who carry this root about them will never be attacked by serpents.

There is another plant, again, very similar to this, with a red flower, and somewhat smaller. It is applied to the same uses as the other; it is asserted, too, that if it is chewed, and then spit out upon a serpent, it will cause its instantaneous death.

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CHAP. 26.

THE ANTHEMIS, LEUCANTHEMIS, LEUCANTHEMUM, CHAMÆXMELUM, OR MELANTHIUM; THREE VARIETIES OF IT: ELEVEN REMEDIES.

The anthemis has been highly extolled by Asclepiades. Some persons call it "leucanthemis," some leucanthemum, others, again, "eranthemis," from its flowering in spring, and others "chamæmelon," because it has a smell like that of an apple: sometimes, too, it is called "melanthion." There are three varieties of this plant, which only differ from one another in the flower; they do not exceed a palm in height, and they bear small blossoms like those of rue, white, yellow, or purple.

This plant is mostly found in thin, poor soils, or growing near foot-paths. It is usually gathered in spring, and put by for the purpose of making chaplets. At the same season, too, medical men pound the leaves, and make them up into lozenges, the same being done with the flowers also, and the root. All the parts of this plant are administered together, in doses of one drachma, for the stings of serpents of all kinds. Taken in drink, too, they bring away the dead fœtus, act as an emmenagogue and diuretic, and disperse calculi of the bladder. The anthemis is employed, also, for the cure of flatulency, affections of the liver, excessive secretions of the bile, and fistulas of the eye; chewed, it heals running sores. Of all the different varieties, the one that is most efficacious for the treatment of calculi is that with the purple flower, the leaves and stem of which are somewhat larger than those of the other kinds. Some persons, and with strict propriety, give to this last the name of "eranthemis."

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CHAP. 27.

THE LOTUS PLANT: FOUR REMEDIES.

Those who think that the lotus is nothing but a tree only, can easily be refuted, if upon the authority of Homer only; for that poet names the lotus first of all among the herbs which grow to administer to the pleasures of the gods. The leaves of this plant, mixed with honey, disperse the marks of sores, argema, and films upon the eyes.

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CHAP. 28.

THE LOTOMETRA: TWO REMEDIES.

The lotometra is a cultivated lotus; with the seed of it, which resembles millet, the shepherds in Egypt make a coarse bread, which they mostly knead with water or milk. It is said, however, that there is nothing lighter or more wholesome than this bread, so long as it is eaten warm; but that when it gets cold, it becomes heavy and more difficult of digestion. It is a well-known fact, that persons who use it as a diet are never attacked by dysentery, tenesmus, or other affections of the bowels; hence it is, that this plant is reckoned among the remedies for that class of diseases.

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CHAP. 29.

THE HELIOTROPIUM, HELIOSCOPIUM, OR VERRUCARIA: TWELVE REMEDIES. THE HELIOTROPIUM, TRICOCCUM, OR SCORPIURON: FOURTEEN REMEDIES.

We have spoken more than once of the marvels of the heliotropium, which turns with the sun, in cloudy weather even, so great is its sympathy with that luminary. At night, as though in regret, it closes its blue flower.

There are two species of heliotropium, the tricoccum and the helioscopium, the latter being the taller of the two, though they neither of them exceed half a foot in height. The helioscopium throws out branches from the root, and the seed of it, enclosed in follicules, is gathered at harvest-time. It grows nowhere but in a rich soil, a highly-cultivated one more particularly; the tricoccum, on the other hand, is to be found growing everywhere. I find it stated, that the helioscopium, boiled, is considered an agreeable food, and that taken in milk, it is gently laxative to the bowels; while, again, a decoction of it, taken as a potion, acts as a most effectual purgative. The juice of this plant is collected in summer, at the sixth hour of the day; it is usually mixed with wine, which makes it keep all the better. Combined with rose-oil, it alleviates head-ache. The juice extracted from the leaves, combined with salt, removes warts; from which circumstance our people have given this plant the name of "verrucaria," although, from its various properties, it fully merits a better name. For, taken in wine or hydromel, it is an antidote to the venom of serpents and scorpions, as Apollophanes and Apollodorus state. The leaves, too, employed topically, are a cure for the cerebral affections of infants, known as "siriasis," as also for convulsions, even when they are epileptic. It is very wholesome, too, to gargle the mouth with a decoction of this plant. Taken in drink, it expels tapeworm and gravel, and, with the addition of cummin, it will disperse calculi. A decoction of the plant with the root, mixed with the leaves and some suet of a he-goat, is applied topically for the cure of gout.

The other kind, which we have spoken of as being called the "tricoccum," and which also bears the name of "scorpiuron," has leaves that are not only smaller than those of the other kind, but droop downwards towards the ground: the seed of it resembles a scorpion's tail, to which, in fact, it owes its latter appellation. It is of great efficacy for injuries received from all kinds of venomous insects and the spider known as the "phalangium," but more particularly for the stings of scorpions, if applied topically. Those who carry it about their person are never stung by a scorpion, and it is said that if a circle is traced on the ground around a scorpion with a sprig of this plant, the animal will never move out of it, and that if a scorpion is covered with it, or even sprinkled with tile water in which it has been steeped, it will die that instant. Four grains of the seed, taken in drink, are said to be a cure for the quartan fever, and three for the tertian; a similar effect being produced by carrying the plant three times round the patient, and then laying it under his head. The seed, too, acts as an aphrodisiac, and, applied with honey, it disperses inflamed tumours. This kind of heliotropium, as well as the other, extracts warts radically, and excrescences of the anus. Applied topically, the seed draws off corrupt blood from the vertebre and loins; and a similar effect is produced by taking a decoction of it in chicken broth, or with beet and lentils. The husks of the seed restore the natural colour to lividities of the skin. According to the Magi, the patient himself should make four knots in the heliotropium for a quartan, and three for a tertian fever, at the same time offering a prayer that he may recover to untie them, the plant being left in the ground meanwhile.

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CHAP. 30.

THE ADIANTUM, CALLITRICHOS, TRICHOMANES, POLYTRICHOS, OR SAXIFRAGUM; TWO VARIETIES OF IT: TWENTY-EIGHT REMEDIES.

Equally marvellous, too, in other respects, is the adiantum; it is green in summer, never dies in the winter, mani- fests an aversion to water, and, when sprinkled with water or dipped in it, has all the appearance of having been dried, so great is its antipathy to moisture; a circumstance to which it owes the name of "adiantum," given to it by the Greeks. In other respects, it is a shrub which might he well employed in ornamental gardening. Some persons give it the name of "callitrichos," and others of "polytrichos," both of them bearing reference to its property of imparting colour to the hair. For this purpose, a decoction of it is made in wine with parsley-seed, large quantities of oil being added, if it is desired to make the hair thick and curly as well: it has also the property of preventing the hair from coming off.

There are two kinds of this plant, one being whiter than the other, which last is swarthy and more stunted. It is the larger kind that is known as the "polytrichos," or, as some call it, the "trichomanes." Both plants have tiny branches of a bright black colour, and leaves like those of fern, the lower ones being rough and tawny, and all of them lying close together and attached to footstalks arranged on either side of the stem: of root, so to say, there is nothing. This plant frequents umbrageous rocks, walls sprinkled with the spray of running water, grottoes of fountains more particularly, and crags surrounded with streamlets, a fact that is all the more remarkable in a plant which derives no benefit from water.

The adiantum is of singular efficacy in expelling and breaking calculi of the bladder, the dark kind in particular; and it is for this reason, in my opinion, rather than because it grows upon stones, that it has received from the people of our country its name of "saxifragum." It is taken in wine, the usual dose being a pinch of it in three fingers. Both these plants are diuretics, and act as an antidote to the venom of serpents and spiders: a decoction of them in wine

arrests looseness of the bowels. A wreath of them, worn on the head, alleviates head-ache. For the bite of the scolopendra they are applied topically, but they must be removed every now and then, to prevent them from cauterizing the flesh: they are employed in a similar manner also for alopecy. They disperse scrofulous sores, scurf on the face, and running ulcers of the head. A decoction of them is useful also for asthma, affections of the liver and spleen, enlarged secretions of the gall, and dropsy. In combination with wormwood, they form a liniment for strangury and affections of the kidneys; they have the effect also of bringing away the after-birth, and act as an emmenagogue. Taken with vinegar or juice of brambleberries, they arrest hæmorrhage. Combined with rose-oil they are employed as a liniment for excoriations on infants, the parts affected being first fomented with wine. The leaves, steeped in the urine of a youth who has not arrived at puberty, and beaten up with saltpetre, compose a liniment which, it is said, prevents wrinkles from forming on the abdomen in females. It is a general belief that partridges and cocks are rendered more pugnacious if this plant is mixed with their food; and it is looked upon as particularly beneficial for cattle.

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CHAP. 31. (22.)

THE PICRIS; ONE REMEDY. THE THESION; ONE REMEDY.

The picris derives its name from its intense bitterness, as we have previously stated. The leaf of it is round; it is remarkably efficacious for the removal of warts.

The thesium, too, has a bitterness not unlike it: it is a powerful purgative, for which purpose it is employed bruised in water.

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CHAP. 32.

THE ASPHODEL; FIFTY-ONE REMEDIES.

The asphodel is one of the most celebrated of all the plants, so much so, indeed, that by some persons it has been called "heroum." Hesiod has mentioned the fact of its growing in rivers, and Dionysius distinguishes it into male and female. It has been observed that the bulbs of it, boiled with a ptisan, are remarkably good for consumption and phthisis, and that bread in which they have been kneaded up with the meal, is extremely wholesome. Nicander recommends also, for the stings of serpents and scorpions, either the stalk, which we have already spoken of under the name of "anthericus," or else the seed or bulbs, to be taken in wine, in doses of three drachmæ; and he says that these should be strewed beneath the bed, if there is any apprehension of their presence. The asphodel is prescribed also for wounds inflicted by marine animals of a venomous nature, and the bite of the land scolopendra. It is quite wonderful how the snails, in Campania, seek the stalk of this plant, and dry it by extracting the inside. The leaves, too, are applied with wine to wounds made by venomous animals, and the bulbs are beaten up with polenta and similarly used for affections of the sinews and joints. It is also a very good plan to rub lichens with them chopped up and mixed with vinegar, and to apply them in water to putrid sores, as also to inflammations of the tests or mamillæ. Boiled in lees of wine, and applied in a linen pledged, they are used for the cure of defluxions of the eyes.

Whatever the malady may happen to be, it is generally in a boiled state that the bulbs are employed; but for foul ulcers of the legs and for chaps upon any part of the body, they are dried and reduced to powder. The bulbs are usually gathered in autumn, a period when their medicinal properties are most fully developed. The juice extracted from them pounded, or else a decoction of them, is good, mixed with honey, for pains in the body: it is employed also with dried iris and a little salt by those who wish to impart an agreeable odour to the person. The leaves are used for the cure of the various

maladies above mentioned, as also, boiled in wine, for scrofu- lous sores, inflamed tumours, and ulcers of the face. The ashes of the root are a remedy for alopecy and chaps on the feet; and an extract of the root, boiled in oil, is good for burns and chilblains. It is injected also into the ears for deafness, and, for tooth-ache, it is poured into the ear opposite to the part affected. A moderate dose of the root, taken in drink, acts as a diuretic and emmenagogue; it is good also for pains in the sides, ruptures, convulsions, and coughs, in doses of one drachma, taken in wine. Chewed, the root promotes vomiting, but the seed, taken internally, disorders the bowels.

Chrysermus used to employ a decoction of the root, in wine, for imposthumes of the parotid glands; and he has prescribed it, in combination with cachrys, in wine, for the cure of scrofulous sores. Some persons say that if, after applying the root to the sores, a part of it is hung up in the smoke to dry, and not taken down till the end of four days, the sores will gradually dry up with this portion of the root. Sophocles used to employ it both ways, boiled and raw, for the cure of gout; and he prescribes it, boiled in oil, for chilblains, and, in vinegar, for jaundice and dropsy. It has been stated, also, that, used as a friction with wine and honey, or taken in drink, it acts as an aphrodisiac. Xenocrates assures us, too, that a decoction of the root in vinegar removes lichens, itchscabs, and leprous sores; and that a decoction of it, with henbane and tar, has a similar effect, and is good also for the removal of bad odours of the armpits and thighs: he states, also, that if the head is well rubbed with the root, being first shaved, the hair will curl all the better for it. Simus prescribes a decoction of it, in wine, to be taken for calculi in the kidneys; and Hippocrates recommends the seed for obstructions of the spleen. The root, or else a decoction of it, applied topically, restores the hair in beasts of burden, where it has been lost by ulcerations or scab. It has the effect, too, of driving away rats and mice, and of exterminating them, if placed before their holes.

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CHAP. 33.

THE HALIMON: FOURTEEN REMEDIES.

Some authors have thought that it is the asphodel that is called "halimon" by Hesiod, an opinion which appears to me ill-founded; halimon being the name of a distinct plant, which has been the occasion of no few mistakes committed by writers. According to some, it is a tufted shrub, white, destitute of thorns, and with leaves like those of the olive, only softer; which eaten boiled, are an agreeable food. The root, they say, taken in doses of one drachma in hydromel, allays gripings of the bowels, and is a cure for ruptures and convul- sions. Others, again, pronounce it to be a vegetable growing near the sea-shore, of a salt taste — to which, in fact, it owes its name — with leaves somewhat round but elongated, and much esteemed as an article of food. They say, too, that there are two species of it, the wild and the cultivated, and that, mixed with bread, they are good, both of them, for dysentery, even if uiceration should have supervened, and are useful for stomachic affections, in combination with vinegar. They state, also, that this plant is applied raw to ulcers of long standing, and that it modifies the inflammation of recent wounds, and the pain attendant upon sprains of the feet and affections of the bladder. The wild halimon, they tell us, has thinner leaves than the other, but is more effectual as a medicament in all the above cases, as also for the cure of itch, whether in man or beast. The root, too, according to them, employed as a friction, renders the skin more clear, and the teeth whiter; and they assert that if the seed of it is put beneath the tongue, no thirst will be experienced. They state, also, that this kind is eaten as well as the other, and that they are, both of them, preserved.

Crateuas has spoken of a third kind also, with longer leaves than the others, and more hairy: it has the smell of the cypress, he says, and grows beneath the ivy more particularly. He states that this plant is extremely good for opisthotony and contractions of the sinews, taken in doses of three oboli to one sextarius of water.

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CHAP. 34.

THE ACANTHUS, PÆDEROS, OR MELAMPHYLLOS: FIVE REMEDIES.

The acanthus is a plant that grows in cities, and is used in ornamental gardening. It has a broad, long leaf, and is used as a covering for the margins of ornamental waters and of parterres in gardens. There are two varieties of it; the one that is thorny and crisped is the shorter of the two; the other, which is smooth, is by some persons called “pæderos,” and by others “melamphyllos.” The root of this last is remarkably good for burns and sprains; and, boiled with the food, a ptisan more particularly, it is equally good for ruptures, spasms, and patients who are in apprehension of phthisis. The root is also beaten up and applied warm for hot gout.

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CHAP. 35.

THE BUPLEURON: FIVE REMEDIES.

The bupleuron is reckoned by the Greeks in the number of the leguminous plants which grow spontaneously. The stem of it is a cubit in height, the leaves are long and numerous, and the head resembles that of dill. It has been extolled as an aliment by Hippocrates, and for its medicinal properties by Glaucon and Nicander. The seed of it is good for the stings of serpents; and the leaves, or else the juice, applied as a liniment with wine, bring away the after-birth. The leaves, also, in combination with salt and wine, are applied to scrofulous sores. The root is prescribed in wine for the stings of serpents, and as a diuretic.

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CHAP. 36.

THE BUPRESTIS: ONE REMEDY.

With a remarkable degree of inconsistency, the Greek writers, while praising the buprestis as an aliment, point out certain antidotes to it, as though it were a poison. The very name, however, proves to a certainty that it is poisonous to cattle, and it is generally admitted that, on tasting it, they burst asunder: we shall, therefore, say no more about it. Is there any reason, in fact, why, when we are speaking of the materials employed in making our grass crowns, we should de- scribe a poison? or really ought we to enlarge upon it only to please the libidinous fancies of those who imagine that there is not a more powerful aphrodisiac in existence than this, when taken in drink?

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CHAP. 37.

THE ELAPHOBOSCON: NINE REMEDIES.

The elaphoboscon is a ferulaceous plant, articulated, and about a finger in thickness. The seed of it is like that of dill, hanging in umbels resembling those of hart-wort in appearance, but not bitter. The leaves are very like those of olusatrum. This plant, too, is highly spoken of as an article of food; in addition to which, it is preserved and kept as a diuretic and for the purpose of assuaging pains in the sides, curing ruptures and convulsions, and dispelling flatulency and colic. It is used, too, for the cure of wounds inflicted by serpents and all kinds of animals that sting; so much so, indeed, that, as the story goes, stags, by eating of it, fortify themselves against the attacks of serpents. The root, too, applied topically, with the addition of nitre, is a cure for fistula, but, when wanted for this purpose, it must be dried first, so as to retain none of the juice; though, on the other hand, this juice does not at all impair its efficacy as an antidote to the poison of serpents.

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CHAP. 38.

THE SCANDIX: NINE REMEDIES. THE ANTHRISCUM: TWO REMEDIES.

The scandix, too, is reckoned by the Greeks in the number of the wild vegetables, as we learn from Opion and Erasistratus. Boiled, it arrests looseness of the bowels; and the seed of it, administered with vinegar, immediately stops hiccup. It is employed topically for burns, and acts as a diuretic; a decoction of it is good, too, for affections of the stomach, liver, kidneys, and bladder. It is this plant that furnished Aristophanes with his joke against the poet Euripides, that his mother used to sell not real vegetables, but only scandix.

The anthriscum would be exactly the same plant as the scandix, if its leaves were somewhat thinner and more odoritferous. Its principal virtue is that it reinvigorates the body when exhausted by sexual excesses, and acts as a stimulant upon the enfeebled powers of old age. It arrests leucorrhœa in females.

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CHAP. 39.

THE IASIONE; FOUR REMEDIES.

The iasione, which is also looked upon as a wild vegetable, is a creeping plant, full of a milky juice: it bears a white flower, the name given to which is “concilium.” The chief recommendation of this plant, too, is that it acts as an aphrodisiac. Eaten with the food, raw, in vinegar, it promotes the secretion of the milk in nursing women. It is salutary also for patients who are apprehensive of phthisis; and, applied to the head of infants, it makes the hair grow, and renders the scalp more firm.

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CHAP. 40.

THE CAUCALIS: TWELVE REMEDIES.

The caucalis, too, is an edible plant. It resembles fennel in appearance, and has a short stem with a white flower; it is usually considered a good cordial. The juice, too, of this plant is taken as a potion, being particularly recommended as a stomachic, a diuretic, an expellent of calculi and gravel, and for the cure of irritations of the bladder. It has the effect, also, of attenuating morbid secretions of the spleen, liver, and kidneys. The seed of it acts as an emmenagogue, and dispels the bilious secretions after child-birth: it is prescribed also, for males, in cases of seminal weakness. Chrysippus is of opinion that this plant promotes conception; for which purpose it is taken by women in wine, fasting. It is employed in the form of a liniment, for wounds inflicted by marine animals of a venomous nature, at least we find it so stated by Petrichus in his poem.

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CHAP. 41.

THE SIUM: ELEVEN REMEDIES.

Among these plants there is reckoned also the sium: it grows in the water, has a leaf broader than that of parsley, thicker, and of a more swarthy colour, bears a considerable quantity of seed, and has the taste of nasturtium. It is an active diuretic, is very good for the kidneys and spleen, and acts as an emmlenagogue, either eaten by itself as an aliment, or taken in the form of a decoction; the seed of it is taken in wine, in doses of two drachmæ. It disperses calculi in the bladder, and neutralizes the action of water which tends to their formation. Used in the form of an injection, it is good for dysentery, and applied topically, for the removal of freckles. It is applied by females, at night, for the removal of spots on the face, a result which it produces almost instantaneously. It has the effect also of assuaging hernia, and is good for the scab in horses.

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CHAP. 42.

THE SILLYBUM.

The sillybum resembles the white chamæleon, and is a plant quite as prickly. In Cilicia, Syria, and Phoenicia, the countries where it grows, it is not thought worth while to boil it, the cooking of it being so extremely troublesome, it is said. It is of no use whatever in medicine.

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CHAP. 43.

THE SCOLYMOS OR LIMONIA: FIVE REMEDIES.

The scolymos, too, is used as an aliment in the East, where it has also the name of “limonia.” This is a shrub-like plant, which never exceeds a cubit in height, with tufted leaves and a black root, but sweet. Eratosthenes speaks highly of it as a diet used by the poor. It is said to possess diuretic properties in a very high degree, and to heal lichens and leprous sores, applied with vinegar. Taken in wine it acts as an aphrodisiac, according to the testimony of Hesiod and Alcæus; who have stated in their writings, that while it is in blossom, the song of the grasshopper is louder than at other times, women more inflamed with desire, and men less inclined to amorous intercourse; and that it is by a kind of foresight on the part of Nature that this powerful stimulant is then in its greatest perfection. The root, too, used without the pith, corrects the noisome odour of the armpits, in doses of one ounce to two heminæ of Falernian wine; the mixture being boiled down to one third, and taken fasting after the bath, as also after meals, a cyathus at a time. It is a remarkable thing, but Xenocrates assures us that he has ascertained it experimentally, that these bad odours are carried off by the urine.

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CHAP. 44.

THE SONCHOS; TWO VARIETIES: FIFTEEN REMEDIES.

The sonchos, too, is edible — at least, it was this that, according to Callimachus, Hecale set before Theseus. There are two kinds, the white and the black: they are, both of them, similar to the lettuce, except that they are prickly, with a stem a cubit in height, angular, and hollow within; when broken, the stem gives out an abundance of milky juice. The white kind, which derives its colour from the milk it contains, is good for hardness of breathing, if eaten dressed with seasoning like the lettuce. Erasistratus says that it carries off calculi by the urine, and that, chewed, it is a corrective of bad breath. The juice of it, taken warm in doses of three cyathi, with white wine and oil, facilitates delivery, but the patient must be careful to walk about immediately after drinking it: it is also given in broth.

A decoction of the stalk renders the milk more abundant in nursing women, and improves the complexion of the infants suckled by them; it is also remarkably beneficial for females when the milk coagulates. The juice of it is used as an injection for the ears, and is taken warm in doses of one cyathus, for strangury, as also for gnawing pains of the stomach, with cucumber seed and pine nuts. It is employed topically for abscesses of the rectum, and is taken in drink for the stings of serpents and scorpions, the root also being applied to the wounds. The root, boiled in oil, with the rind of a pomegranate, is a remedy for diseases of the ears — all these remedies, however, be it remembered, are derived from the white kind.

As to the black sonchos, Cleemporus forbids it to be eaten, as being productive of diseases, but at the same time he approves of the use of the white. Agathocles, however, goes so far as to assert that the juice of the black kind is an antidote for poisoning by bulls' blood; and, indeed, it is generally agreed that the black sonchos has certain refreshing properties; for which reason cataplasms of it may be advantageously applied with polenta. Zeno recommends the root of the white kind for strangury.

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CHAP. 45.

THE CONDRION OR CHONDRYLLA: SIX REMEDIES.

The condrion, or chondrylla, has leaves, eaten away, as it were, at the edges, and similar to those of endive, a stalk less than a foot in length and full of a bitter juice, and a root resembling that of the bean, and occasionally very ramified. It produces, near the surface of the earth, a sort of mastich, in a tubercular form, the size of a bean; this mastich, it is said, employed as a pessary, promotes the menstrual discharge. This plant, pounded whole with the roots, is divided into lozenges, which are employed for the stings of serpents, and probably with good effect; for field mice, it is said, when injured by those reptiles, are in the habit of eating this plant. A decoction of it in wine arrests looseness of the bowels, and makes a most excellent substitute for gum, as a bandoline for the eye-lashes, even when the hairs are most stubborn. Dorotheus says, in his poems, that it is extremely good for the stomach and the digestive organs. Some persons, however, have been of opinion that it is unwholesome for females, bad for the eyesight, and productive of impotence in the male sex.

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CHAP. 46.

MUSHROOMS: PECULIARITIES OF THEIR GROWTH.

Among those vegetable productions which are eaten with risk, I shall, with good reason, include mushrooms; a very dainty food, it is true, but deservedly held in disesteem since the notorious crime committed by Agrippina, who, through their agency, poisoned her husband, the Emperor Claudius, and at the same moment, in the person of his son Nero, inflicted another poisonous curse upon the whole world, herself in particular.

Some of the poisonous mushrooms are easily known, being of a rank, unwholesome look, light red without and livid within, with the clefts considerably enlarged, and a pale, sickly margin to the head. These characteristics, however, are not presented by others of the poisonous kinds; but being dry to all appearance and strongly resembling the genuine ones, they present white spots upon the head, on the surface of the outer coat. The earth, in fact, first produces the uterus or receptacle for the mushroom, and then the mushroom within, like the yolk in the egg. Nor is this envelope less conducive to the nutrition of the young mushroom [than is the albumen of the egg to that of the chicken.] Bursting forth from the envelope at the moment of its first appearance, as it gradually increases it becomes transformed into a substantial stalk; it is but very rarely, too, that we find two growing from a single foot-stalk. The generative principle of the mushroom is in the slime and the fermenting juices of the damp earth, or of the roots of most of the glandiferous trees. It appears at first in the shape of a sort of viscous foam, and then assumes a more substantial but membranous form, after which, as already stated, the young mushroom appears.

In general, these plants are of a pernicious nature, and the use of them should be altogether rejected; for if by chance they should happen to grow near a hob-nail, a piece of rusty iron, or a bit of rotten cloth, they will immediately imbibe all these foreign emanations and flavours, and transform them into poison. Who, in fact, is able to distinguish them, except those who dwell in the

country, or the persons that are in the habit of gathering them? There are other circumstances, too, which render them noxious; if they grow near the hole of a serpent, for instance, or if they should happen to have been breathed upon by one when just beginning to open; being all the more disposed to imbibe the venom from their natural affinity to poisonous substances.

It will therefore be as well to be on our guard during the season at which the serpents have not as yet retired to their holes for the winter. The best sign to know this by is a multitude of herbs, of trees, and of shrubs, which remain green from the time that these reptiles leave their holes till their return; indeed, the ash alone will be quite sufficient for the purpose, the leaves of it never coming out after the serpents have made their appearance, or beginning to fall before they have retired to their holes. The entire existence of the mush- room, from its birth to its death, is never more than seven days.

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CHAP. 47. (23.)

FUNGI; SIGNS BY WHICH THE VENOMOUS KINDS MAY BE RECOGNIZED: NINE REMEDIES.

Fungi are of a more humid nature than the last, and are divided into numerous kinds, all of which are derived solely from the pituitous humours of trees. The safest are those, the flesh of which is red, the colour being more pronounced than that of the mushroom. The next best are the white ones, the stems of which have a head very similar to the apex worn by the Flamens; and a third kind are the suilli, very conveniently adapted for poisoning. Indeed, it is but very recently that they have carried off whole families, and all the guests at a banquet; Linnæus Serenus, for instance, the prefect of Nero's guard, together with all the tribunes and centurions. What great pleasure, then, can there be in partaking of a dish of so doubtful a character as this? Some persons have classified these fungi according to the trees to which they are indebted for their formation, the fig, for instance, the fennel-giant, and the gummiferous trees; those belonging to the beech, the robur, and the cypress, not being edible, as already mentioned. But who is there to give us a guarantee when they come to market, that these distinctions have been observed?

All the poisonous fungi are of a livid colour; and the degree of similarity borne by the sap of the tree itself to that of the fig will afford an additional indication whether they are venom- oust or not. We have already mentioned various remedies for the poison of fungi, and shall have occasion to make mention of others; but in the mean time, it will be as well to observe that they themselves also have some medicinal uses. Glaucias is of opinion that mushrooms are good for the stomach. The suilli are dried and strung upon a rush, as we see done with those brought from Bithynia. They are employed as a remedy for the fluxes known as "rheumatismi," and for excrescences of the fundament, which they diminish and gradually consume. They are used, also, for freckles and spots on women's faces. A wash, too, is made of them, as is done with lead, for maladies of the eyes. Steeped in water, they are applied topically to

foul ulcers, eruptions of the head, and bites inflicted by dogs.

I would here also give some general directions for the cooking of mushrooms, as this is the only article of food that the voluptuaries of the present day are in the habit of dressing with their own hands, and so feeding upon it in anticipation, being provided with amber-handled knives and silver plates and dishes for the purpose. Those fungi may be looked upon as bad which become hard in cooking; while those, on the other hand, are comparatively innoxious, which admit of being thoroughly boiled, with the addition of some nitre. They will be all the safer if they are boiled with some meat or the stalks of pears: it is a very good plan, too, to eat pears directly after them. Vinegar, too, being of a nature diametrically opposed to them, neutralizes their dangerous qualities.

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CHAP. 48.

SULPHUR: SEVEN REMEDIES.

All these productions owe their origin to rain, and by rain is silphium produced. It originally came from Cyrenæ, as already stated: at the present day, it is mostly imported from Syria, the produce of which country, though better than that of Media, is inferior to the Parthian kind. As already ob- served, the silphium of Cyrenæ no longer exists. It is of considerable use in medicine, the leaves of it being employed to purge the uterus, and as an expellent of the dead fœtus; for which purposes a decoction of them is made in white aromatic wine, and taken in doses of one acetabulum, immediately after the bath. The root of it is good for irritations of the trachea, and is employed topically for extravasated blood; but, used as an aliment, it is difficult of digestion, being productive of flatulency and eructations: it is injurious, also, to the urinary secretions. Combined with wine and oil, it is extremely good for bruises, and, with wax, for the cure of scrofulous sores. Repeated fumigations with the root cause excrescences of the anus to subside.

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CHAP. 49.

LASER: THIRTY-NINE REMEDIES.

Laser, a juice which distils from silphium, as we have already stated, and reckoned among the most precious gifts presented to us by Nature, is made use of in numerous medicinal preparations. Employed by itself, it warms and revives persons benumbed with cold, and, taken in drink, it alleviates affections of the sinews. It is given to females in wine, and is used with soft wool as a pessary to promote the menstrual discharge. Mixed with wax, it extracts corns on the feet, after they have been first loosened with the knife: a piece of it, the size of a chick-pea, melted in water, acts as a diuretic. Andreas assures us that, taken in considerable doses even, it is never productive of flatulency, and that it greatly promotes the digestion, both in aged people and females; he says, too, that it is better used in winter than in summer, and that even then, it is best suited for those whose beverage is water: but due care must be taken that there is no internal ulceration. Taken with the food, it is very refreshing for patients just recovering from an illness; indeed, if it is used at the proper time, it has all the virtues of a desiccatory, though it is more wholesome for persons who are in the habit of using it than for those who do not ordinarily employ it.

As to external maladies, the undoubted virtues of this medicament are universally acknowledged: taken in drink, it has the effect, also, of neutralizing the venom of serpents and of poisoned weapons, and, applied with water, it is in general use for the cure of wounds. In combination with oil, it is only used as a liniment for the stings of scorpions, and with barley- meal or dried figs, for the cure of ulcers that have not come to a head. It is applied topically, also, to carbuncles, with rue or honey, or else by itself, with some viscous substance to make it adhere; for the bites of dogs, also, it is similarly em- ployed. A decoction of it in vinegar, with pomegranate rind, is used for excrescences of the fundament, and, mixed with nitre, for the corns commonly known as “morticini.” In cases of alopecy which have been first treated with nitre, it makes the hair grow again,

applied with wine and saffron, or else pepper or mouse-dung and vinegar. For chilblains, fo- mentations are made of it with wine, or liniments with oil; as also for callosities and indurations. For corns on the feet, if pared first, it is particularly useful, as also as a preservative against the effects of bad water, and of unhealthy climates or weather. It is prescribed for cough, too, affections of the uvula, jaundice of long standing, dropsy, and hoarseness, having the effect of instantly clearing the throat and restoring the voice. Diluted in oxycrate, and applied with a sponge, it assuages the pains in gout.

It is given also in broth to patients suffering from pleurisy, when about to take wine; and it is prescribed for convulsions and opisthotony, in pills about as large as a chick-pea coated with wax. For quinsy, it is used as a gargle, and to patients troubled with asthma or inveterate cough, it is given with leeks in vinegar; it is prescribed, also, with vinegar, after drinking butter-milk. It is recommended with wine for con- sumptive affections of the viscera and epilepsy, and with hy- dromel for paralysis of the tongue; with a decoction of honey, it forms a liniment for sciatica and lumbago.

For my own part, I should not recommend, what some authors advise, to insert a pill of laser, covered with wax, in a hollow tooth, for tooth-ache; being warned to the contrary by a remarkable case of a man, who, after doing so, threw himself headlong from the top of a house. Besides, it is a well-known fact, that if it is rubbed on the muzzle of a bull, it irritates him to an extraordinary degree; and that if it is mixed with wine, it will cause serpents to burst — those reptiles being extremely fond of wine. In addition to this, I should not advise any one to rub the gums with Attic honey, although that practice is recommended by some.

It would be an endless task to enumerate all the uses to which laser is put, in combination with other substances; and the more so, as it is only our object to treat of simple remedies, it being these in which Nature displays her resources. In the compound remedies, too, we often find our judgment deceived, and quite at fault, from our comparative inattention to the sympathy or antipathy which naturally exists between the ingredients employed — on this subject, however, we shall have to enlarge on a future occasion.

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CHAP. 50. (24.)

PROPOLIS: FIVE REMEDIES.

Honey would be held in no less esteem than laser, were it not for the fact that nearly every country produces it. Laser is the production of Nature herself; but, for the formation of honey, she has created an insect, as already described. The uses to which honey is put are quite innumerable, if we only consider the vast number of compositions in which it forms an ingredient. First of all, there is the propolis, which we find in the hives, as already mentioned. This substance has the property of extracting stings and all foreign bodies from the flesh, dispersing tumours, ripening indurations, allaying pains of the sinews, and cicatrizing ulcers of the most obstinate nature.

As to honey itself, it is of so peculiar a nature, that it pre- vents putrefaction from supervening, by reason of its sweet- ness solely, and not any inherent acridity, its natural properties being altogether different from those of salt. It is employed with the greatest success for affections of the throat and tonsils, for quinsy and all ailments of the mouth, as also in fever, when the tongue is parched. Decoctions of it are used also for peripneumony and pleurisy, for wounds inflicted by serpents, and for the poison of fungi. For paralysis, it is prescribed in honied wine, though that liquor also has its own peculiar virtues. Honey is used with rose-oil, as an injection for the ears; it has the effect also of exterminating nits and foul vermin of the head. It is the best plan always to skim it before using it.

Still, however, honey has a tendency to inflate the stomach; it increases the bilious secretions also, produces qualmishness, and, according to some, if employed by itself, is injurious to the sight: though, on the other hand, there are persons who recommend ulcerations at the corners of the eyes to be touched with honey.

As to the elementary principles of honey, the different varieties of it, the countries where it is found, and its characteristic features, we have enlarged upon them on previous occasions: first, when treating of the nature of bees, and secondly, when speaking of that of flowers; the plan of this work compelling us to separate subjects which ought

properly to be united, if we would arrive at a thorough knowledge of the operations of Nature.

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CHAP. 51.

THE VARIOUS INFLUENCES OF DIFFERENT ALIMENTS UPON THE DISPOSITION.

While speaking of the uses of honey, we ought also to treat of the properties of hydromel. There are two kinds of hydromel, one of which is prepared at the moment, and taken while fresh, the other being kept to ripen. The first, which is made of skimmed honey, is an extremely wholesome beverage for invalids who take nothing but a light diet, such as strained alica for instance: it reinvigorates the body, is soothing to the mouth and stomach, and by its refreshing properties allays feverish heats. I find it stated, too, by some authors, that to relax the bowels it should be taken cold, and that it is particularly well-suited for persons of a chilly temperament, or of a weak and pusillanimous constitution, such as the Greeks, for instance, call "micropsychi."

For there is a theory, remarkable for its extreme ingenuity, first established by Plato, according to which the primary atoms of bodies, as they happen to be smooth or rough, angular or round, are more or less adapted to the various temperaments of individuals: and hence it is, that the same substances are not universally sweet or bitter to all. So, when affected with lassitude or thirst, we are more prone to anger than at other times. These asperities, however, of the disposition, or rather I should say of the mind, are capable of being modified by the sweeter beverages; as they tend to lubricate the passages for the respiration, and to mollify the channels, the work of inhalation and exhalation being thereby unimpeded by any rigidities. Every person must be sensible of this experiment- ally, in his own cease: there is no one in whom anger, affection, sadness, and all the emotions of the mind may not, in some degree, be modified by diet. It will therefore be worth our while to observe what aliments they are which exercise a physical effect, not only upon the body, but the disposition as well.

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CHAP. 52.

HYDROMEL: EIGHTEEN REMEDIES.

Hydromel is recommended, too, as very good for a cough: taken warm, it promotes vomiting. With the addition of oil it counteracts the poison of white lead; of henbane, also, and of the halicacabum, as already stated, if taken in milk, asses' milk in particular. It is used as an injection for diseases of the ears, and in cases of fistula of the generative organs. With crumb of bread it is applied as a poultice to the uterus, as also to tumours suddenly formed, sprains, and all affections which require soothing applications. The more recent writers have condemned the use of fermented hydro- mel, as being not so harmless as water, and less strengthening than wine. After it has been kept a considerable time, it becomes transformed into a wine, which, it is universally agreed, is extremely prejudicial to the stomach, and injurious to the nerves.

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CHAP. 53.

HONIED WINE: SIX REMEDIES.

As to honied wine, that is always the best which has been made with old wine: honey, too, incorporates with it very readily, which is never the case with sweet wine. When made with astringent wine, it does not clog the stomach, nor has it that effect when the honey has been boiled: in this last case, too, it causes less flatulency, an inconvenience generally incidental to this beverage. It acts as a stimulant also upon a failing appetite; taken cold it relaxes the bowels, but used warm it acts astringently, in most cases, at least. It has a tendency also to make flesh. Many persons have attained an extreme old age, by taking bread soaked in honied wine, and no other diet — the famous instance of Pollio Romilius, for example. This man was more than one hundred years old when the late Emperor Augustus, who was then his host, asked him by what means in particular he had retained such remarkable vigour of mind and body. — "Honied wine within, oil without," was his answer. According to Varro, the jaun- dice has the name of "royal disease" given to it, because its cure is effected with honied wine.

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CHAP. 54.

MELITITES: THREE REMEDIES.

We have already described how melitites is prepared, of must and honey, when speaking on the subject of wines. It is, I think, some ages, however, since this kind of beverage was made, so extremely productive as it was found to be of flatulency. It used, however, to be given in fever, to relieve inveterate costiveness of the bowels, as also for gout and affections of the sinews. It was prescribed also for females who were not in the habit of taking wine.

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CHAP. 55.

WAX: EIGHT REMEDIES.

To an account of honey, that of wax is naturally appended, of the origin, qualities, and different kinds of which, we have previously made mention on the appropriate occasions. Every kind of wax is emollient and warming, and tends to the formation of new flesh; fresh wax is, however, the best. It is given in broth to persons troubled with dysentery, and the combs themselves are sometimes used in a pottage made of parched alica. Wax counteracts the bad effects of milk; and ten pills of wax, the size of a grain of millet, will pre- vent milk from coagulating in the stomach. For swellings in the groin, it is found beneficial to apply a plaster of white wax to the pubes.

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CHAP. 56.

REMARKS IN DISPARAGEMENT OF MEDICINAL COMPOSITIONS.

As to the different uses to which wax is applied, in combination with other substances in medicine, we could no more make an enumeration of them than we could of all the other ingredients which form part of our medicinal compositions. These preparations, as we have already observed, are the results of human invention. Cerates, poultices, plasters, eyesalves, antidotes, — none of these have been formed by Nature, that parent and divine framer of the universe; they are merely the inventions of the laboratory, or rather, to say the truth, of human avarice. The works of Nature are brought into existence complete and perfect in every respect, her ingredients being but few in number, selected as they are from a due appreciation of cause and effect, and not from mere guesswork; thus, for instance, if a dry substance is wanted to assume a liquefied form, a liquid, of course, must be employed as a vehicle, while liquids, on the other hand, must be united with a dry substance to render them consistent. But as for man, when he pretends, with balance in hand, to unite and combine the various elementary substances, he employs himself not merely upon guesswork, but proves himself guilty of downright impudence.

It is not my intention to touch upon the medicaments afforded by the drugs of India, or Arabia and other foreign climates: I have no liking for drugs that come from so great a distance; they are not produced for us, no, nor yet for the natives of those countries, or else they would not be so ready to sell them to us. Let people buy them if they please, as ingredients in perfumes, unguents, and other appliances of luxury; let them buy them as adjuncts to their superstitions even, if incense and costus we must have to propitiate the gods; but as to health, we can enjoy that blessing without their assistance, as we can easily prove — the greater reason then has luxury to blush at its excesses.

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CHAP. 57.

REMEDIES DERIVED FROM GRAIN. SILIGO: ONE REMEDY. WHEAT: ONE REMEDY. CHAFF: TWO REMEDIES. SPELT: ONE REMEDY. BRAN: ONE REMEDY. OLYRA, OR ARINCA: TWO REMEDIES.

Having now described the remedies derived from flowers, both those which enter into the composition of garlands, and the ordinary garden ones, as well as from the vegetable productions, how could we possibly omit those which are derived from the cereals?

(25.) It will be only proper then, to make some mention of these as well. In the first place, however, let us remark that it is a fact universally acknowledged, that it is the most intel- ligent of the animated beings that derive their subsistence from grain. The grain of siligo highly roasted and pounded in Aminean wine, applied to the eyes, heals defluxions of those organs; and the grain of wheat, parched on a plate of iron, is an instantaneous remedy for frost-bite in various parts of the body. Wheat-meal, boiled in vinegar, is good for contractions of the sinews, and bran, mixed with rose-oil, dried figs, and myxa plums boiled down together, forms an excel- lent gargle for the tonsillary glands and throat.

Sextus Pomponius, who had a son prætor, and who was himself the first citizen of Nearer Spain, was on one occasion attacked with gout, while superintending the winnowing in his granaries; upon which, he immediately thrust his legs, to above the knees, in a heap of wheat. He found himself re- lieved, the swelling in the legs subsided in a most surprising degree, and from that time he always employed this remedy: indeed, the action of grain in masses is so extremely powerful as to cause the entire evaporation of the liquor in a cask. Men of experience in these matters recommend warm chaff of wheat or barley, as an application for hernia, and fomentations with the water in which it has been boiled. In the grain known as spelt, there is a small worm found, similar in appearance to the teredo: if this is put with wax into the hollow of carious teeth, they will come out, it is said, or, indeed, if the teeth are only rubbed with it. Another name given to olyra, as already mentioned, is “arinca:” with a

decoction of it a medicament is made, known in Egypt as “athera,” and extremely good for infants. For adult persons it is employed in the form of a liniment.

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CHAP. 58.

THE VARIOUS KINDS OF MEAL: TWENTY-EIGHT REMEDIES.

Barley-meal, raw or boiled, disperses, softens, or ripens gatherings and inflammatory tumours; and for other purposes a decoction of it is made in hydromel, or with dried figs. If required for pains in the liver, it must be boiled with oxycrate in wine. When it is a matter of doubt whether an abscess should be made to suppurate or be dispersed, it is a better plan to boil the meal in vinegar, or lees of vinegar, or else with a decoction of quinces or pears. For the bite of the millepede, it is employed with honey, and for the stings of serpents, and to prevent suppurations, with vinegar. To promote suppuration, it should be used with oxycrate, with the addition of Gallic resin. For gatherings, also, that have come to a head, and ulcers of long standing, it must be employed in combination with resin, and for indurations, with pigeons' dung, dried figs, or ashes. For inflammation of the tendons, or of the intestines and sides, or for pains in the male organs and denudations of the bones, it is used with poppies, or melilote; and for scrofulous sores, it is used with pitch and oil, mixed with the urine of a youth who has not reached the years of puberty. It is employed also with fenugreek for tumours of the thoracic organs, and in fevers, with honey, or stale grease.

For suppurations, however, wheat-meal is much more sooth- ing; it is applied topically also for affections of the sinews, mixed with the juice of henbane, and for the cure of freckles, with vinegar and honey. The meal of zea, from which, as already stated, an alica is made, appears to be more efficacious than that of barley even: but that of the three month kind is the most emollient. It is applied warm, in red wine, to the stings of scorpions, as also for affections of the trachea, and spitting of blood: for coughs, it is employed in combination with goat suet or butter.

The meal of fenugreek, however, is the most soothing of them all: boiled with wine and nitre, it heals running ulcers, eruptions on the body, and diseases of the feet and mamillæ. The meal of æra is more detergent than the other kinds, for inveterate ulcers and gangrenes: in

combination with radishes, salt, and vinegar, it heals lichens, and with virgin sulphur, leprosy: for head-ache, it is applied to the forehead with goose-grease. Boiled in wine, with pigeons' dung and linseed, it ripens inflamed tumours and scrofulous sores.

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CHAP. 59.

POLENTA: EIGHT REMEDIES.

Of the various kinds of polenta we have already treated sufficiently at length, when speaking of the places where it is made. It differs from barley meal, in being parched, a process which renders it more wholesome for the stomach. It arrests looseness of the bowels, and heals inflammatory eruptions; and it is employed as a liniment for the eyes, and for head-ache, combined with mint or some other refreshing herb. It is used in a similar manner also for chilblains and wounds inflicted by serpents; and with wine, for burns. It has the effect also of checking pustular eruptions.

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CHAP. 60.

FINE FLOUR: FIVE REMEDIES. PULS: ONE REMEDY. MEAL USED FOR PASTING PAPYRUS: ONE REMEDY.

The flour of bolted meal, kneaded into a paste, has the property of drawing out the humours of the body: hence it is applied to bruises gorged with blood, to extract the corrupt matter, even to soaking the bandages employed: used with boiled must, it is still more efficacious. It is used as an application also for callosities of the feet and corns; boiled with old oil and pitch, and applied as hot as possible, it cures condylomata and all other maladies of the fundament in a most surprising manner. Puls is a very feeding diet. The meal used for pasting the sheets of papyrus is given warm to patients for spitting of blood, and is found to be an effectual cure.

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CHAP. 61.

ALICA: SIX REMEDIES.

Alica is quite a Roman invention, and not a very ancient one: for otherwise the Greeks would never have written in such high terms of the praises of ptisan in preference. I do not think that it was yet in use in the days of Pompeius Magnus, a circumstance which will explain why hardly any mention has been made of it in the works of the school of Asclepiades. That it is a most excellent preparation no one can have a doubt, whether it is used strained in hydromel, or whether it is boiled and taken in the form of broth or puls. To arrest flux of the bowels, it is first parched and then boiled with honeycomb, as already mentioned: but it is more particularly useful when there is a tendency to phthisis after a long illness, the proper proportions being three cyathi of it to one sextarius of water. This mixture is boiled till all the water has gone off by evaporation, after which one sextarius of sheep' or goats' milk is added: it is then taken by the patient daily, and after a time some honey is added. By this kind of nutriment a deep decline may be cured.

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CHAP. 62.

MILLET: SIX REMEDIES.

Millet arrests looseness of the bowels and dispels gripings of the stomach, for which purposes it is first parched. For pains in the sinews, and of various other descriptions, it is applied hot, in a bag, to the part affected. Indeed, there is no better topical application known, as it is extremely light and emollient, and retains heat for a very long time: hence it is that it is so much employed in all those cases in which the application of heat is necessary. The meal of it, mixed with tar, is applied to wounds inflicted by serpents and millepedes.

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CHAP. 63.

PANIC: FOUR REMEDIES.

Diodes, the physician, has given to panic the name of “honey of corn.” It has the same properties as millet, and, taken in wine, it is good for dysentery. In a similar manner, too, it is applied to such parts of the body as require to be treated with heat. Boiled in goats’-milk, and taken twice a-day, it arrests looseness of the bowels; and, used in a similar manner, it is very good for gripings of the stomach.

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CHAP. 64.

SESAME: SEVEN REMEDIES. SESAMOIDES: THREE REMEDIES. ANTICYRICUM: THREE REMEDIES.

Sesame, pounded and taken in wine, arrests vomiting: it is applied also topically to inflammations of the ears, and burns. It has a similar effect even while in the blade: and in that state, a decoction of it in wine is used as a liniment for the eyes. As an alignment it is injurious to the stomach, and imparts a bad odour to the breath. It is an antidote to the bite of the spotted lizard, and heals the cancerous sore known as “cacoethes.” The oil made from it, as already mentioned, is good for the ears.

Sesamoïdes owes its name to its resemblance to sesame; the grain of it, however, is bitter, and the leaf more diminutive: it is found growing in sandy soils. Taken in water, it carries off bile, and, with the seed, a liniment is made for erysipelas: it disperses inflamed swellings also. Besides this, there is another sesamoïdes, which grows at Anticyra, and, for that reason, is known by some as “anticyricon.” In other respects, it is similar to the plant erigeron, of which we shall have to speak on a future occasion; but the seed of it is like that of sesame. It is given in sweet wine as an evacuant, in doses of a pinch in three fingers, mixed with an obolus and a half of white hellebore; this preparation being employed principally as a purgative, in cases of insanity, melancholy, epilepsy, and gout. Taken alone, in doses of one drachma, it purges by stool.

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CHAP. 65.

BARLEY: NINE REMEDIES. MOUSE-BARLEY, BY THE GREEKS CALLED PHŒNICE: ONE REMEDY.

The whitest barley is the best. Boiled in rain-water, the pulp of it is divided into lozenges, which are used in injections for ulcerations of the intestines and the uterus. The ashes of barley are applied to burns, to bones denuded of the flesh, to purulent eruptions, and to the bite of the shrewmouse: sprinkled with salt and honey they impart whiteness to the teeth, and sweetness to the breath. It is alleged that persons who are in the habit of eating barley-bread are never troubled with gout in the feet: they say, too, that if a person takes nine grains of barley, and traces three times round a boil, with each of them in the left hand, and then throws them all into the fire, he will experience an immediate cure. There is another plant, too, known as "phœnice" by the Greeks, and as "mouse-barley" by us: pounded and taken in wine, it acts remarkably well as an emmenagogue.

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CHAP. 66.

PTISAN: FOUR REMEDIES.

To ptisan, which is a preparation of barley, Hippocrates has devoted a whole treatise; praises, however, which at the present day are all transferred to “alica,” being, as it is, a much more wholesome preparation. Hippocrates, however, recommends it as a pottage, for the comparative ease with which, from its lubricous nature, it is swallowed; as also, because it allays thirst, never swells in the stomach, passes easily through the intestines, and is the only food that admits of being given twice a-day in fever, at least to patients who are in the habit of taking two meals — so opposed is his method to that of those physicians who are for famishing their patients. He forbids it to be given, however, without being first strained; for no part, he says, of the ptisan, except the water, should be used. He says, too, that it must never be taken while the feet are cold, and, indeed, that no drink of any kind should be taken then. With wheat a more viscous kind of ptisan is made, which is found to be still more efficacious for ulcerations of the trachea.

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CHAP. 67.

AMYLUM: EIGHT REMEDIES. OATS: ONE REMEDY.

Amylum weakens the eyesight, and is bad for the throat, whatever opinions may be held to the contrary. It has the effect also of arresting looseness of the bowels, and curing defluxions and ulcerations of the eyes, as also pustules and con- gestions of the blood. It mollifies indurations of the eyelids, and is given with egg to persons when they vomit blood. For pains of the bladder, half an ounce of it is prescribed with an egg, and as much raisin wine as three egg-shells will hold, the mixture to be made lukewarm and taken immediately after the bath. Oatmeal, boiled in vinegar, removes moles.

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CHAP. 68.

BREAD: TWENTY-ONE REMEDIES.

Bread, too, which forms our ordinary nutriment, possesses medicinal properties, almost without, number. Applied with water and oil, or else rose-oil, it softens abscesses; and, with hydromel, it is remarkably soothing for indurations. It is prescribed with wine to produce delitescence, or when a defluxion requires to be checked; or, if additional activity is required, with vinegar. It is employed also for the morbid defluxions of rheum, known to the Greeks as "rheumatismi," and for bruises and sprains. For all these purposes, however, bread made with leaven, and known as "autopyrus," is the best.

It is applied also to whitlows, in vinegar, and to callosities of the feet. Stale bread, or sailors'-bread, beaten up and baked again, arrests looseness of the bowels. For persons who wish to improve the voice, dry bread is very good, taken fasting; it is useful also as a preservative against catarrhs. The bread called "sitanius," and which is made of three-month wheat, applied with honey, is a very efficient cure for contusions of the face and scaly eruptions. White bread, steeped in hot or cold water, furnishes a very light and wholesome aliment for patients. Soaked in wine, it is applied as a poultice for swellings of the eyes, and used in a similar manner, or with the addition of dried myrtle, it is good for pustules on the head. Persons troubled with palsy are recommended to take bread soaked in water, fasting, immediately after the bath. Burnt bread modifies the close smell of bedrooms, and, used in the strainers, it neutralizes bad odours in wine.

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CHAP. 69.

BEANS: SIXTEEN REMEDIES.

Beans, too, furnish us with some remedies. Parched whole, and thrown hot into strong vinegar, they are a cure for grip- ings of the bowels. Bruised, and boiled with garlic, they are taken with the daily food for inveterate coughs, and for suppurations of the chest. Chewed by a person fasting, they are applied topically to ripen boils, or to disperse them; and, boiled in wine, they are employed for swellings of the testes and diseases of the genitals. Bean-meal, boiled in vinegar, ripens tumours and breaks them, and heals contusions and burns. M. Varro assures us that beans are very good for the voice. The ashes of bean stalks and shells, with stale hogs'- lard, are good for sciatica and inveterate pains of the sinews. The husks, too, boiled down, by themselves, to one-third, arrest looseness of the bowels.

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CHAP. 70.

LENTILS: SEVENTEEN REMEDIES.

Those lentils are the best which boil the most easily, and those in particular which absorb the most water. They injure the eye-sight, no doubt, and inflate the stomach; but taken with the food, they act astringently upon the bowels, more particularly if they are thoroughly boiled in rain-water: if, on the other hand, they are lightly boiled, they are laxative. They break purulent ulcers, and they cleanse and cicatrize ulcerations of the mouth. Applied topically, they allay all kinds of abscesses, when ulcerated and chapped more particularly; with melilote or quinces they are applied to defluxions of the eyes, and with polenta they are employed topically for suppurations. A decoction of them is used for ulcerations of the mouth and genitals, and, with rose-oil or quinces, for diseases of the fundament. For affections which demand a more active remedy, they are used with pomegranate rind, and the addition of a little honey; to prevent the composition from drying too quickly, beet leaves are added. They are ap- plied topically, also, to scrofulous sores, and to tumours, whether ripe or only coming to a head, being thoroughly-boiled first in vinegar. Mixed with hydromel they are employed for the cure of' chaps, and with pomegranate rind for gangrences. With polenta they are used for gout, for diseases of the uterus and kidneys, for chilblains, and for ulcerations which cicatrize with difficulty. For a disordered stomach, thirty grains should be eaten.

For cholera, however, and dysentery, it is the best plan to boil the lentils in three waters, in which case they should always be parched first, and then pounded as fine as possible, either by themselves, or else with quinces, pears, myrtle, wild endive, black beet, or plantago. Lentils are bad for the lungs, head-ache, all nervous affections, and bile, and are very apt to cause restlessness at night. They are useful, however, for pustules, erysipelas, and affections of the mamillæ, boiled in sea-water; and, applied with vinegar, they disperse indurations and scrofulous sores. As a stomachic, they are mixed, like polenta, with the drink given to patients. Parboiled in water, and then

pounded and bolted through a sieve to disengage the bran, they are good for burns, care being taken to add a little honey as they heal: they are boiled, also, with oxycrate for diseases of the throat.

There is a marsh-lentil also, which grows spontaneously in stagnant waters. It is of a cooling nature, for which rea- son it is employed topically for abscesses, and for gout in par- ticular, either by itself or with polenta. Its glutinous properties render it a good medicine for intestinal hernia.

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CHAP. 71.

THE ELELISPHACOS, SPHACOS, OR SALVIA: THIRTEEN REMEDIES.

The plant called by the Greeks “elelisphacos,” or “sphacos,” is a species of wild lentil, lighter than the cultivated one, and with a leaf, smaller, drier, and more odoriferous. There is also another kind of it, of a wilder nature, and possessed of a powerful smell, the other one being milder. It has leaves the shape of a quince, but white and smaller: they are generally boiled with the branches. This plant acts as an emmenagogue and a diuretic: and it affords a remedy for wounds inflicted by the sting-ray, having the property of benumbing the part affected. It is taken in drink with wormwood for dysentery: employed with wine it accelerates the catamenia when retarded, a decoction of it having the effect of arresting them when in excess: the plant, applied by itself, stanches the blood of wounds. It is a cure, too, for the stings of serpents, and a decoction of it in wine allays prurigo of the testes.

Our herbalists of the present day take for the “elelisphacos” of the Greeks the “salvia” of the Latins, a plant similar in appearance to mint, white and aromatic. Applied externally, it expels the dead fœtus, as also worms which breed in ulcers and in the ears.

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CHAP. 72.

THE CHICKPEA AND THE CHICHELING VETCH: TWENTY-THREE REMEDIES.

There is a wild chickpea also, which resembles in its leaf the cultivated kind, and has a powerful smell. Taken in considerable quantities, it relaxes the bowels, and produces griping pains and flatulency; parched, however, it is looked upon as more wholesome. The chicheling vetch, again, acts more bene- ficially upon the bowels. The meal of both kinds heals running sores of the head — that of the wild sort being the more efficacious of the two — as also epilepsy, swellings of the liver, and stings inflicted by serpents. It acts as an emmenagogue and a diuretic, used in the grain more particularly, and it is a cure for lichens, inflammations of the testes, jaundice, and dropsy. All these kinds, however, exercise an injurious effect upon ulcerations of the bladder and kidneys: but in combination with honey they are very good for gangrenous sores, and the cancer known as "cacoethes." The following is a method adopted for the cure of all kinds of warts: on the first day of the moon, each wart must be touched with a single chickpea, after which, the party must tie up the pease in a linen cloth, and throw it behind him; by adopting this plan, it is thought, the warts will be made to disappear.

Our authors recommend the plant known as the "arietinum" to be boiled in water with salt, and two cyathi of the decoction to be taken for strangury. Employed in a similar manner, it expels calculi, and cures jaundice. The water in which the leaves and stalks of this plant have been boiled, applied as a fomentation as hot as possible, allays gout in the feet, an effect equally produced by the plant itself, beaten up and applied warm. A decoction of the columbine chickpea, it is thought, moderates the shivering fits in tertian or quartan fevers; and the black kind, beaten up with half a nut-gall, and applied with raisin wine, is a cure for ulcers of the eyes.

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CHAP. 73.

THE FITCH: TWENTY REMEDIES.

In speaking of the fitch, we have mentioned certain properties belonging to it; and, indeed, the ancients have attributed to it no fewer virtues than they have to the cabbage. For the stings of serpents, it is employed with vinegar; as also for bites inflicted by crocodiles and human beings. If a person eats of it, fasting, every day, according to authors of the very highest authority, the spleen will gradually diminish. The meal of it removes spots on the face and other parts of the body. It prevents ulcers from spreading also, and is extremely efficacious for affections of the mamillæ: mixed with wine, it makes carbuncles break. Parched, and taken with a piece of honey the size of a hazel nut, it cures dysuria, flatulency, affections of the liver, tenesmus, and that state of the body in which no nourishment is derived from the food, generally known as "atrophy." For cutaneous eruptions, plasters are made of it boiled with honey, being left to remain four days on the part affected. Applied with honey, it prevents inflamed tumours from suppurating. A decoction of it, employed as a fomenta- tion, cures chilblains and prurigo; and it is thought by some, that if it is taken daily, fasting, it will improve the complexion of all parts of the body.

Used as an aliment, this pulse is far from wholesome, being apt to produce vomiting, disorder the bowels, and stuff the head and stomach. It weakens the knees also; but the effects of it may be modified by keeping it in soak for several days, in which case it is remarkably beneficial for oxen and beasts of burden. The pods of it, beaten up green with the stalks and leaves, before they harden, stain the hair black.

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CHAP. 74.

LUPINES: THIRTY-FIVE REMEDIES.

There are wild lupines, also, inferior in every respect to the cultivated kinds, except in their bitterness. Of all the alimentary substances, there are none which are less heavy or more useful than dried lupines. Their bitterness is considerably modified by cooking them on hot ashes, or steeping them in hot water. Employed frequently as an article of food, they impart freshness to the colour; the bitter lupine, too, is good for the sting of the asp. Dried lupines, stripped of the husk and pounded, are applied in a linen cloth to black ulcers, in which they make new flesh: boiled in vinegar, they disperse scrofu- lous sores and imposthumes of the parotid glands. A decoction of them, with rue and pepper, is given in fever even, as an expellent of intestinal worms, to patients under thirty years of age. For children, also, they are applied to the sto- mach as a vermifuge, the patient fasting in the meantime and, according to another mode of treatment, they are parched and taken in boiled must or in honey.

Lupines have the effect of stimulating the appetite, and of dispelling nausea. The meal of them, kneaded up with vinegar, and applied in the bath, removes pimples and prurigo; employed alone, it dries up ulcerous sores. It cures bruises also, and, used with polenta, allays inflammations. The wild lupine is found to be the most efficacious for debility of the hips and loins. A decoction of them, used as a fomentation, removes freckles and improves the skin; and lupines, either wild or cultivated, boiled down to the consistency of honey, are a cure for black eruptions and leprosy. An application of cultivated lupines causes carbuncles to break, and reduces inflamed tumours and scrofulous sores, or else brings them to a head: boiled in vinegar, they restore the flesh when cicatrized to its proper colour. Thoroughly boiled in rain-water, the decoction of them furnishes a detersive medicine, of which fomentations are made for gangrenes, purulent eruptions, and runing ulcers. This decoction is very good, taken in drink, for affections of the spleen, and with honey, for retardations of the catamenia. Beaten up raw, with dried figs, lupines

are applied externally to the spleen. A decoction of the root acts as a diuretic.

The herb chamæleon, also, is boiled with lupines, and the water of it strained off, to be used as a potion for cattle. Lupines boiled in amurca, or a decoction of them mixed with amurca, heals the itch in beasts. The smoke of lupines kills gnats.

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CHAP. 75.

IRIO, OR ERYSIMUM, BY THE GAULS CALLED VELA: FIFTEEN REMEDIES.

When treating of the cereals, we have already stated that the irio, which strongly resembles sesame, is also called “erysimon “ by the Greeks: the Gauls give it the name of “vela.” It is a branchy plant, with leaves like those of rocket, but a little narrower, and a seed similar to that of nasturtium. With honey, it is extremely good for cough and purulent expectorations: it is given, also, for jaundice and affections of the loins, pleurisy, gripings of the bowels, and cœliac affections, and is used in liniments for imposthumes of the parotid glands and carcinomatous affections. Employed with water, or with honey, it is useful for inflammations of the testes, and is extremely beneficial for the diseases of infants. Mixed with honey and figs, it is good for affections of the fundament and diseases of the joints; and taken in dink, it is an excellent antidote to poisons. It is used, also, for asthma, and with stale axle- grease for fistulas; but it must not be allowed to touch the interior of them.

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CHAP. 76.

HORMINUM: SIX REMEDIES.

Horminum resembles cummin, as already stated, in its seed; but in other respects, it is like the leek. It grows to some nine inches in height, and there are two varieties of it. In one of these the seed is oblong, and darker than that of the other, and the plant itself is in request as an aphrodisiac, and for the cure of argema and albugo in the eyes: of the other kind the seed is whiter, and of a rounder form. Both kinds, pounded and applied with water, are used for the extraction of thorns from the body. The leaves, steeped in vinegar, disperse tumours, either used by themselves, or in combination with honey; they are employed, also, to disperse boils, before they have come to a head, and other collections of acrid hu- mours.

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CHAP. 77.

DARNEL: FIVE REMEDIES.

Even more than this — the very plants which are the bane of the corn-field are not without their medicinal uses. Darnel has received from Virgil the epithet of “unhappy;” and yet, ground and boiled with vinegar, it is used as an application for the cure of impetigo, which is the more speedily effected the oftener the application is renewed. It is employed, also, with oxymel, for the cure of gout and other painful diseases. The following is the mode of treatment: for one sextarius of vinegar, two ounces of honey is the right proportion; three sextarii having been thus prepared, two sextarii of darnel meal are boiled down in it to a proper consistency, the mixture being applied warm to the part affected. This meal, too, is used for the extraction of splinters of broken bones.

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CHAP. 78.

THE PLANT MILIARIA: ONE REMEDY.

“Miliaria” is the name given to a plant which kills millet: this plant, it is said, is a cure for gout in beasts of burden, beaten up and administered in wine, with the aid of a horn.

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CHAP. 79.

BROMOS: ONE REMEDY.

Bromos is the seed also of a plant which bears an ear. It is a kind of oat which grows among corn, to which it is injurious; the leaves and stalk of it resemble those of wheat, and at the extremity it bears seeds, hanging down, something like small locusts in appearance. The seed of this plant is useful for plasters, like barley and other grain of a similar nature. A decoction of it is good for coughs.

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CHAP. 80.

OROBANCHE, OR CYNOMORION: ONE REMEDY.

We have mentioned orobanche as the name of a plant which kills the fitch and other leguminous plants. Some persons have called it “cynomorion,” from the resemblance which it bears to the genitals of a dog. The stem of it is leafless, thick, and red. It is eaten either raw, or boiled in the saucepan, while young and tender.

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CHAP. 81.

REMEDIES FOR INJURIES INFLICTED BY INSECTS WHICH BREED AMONG LEGUMINOUS PLANTS.

There are some venomous insects also, of the solipuga kind, which breed upon leguminous plants, and which, by stinging the hands, endanger life. For these stings all those remedies are efficacious which have been mentioned for the bite of the spider and the phalangium. Such, then, are the medicinal properties for which the cereals are employed.

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CHAP. 82.

THE USE MADE OF THE YEAST OF ZYTHUM.

Different beverages, too, are made from the cereals, zythum in Egypt, cælia and cerea in Spain, cervesia and numerous liquors in Gaul and other provinces. The yeast of all of these is used by women as a cosmetic for the face. — But as we are now speaking of beverages, it will be the best plan to pass on to the various uses of wine, and to make a beginning with the vine of our account of the medicinal properties of the trees.

Summary. — Remedies, narratives, and observations, nine hundred and six.

Authors quoted. — All those mentioned in the preceding Book: and, in addition to them, Chrysermus, Eratosthenes, and Alcæus.

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BOOK XXIII. THE REMEDIES DERIVED FROM THE CULTIVATED TREES.

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CHAP. 1. (1.)

INTRODUCTION.

We have now set forth the various properties, medicinal or otherwise, as well of the cereals as of the other productions which lie upon the surface of the earth, for the purpose either of serving us for food, or for the gratification of our senses with their flowers or perfumes. In the trees, however, Pomona has entered the lists with them, and has imparted certain medicinal properties to the fruits as they hang. Not content with protecting and nourishing, under the shadow of the trees, the various plants which we have already described, she would even appear to be indignant, as it were, at the thought that we should derive more succour from those productions which are further removed from the canopy of heaven, and which have only come into use in times comparatively recent. For she bids man bear in mind that it was the fruits of the trees which formed his first nourishment, and that it was these which first led him to look upwards towards the heavens: and not only this, but she reminds him, too, that even still it is quite possible for him to derive his aliment from the trees, without being indebted to grain for his subsistence.

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CHAP. 2.

THE VINE.

But, by Hercules! it is the vine more particularly to which she has accorded these medicinal properties, as though she were not contented with her generosity in providing it with such delicious flavours, and perfumes, and essences, in its omphacium, its œnanthe, and its massaris, preparations upon which we have already enlarged. "It is to me," she says, "that man is indebted for the greater part of his enjoyments, it is I that produce for him the flowing wine and the trickling oil, it is I that ripen the date and other fruits in numbers so varied; and all this, not insisting, like the earth, on their purchase at the cost of fatigues and labours. No necessity do I create for ploughing with the aid of oxen, for beating out upon the threshing-floor, or for bruising under the millstone, and all in order that man may earn his food at some indefinite time by this vast expenditure of toil. As for me, all my gifts are presented to him ready prepared: for no anxieties or flatigues do they call, but, on the contrary, they offer them- selves spontaneously, and even fall to the ground, if man should be too indolent to reach them as they hang." Vying even with herself, Pomona has done still more for our practical advantage than for the mere gratification of our pleasures and caprices.

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CHAP. 3.

THE LEAVES AND SHOOTS OF THE VINE: SEVEN REMEDIES.

The leaves and shoots of the vine, employed with polenta, allay head-ache and reduce inflammations: the leaves, too, applied by themselves with cold water, are good for burning pains in the stomach; and, used with barley-meal, are excellent applications for diseases of the joints. The shoots, beaten up and applied, have the property of drying up all kinds of running tumours, and the juice extracted from them is used as an injection for the cure of dysentery. The tears of the vine, which would appear to be a sort of gum, will heal leproussores, lichens, and itch-scabs, if treated first with nitre: used with oil, and applied frequently to superfluous hairs, they act as a depilatory, those more particularly which exude from the vine when burnt in a green state: this last liquid has the effect, too, of removing warts. An infusion of the shoots in water, taken in drink, is good for persons troubled with spitting of blood, and for the fainting fits which sometimes ensue upon conception.

The bark of the vine and the dried leaves arrest the flowing of blood from wounds, and make the sores cicatrize more rapidly. The juice of the white vine, extracted from it while green, effectually removes cutaneous eruptions. The ashes of the cuttings of vines, and of the husks of the grapes, ap- plied with vinegar, are curative of condylomata and diseases of the fundament; as also of sprains, burns, and swellings of the spleen, applied with rose-oil, rue, and vinegar. Used with wine, but without oil, they make a fomentation for erysipelas and parts of the body which are chafed; they act as a depilatory also. For affections of the spleen the ashes of vine-cuttings, moistened with vinegar, are administered in drink, being taken in doses of two cyathi in warm water; after which the patient must take due care to lie upon the side in which the spleen is situate.

The tendrils, too, which the vine throws out as it climbs, beaten up in water and drunk, have the effect of arresting habitual vomiting. The ashes of the vine, used with stale axle-grease, are good for tumours, act as a detergent upon fistulas, and speedily effect a radical

cure; the same, too, with pains and contractions of the sinews, occasioned by cold. Applied with oil, they are useful for contusions, and with vinegar and nitre, for fleshy excrescences upon the bones: in combination with oil, they are good, too, for wounds inflicted by scorpions and dogs. The ashes of the bark, employed by themselves, restore the hair to such parts of the body as have suffered from the action of fire.

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CHAP. 4.

OMPHACIUM EXTRACTED FROM THE VINE: FOURTEEN REMEDIES.

We have already mentioned, when speaking of the composition of unguents, how omphacium is made from the grape, when it is just beginning to form: we shall now proceed to speak of its medicinal properties. Omphacium heals ulcerations of the humid parts of the body, such as the mouth, tonsillary glands, and generative organs, for example; it is very good, too, for the sight, for rough spots upon the eyelids, ulcers at the corners of the eyes, films upon the eyes, running sores on all parts of the body, cicatrizations slow in forming, and purulent discharges from the ears. The powerful action of omphacium is modified by the admixture of honey or raisin wine. It is very useful, too, for dysentery, spitting of blood, and quinsy.

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CHAP. 5.

ŒNANTHE: TWENTY-ONE REMEDIES.

Next to omphacium comes œnanthe, a product of the wild vine, described by us already when treating of the unguents. The most esteemed kind is that of Syria, the produce of the white vine in the vicinity of the mountains of Antiochia and Laodicea in particular. Being of a cooling, astringent nature, it is used for sprinkling upon sores, and is employed as a topical application for diseases of the stomach. It acts also as a diuretic, and is good for maladies of the liver, head-ache, dysentery, cœliac affections, and attacks of cholera: for nausea, it is taken in doses of one obolus in vinegar. It acts as a desiccative upon running eruptions of the head, and is extremely efficacious for maladies of the humid parts of the body; hence it is that it is employed, with honey and saffron, for ulcers of the mouth, and for diseases of the generative organs and the fundament. It arrests looseness of the bowels, and heals erup- tions of the eyelids and runnings at the eyes: taken with wine, it cures derangements of the stomach, and with cold water, spitting of blood.

The ashes of œnanthe are highly esteemed as an ingredient in eye-salves, and as a detergent for ulcers, whitlows, and hang-nails; to obtain these ashes, it is put into an oven, and left there till the bread is thoroughly baked.

As to massaris, it is used as a perfume only. The renown attached to all these preparations is due solely to the innate greediness of mankind, which has racked its invention to gather the productions of the earth before they have arrived at maturity.

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CHAP. 6.

GRAPES, FRESH GATHERED.

As to grapes when allowed to gain maturity, the black ones have more marked properties than the others; and hence it is, that the wine made from them is not so agreeable. The white grapes, on the other hand, are sweeter, for, being transparent, the air penetrates them with greater facility.

Grapes fresh gathered are productive of flatulency, and disturb the stomach and bowels; hence it is that they are avoided in fevers, in large quantities more particularly. Indeed, they are very apt to produce oppression of the head, and to bring on the malady known as lethargy. Grapes which have been gathered, and left to hang for some time, are much less injurious, the exposure to the air rendering them beneficial even to the stomach, and refreshing to the patient, as they are slightly cooling, and tend to remove nausea and qualmishness.

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CHAP. 7.

VARIOUS KINDS OF PRESERVED GRAPES: ELEVEN REMEDIES.

Grapes which have been preserved in wine or in must are trying to the head. Next to the grapes which have been left to hang in the air, are those which have been kept in chaff; but as to those which have been preserved among grape husks, they are injurious to the head, the bladder, and the stomach, though at the same time they arrest looseness of the bowels, and are extremely good for patients troubled with spitting of blood. When preserved in must, they are worse even in their effects than when kept among husks; boiled must, too, renders them injurious to the stomach. It is the opinion of medical writers, that grapes kept in rain-water are the most wholesome of all, even though they are by no means agreeable eating; for the benefit of them is particularly experienced in burning pains of the stomach, biliousness arising from a disordered liver, vomiting of bile, and attacks of cholera, as also dropsy and burning fevers.

Grapes kept in earthen pots sharpen the taste, the stomach, and the appetite; it is thought, however, that they are rendered a little heavy by the exhalations from the husks with which they are covered. If vine-blossoms are given to poultry, mixed with their food, they will never touch the grapes.

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CHAP. 8.

CUTTINGS OF THE VINE: ONE REMEDY.

Such cuttings of the vine as have borne grapes, have an astringent effect, when they are preserved in earthen pots, more particularly.

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CHAP. 9.

GRAPE-STONES: SIX REMEDIES.

Grape-stones, also, have a similar property; it is through them that wine is so apt to produce head-ache. Parched and then pounded, they are beneficial for the stomach; and this powder is sprinkled, like polenta, in the beverage of patients suffering from dysentery, cœliac affections, and derangements of the stomach. A decoction of them is useful, also, as a fomentation for itch-scabs and prurigo.

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CHAP. 10.

GRAPE-HUSKS: EIGHT REMEDIES.

Grape-husks, used by themselves, are less injurious to the head and bladder than grape-stones are: beaten up with salt, they form an excellent liniment for inflammations of the ma- millæ. A decoction of them, taken in drink, or employed as a fomentation, is good for inveterate dysentery, and cœliac affections.

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CHAP. 11.

THE GRAPES OF THE THERIACA: FOUR REMEDIES.

The grape of the theriaca, of which we have already made mention on the appropriate occasion, is eaten by way of antidote to the stings of serpents. It is recommended, too, to eat the young shoots of this tree, and to apply them topically. The wine and vinegar made from these grapes are productive of a similar salutary effect.

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CHAP. 12.

RAISINS, OR ASTAPHIS: FOURTEEN REMEDIES.

Raisins, the name given to which is “astaphis,” would be injurious to the stomach, abdomen, and intestines, were it not for the stones within them, which act as a corrective. When the stones are removed, raisins, it is thought, are beneficial to the bladder, and good for cough: in the last case, the raisin of the white grape is considered the best. Raisins are good also for the trachea and the kidneys, and the wine made from them is particularly efficacious for the sting of the serpent called hæmorrhoïs. In combination with meal of cummin or coriander, they are employed topically for inflammations of the testes. For carbuncles and diseases of the joints, the stones are removed, and the raisins are pounded with rue; if used for ulcers, the sores must be first fomented with wine.

Used with the stones, raisins are a cure for epinyctis, honeycomb ulcers, and dysentery; and for gangrenes they are applied topically with radish rind and honey, being first boiled in oil. They are used with panax, for gout and loose nails; and they are sometimes eaten by themselves, in combination with pep- per, for the purpose of cleansing the mouth and clearing the brain.

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CHAP. 13

THE ASTAPHISAGRIA, OTHERWISE CALLED STAPHIS OR TAMINIA: TWELVE REMEDIES.

The wild astaphis, otherwise called staphis, is by some persons erroneously called “uva taminia;” for it is altogether a distinct plant from the other. It has a black, upright stein, with leaves resembling those of the labrusca, and bears what we may call a pod, rather than a grape, green, similar to a chick-pea in appearance, and enclosing a kernel of triangular form. The fruit of it ripens with the vintage and turns black, while the berries of the taminia, as is well known, are red; this last, too, as we are aware, grows only in shaded spots, while the wild astaphis, on the other hand, loves a site that is exposed to the sun.

I would not recommend any one to use the kernels of the wild astaphis as a purgative, as it is very doubtful whether they might not choke the patient; nor would I advise them to be employed for the purpose of attenuating the phlegm, as they are extremely irritating to the throat. Beaten up, however, and applied topically, they kill vermin in the head and other parts of the body, more particularly if they are used with sandarach; they are very useful, too, for itch-scabs and prurigo. A decoction of the kernels is made with vinegar, for the cure of tooth-ache, diseases of the ears, cicatrices that are slow in healing, and running sores.

The blossoms of the plant are beaten up and taken in wine for stings inflicted by serpents; but, as to the seed, I would strongly recommend its rejection, on account of its extremely pungent properties. Some persons give to this plant the name of “pituitaria,” and use it as a common application for stings inflicted by serpents.

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CHAP. 14.

THE LABRUSCA, OR WILD VINE: TWELVE REMEDIES.

The labrusca, too, produces an œnanthe, which has been described at sufficient length already: by the Greeks the labrusca is known as the wild vine. The leaves of it are thick and of a whitish colour, the stem is jointed, and the bark full of fissures: it bears grapes of a scarlet hue, like the coccus, which are made use of by females for the purpose of improving the complexion, and removing spots upon the face. Pounded with the leaves and the juice extracted from the tree, these grapes are usefully employed for the treatment of lumbago and sciatica. A decoction of the root in water, taken in two cyathi of Coan wine, promotes an alvine evacuation of aqueous secretions; for which reason it is prescribed for dropsy.

I am inclined to think that; this is the plant that is commonly known as the “uva taminia;” it is in great request as an amulet, and is employed, though as a gargle only, in cases of spitting blood; for which purpose, salt, thyme, and oxymel are added to it, care being taken not to swallow any of the mixture. It is generally looked upon as unsafe to employ it as a purgative.

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CHAP. 15.

THE SALICASTRUM: TWELVE REMEDIES.

There is another plant, similar to the labrusca, but found growing in willow-beds; for which reason it is known by a distinct name, though the uses to which it is applied are just the same. The name given to it is “salicastrum;” beaten up with oxymel, it displays marvellous efficacy in the removal of itch-scab and prurigo in men and cattle.

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CHAP. 16.

THE WHITE VINE, OTHERWISE CALLED AMPELOLEUCE, STAPHYLE, MELOTHRON, PSILOTRUM, ARCHEZOSTIS, CEDROSTIS, OR MADON: THIRTY-ONE REMEDIES.

The white vine is known to the Greeks by the various names of ampeloleuce, staphyle, melothron, psilotrum, archezostis, cedrostis, and madon. The twigs of this tree are jointed, thin, and climbing, with considerable interstices between the knots. The leaves, attached to the numerous shoots, and about the size of an ivy leaf, are jagged at the edges, like that of the vine. The root of it is large and white, and very like a radish at first; from it issue several stems, Similar to asparagus in appearance. These stems, eaten boiled, are both purgative and diuretic. The leaves, too, as well as the stems, are possessed of caustic properties; for which reason they are employed topically with salt, for phagedænic sores, gangrenes, and putrid ulcers of the legs. The fruit of the tree is in the form of grapes thinly scattered, the juice of which is red at first, and afterwards of a saffron colour. This fruit is well known to curriers, who are in the habit of using it in preparing leather. It is employed also in the form of a liniment for itch-scabs and leprous spots; and a decoction of it with wheat, taken in drink, increases the milk in women when nursing. The root of this tree, so renowned for the numerous medicinal purposes to which it is applied, is pounded and taken in wine, in doses of two drachmæ, for the cure of stings inflicted by serpents: it has the effect, also, of removing spots upon the face, moles and freckles, as well as scars and bruises: a decoction of it in oil is productive of a similar effect. A decoction of it is given to drink for epilepsy, and to persons troubled with a disordered mind or suffering from vertigo, the dose being one drachma daily, for a whole year: taken in larger quantities, it is apt sometimes to disorder the senses. It is possessed, also, of one very remarkable property, applied with water in the same manner as bryonia, of extracting splintered bones, for which reason it is known to some persons by the name of white bryonia: the other kind, however, which is black, is found to answer

the purpose better, in combination with honey and frankincense.

The white vine disperses incipient suppurations, ripens them when they are inveterate, and acts as a detergent: it operates also as an emmenagogue and diuretic. An electuary is prepared from it for asthma and pains in the sides, as also for convulsions and ruptures. Taken in drink for thirty days together, in doses of three oboli, it has the effect of reducing the spleen; and it is used, in combination with figs, for the cure of hangnails on the fingers. Applied with wine, it brings away the after-birth, and, taken in hydromel, in doses of one drachma, it carries off phlegm. The juice of the root should be extracted before the fruit ripens; applied either by itself or with meal of fitches, it imparts an improved com- plexion and a certain degree of suppleness to the skin: it has the effect also of repelling serpents. The root itself, too, beaten up with a pulpy fig, will remove wrinkles on the body, if the person using it takes care to walk a couple of stadia immediately after the application; otherwise it would leave marks upon the skin, unless, indeed, it were washed off immediately with cold water. The black vine, too, is better for this purpose than the white one, as the latter is very apt to be pro- ductive of itching.

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CHAP. 17.

THE BLACK VINE, OTHERWISE CALLED BRYONA, CHIRONIA, GYNÆCANTHE, OR APRONIA: THIRTY-FIVE REMEDIES.

For there is also a black vine, properly known as the “bryonia,” though by some persons it is called the “chironia,” and by others the “gynæcanthe,” or “apronia.” It differs only from the one previously mentioned in its colour, which, as already stated, is black. The shoots of this tree, which resemble asparagus in appearance, are preferred by Diodes for eating to real asparagus, as a diuretic and for its property of reducing the spleen. It is found growing in shrubberies or reed-beds more particularly. The root of it, which is black outside, and of the colour of box within, is even more efficacious for the extraction of splintered bones than the plant last mentioned; in addition to which, it has the property of being a specific for excoriations of the neck in cattle. It is said, too, that if a person plants it around a farm, it will be sure to keep hawks away, and to preserve the poultry-yard in perfect safety. Attached to the ankles, it tends to disperse the blood, congested or otherwise, which may have settled in those parts of the body, whether in human beings or in beasts of burden.

Thus much with reference to the various species of vines.

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CHAP. 18.

MUST: FIFTEEN REMEDIES.

The various kinds of must have different properties; some of them being black, some white, and others of intermediate shades of colour. There is a difference, too, between the kinds of must from which wine is made, and those from which raisin wine is prepared. The various degrees of care and attention on the part of the maker, render the differences that already exist, quite innumerable; we shall therefore content ourselves with taking a general view only of their medicinal uses.

Every kind of must is unwholesome to the stomach, but of a soothing nature to the venous system. Taken off at a draught, immediately after the bath, must is fatal in its effects. It acts as an antidote to cantharides and stings inflicted by serpents, those of the hæmorrhois and the salamandra in particular. It is productive of head-ache, and is prejudicial to the throat, but it is good for the kidneys, liver, and inner coat of the bladder, by reason of its lubricating properties. It is particularly effectual also in cases of injuries inflicted by the insect known as the “buprestis.”

Taken with oil as a vomit, it neutralizes the bad effects of opium, milk that has curdled upon the stomach, hemlock, dorycnium, and other poisons. For all these purposes, however, white must is not so efficacious, while must prepared from raisins of the sun has a more pleasant flavour, and is productive of a less degree of oppression to the head.

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CHAP. 19.

PARTICULARS RELATIVE TO WINE.

We have already described the various kinds of wine, the numerous differences which exist between them, and most of the properties which each kind possesses. There is no subject that presents greater difficulties than this, or, indeed, a more varied field for discussion, it being extremely difficult to pronounce whether wine is more generally injurious in its effects, or beneficial. And then, in addition to this, how very uncertain is it, whether, the moment we have drunk it, it will be productive of salutary results, or turn out no better than so much poison! However, it is only with reference to its medicinal properties, that we are now about to speak of it.

Asclepiades has composed a whole treatise (which has thence received its name) on the proper methods of administering wine; and the number of commentators who have since written on this treatise, is almost innumerable. For my own part, with all that gravity which becomes a Roman, and one zealous for the furtherance of liberal pursuits, I shall enter into a careful examination of this subject, not, indeed, in the character of a physician, but as a careful investigator of the effects which wine is likely to produce upon the health of mankind. To treat, however, of the medicinal properties of each individual kind, would be a labour without end, and quite inexhaustible; the more so, as the opinions of medical men are so entirely at variance upon the subject.

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CHAP. 20.

THE SURRENTINE WINES: THREE REMEDIES. THE ALBAN WINES: TWO REMEDIES. THE FALERNIAN WINES: SIX REMEDIES.

Our ancestors set the highest value upon the wines of Surrentum; but at a later period the preference was given to the Alban, or the Falernian wines. More recently, again, other varieties of wine have come into fashion, quite in accordance with that most unreasonable mode of proceeding, according to which, each person, as he finds a wine most to his taste, extols it as superior to all others. Suppose, now, that all persons were quite agreed as to the superiority of some particular kind of wine, how small a proportion of mankind would be enabled to make use of it! As it is, even the rich never drink it in an unsophisticated state; the morals of the age being such, that it is the name only of a vintage that is sold, the wines being adulterated the very moment they enter the vat. Hence it is, by Hercules! — a thing truly astounding — that, in reality, a wine is more innoxious in its effects, in pro- portion as it enjoys a less extended renown. The three kinds, however, of which we have made mention, appear to have maintained, with the least diminution, their ancient repute.

The Falernian wine, it a person should be desirous to know the marked characteristics of wines according to age, is injurious to the health, either too new or too old; at fifteen years it begins to be of medium age. Falernian wine of this age, taken cold, is good for the stomach, but not when taken warm. For an inveterate cough and for quartan fevers, it is a good plan to drink it neat, fisting. There is no wine that quickens the action of the venous system so much as this; it acts astringently upon the bowels, and is feeding to the body. It has been thought, however, that this wine is productive of injury to the sight, and that it is far from beneficial to the nerves and the bladder.

The Alban wines are more salutary to the nervous system, but the sweet kinds are not so beneficial to the stomach. The rough wines of Alba are even better than those of Falernum, but they do not promote the digestion so well, and have a slight tendency to overload the stomach.

As to the Surrentine wines, they have no such effect upon the stomach, nor are they at all trying to the head; they have the property also of arresting defluxions of the stomach and intestines. The Cæcuban wines are no longer grown.

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CHAP. 21.

THE SETINE WINES; ONE OBSERVATION UPON THEM. THE STATAN WINES; ONE OBSERVATION UPON THEM. THE, SIGNIAN WINES; ONE REMEDY.

Among the wines, however, which still exist, those of Setia promote the digestion, having more strength than the Surrentine wines, and more roughness than those of Alba. The wines of Falernum are not so powerful. Those of Stata are but very little inferior in quality to the wines already mentioned. It is universally agreed that the wines of Signia are extremely beneficial in cases of derangement of the bowels.

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CHAP. 22.

OTHER WINES: SIXTY-FOUR REMEDIES.

As to the other wines, they may be spoken of in general terms. By the use of wine, the human vigour, blood, and complexion are improved. It is wine that makes up for all the difference between the middle or temperate zone, and those which lie on either side of it, the juice of the vine conferring as much vigour and robustness upon the inhabitants of our part of the earth as the rigorousness of the climate does upon the people there. Milk, used as a beverage, strengthens the bones, liquids extracted from the cereals nourish the sinews, and water imparts nutriment to the flesh: hence it is that persons who confine themselves to these several liquids as a beverage, are of a less ruddy complexion than the winedrinker, less robust, and less able to endure fatigue. By the use of wine in moderation the sinews are strengthened, but taken in excess it proves injurious to them; the same, too, with the eves. Wine refreshes the stomach, sharpens the appetite, takes off the keen edge of sorrows and anxieties, warms the body, acts beneficially as a diuretic, and invites sleep. In addition to these properties, it arrests vomiting, and we find that pledgets of wool, soaked in wine, and applied to abscesses, are extremely beneficial. According to Asclepiades, the virtues possessed by wine are hardly equalled by the majestic attributes of the gods themselves.

Old wine bears admixture with a larger quantity of water, and acts more powerfully as a diuretic, though at the same time it is less effectual for quenching thirst. Sweet wine, again, is less inebriating, but stays longer on the stomach, while rough wine is more easy of digestion. The wine that becomes mellow with the greatest rapidity is the lightest, and that which becomes sweeter the older it is, is not so injurious to the nerves. Wines that are rich and black, are not so beneficial to the stomach; but, at the same time, they are more feeding to the body. Thin-bodied rough wines are not so feeding, but are more wholesome to the stomach, and pass off more speedily by urine, though they are all the more liable to fly to the head; a remark which will apply, once for all, to liquids of every kind.

Wine that has been mellowed by the agency of smoke is extremely unwholesome — a fraudulent method of preparation that has been invented in the wine-lofts of the retail dealers. At the present day, however, this plan is adopted in private families even, when it is wished to give the appearance of maturity to wines that have become carious. Indeed, this term *carious* has been used very appositely by the ancients with reference to wines; for we find that in the case of wood even, smoke exercises a caustic effect upon the carious parts, and eats them away; and yet we, on the other hand, persuade ourselves that an adventitious age may be imparted to wines by the bitter twang derived from smoke!

Those wines which are extremely pale, become more wholesome the older they are. The more generous a wine is, the thicker it becomes with age; while, at the same time, it contracts a bitter flavour, which is far from exercising a beneficial effect upon the health. To season another wine, that is not so old, with this, is nothing less than to make an unwholesome preparation. The more of its own natural flavour a wine possesses, the more wholesome it is; and the best age for a wine is that which naturally belongs to it, a medium age being the one that is the most generally esteemed.

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CHAP. 23.

SIXTY-ONE OBSERVATIONS RELATIVE TO WINE.

Persons whose wish it is to make flesh, or to keep the bowels relaxed, will do well to drink while taking their food. Those, on the other hand, who wish to reduce themselves, or prevent the bowels from being relaxed, should abstain from drinking while taking their meals, and drink but a very little only when they have done eating. To drink wine fasting is a fashion of recent introduction only, and an extremely bad one for persons engaged in matters of importance, and requiring a continued application of the mental faculties. Wine, no doubt, was taken fasting in ancient times, but then it was as a preparative for sleep and repose from worldly cares; and it is for this reason that, in Homer, we find Helen presenting it to the guests before the repast. It is upon this fact, too, that the common proverb is founded, which says that "wisdom is obscured by wine." It is to wine that we men are indebted for being the only animated beings that drink without being thirsty. When drinking wine, it is a very good plan to take a draught of water every now and then; and to take one long draught of it at the last, cold water taken internally having the effect of instantaneously dispelling inebriation.

It is strongly recommended by Hesiod to drink undiluted wine for twenty days before the rising of the Dog-star, and as many after. Pure wine, too, acts as an antidote to hemlock, coriander, henbane, mistletoe, opium, mercury, as also to stings inflicted by bees, wasps, hornets, the phalangium, serpents, and scorpions; all kinds of poison, in fact, which are of a cold nature, the venom of the hæmorrhois and the prester, in particular, and the noxious effects of fungi. Undiluted wine is good, too, in cases of flatulency, gnawing pains in the thoracic organs, excessive vomitings at the stomach, fluxes of the bowels and intestines, dysentery, excessive perspirations after prolonged fits of coughing, and defluxions of various kinds. In the cardiac disease, it is a good plan to apply a sponge soaked in neat wine to the left breast: in all these cases, however, old white wine is the best. A fomentation of hot wine applied to the genitals of beasts

of burden is found to be very beneficial; and, introduced into the mouth, with the aid of a horn, it has the effect of removing all sensations of fatigue. It is asserted that in apes, and other quadrupeds with toes, the growth will be impeded if they are accustomed to drink undiluted wine.

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CHAP. 24.

IN WHAT MALADIES WINE SHOULD BE ADMINISTERED; HOW IT SHOULD BE ADMINISTERED, AND AT WHAT TIMES.

We shall now proceed to speak of wine in relation to its medicinal uses. The wines of Campania which have the least body, are the most wholesome beverage for persons of rank and station; and for the lower classes the best kind of wine is that which is the most pleasant to the person who drinks it, provided he is in robust health. For persons of all ranks, however, the most serviceable wine is that the strength of which has been reduced by the strainer; for we must bear in mind that wine is nothing else but juice of grapes which has acquired strength by the process of fermentation. A mixture of numerous kinds of wine is universally bad, and the most wholesome wine of all is that to which no ingredient has been added when in a state of must; indeed, it is still better if the vessels even in which it is kept have never been pitched. As to wines which have been treated with marble, gypsum, or lime, where is the man, however robust he may be, that has not stood in dread of them?

Wines which have been prepared with sea-water are par- ticularly injurious to the stomach, nerves, and bladder. Those which have been seasoned with resin are generally looked upon as beneficial to a cold stomach, but are considered unsuitable where there is a tendency to vomit: the same, too, with must, boiled grape-juice, and raisin wine. New wines sea- soned with resin are good for no one, being productive of vertigo and head-ache: hence it is that the name of "crapula" has been given equally to new resined wines, and to the surfeit and head-ache which they produce.

The wines above mentioned by name, are good for cough and catarrh, as also for cœliac affections, dysentery, and the catamenia. Those wines of this sort which are red or black, are more astringent and more heating than the others. Wines which have been seasoned with pitch only, are not so injurious; but at the same time we must bear in mind that pitch is neither more nor less than resin liquefied by the action of fire, These pitched wines are of a heating nature,

promote the digestion, and act as a purgative; they are good, also, for the chest and the bowels, for pains in the uterus, if there are no signs of fever, for inveterate fluxes, ulcerations, ruptures, spasms, suppurated abscesses, debility of the sinews, flatulency, cough, asthma, and sprains, in which last case they are applied in uncleansed wool. For all these purposes the wine is preferred which has naturally the flavour of pitch, and is thence known as "picatum:" it is generally agreed, however, that the produce of the vine called "helvennaca," if taken in too large a quantity, is trying to the head.

In reference to the treatment of fever, it is well known that wine should never be given, unless the patient is an aged person, or the symptoms are beginning to abate. In cases of acute fever, wine must never be given, under any circumstance, except when there is an evident remission of the attack, and more particularly if this takes place in the night, for then the danger is diminished by one half, there being the probability of the patient sleeping off the effects of the wine. It is equally forbidden, also, to females just after delivery or a miscarriage, and to patients suffering from over-indulgence of the sexual passions; nor should it be given in cases of head-ache, of maladies in which the attacks are attended with chills at the extremities, of fever accompanied with cough, of tremulousness in the sinews, of pains in the fauces, or where the disease is found to concentrate itself in the iliac regions. Wine is strictly forbidden, too, in cases of induration of the thoracic organs, violent throbbings of the veins, opisthotony, tetanus, asthma, and hardness of breathing attended with fever.

Wine is far from beneficial for a patient, when the eyes are fixed and rigid, and when the eyelids are immoveable, or else relaxed and heavy; in cases, too, where, with an incessant nictation, the eyes are more than usually brilliant, or where the eyelids refuse to close — the same, too, if that symptom should occur in sleep — or where the eyes are suffused with blood, or congealed matter makes its appearance in the corners of those organs. The same rule should be observed, also, when the tongue is heavy and swollen, or when there is an impediment from time to time in the speech, when the urine is passed with difficulty, or when a person has been seized with a sudden fright, with spasms, or recurrent fits of torpor, or experiences

seminal discharges during sleep.

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CHAP. 25.

NINETY-ONE OBSERVATIONS WITH REFERENCE TO WINE.

It is a well-ascertained fact, that in the cardiac disease the only resource is wine. According to some authorities, however, wine should only be given when the attacks come on, while others, again, are of opinion, that it must only be administered between the attacks; it being the object with the former to arrest the profuse perspirations, while the latter base their practice on an impression that it may be given with more safety at a moment when the malady has diminished in intensity; and this I find is the opinion entertained by most people. In all cases, wine must only be administered just after taking food, never after sleep, and under no circumstances after any other kind of drink, or in other words, only when the patient is thirsty; in no case whatever should it be given, except at the very last extremity. Wine is better suited to males than to females, to aged people than to youths, to youths than to children, and to persons who are used to it than to those who are not in the habit of taking it; winter, too, is a better time for using it than summer. As to the quantity to be prescribed, and the proportion of water to be mixed with it, that depends entirely upon the strength of the wine; it is generally thought, however, that the best proportions are one cyathus of wine and two of water. If, however, there is a derangement of the stomach, and if the food does not pass downward, the wine must be given in a larger proportion.

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CHAP. 26.

ARTIFICIAL WINES.

Among the artificial wines, the preparation of which we have described, [there are some which], I think, are no longer made; in addition to which, it would be a mere loss of time to enlarge upon their medicinal effects, having expatiated elsewhere upon the properties of the various elements of which they are composed. And then, besides, the conceits of the medical men in relation to these wines have really passed all bounds; they pretend, for instance, that a wine extracted from turnips is good for recruiting the exhausted strength, after exercises in arms or on horseback; and, not to speak of other preparations, they attribute a similar effect to wine of juniper. Who is there, too, that would think of looking upon wormwood wine as superior in its effects to wormwood itself?

I shall pass in silence the rest of these preparations, and among them palm wine, which is injurious to the head, and is beneficial only as a laxative to the bowels, and as a cure for spitting of blood. We cannot, however, look upon the liquor which we have spoken of under the name of "bion," as being an artificial wine; for the whole art of making it consists merely in the employment of grapes before they have arrived at maturity. This preparation is extremely good for a deranged stomach or an imperfect digestion, as also for pregnancy, fainting fits, paralysis, fits of trembling, vertigo, gripings of the bowels, and sciatica. It is said, too, that in times of pestilence, and for persons on a long journey, this liquid forms a beverage of remarkable efficacy.

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CHAP. 27.

VINEGAR: TWENTY-EIGHT REMEDIES.

Wine, even when it has lost its vinous properties, still retains some medicinal virtues. Vinegar possesses cooling properties in the very highest degree, and is no less efficacious as a resolvent; it has the property, too, of effervescing, when poured upon the ground. We have frequently had occasion, and shall again have occasion, to mention the various medicinal compositions in which it forms an ingredient. Taken by itself it dispels nausea and arrests hiccup, and if smelt at, it will prevent sneezing: retained in the mouth, it prevents a person from being inconvenienced by the heat of the bath. It is used as a beverage also, in combination with water, and employed as a gargle, it is found by many to be very wholesome to the stomach, particularly convalescents and persons suffering from sun-stroke; used as a fomentation, too, this mixture is extremely beneficial to the eyes. Vinegar is used remedially when a leech has been swallowed; and it has the property of healing leprous sores, scorbutic eruptions, running ulcers, wounds inflicted by dogs, scorpions, and scolopendræ, and the bite of the shrew-mouse. It is good, too, as a preventive of the itching sensations produced by the venom of all stinging animals, and as an antidote to the bite or the millepede.

Applied warm in a sponge, in the proportion of three sextarii to two ounces of sulphur or a bunch of hyssop, vinegar is a remedy for maladies of the fundament. To arrest the hemorrhage which ensues upon the operation of lithotomy, and, indeed, all other operations of a similar nature, it is usual to apply vinegar in a sponge, and at the same time to administer it internally in doses of two cyathi, the very strongest possible being employed. Vinegar has the effect also of dissolving coagulated blood; for the cure of lichens, it is used both internally and externally. Used as an injection, it arrests looseness of the bowels and fluxes of the intestines; it is similarly employed, too, for procidence of the rectum and uterus.

Vinegar acts as a cure for inveterate coughs, defluxions of the throat, hardness of breathing, and looseness of the teeth: but it acts

injuriously upon the bladder and the sinews, when relaxed. Medical men were for a long time in ignorance how beneficial vinegar is for the sting of the asp; for it was only recently that a man, while carrying a bladder of vinegar, happening to be stung by an asp upon which he trod, found to his surprise that whenever he put down the bladder he felt the sting, but that when he took it up again, he seemed as though he had never been hurt; a circumstance which at once suggested to him the remedial properties of the vinegar, upon drinking some of which he experienced a cure. It is with vinegar, too, and nothing else, that persons rinse the mouth after sucking the poison from a wound. This liquid, in fact, exercises a predominance not only upon various articles of food, but upon many other substances as well. Poured upon rocks in con- siderable quantities, it has the effect of splitting them, when the action of fire alone has been unable to produce any effect thereon. As a seasoning, too, there is no kind that is more agreeable than vinegar, or that has a greater tendency to heighten the flavour of food. When it is employed for this purpose, its extreme tartness is modified with burnt bread or wine, or else it is heightened by the addition of pepper, and of laser; in all cases, too, salt modifies its strength.

While speaking of vinegar, we must not omit to mention a very remarkable case in connexion with it: in the latter years of his life, M. Agrippa was dreadfully afflicted with gout, so much so, in fact, that he was quite unable to endure the tor- ments to which he was subjected. Upon this, guided by the ominous advice of one of his medical attendants, though un- known to Augustus, at the moment of an extremely severe attack he plunged his legs into hot vinegar, content to pur- chase exemption from such cruel torments as he suffered, if even at the price of all use and sensation in those limbs, * * * * *.

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CHAP. 28. (2.)

SQUILL VINEGAR: SEVENTEEN REMEDIES.

Squill vinegar is the more esteemed, the older it is. In addition to the properties which we have already mentioned, it is useful in cases where the food turns sour upon the sto- mach, a mere taste of it being sufficient to act as a corrective. It is good, too, when persons are seized with vomiting, while fasting, having the effect of indurating the passages of the throat and stomach. It is a corrective, also, of bad breath, strengthens the teeth and gums, and improves the complexion.

Used as a gargle, squill vinegar remedies hardness of hearing, and opens the passages of the ears, while at the same time it tends to improve the sight. It is very good, too, for epilepsy, melancholy, vertigo, hysterical suffocations, blows, falls with violence, and extravasations of blood in consequence, as also for debility of the sinews, and diseases of the kidneys. In cases of internal ulceration, however, the use of it must be avoided.

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CHAP. 29.

OXYMELI: SEVEN REMEDIES.

The following, as we learn from Dieuches, was the manner in which oxymeli was prepared by the ancients. In a cauldron they used to put ten minæ of honey, five heminæ of old vinegar, a pound and a quarter of sea-salt, and five sextarii of rain-water; the mixture was then boiled together till it had simmered some ten times, after which it was poured off, and put by for keeping. Asclepiades, however, condemned this preparation, and put an end to the use of it, though before his time it used to be given in fevers even. Still, however, it is generally admitted that it was useful for the cure of stings inflicted by the serpent known as the “seps,” and that it acted as an antidote to opium and mistletoe. It was usefully employed also, warm, as a gargle for quinsy and maladies of the ears, and for affections of the mouth and throat; for all these purposes, however, at the present day, oxalme is employed, the best kind of which is made with salt and fresh vinegar.

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CHAP. 30.

SAPA: SEVEN REMEDIES.

Sapa, has a close affinity with wine, being nothing else but must boiled down to one third: that which is prepared from white must is the best. It is used medicinally in cases of injuries inflicted by cantharides, the buprestis, the pinecaterpillars known as pityocampæ, salamanders, and all venomous bites and stings. Taken with onions it has the effect of bringing away the dead fœtus and the after-birth. According to Fabianus, it acts as a poison, if taken by a person fasting, immediately after the bath.

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CHAP. 31.

LEES OF WINE: TWELVE REMEDIES.

Next in the natural order come the lees of these several liquids. The lees of wine are so extremely powerful as to prove fatal to persons on descending into the vats. The proper precaution for preventing this, is to let down a light first, which so long as it refuses to burn, is significant of danger. Wine-lees, in an unrinsed state, form an ingredient in several medicinal preparations: with an equal proportion of iris, a liniment is prepared from them for purulent eruptions; and either moist or dried, they are used for stings inflicted by the phalangium, and for inflammations of tile testes, marmillæ, or other parts of the bolly. A decoction of wine-lees is pre- pared, too, with barley-meal and powdered frankincense; after which it is first parched and then dried. The test of its being properly boiled, is its imparting, when cold, a burning sensa- tion to the tongue. When left exposed to the air, wine-lees very rapidly lose their virtues; which, on the other hand, are greatly heightened by the action of fire.

Wine-lees arc very useful, too, boiled with figs, for the cure of lichens and cutaneous eruptions; they are applied also in a similar manner to leprous sores and running ulcers. Taken in drink, they act as an antidote to the poison of fungi, and more particularly if they are undiluted; boiled and then rinsed, they are used in preparations for the eyes. They are employed also topically for diseases of the testes and generative organs, and are taken in wine for strangury. When wine-lees have lost their strength, they are still useful for cleansing the body and scouring clothes, in which case they act as a substitute for gum acacia.

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CHAP. 32.

LEES OF VINEGAR: SEVENTEEN REMEDIES.

The lees of vinegar, as a matter of course, considering the material from which they are derived, are much more acrid than these of wine, and more caustic in their effects. This substance prevents the increase of suppuration, and, employed topically, is good for the stomach, intestines, and regions of the abdomen. It has the property also of arresting fluxes of those parts, and the catamenia when in excess; it disperses inflamed tumours which have not come to a head, and is a cure for quinsy. Applied with wax, it is curative of erysipelas. It reduces swellings of the mamillæ when gorged with milk, and removes malformed nails. Employed with polenta, it is very efficacious for the cure of stings inflicted by the serpent called cerastes; and in combination with melanthium, it heals bites inflicted by crocodiles and dogs.

Vinegar lees, too, by being subjected to the action of fire, acquire additional strength. Mixed in this state with oil of mastich, and applied to the hair, they turn it red in a single night. Applied with water in linen, as a pessary, they act as a detergent upon the uterus.

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CHAP. 33.

LEES OF SAPA: FOUR REMEDIES.

The lees of sapa are used for the cure of burns, it being the best plan to employ with them the down that grows on the reed; a decoction too, of these lees, is good for the cure of an inveterate cough. They are boiled also in a saucepan with salt and grease as an ointment for tumours of the jaws and neck.

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CHAP. 34. (3.)

THE LEAVES OF THE OLIVE: TWENTY-THREE REMEDIES.

The next rank, after the vine, clearly belongs to the olive. The leaves of the olive-tree are astringent, detergent, and binding in the highest degree. Chewed and applied to sores, they are of a healing nature; and applied topically with oil, they are good for head-ache. A decoction of them with honey makes a good liniment for such parts of the body as have been subjected to cauterization, as also for inflammations of the gums, whitlows, and foul and putrid ulcers: combined with honey, they arrest discharges of blood from the nervous parts of the body. The juice of olive leaves is efficacious for carbuncular ulcers and pustules about the eyes, and for procidence of the pupil; hence it is much employed in the composition of eye-salves, having the additional property of healing inveterate runnings of the eyes, and ulcerations of the eyelids.

This juice is extracted by pouring wine and rain-water upon the leaves, and then pounding them; after which the pulp is dried and divided into lozenges. Used with wool, as a pessary, this preparation arrests menstruation when in excess, and is very useful for the treatment of purulent sores, condylomata, erysipelas, spreading ulcers, and epinyctis.

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CHAP. 35

THE BLOSSOM OF THE OLIVE: FOUR REMEDIES.

The blossom, of too, of the olive-tree possesses similar pro- perties. The young branches are burnt when just beginning to blossom, and of the ashes a substitute for spodium is made, upon which wine is poured, and it is then burnt afresh. To suppurations and inflamed tumours these ashes are applied, or else the leaves, beaten up with honey; for the eyes, they are used with polenta. The juice which exudes from the wood, when burnt in a green state, heals lichens, scaly eruptions, and running ulcers.

As to the juice which exudes naturally from the olivetree, and more particularly that of Æthiopia, we cannot be sufficiently surprised that authors should have been found to recommend it as an application for tooth-ache, and to tell us at the same time that it is a poison, and even that we must have recourse to the wild olive for it. The bark of the roots of the olive, as young and tender a tree as possible being selected, scraped and taken every now and then in honey, is good for patients suffering from spitting of blood and purulent expectorations. The ashes of the tree itself, mixed with axle-grease, are useful for the cure of tumours, and heal fistulas by the extraction of the vicious humours which they contain.

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CHAP. 36.

WHITE OLIVES: FOUR REMEDIES. BLACK OLIVES: THREE REMEDIES.

White olives are wholesome for the upper regions of the stomach, but not so good for the bowels. Eaten by themselves, habitually as a diet, quite fresh and before they are preserved, they are remarkably serviceable, having the effect of curing gravel, and of strengthening the teeth when worn or loosened by the use of meat.

Black olives, on the other hand, are not so wholesome for the upper regions of the stomach, but are better for the bowels; they are not good, however, for the head or for the eves. Both kinds, pounded and applied topically, are good for the cure of burns, but the black olive is sometimes chewed first, and instantly applied to the sore, for the purpose of preventing blisters from forming. Colymbades act as a deter- gent for foul ulcers, but they are bad for persons suffering from strangury.

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CHAP. 37.

AMURCA OF OLIVES: TWENTY-ONE REMEDIES.

As to the amurca of olives, we might appear to have said enough on the subject already, taking Cato as our guide; it remains, however, to speak of the medicinal uses of this substance. It is extremely serviceable as a strengthener of the gums, and for the cure of ulcers of the mouth; it has the effect, also, of strengthening loose teeth in the sockets, and an application of it is good for erysipelas and spreading ulcers. For chilblains, the amurca of the black olive is the best, as also as a fomentation for infants; that of the white olive is used, with wool, as a pessary for affections of the uterus. Of both kinds, however, the amurca is much more serviceable when boiled; this being done in a vessel of Cyprian copper, to the consistency of honey. Thus prepared, it is used, according to the necessities of the case, with either vinegar, old wine, or honied wine, for the treatment of maladies of the mouth, teeth, and ears, and for running ulcers, diseases of the generative organs, and chaps on various parts of the body. It is employed topically, for the cure of wounds, in a linen pledget, and for sprains, in wool: as a medicament, it is of great utility, more particularly when old, as in such case it effects the cure of fistula.

It is used as an injection for ulcerations of the fundament, the generative organs, and the uterus, and is employed topically for incipient gout and diseases of the joints. Boiled down again, with omphacium, to the consistency of honey, it extracts decayed teeth; and, in combination with a decoction of lupines and the plant chamæleon, it is a marvellous cure for itch in beasts of burden. Fomentations of amurca in a raw state are extremely good for gout.

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CHAP. 38. (4.)

THE LEAVES OF THE WILD OLIVE: SIXTEEN REMEDIES.

The leaves of the wild olive are possessed of similar properties. The spodium that is made by burning the young branches is of remarkable efficacy for arresting fluxes; it allays inflammations of the eyes also, acts as a detergent upon ulcerous sores, makes the flesh grow on wounds from which it has been removed, and acts gently as a caustic upon fleshy excrescences, drying them up and making them cicatrize. The rest of its properties are similar to those of the cultivated olive. There is, however, one peculiarity in it; the leaves, boiled with honey, are given in doses of a spoonful for spitting of blood. The oil, too, of the wild olive is more acrid, and possesses greater energy than that of the cultivated olive; hence it is that it is usual to rinse the mouth with it for the purpose of strengthening the teeth.

The leaves, too, are applied topically, with wine, to whitlows, carbuncles, and all kinds of gatherings; and, with honey, to sores which require a detergent. Both a decoction of the leaves and the natural juices of the wild olive form ingredients in medicaments for the eyes; and the latter are found useful as an injection for the ears, in the case of puru- lent discharges even. From the blossom of the wild olive a liniment is prepared for condylomata and epinyctis: it is applied also to the abdomen, with barley-meal, for fluxes, and to the head, with oil, for head-ache. In cases where the scalp becomes detached from the cranium, the young branches, boiled and applied with honey, have a healing effect. These branches, too, when arrived at maturity, taken with the food, arrest diarrhœa: parched and beaten up with honey, they act as a detergent upon corroding sores, and bring carbuncles to a head and dispers them.

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CHAP. 39.

OMPHACIUM: THREE REMEDIES.

As to olive oil, we have abundantly treated of its nature and elements already. It now remains to speak of the medicinal properties of the various kinds of oil. The most useful of all is omphacium, and next to that, green oil; in addition to which, we may remark that oil ought to be as fresh as possible, except in cases where old oil is absolutely required. For medicinal purposes, too, oil should be extremely fluid, have an agreeable smell, and be free from all taste, just the converse, in fact, of the property which we look for in food. Omphacium is good for the gums, and if kept from time to time in the mouth, there is nothing better as a preservative of the whiteness of the teeth. It checks profuse perspirations.

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CHAP. 40.

OIL OF ŒNANTHE: TWENTY-EIGHT REMEDIES.

Oil of œnanthe has just the same properties as oil of roses. Like oil in general, it makes the body supple, and imparts to it strength and vigour; it is injurious to the stomach, promotes the increase of ulcers, irritates the fauces, and deadens the effect of all poisons, white-lead and gypsum in particular, if taken in hydromel or a decoction of dried figs. Taken with water, it is good as an antidote to the effects of opium, and to injuries inflicted by cantharides, the buprestis, the salamandra, and the pine caterpillar. Taken pure as an emetic, it is highly esteemed as an antidote in all the before-mentioned cases. It is also a refreshing remedy for extreme lassitude, and for fits of shivering from cold. Taken warm, in doses of six cyathi, and more particularly when boiled with rue, it relieves gripings of the stomach and expels intestinal worms, Taken in doses of one hemina with wine and warm water, or else with barley water, it acts as a purgative upon the bowels. It is useful, also, in the composition of plasters for wounds, and it cleanses the complexion of the face. Injected into the nostrils of oxen, till it produces eructation, it cures attacks of flatulency.

When old it is of a more warming nature than when new, and acts more energetically as a sudorific, and as a resolvent for indurations. It is very efficacious in cases of lethargy, and more particularly in the decline of the disease. Mixed with an equal proportion of honey which has not been smoked, it contributes in some degree to the improvement of the sight. It is a remedy, also for head-ache; and, in combination with water, for the burning attacks in fevers. If old oil should happen not to be at hand, the new oil is boiled to act as a substitute for it.

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CHAP. 41.

CASTOR OIL: SIXTEEN REMEDIES.

Castor oil, taken with an equal quantity of warm water, acts as a purgative upon the bowels. It is said, too, that as a purgative this oil acts more particularly upon the regions of the diaphragm. It is very useful for diseases of the joints, all kinds of indurations, affections of the uterus and ears, and for burns: employed with the ashes of the murex, it heals itch-scabs and inflammations of the fundament. It improves the complexion also, and by its fertilizing tendencies promotes the growth of the hair. The cicus, or seed from which this oil is made, no animal will touch; and from these grape-like seeds wicks are made, which burn with a peculiar brilliancy; the light, however, that is produced by the oil is very dim, in consequence of its extreme thickness. The leaves are applied topically with vinegar for erysipelas, and fresh-gathered, they are used by themselves for diseases of the mamillæ and de- fluxions; a decoction of them in wine, with polenta and saf- fron, is good for inflammations of various kinds. Boiled by themselves, and applied to the face for three successive days, they improve the complexion.

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CHAP. 42.

OIL OF ALMONDS: SIXTEEN REMEDIES.

Oil of almonds is of a purgative and emollient nature; it effaces wrinkles on the skin, improves the complexion, and, in combination with honey, removes spots on the face. A decoc- tion of it with oil of roses, honey, and pomegranate rind, is good for the ears, and exterminates the small worms that breed there; it has the effect also, of dispelling hardness of hearing, recurrent tinglings and singing in the ears, and is curative of head-ache and pains in the eyes. Used with wax, it cures boils, and scorches by exposure to the sun; in combination with wine it heals running ulcers and scaly eruptions, and with melilote, condylomatous swellings. Applied by itself to the head, it invites sleep.

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CHAP. 43.

OIL OF LAUREL: NINE REMEDIES.

As to oil of laurel, the fresher and greener it is, the more valuable are its properties. It is of a heating nature, and is consequently applied, warm, in a pomegranate rind, for paralysis, spasms, sciatica, bruises, head-ache, catarrhs of long standing, and diseases of the ears.

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CHAP. 44.

OIL OF MYRTLE: TWENTY REMEDIES.

Oil of myrtle has similar properties. It is of an astringent and indurative nature; mixed with the scoria of copper, and wax, it cures diseases of the gums, tooth-ache, dysentery, ulcerations of the uterus, affections of the bladder, inveterate or running ulcers, eruptions, and burns. It exercises a healing effect also, upon excoriations, scaly eruptions, chaps, condylomata, and sprains, and it neutralizes offensive odours of the body. This oil is an antidote to cantharides, the buprestis, and other dangerous poisons of a corrosive nature.

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CHAP. 45.

OIL OF CHAMÆMYRSINE OR OXYMYRSINE; OIL OF CYPRESS; OIL OF CITRUS; OIL OF WALNUTS; OIL OF CNIDIUM: OIL OF MASTICH; OIL OF BALANUS; VARIOUS REMEDIES.

Oil of chamæmyrsine, or oxymyrsine, possesses similar properties. Oil of cypress also, produces the same effects as oil of myrtle, and the same as to oil of citrus. Oil of walnuts, which we have previously mentioned as being called “caryinon,” is good for alopecy, and is injected into the ears for the cure of hardness of hearing. Used as a liniment, it relieves head-ache; but in other respects it is of an inert nature and disagreeable taste; indeed, if part only of one of the kernels should happen to be decayed, the whole making is spoilt. The oil extracted from the grain of Cnidos has similar properties to castor oil. Oil of mastich is very useful as an ingredient in the medicinal preparation known as “acopum;” indeed it would be fully as efficacious as oil of roses, were it not found to be somewhat too styptic in its effects. It is employed in cases of too profuse perspiration, and for the cure of pimples produced thereby. It is extremely efficacious also or itch in beasts of burden. Oil of balanus removes spots on the skin, boils, freckles, and maladies of the gums.

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CHAP. 46.

THE CYPRUS, AND THE OIL EXTRACTED FROM IT; SIXTEEN REMEDIES. GLEUCINUM: ONE REMEDY.

We have already enlarged upon the nature of the cyprus, and the method of preparing oil of cyprus. This oil is natu- rally warming, and relaxes the sinews. The leaves of the tree are used as an application to the stomach, and the juice of them is applied in a pessary for irritations of the uterus. Fresh gathered and chewed, the leaves are applied to running ulcers of the head, ulcerations of the mouth, gatherings, and condylomatous sores. A decoction of the leaves is very useful also for burns and sprains. Beaten up and applied with the juice of the strutheum, they turn the hair red. The blos- soms, applied to the head with vinegar, relieve head-ache, and the ashes of them, burnt in a pot of raw earth, are curative of corrosive sores and putrid ulcers, either employed by themselves, or in combination with honey. The odour exhaled by these blossoms induces sleep.

The oil called “gleucinum” has certain astringent and refreshing properties similar to those of oil of œnanthe.

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CHAP. 47.

OIL OF BALSAMUM: FIFTEEN REMEDIES.

The oil of balsamum is by far the most valuable of them all, as already stated by us, when treating of the unguents. It is extremely efficacious for the venom of all kinds of serpents, is very beneficial to the eyesight, disperses films upon the eyes, assuages hardness of breathing, and acts emolliently upon all kinds of gatherings and indurations. It has the effect, also, of preventing the blood from coagulating, acts as a detergent upon ulcers, and is remarkably beneficial for diseases of the ears, head-ache, trembling, spasms, and ruptures. Taken in milk, it is an antidote to the poison of aconite, and used as a liniment upon the access of the shivering fits in fevers, it modifies their violence. Still, however, it should be used but sparingly, as it is of a very caustic nature, and, if not employed in moderation, is apt to augment the malady.

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CHAP. 48.

MALOBATHRUM: FIVE REMEDIES.

We have already spoken, also, of the nature of malobathrum, and the various kinds of it. It acts as a diuretic, and, sprinkled in wine upon the eyes, it is used very advantageously for defluxions of those organs. It is applied also to the forehead, for the purpose of promoting sleep; but it acts with still greater efficacy, if the nostrils are rubbed with it, or if it is taken in water. The leaves, placed beneath the tongue, impart a sweetness to the mouth and breath, and put among clothes, they produce a similar effect.

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CHAP. 49.

OIL OF HENBANE: TWO REMEDIES. OIL OF LUPINES: ONE REMEDY. OIL OF NARCISSUS: ONE REMEDY. OIL OF RADISHES: FIVE REMEDIES. OIL OF SESAME: THREE REMEDIES. OIL OF LILIES: THREE REMEDIES. OIL OF SELGA: ONE REMEDY. OIL OF IGUVIUM: ONE REMEDY.

Oil of henbane is of an emollient nature, but it is bad for the nerves; taken in drink, it disturbs the brain. Thermal- num, or oil of lupines, is emollient, and very similar to oil of roses in its effects. As to oil of narcissus, we have already spoken of it when describing that flower. Oil of radishes cures phthiriasis contracted in a long illness, and removes roughness of the skin upon the face. Oil of sesame is curative of pains in the ears, spreading ulcers, and the cancer known as “cacoethes.” Oil of lilies, which we have previously mentioned as being called oil of Phaselis and oil of Syria, is extremely good for the kidneys and for promoting perspiration, as also as an emollient for the uterus, and as tending to bring internal tumours to a head. As to oil of Selga, we have already spoken of it as being strengthening to the tendons which is the case, also, with the herbaceous oil which the people of Iguvium sell, on the Flaminian Way.

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CHAP. 50.

ELÆOMELI: TWO REMEDIES. OIL OF PITCH: TWO REMEDIES.

Elæomeli, which, as we have already stated, exudes from the olive-trees of Syria, has a flavour like that of honey, but not without a certain nauseous taste. It relaxes the bowels, and carries off the bilious secretions more particularly, if taken in doses of two cyathi, in a semisextarius of water. After drinking it, the patient falls into a torpor, and requires to be aroused every now and then. Persons, when about to drink for a wager, are in the habit of taking a cyathus of it, by way of prelude. Oil of pitch is employed for the cure of cough, and of itch in cattle.

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CHAP. 51.

THE PALM: NINE REMEDIES.

Next in rank after the vine and the olive comes the palm. Dates fresh-gathered have an inebriating effect, and are productive of head-ache; when dried, they are not so injurious. It would appear, too, that they are not wholesome to the stomach; they have an irritating effect on coughs, but are very nourishing to the body. The ancients used to give a decoction of them to patients, as a substitute for hydromel, with the view of recruiting the strength and allaying thirst, the Thebaic date being held in preference for the purpose. Dates are very use- ful, too, for persons troubled with spitting of blood, when taken in the food more particularly. The dates called caryotæ, in combination with quinces, wax, and saffron, are applied topically for affections of the stomach, bladder, abdomen, and in- testines: they are good for bruises also. Date-stones, burnt in a new earthen vessel, produce an ash which, when rinsed, is employed as a substitute for spodium, and is used as an ingredient in eye-salves, and, with the addition of nard, in washes for the eye-brows.

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CHAP. 52. (5.)

THE PALM WHICH PRODUCES MYROBALANUM: THREE REMEDIES.

Of the palm which produces myrobalanum, the most esteemed kind is that grown in Egypt; the dates of which, unlike those of the other kinds, are without stones. Used with astringent wine, they arrest diarrhœa and the catamenia, and promote the cicatrization of wounds.

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CHAP. 53.

THE PALM CALLED ELATE: SIXTEEN REMEDIES.

The palm called “elate,” or “spathe,” furnishes its buds, leaves, and bark for medicinal purposes. The leaves are applied to the thoracic regions, stomach, and liver, and to spreading ulcers, but they are adverse to cicatrization. The bark of the tree, while tender, mixed with wax and resin, heals itch-scab in the course of twenty days: a decoction, also, is made of it for diseases of the testes. Used as a fumigation, it turns the hair black, and brings away the fœtus. It is given in drink, also, for diseases of the kidneys, bladder, and thoracic organs; but it acts injuriously upon the head and nerves. The decoction of this bark has the effect, also, of arresting fluxes of the uterus and the bowels: the ashes of it are used with white wine for griping pains in the stomach, and form a very efficacious remedy for affections of the uterus.

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CHAP. 54. (6.)

REMEDIES DERIVED FROM THE BLOSSOMS, LEAVES, FRUIT, BRANCHES, BARK, JUICES, WOOD, ROOTS, AND ASHES OF VARIOUS KINDS OF TREES. SIX OBSERVATIONS UPON APPLES. TWENTY-TWO OBSERVATIONS UPON QUINCES. ONE OBSERVATION UPON STRUTHEA.

We next come to the medicinal properties of the various kinds of apples. The spring fruits of this nature are sour and unwholesome to the stomach, disturb the bowels, contract the bladder, and act injuriously upon the nerves; when cooked, however, they are of a more harmless nature. Quinces are more pleasant eating when cooked; still however, eaten raw, provided they are ripe, they are very useful for spitting of blood, dysentery, cholera, and cœliac affections; indeed, they are not of the same efficacy when cooked, as they then lose the astringent properties which belong to their juice. They are applied also to the breast in the burning attacks of fever, and, in spite of what has been stated above, they are occasionally boiled in rain-water for the various purposes before-mentioned. For pains in the stomach they are applied like a cerate, either raw or boiled. The down upon them heals carbuncles.

Boiled in wine, and applied with wax, they restore the hair, when it has been lost by alopecy. A conserve of raw quinces in honey relaxes the bowels; and they add very materially to the sweetness of the honey, and render it more wholesome to the stomach. Boiled quinces preserved in honey are beaten up with a decoction of rose-leaves, and are taken as food by some for the cure of affections of the stomach. The juice of raw quinces is very good, also, for the spleen, hardness of breathing, dropsy, affections of the mamillæ, condylomata, and varicose veins. The blossoms, either fresh or dried, are useful for inflammations of the eyes, spitting of blood, and irregularities of the catamenia. By beating them up with sweet wine, a sooth- ing sirop is prepared, which, is very beneficial for cœliac affections and diseases of the liver: with a decoction of them a fomentation is made for procidence of the uterus and intestines.

From quinces an oil is also extracted, which we have spoken of

under the name of “melinum:” in order to make it, the fruit must not have been grown in a damp soil; hence it is that the quinces which come from Sicily are so highly esteemed for the purpose; while, on the other hand, the strutheum, though of a kindred kind, is not so good.

A circle is traced round the root of this tree, and the root itself is then pulled up with the left hand, care being taken by the person who does so to state at the same moment the object for which it is so pulled up, and for whom. Worn as an amulet, this root is a cure for scrofula.

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CHAP. 55.

THE SWEET APPLES CALLED MELIMELA: SIX OBSERVATIONS UPON THEM. SOUR APPLES: FOUR OBSERVATIONS UPON THEM.

The apples known as “melimela,” and the other sweet apples, relax the stomach and bowels, but are productive of heat and thirst, though they do not act injuriously upon the nervous system. The orbiculata arrest diarrhœa and vomiting, and act as a diuretic. Wild apples resemble the sour apples of spring, and act astringently upon the bowels: indeed, for this purpose they should always be used before they are ripe.

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CHAP. 56.

CITRONS: FIVE OBSERVATIONS UPON THEM.

Citrons, either the pulp of them or the pips, are taken in wine as an antidote to poisons. A decoction of citrons, or the juice extracted from them, is used as a gargle to impart sweet- ness to the breath. The pips of this fruit are recommended for pregnant women to chew when affected with qualmish- ness. Citrons are good, also, for a weak stomach, but it is not easy to eat them except with vinegar.

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CHAP. 57.

PUNIC APPLES OR POMEGRANATES: TWENTY-SIX REMEDIES.

It would be a mere loss of time to recapitulate the nine different varieties of the pomegranate. The sweet pome- granates, or, in other words, those known by the name of "apyrna," are generally considered to be injurious to the stomach; they are productive, also, of flatulency, and are bad for the teeth and gums. The kind which closely resembles the last in flavour, and which we have spoken of as the "vinous" pomegranate, has very diminutive pips, and is thought to be somewhat more wholesome than the others. They have an astringent effect upon the stomach and bowels, provided they are taken in moderation, and not to satiety; but even these, or, indeed, any other kind, should never be given in fevers, as neither the substance nor the juice of the fruit acts otherwise than injuriously under those circumstances. They should, also, be equally abstained from in cases of vomiting and bilious evacuations.

In this fruit Nature has revealed to us a grape, and, so to say, not must, but a wine ready made, both grape and wine being enclosed in a tougher skin. The rind of the sour pomegranate is employed for many purposes. It is in very common use with curriers for tanning leather, from which circumstance it has received the name of "malicorium." Medical men assure us that the rind is diuretic, and that, boiled with nut-galls in vinegar, it strengthens loose teeth in the sockets. It is prescribed also for pregnant women when suf- fering from qualmishness, the flavour of it quickening the fœtus. A pomegranate is cut, and left to soak in rain-water for some three days; after which the infusion is given cold to persons suffering from cœliac affections and spitting of blood.

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CHAP. 58.

THE COMPOSITION CALLED STOMATICE: FOURTEEN REMEDIES.

With the sour pomegranate a medicament is made, which is known as “stomatice,” and is extremely good for affections of the mouth, nostrils, and ears, dimness of sight, films upon the eyes, diseases of the generative organs, corrosive sores called “nomæ,” and fleshy excrescences in ulcers; it is useful, also, as an antidote to the venom of the sea-hare. The following, is the method of making it: the rind is taken off the fruit, and the pips are pounded, after which the juice is boiled down to one-third, and then mixed with saffron, split alum, myrrh, and Attic honey, the proportions being half a pound of each.

Some persons have another way of making it: a number of sour pomegranates are pounded, after which the juice is boiled down in a new cauldron to the consistency of honey. This composition is used for various affections of the generative organs and fundament, and, indeed, all those diseases which are treated with lycium. It is employed, also, for the cure of purulent discharges from the ears, incipient defluxions of the eyes, and red spots upon the hands. Branches of the pomegranate have the effect of repelling the attacks of serpents. Pomegranate rind, boiled in wine and applied, is a cure for chilblains. A pomegranate, boiled down to onethird in three heminæ of wine, is a cure for griping pains in the bowels and for tape-worm. A pomegranate, put in anew earthen pot tightly covered and burnt in a furnace, and then pounded and taken in wine, arrests looseness of the bowels, and dispels griping pains in the stomach.

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CHAP. 59.

CYTINUS: EIGHT REMEDIES.

The Greeks have given the name of cytinus to the first germs of this tree when it is just beginning to blossom. These germs have a singular property, which has been re- marked by many. If a person, after taking off everything that is fastened upon the body, his girdle, for instance, shoes, and even his ring, plucks one of them with two fingers of the left hand, the thumb, namely, and the fourth finger, and, after rubbing it gently round his eyes, puts it into his mouth and swallows it without letting it touch his teeth, he will experience, it is said, no malady of the eyes throughout all the year. These germs, dried and pounded, check the growth of fleshy excrescences; they are good also for the gums and teeth; and if the teeth are loose a decoction of the germs will strengthen them.

The young pomegranates themselves are beaten up and applied as a liniment to spreading or putrid sores; they are used also for inflammations of the eyes and intestines, and nearly all the purposes for which pomegranate-rind is used. They are remedial also for the stings of scorpions.

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CHAP. 60.

BALAUSTIUM: TWELVE REMEDIES.

We cannot sufficiently admire the care and diligence displayed by the ancients, who, in their enquiries into every subject, have left nothing untried. Within the cytinus, before the pomegranate itself makes its appearance, there are dimi- nutive flowers, the name given to which, as already stated, is “balaustium.” These blossoms, even, have not escaped their enquiries; it having been ascertained by them that they are an excellent remedy for stings inflicted by the scorpion. Taken in drink, they arrest the catamenia, and are curative of ulcers of the mouth, tonsillary glands, and uvula, as also of spitting of blood, derangement of the stomach and bowels, diseases of the generative organs, and running sores in all parts of the body.

The ancients also dried these blossoms, to try their efficacy in that state, and made the discovery that, pulverized, they cure patients suffering from dysentery when at the very point of death even, and that they arrest looseness of the bowels. They have not disdained, too, to make trial of the pips of the pomegranate: parched and then pounded, these pips are good for the stomach, sprinkled in the food or drink. To arrest looseness of the bowels, they are taken in rain-water. A decoction of the juices of the root, in doses of one victoriatus, exterminates tape-worm; and the root itself, boiled down in water to a thick consistency, is employed for the same purposes as lycium.

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CHAP. 61.

THE WILD POMEGRANATE.

There is a tree, also, which is called the wild pomegranate, on account of its strong resemblance to the cultivated pomegranate. The roots of it have a red bark, which taken in wine in doses of one denarius, promotes sleep. The seed of it taken in drink is curative of dropsy. Gnats are kept at a distance by the smoke of burnt pomegranate rind.

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CHAP. 62. (7.)

PEARS: TWELVE OBSERVATIONS UPON THEM.

All kinds of pears, as an aliment, are indigestible, to persons in robust health, even; but to invalids they are forbidden as rigidly as wine. Boiled, however, they are re- markably agreeable and wholesome, those of Crustumium in particular. All kinds of pears, too, boiled with honey, are wholesome to the stomach. Cataplasms of a resolvent nature are made with pears, and a decoction of them is used to disperse indurations. They are efficacious, also, in cases of poisoning by mushrooms and fungi, as much by reason of their heaviness, as by the neutralizing effects of their juice.

The wild pear ripens but very slowly. Cut in slices and hung in the air to dry, it arrests looseness of the bowels, an effect which is equally produced by a decoction of it taken in drink; in which case the leaves also are boiled up together with the fruit. The ashes of pear-tree wood are even more efficacious as an antidote to the poison of fungi.

A load of apples or pears, however small, is singularly fatiguing to beasts of burden; the best plan to counteract this, they say, is to give the animals some to eat, or at least to shew them the fruit before starting.

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CHAP. 63.

FIGS: ONE HUNDRED AND ELEVEN OBSERVATIONS UPON THEM.

The milky juice of the fig-tree possesses kindred properties with vinegar; hence it is, that, like rennet, it curdles milk. This juice is collected before the fruit ripens, and dried in the shade; being used with yolk of egg as a liniment, or else in drink, with amylum, to bring ulcers to a head and break them, and for the purposes of an emmenagogue. With meal of fenugreek and vinegar, it is applied topically for gout; it acts also as a depilatory, heals eruptions of the eyelids, lichens and itch-scabs, and relaxes the bowels. The milk of the fig-tree is naturally curative of the stings of hornets, wasps, and similar insects, and is remarkably useful for wounds inflicted by scorpions. Mixed with axle-grease it removes warts. With the leaves and figs still green an application is made for scrofulous and other sores of a nature which requires emollients or resolvents. The leaves, too, used by themselves, are productive of a similar effect. In addition to this, they are employed for other purposes, as a friction for lichens, for example, for alopecy, and other diseases which require caustic applications. The young shoots of the branches are used as an application to the skin in cases of bites inflicted by dogs. With honey they are applied to the ulcers known as honeycomb ulcers; mixed with the leaves of wild poppies they extract splinters of bones; and the leaves beaten up in vinegar are a cure for bites inflicted by dogs. The young white shoots of the black fig are applied topically, with wax, to boils, and bites inflicted by the shrew-mouse: and the ashes of their leaves are used for the cure of gangrenes and the reduction of fleshy excrescences.

Ripe figs are diuretic and laxative; they promote the perspiration, and bring out pimples; hence it is that they are unwholesome in autumn, the perspirations which they excite being always attended with shivering. They are injurious also to the stomach, though for a short time only; and it is generally thought that they spoil the voice. The figs which are the last to ripen are more wholesome than the first, but those which are drugged for the purpose of ripening them

are never wholesome. This fruit invigorates the young, and improves the health of the aged and retards the formation of wrinkles; it allays thirst, and is of a cooling nature, for which reason it should never be declined in those fevers of an astringent tendency which are known as “stegnæ.”

Dried figs are injurious to the stomach, but are beneficial in a marvellous degree to the throat and fauces. They are of a warming nature, are productive of thirst, and relax the bowels, but are unwholesome in stomachic complaints and fluxes of the bowels. In all cases they are beneficial for the bladder, hard- ness of breathing, and asthma, as also for diseases of the liver, kidneys, and spleen. They are nourishing and invigorating, for which reason, the athletes in former times used them as food: Pythagoras, the gymnast, being the first who intro- duced among them a flesh diet. Figs are extremely useful for patients recovering from a long illness, and for persons suffering from epilepsy or dropsy. They are applied topically also in all cases where sores require to be brought to a head, or dispersed; and they are still more efficacious when mixed with lime or nitre. Boiled with hyssop they act as a purgative on the pectoral organs, carry off the phlegm, and cure inveterate coughs: boiled with wine they heal maladies of the fundament, and tumours of the jaws. A decoction of them is applied also to boils, inflamed tumours, and imposthumes of the parotid glands. This decoction, too, is found very useful as a fomentation for disorders incident to females.

Boiled with fenugreek, figs are very useful in cases of pleurisy and peripneumony. A decoction of them with rue is good for griping pains in the bowels; in combination with verdigris, they are used for ulcers of the legs and imposthumes of the parotid glands; with pomegranates, for hang- nails; and with wax, for burns and chilblains. Boiled in wine, with wormwood and barley-meal, they are employed for dropsy. Eaten with nitre, they relax the bowels; and beaten up with salt they are applied to stings inflicted by scorpions. Boiled in wine, and applied topically, they bring carbuncles to a head. In cases of carcinoma, unattended with ulceration, it is a singularly good plan to apply to the part the pulpiest fig that can be procured; the same, too, with phagedænic sores.

As to the ashes of the fig, those of no tree known are of a more acrid character, being of a detergent and astringent nature, and tending to make new flesh and to promote the cicatrization of wounds. They are also taken in drink, for the purpose of dissolving coagulated blood, as also for bruises, falls with violence, ruptures, convulsions * * * * in one cyathus respectively of water and oil. They are administered also for tetanus and spasms, and are used either in a potion, or as an injection for cœliac affections and dysentery. Employed as a liniment with oil, they have a warming effect; and kneaded into a paste with wax and rose-oil, they heal burns, leaving the slightest scar only. Applied in oil, as a liniment, they are a cure for weakness of sight, and are used as a dentifrice in diseases of the teeth.

It is said, too, that if a patient draws downward a branch of a fig-tree, and turns up his head and bites off some knot or other of it, without being seen by any one, and then wears it in a leather bag suspended by a string from his neck, it is a certain cure for scrofulous sores and imposthumes of the parotid glands. The bark of this tree, beaten up with oil, cures ulcerations of the abdomen. Green figs, applied raw, with the addition of nitre and meal, remove warts and wens.

The ashes of the suckers which spring from the roots are used as a substitute for spodium. Burnt over a second time and incorporated with white lead, they are divided into cakes which are used for the cure of ulcerations of the eyes and eruptions.

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CHAP. 64.

THE WILD FIG: FORTY-TWO OBSERVATIONS UPON IT.

The wild fig, again, is even more efficacious in its properties than the cultivated one. It has not so large a proportion of milky juice as the other: a slip of it put into milk has the effect of curdling it and turning it into cheese. This juice, collected and indurated by being subjected to pressure, im- parts a fine flavour to meat, being steeped in vinegar for the purpose, and then rubbed upon it. It is used also as an ingredient in blisters, and taken internally it relaxes the bowels. Used with amylum, it opens the passages of the uterus, and combined with the yolk of an egg it acts as an emmenagogue. Mixed with meal of fenugreek it is applied topically for gout, and is used for the dispersion of leprous sores, itch-scabs, lichens, and freckles: it is an antidote also to the stings of venomous animals, and to the bites of dogs. Applied to the teeth in wool, or introduced into the cavity of a carious tooth, this juice cures tooth-ache. The young shoots and the leaves, mixed with meal of fitches, act as an antidote to the poison of marine animals, wine being added to the prepa- ration. In boiling beef a great saving of fire-wood may be effected, by putting some of these shoots in the pot.

The figs in a green state, applied topically, soften and disperse scrofulous sores and all kinds of gatherings, and the leaves, to a certain extent, have a similar effect. The softer leaves are applied with vinegar for the cure of running ulcers, epinyctis, and scaly eruptions. With the leaves, mixed with honey, honeycomb ulcers are treated, and wounds inflicted by dogs; the leaves are applied, too, fresh, with wine, to phagledænic sores. In combination with poppy-leaves, they extract splintered bones. Wild figs, in a green state, employed as a fumigation, dispel flatulency; and an infusion of them, used as a potion, combats the deleterious effects of bullocks' blood, white-lead, and coagulated milk, taken internally. Boiled in water, and employed as a cataplasm, they cure imposthumes of the parotid glands. The shoots, or the green figs, gathered as young as possible, are taken in wine for stings inflicted by scorpions. The milky juice is

also poured into the wound, and the leaves are applied to it: the bite of the shrew-mouse is treated in a similar manner. The ashes of the young branches are curative of relaxations of the uvula; and the ashes of the tree itself, mixed with honey, have the effect of healing chaps. A de- coction of the root, boiled in wine, is good for tooth-ache. The winter wild fig, boiled in vinegar and pounded, is a cure for impetigo: the branches are first barked for the purpose and then scraped; these scrapings, which are as fine as sawdust, being applied topically to the parts affected.

There is also one medicinal property of a marvellous nature attributed to the wild fig: if a youth who has not arrived at puberty breaks off a branch, and then with his teeth tears off the bark swelling with the sap, the pith of this branch, we are assured, attached as an amulet to the person before sunrise, will prevent the formation of scrofulous sores. A branch of this tree, attached to the neck of a bull, however furious, ex- ercises such a marvellous effect upon him as to restrain his ferocity, and render him quite immoveable.

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CHAP. 65.

THE HERB ERINEON: THREE REMEDIES.

It will be as well to speak here, in consequence of the similarity of name, of the herb which is known to the Greeks as the “erineon.” This plant is a palm in height, and has mostly five small stems: in appearance it resembles ocimum, and bears a white flower, with a small, black, seed. Beaten up with Attic honey, it is a cure for defluxions of the eyes. In whatever way it is gathered, it yields a considerable abundance of sweet, milky, juice. With the addition of a little nitre, this plant is extremely useful for pains in the ears. The leaves of it have the property of neutralizing poisons.

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CHAP. 66.

PLUMS: FOUR OBSERVATIONS UPON THEM.

The leaves of the plum, boiled in wine, are useful for the tonsillary glands, the gums, and the uvula, the mouth being rinsed with the decoction every now and then. As for the fruit itself, it is relaxing to the bowels; but it is not very wholesome to the stomach, though its bad effects are little more than momentary.

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CHAP. 67.

PEACHES: TWO REMEDIES.

Peaches, again, are more wholesome than plums; and the same is the case with the juice of the fruit, extracted, and taken in either wine or vinegar. Indeed, what known fruit is there that is more wholesome as an aliment than this? There is none, in fact, that has a less powerful smell, or a greater abundance of juice, though it has a tendency to create thirst. The leaves of it, beaten up and applied topically, arrest hæmorrhage: the kernels, mixed with oil and vinegar, are used as a liniment for head-ache.

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CHAP. 68.

WILD PLUMS: TWO REMEDIES.

The fruit of the wild plum, or the bark of the root, boiled down to one-third in one hemina of astringent wine, arrests looseness of the bowels and griping pains in the stomach: the proper dose of the decoction is one cyathus.

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CHAP. 69.

THE LICHEN ON PLUM-TREES: TWO REMEDIES.

Upon the bark of the wild and cultivated plums we find an excrescence growing, known to the Greeks by the name of “lichen:” it is remarkably good for chaps and condylomatous swellings.

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CHAP. 70.

MULBERRIES: THIRTY-NINE REMEDIES.

In Egypt and in the Isle of Cyprus there are, as already stated, mulberry-trees of a peculiar kind, being of a nature that is truly marvellous; for, if the outer bark is peeled off, they emit a great abundance of juice; but if a deeper incision is made, they are found to be quite dry. This juice is an antidote to the venom of serpents, is good for dysentery, disperses inflamed tumours and all kinds of gatherings, heals wounds, and allays both head-ache and ear-ache: it is taken in drink for affections of the spleen, and is used as a liniment for the same purpose, as also for fits of shivering. This juice, however, very soon breeds worms.

Among ourselves, too, the juice which exudes from the mulberry-tree is employed for an equal number of purposes: taken in wine, it neutralizes the noxious effects of aconite and the venom of spiders, relaxes the bowels, and expels tapeworm and other animals which breed in the intestines; the bark of the tree, pounded, has also a similar effect. The leaves, boiled in rain-water with the bark of the black fig and the vine, are used for dyeing the hair.

The juice of the fruit has a laxative effect immediately upon the bowels, though the fruit itself, for the moment, acts beneficially upon the stomach, being of a refreshing nature, but productive of thirst. If no other food is taken upon them, mulberries are of a swelling tendency. The juice of unripe mulberries acts astringently upon the bowels. The marvels which are presented by this tree, and of which we have made some mention when describing it, would almost appear to belong to a creature gifted with animation.

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CHAP. 71.

THE MEDICAMENT CALLED STOMATICE, ARTERIACE, OR PANCHRESTOS. FOUR REMEDIES.

From the fruit of the mulberry a medicament is prepared, called "panchrestos," "stomatice," or "arteriace:" the following is the method employed. Three sextarii of the juice are reduced, at a slow heat, to the consistency of honey; two denarii of dried omphacium or one of myrrh, with one denarius of saffron, are then added, the whole being beaten up together and mixed with the decoction. There is no medica- ment known that is more soothing than this, for affections of the mouth, the trachea, the uvula, and the stomach. There is also another mode of preparing it: two sextarii of mulberry juice and one of Attic honey are boiled down in the manner above stated.

There are some other marvellous properties, also, which are mentioned in reference to this tree. When the tree is in bud, and before the appearance of the leaves, the germs of the fruit must be gathered with the left hand — the Greeks give them the name of "ricini." These germs, worn as an amulet before they have touched the ground, have the effect of arresting hæmrrhage, whether proceeding from a wound, from the mouth, from the nostrils, or from piles; for which purposes they are, accordingly, put away and kept. Similar virtues are attributed to a branch just beginning to bear, broken off at full moon, provided also it has not touched the ground: this branch, it is said, attached to the arm, is peculiarly efficacious for the suppression of the catamenia when in excess. The same effect is produced, it is said, when the woman herself pulls it off, whatever time it may happen to be, care being taken not to let it touch the ground, and to wear it attached to the body. The leaves of the mulberry-tree beaten up fresh, or a decoction of them dried, are applied topically for stings inflicted by serpents: an infusion of them, taken in drink, is equally efficacious for that purpose. The juice extracted from the bark of the root, taken in wine or oxycrate, counteracts the venom of the scorpion.

We must also give some account of the method of preparing this

medicament employed by the ancients: extracting the juice from the fruit, both ripe and unripe, they mixed it to- gether, and then boiled it down in a copper vessel to the con- sistency of honey. Some persons were in the habit of adding myrrh and cypress, and then left it to harden in the sun, mixing it with a spatula three times a-day. Such was their receipt for the stomatice, which was also employed by them to promote the cicatrization of wounds. There was another method, also, of dealing with the juice of this fruit: extracting the juice, they used the dried fruit with various articles of food, as tending to heighten the flavour; and they were in the habit of employing it medicinally for corroding ulcers, pituitous expectorations, and all cases in which astringents were required for the viscera. They used it also for the purpose of cleaning the teeth. A third mode of employing the juices of this tree is to boil down the leaves and root, the decoction being used, with oil, as a liniment for the cure of burns. The leaves are also applied by themselves for the same purpose.

An incision made in the root at harvest-time, supplies a juice that is extremely useful for tooth-ache, gatherings, and suppurations; it acts, also, as a purgative upon the bowels. Mulberry-leaves, macerated in urine, remove the hair from hides.

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CHAP. 72.

CHERRIES: FIVE OBSERVATIONS UPON THEM.

Cherries are relaxing to the bowels and unwholesome to the stomach; in a dried state, however, they are astringent and diuretic. I find it stated by some authors, that if cherries are taken early in the morning covered with dew, the kernels being eaten with them, the bowels will be so strongly acted upon as to effect a cure for gout in the feet.

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CHAP. 73.

MEDLARS: TWO REMEDIES. SORBS: TWO REMEDIES.

Medlars, the setania excepted, which has pretty nearly the same properties as the apple, act astringently upon the stomach and arrest looseness of the bowels. The same is the case, too, with dried sorbs; but when eaten fresh, they are beneficial to the stomach, and are good for fluxes of the bowels.

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CHAP. 74. (8.)

PINE-NUTS: THIRTEEN REMEDIES.

Pine-nuts, with the resin in them, are slightly bruised, and then boiled down in water to one-half; the proportion of water being one sextarius to each nut. This decoction, taken in doses of two cyathi, is used for the cure of spitting of blood. The bark of the tree, boiled in wine, is given for griping pains in the bowels. The kernels of the pine-nut allay thirst, and assuage acridities and gnawing pains in the stomach; they tend also to neutralize vicious humours in that region, recruit the strength, and are salutary to the kidneys and the bladder. They would seem, however, to exercise an irritating effect upon the fauces, and to increase cough. Taken in water, wine, raisin wine, or a decoction of dates, they carry off bile. For gnawing pains in the stomach of extreme violence, they are mixed with cucumber-seed and juice of purslain; they are employed, too, in a similar manner for ulcerations of the bladder and kidneys, having a diuretic effect.

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CHAP. 75.

ALMONDS: TWENTY-NINE REMEDIES.

A decoction of the root of the bitter almond clears the complexion, and gives the face a brighter colour. Bitter al- monds are provocative of sleep, and sharpen the appetite; they act, also, as a diuretic and as an emmenagogue. They are used topically for head-ache, when there is fever more particularly. Should the head-ache proceed from inebriation, they are applied with vinegar, rose-oil, and one sextarius of water. Used in combination with amylum and mint, they arrest hæmorrhage. They are useful, also, for lethargy and epilepsy, and the head is anointed with them for the cure of epinyctis. In combination with wine, they heal putrid ulcers of an inveterate nature, and, with honey, bites inflicted by dogs. They are employed, also, for the cure of scaly erup- tions of the face, the parts affected being fomented first.

Taken in water, or, as is often done, in an electuary, with resin of terebinth, they remove pains in the liver and kidneys; used with raisin wine, they are good for calculus and strangury. Bruised in hydromel, they are useful for cleansing the skin; and taken in an electuary with the addition of a small proportion of elelisphacus, they are good for diseases of the liver, cough, and colic, a piece about the size of a hazel-nut being taken in honey. It is said that if five bitter almonds are taken by a person before sitting down to drink, he will be proof against inebriation; and that foxes, if they eat bitter almonds, will be sure to die immediately, if they cannot find water to lap.

As to sweet almonds, their remedial properties are not so extensive; still, however, they are of a purgative nature, and are diuretic. Eaten fresh, they are difficult of digestion.

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CHAP. 76.

GREEK NUTS: ONE REMEDY.

Greek nuts, taken in vinegar with wormwood seed, are said to be a cure for jaundice. Used alone, they are employed topically for the treatment of diseases of the fundament, and condylomata in particular, as also cough and spitting of blood.

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CHAP. 77.

WALNUTS: TWENTY-FOUR REMEDIES. THE MITHRIDATIC ANTIDOTE.

Walnuts have received their name in Greek from being oppressive to the head; for, in fact, the emanations from the tree itself and the leaves penetrate to the brain. The kernels, also, have a similar effect when eaten, though not in so marked a degree. When fresh gathered, they are most agreeable eating; for when dry, they are more oleaginous, unwholesome to the stomach, difficult of digestion, productive of head-ache, and bad for cough, or for a person when about to take an emetic fasting: they are good in cases of tenesmus only, as they carry off the pituitous humours of the body. Eaten beforehand, they deaden the effects of poison, and, employed with rue and oil, they are a cure for quinsy. They act as a corrective, also, to onions, and modify their flavour. They are applied to inflammations of the ears, with a little honey, and with rue they are used for affections of the mamille, and for sprains. With onions, salt, and honey, they are applied to bites inflicted by dogs or human beings. Walnut-shells are used for cauterizing carious teeth; and with these shells, burnt and then beaten up in oil or wine, the heads of infants are anointed, they having a tendency to make the hair grow; hence they are used in a similar manner for alopecy also. These nuts, eaten in considerable numbers, act as an expellent upon tapeworm. Walnuts, when very old, are curative of gangrenous sores and carbuncles, of bruises also. Green walnut-shells are employed for the cure of lichens and dysentery, and the leaves are beaten up with vinegar as an application for earache.

After the defeat of that mighty monarch, Mithridates, Cneius Pompeius found in his private cabinet a recipe for an antidote in his own hand-writing; it was to the following effect: — Take two dried walnuts, two figs, and twenty leaves of rue; pound them all together, with the addition of a grain of salt; if a person takes this mixture fasting, he will be proof against all poisons for that day. Walnut kernels, chewed by a man fasting, and applied to the wound, effect an instantaneous cure, it is said, of bites inflicted by a mad dog.

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CHAP. 78.

HAZEL-NUTS: THREE OBSERVATIONS UPON THEM. PISTACHIO-NUTS: EIGHT OBSERVATIONS UPON THEM. CHESNUTS: FIVE OBSERVATIONS UPON THEM.

Hazel-nuts are productive of head-ache, and flatulency of the stomach; they contribute, however, to the increase of flesh more than would be imagined. Parched, they are remedial for catarrhs, and beaten up and taken with hydromel, they are good for an inveterate cough. Some persons add grains of pepper, and others take them in raisin wine.

Pistachio-nuts have the same properties, and are productive of the same effects, as pine-nuts; in addition to which, they are used as an antidote to the venom of serpents, eaten or taken in drink.

Chesnuts have a powerful effect in arresting fluxes of the stomach and intestines, are relaxing to the bowels, are beneficial in cases of spitting of blood, and have a tendency to make flesh.

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CHAP. 79.

CAROBS: FIVE OBSERVATIONS UPON THEM. THE CORNEL; ONE REMEDY. THE FRUIT OF THE ARBUTUS.

Fresh carobs are unwholesome to the stomach, and relaxing to the bowels; in a dried state, however, they are astringent, and are much more beneficial to the stomach; they are diuretic also. For pains in the stomach, persons boil three Syrian carobs with one sextarius of water, down to one-half, and drink the decoction.

The juices which exude from the branches of the cornel are received on a plate of red-hot iron without it touching the wood; the rust of which is applied for the cure of incipient lichens. The arbutus or unedo bears a fruit that is difficult of digestion, and injurious to the stomach.

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CHAP. 80.

THE LAUREL; SIXTY-NINE OBSERVATIONS UPON IT.

All parts of the laurel, both the leaves, bark, and berries, are of a warming nature; and a decoction of them, the leaves in particular, is very useful for affections of the bladder and uterus. The leaves, applied topically, neutralize the poison of wasps, bees, and hornets, as also that of serpents, the seps, dipsas, and viper, in particular. Boiled in oil, they promote the catamenia; and the more tender of the leaves beaten up with polenta, are used for inflammations of the eyes. with rue for inflammations of the testes, and with rose-oil, or oil of iris, for head-ache. Three leaves, chewed and swallowed for three days in succession, are a cure for cough, and beaten up with honey, for asthma. The bark of the root is dangerous to pregnant women; the root itself disperses calculi, and taken in doses of three oboli in aromatic wine, it acts beneficially on the liver. The leaves, taken in drink, act as an emetic; and the berries, pounded and applied as a pessary, or else taken in drink, promote menstruation. Two of the berries with the skin removed, taken in wine, are a cure for inveterate cough and hardness of breathing; if, however, this is accompanied with fever, they are given in water, or else in an electuary with raisin wine, or boiled in hydromel. Employed in a similar manner, they are good for phthisis, and for all defluxions of the chest, as they have the effect of detaching the phlegm and bringing it off.

For stings inflicted by scorpions, four laurel-berries are taken in wine. Applied with oil, they are a cure for epinyctis, freckles, running sores, ulcers of the mouth, and scaly eruptions. The juice of the berries is curative of porrigo and phthiriasis; and for pains in the ears, or hardness of hearing, it is injected into those organs with old wine and oil of roses. All venomous creatures fly at the approach of persons who have been anointed with this juice: taken in drink, the juice of the small-leaved laurel in particular, it is good for stings inflicted by them. The berries, used with wine, neu- tralize the venom of serpents, scorpions, and spiders; they are applied also, topically, with oil and vinegar, in diseases of the spleen and liver, and with

honey to gangrenous sores. In cases of lassitude and shivering fits, it is a very good plan to rub the body with juice of laurel-berries mixed with nitre. Some persons are of opinion that delivery is accelerated by taking laurel-root to the amount of one acetabulum, in water, and that, used fresh, it is better than dried. It is recommended by some authorities, to take ten of the berries in drink, for the sting of the scorpion; and in cases of relaxation of the uvula, to boil a quarter of a pound of the berries, or leaves, in three sextarii of water, down to one third, the decoction being used warm, as a gargle. For head-ache, also, it is recommended to bruise an uneven number of the berries in oil, the mixture being warmed for use.

The leaves of the Delphic laurel bruised and applied to the nostrils from time to time, are a preservative against conta- gion in pestilence, and more particularly if they are burnt. The oil of the Delphic laurel is employed in the preparation of cerates and the medicinal composition known as "acopum," and is used for fits of shivering occasioned by cold, for the relaxation of the sinews, and for the cure of pains in the side and the cold attacks in fevers. Warmed in the rind of a pomegranate, it is applied topically for the cure of ear-ache. A decoction of the leaves boiled down in water to one third, used as a gargle, braces the uvula, and taken in drink allays pains in the bowels and intestines. The more tender leaves, bruised in wine and applied at night, are a cure for pimples and prurigo.

The other varieties of the laurel possess properties which are nearly analogous. The root of the laurel of Alexandria, or of Mount Ida, accelerates delivery, being administered in doses of three denarii to three cyathi of sweet wine; it acts also as an emmenagogue, and brings away the after-birth. Taken in drink in a similar manner, the wild laurel, known as "daphnoides" and by the other names which we have mentioned, is productive of beneficial effects. The leaves of it, either fresh or dried, taken in doses of three drachmœ, in hydromel with salt, act as a purgative upon the bowels. The wood, chewed, brings off phlegm, and the leaves act as an "emetic;" they are unwholesome, however, to the stomach. The berries, too, are sometimes taken, fifteen in number, as a purgative.

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CHAP. 81.

MYRTLE; SIXTY OBSERVATIONS UPON IT.

The white cultivated myrtle is employed for fewer medicinal purposes than the black one. The berries of it are good for spitting of blood, and taken in wine, they neutralize the poison of fungi. They impart an agreeable smell to the breath, even when eaten the day before; thus, for instance, in Menander we find the Synaristosæ eating them. They are taken also for dysentery, in doses of one denarius, in wine: and they are employed lukewarm, in wine, for the cure of obstinate ulcers on the extremities. Mixed with polenta, they are employed topically in ophthalmia, and for the cardiac disease they are applied to the left breast. For stings inflicted by scorpions, diseases of the bladder, head-ache, and fistulas of the eye before suppuration, they are similarly employed; and for tumours and pituitous eruptions, the kernels are first removed and the berries are then pounded in old wine. The juice of the berries acts astringently upon the bowels, and is diuretic: mixed with cerate it is applied topically to blisters, pituitous eruptions, and wounds inflicted by the phalangium; it imparts a black tint, also, to the hair.

The oil of this myrtle is of a more soothing nature than the juice, and the wine which is extracted from it, and which possesses the property of never inebriating, is even more so. This wine, used when old, acts astringently upon the stomach and bowels, cures griping pains in those regions, and dispels nausea.

The dried leaves, powdered and sprinkled upon the body, check profuse perspirations, in fever even; they are good, too, used as a fomentation, for cœliac affections, procidence of the uterus, diseases of the fundament, running ulcers, erysipelas, loss of the hair, scaly and other eruptions, and burns. This powder is used as an ingredient, also, in the plasters known as “liparæ;” and for the same reason the oil of the leaves is used for a similar purpose, being extremely efficacious as an application to the humid parts of the body, the mouth and the uterus, for example.

The leaves themselves, beaten up with wine, neutralize the bad

effects of fungi; and they are employed, in combination with wax, for diseases of the joints, and gatherings. A decoction of them, in wine, is taken for dysentery and dropsy. Dried and reduced to powder, they are sprinkled upon ulcers and hæmorrhages. They are useful, also, for the removal of freckles, and for the cure of hang-nails, whitlows, condylo- mata, affections of the testes, and sordid ulcers. In combination with cerate, they are used for burns.

For purulent discharges from the ears, the ashes of the leaves are employed, as well as the juice and the decoction: the ashes are also used in the composition of antidotes. For a similar purpose the blossoms are stripped from off the young branches, which are burnt in a furnace, and then pounded in wine. The ashes of the leaves, too, are used for the cure of burns. To prevent ulcerations from causing swellings in the inguinal glands, it will suffice for the patient to carry a sprig of myrtle about him which has never touched the ground or any implement of iron.

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CHAP. 82.

MYRTIDANUM: THIRTEEN REMEDIES.

We have already described the manner in which myrtidanum is made. Applied in a pessary, or as a fomentation or liniment, it is good for affections of the uterus, being much more efficacious than the bark of the tree, or the leaves and seed. There is a juice also extracted from the more tender leaves, which are pounded in a mortar for the purpose, astringent wine, or, according to one method, rain-water, being poured upon them a little at a time. This extract is used for the cure of ulcers of the mouth, the fundament, the uterus, and the abdomen. It is employed, also, for dyeing the hair black, the suppression of exudations at the arm-pits, the removal of freckles, and other purposes in which astringents are required.

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CHAP. 83.

THE WILD MYRTLE, OTHERWISE CALLED OXYMYRSINE, OR CHAMÆMYRSINE, AND THE RUSCUS: SIX REMEDIES.

The wild myrtle, oxymyrsine, or chamæmyrsine, differs from the cultivated myrtle in the redness of its berries and its diminutive height. The root of it is held in high esteem; a decoction of it, in wine, is taken for pains in the kidneys and strangury, more particularly when the urine is thick and fetid. Pounded in wine, it is employed for the cure of jaundice, and as a purgative for the uterus. The same method is adopted, also, with the young shoots, which are sometimes roasted in hot ashes and eaten as a substitute for asparagus.

The berries, taken with wine, or oil and vinegar, break calculi of the bladder: beaten up with rose-oil and vinegar, they allay head-ache. Taken in drink, they are curative of jaundice. Castor calls the wild myrtle with prickly leaves, or oxymyrsine, from which brooms are made, by the name of "ruscus" — the medicinal properties of it are just the same.

Thus much, then, with reference to the medicinal pro- perties of the cultivated trees; let us now pass on to the wild ones.

Summary. — Remedies, narratives, and observations, nine hundred and eighteen.

Roman Authors Quoted. — C. Valgius, Pompeius Linnæus, Sextius Niger who wrote in Greek, Julius Bassus who wrote in Greek, Antonius Castor, M. Varro, Cornelius Celsus, Fabianus.

Foreign Authors Quoted. — Theophrastus, Democritus, Orpheus, Pythagoras, Mago, Menander who wrote the "Biochresta," Nicandcr, Homer, Hesiod, Musæus, Sophocles, Anaxilaüs.

Medical Authors Quoted. — Mnesitheus, Callimachus, Phanias the physician, Timaristus, Simus, Hippocrates, Chrysippus, Diocles, Ophelion, Heraclides Hicesius, Dionysius, Apollodorus of Citium, Apollodorus of Tarentum, Plistonicus, Medius, Dieuches, Cleophantus, Philistion, Asclepiades, Crateuas, Petronius Diodotus, Iollas, Erasistratus, Diagoras, Andreas, Mnesides, Epicharmus,

Damion, Dalion, Sosimenes, Tlepolemus, Metrodorus, Solo, Lycus, Olympias of Thebes, Philinus, Petrichus, Micton, Glaucias, Xenocrates.

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BOOK XXIV. THE REMEDIES DERIVED FROM THE FOREST TREES.

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CHAP. 1. (1.)

THE ANTIPATHIES AND SYMPATHIES WHICH EXIST AMONG TREES AND PLANTS.

NOT even are the forests and the spots in which the aspect of Nature is most rugged, destitute of their peculiar remedies; for so universally has that divine parent of all things distributed her succours for the benefit of man, as to implant for hint medicinal virtues in the trees of the desert even, while at every step she presents us with most wonderful illustrations of those antipathies and sympathies which exist in the vegetable world.

Between the quercus and the olive there exists a hatred so inveterate, that transplanted, either of them, to a site previously occupied by the other, they will die. The quercus too, if planted near the walnut, will perish. There is a mortal feud existing also between the cabbage and the vine; and the cabbage itself, so shunned as it is by the vine, will wither immediately if planted in the vicinity of cyclamen or of origanum. We find it asserted even, that aged trees fit to be felled, are cut with all the greater difficulty, and dry all the more rapidly, if touched by the hand of man before the axe is applied: it is a common belief, too, that when their load consists of fruit, beasts of burden are immediately sensible of it, and will instantly begin to sweat, however trifling it may be, unless the fruit is duly shown to them before starting. Fennel-giant, as a fodder, is extremely grateful to the ass, and yet to other beasts of burden it is a deadly poison: hence it is that the ass is consecrated to Father Liber, to which deity the fennel is also sacred.

Inanimate objects again, even of the most insignificant character, have their own peculiar antipathies. Cooks disengage meat of the brine, when it has been too highly salted, by the agency of fine meal and the inner bark of the lindentree. Salt again, tends to neutralize the sickly flavour of food when over-sweet. The taste of water, when nitrous or bitter, is modified by the addition of polenta, so much so indeed, as to be rendered potable in a couple of hours: it is for a similar reason, too, that a layer of polenta is put in our linen

winestrainers. A similar property is possessed also by the chalk of Rhodes, and the argilla of our own country.

Equal affinities exist as well; pitch, for instance, is extracted by the agency of oil, both of them being of an unctuous nature oil again, will incorporate only with lime, both of them having a natural antipathy to water. Gum is most easily removed with vinegar, and ink with water; in addition to which, there are numberless other instances of sympathy and antipathy which we shall be careful to mention in their appropriate places.

It is in tendencies of this description that the medical art first took its rise; though it was originally intended, no doubt, by Nature, that our only medicaments should be those which universally exist, are everywhere to be found, and are to he procured at no great outlay, the various substances, in fact, from which we derive our sustenance. But at a later period the fraudulent disposition of mankind, combined with an ingenuity prompted by lucre, invented those various laboratories, in which each one of us is promised an extension of his life — that is, if he will pay for it. Compositions and mixtures of an in- explicable nature forthwith have their praises sung, and the productions of Arabia and India are held in unbounded ad- miration in the very midst of us. For some trifling sore or other, a medicament is prescribed from the shores of the Red Sea; while not a day passes but what the real remedies are to be found upon the tables of the very poorest man among us. But if the remedies for diseases were derived from our own gardens, if the plants or shrubs were employed which grow there, there would be no art, forsooth, that would rank lower than that of medicine.

Yes, avow it we must-the Roman people, in extending its empire, has lost sight of its ancient manners, and in that we have conquered we are the conquered: for now we obey the natives of foreign lands, who by the agency of a single art have even out-generalled our generals. More, however, on this topic hereafter.

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CHAP. 2. (2.)

THE LOTUS OF ITALY: SIX REMEDIES.

We have already spoken in their appropriate places of the herb called lotus, and of the plant of Egypt known by the same name and as the "tree of the Syrtes." The berries of the lotus, which is known among us as the "Grecian bean," act astringently upon the bowels; and the shavings of the wood, boiled in wine, are useful in cases of dysentery, excessive menstruation, vertigo, and epilepsy: they also prevent the hair from falling off. It is a marvellous thing — but there is no substance known that is more bitter than the shavings of this wood, or sweeter than the fruit. The sawdust also of the wood is boiled in myrtle-water, and then kneaded and divided into lozenges, which form a medicament for dysentery of remarkable utility, being taken in doses of one victoriatus, in three cyathi of water.

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CHAP. 3. (3.)

ACORNS: THIRTEEN REMEDTES.

Acorns, pounded with salted axle-grease, are curative of those indurations known as “cacoethe.” The acorn of the holm-oak, however, is the most powerful in its effects; ad(in all these trees the bark is still more efficacious, as well as the inner membrane which lies beneath it. A decoction of this last is good for cœliac affections; and it is applied topically in cases of dysentery, as well as the acorns, which are em- ployed also for the treatment of stings inflicted by serpents, fluxes, and suppurations. The leaves, acorns, and bark, as well as a decoction prepared from them, are good as counter-poisons. A decoction of the bark, boiled in cows’ milk, is used topically for stings inflicted by serpents, and is administered in wine for dysentery. The holm-oak is possessed of similar properties.

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CHAP. 4. (4.)

TIE KERMES-BERRY OF THE HOLM-OAK: THREE: REMEDIES.

The scarlet berry of the holm-oak is applied to fresh wounds with vinegar; and in combination with water it is dropt into the eyes in cases of defluxion of those organs or of ecchymosis. There grows also in most parts of Attica, and in Asia, a berry of this description, which becomes transformed with great rapidity into a diminutive worm, owing to which circumstance the Greeks have given it the name of “scolecion:” it is held, however, in disesteem. The principal varieties of this berry have been previously described.

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CHAP. 5.

GALL-NUTS: TWENTY-THREE REMEDIES.

And no fewer are the varieties of the gall-nut which we have described: we have, for instance, the full-bodied gallnut, the perforated one, the white, the black, the large, the small, all of them possessed of similar properties; that, however, of Commagene is generally preferred. These substances remove fleshy excrescences on the body, and are serviceable for affections of the gums and uvula, and for ulcerations of the mouth. Burnt, and then quenched in wine, they are applied topically in cases of cœliac affections and dysentery, and with honey, to whitlows, hang-nails, malformed nails, running ulcers, condylomatous swellings, and ulcerations of the nature known as phagedænic. Adecoction of them in wine is used as an injection for the ears, and as a liniment for the eyes, and in combination with vinegar they are employed for eruptions and tumours.

The inner part of the gall, chewed, allays tooth-ache, and is good for excoriations between the thighs, and for burns. Taken unripe in vinegar, they reduce the volume of the spleen; and, burnt and then quenched in salt and vinegar, they are used as a fomentation for excessive menstruation and procidence of the uterus. All varieties of the gall-nut stain the hair black.

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CHAP. 6.

MISTLETOE: ELEVEN REMEDIES.

We have already stated that the best mistletoe is that which grows on the robur, and have described the manner in which it is prepared. Some persons, after bruising the berries, boil them in water, till nothing appears on the surface, while others, again, bite the berries with the teeth, and reject the skins. The best kind of viscus is that which has none of the outer skin in it, is extremely light, yellow without, and of a leek-green colour within. There is no substance more glutinous than this: it is of an emollient nature, disperses tumours, and acts as a desiccative upon scrofulous sores; com- bined with resin and wax, it heals inflamed swellings of every description. Some persons add galbanum as well, using equal proportions of each ingredient, and this preparation they em- ploy also for the treatment of wounds.

The viscus of the mistletoe has the additional property also of rectifying malformed nails; but to effect this it must be taken off at the end of seven days, and the nails must he washed with a solution of nitre. Some persons have a sort of superstitious notion that the viscus will be all the more efficacious if the berries are gathered from the robur at new moon, and without the aid of iron. They have an impression too. that if it has not touched the ground, it will cure epilepsy, that it will promote conception in females if they make a practice of carrying it about them: the berries, chewed and applied to ulcers, are remarkably efficacious for their cure, it is said.

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CHAP. 7.

THE EXCRESCENCES WHICH GROW ON THE ROBUR: ONE REMEDY. THE CHRRUS: EIGHT REMEDIES.

The round excrescences which grow on the robur * * * and mixed with bear's grease, are remedial in cases of loss of the hair by alopecy.

The leaves, bark, and acorns of the cerrus act as a desiecative upon gatherings and suppurations, and arrest fluxes. A decoction of them, used as a fomentation, strengthens such parts of the body as are paralyzed; and it is a very good plan to employ it as a sitting-bath, for its desiccative or astringent effects upon the lower extremities. The root of this tree neutralizes the venom of the scorpion.

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CHAP. 8.

THE-CORK TREE: TWO REMEDIES.

The bark of the cork-tree, pulverized and taken in warm water, arrests hæmorrhage at the mouth and nostrils; and the ashes of it, taken in warm wine, are highly extolled as a cure for spitting of blood.

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CHAP. 9. (5.)

THE BEECUH: FOUR REMEDIES.

The leaves of the beech are chewed for affections of the lips and gums. A liniment is made of the ashes of beech- mast for urinary calculus, and, in combination with honey, for alopecy.

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CHAP. 10.

THE CYPRESS: TWENTY-THREE REMEDIES.

The leaves of the cypress are pounded and applied to wounds inflicted by serpents, and with polenta, to the head, in cases of sunstroke. They are used also for hernia, and an infusion of them is taken in drink. They are applied with wax to swellings of the testes, and mixed with vinegar they stain the hair black. Beaten up with twice the quantity of light bread, and then kneaded with Aminean wine, they are found very soothing for pains in the Feet and sinews.

The excrescences of this tree are taken in drink for the stings of serpents and for discharges of blood from the mouth they are used also as a topical application for gatherings. Fresh-gathered and beaten up with axle-grease and bean-meal, they are good for hernia; and an infusion of them is taken in drink for the same complaint. In combination with meal, they are applied topically to imposthumes of the parotid glands, and to scrofulous sores. From these excrescences, pounded along with the seed, a juice is extracted, which, mixed with oil, disperses films of the eyes. Taken in doses of one victoriatus, in wine, and applied at the same time in a pulpy, dried fig, the seeds of which have been removed, this juice cures maladies of the testes and disperses tumours: mixed with leaven, it heals scrofulous sores.

The root of the cypress, bruised with the leaves and taken in drink, is curative of diseases of the bladder, strangury, and the sting of the phalangium. The shavings of the wood, taken in drink, act as an emmenagogue, and neutralize the venom of the scorpion.

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CHAP. 11.

THE CEDAR: THIRTEEN REMEDIES.

The larger cedar, known as the "cedrelates," produces a pitch called "cedria," which is very useful for tooth-ache, it having the effect of breaking the teeth and extracting them, and so allaying the pain. We have already stated how the juices of cedar are extracted, so remarkably useful for seasoning books, were it not for the head-ache they produce. This extract from the cedar preserves the bodies of the dead uncorrupted for ages, but exercises a noxious effect upon the bodies of the living-singular that there should be such a diversity in its properties, taking away life from animated beings, and imparting a sort of life, as it were, to the dead! It injures clothing also and destroys animal life. It is for this reason that I cannot recommend it to be taken internally for the cure of quinzy and indigestion, though there are some who advise it: I should be greatly in dread too, to rinse the teeth with it, in combination with vinegar, for tooth-ache, or to use it as an injection for the ears in cases of hardness of hearing, or for worms in those organs. There is one very marvellous story told about it — if the male organs, they say, are rubbed with it just before the sexual congress, it will effectually prevent impregnation.

Still, however, I should not hesitate to employ it as a friction for phthiriasis or porrigo. It is strongly recommended also, in raisin wine, as an antidote to the poison of the sea- share, but I should be more ready to use it as a liniment for elephantiasis. Some authors have prescribed it as an ointment for foul ulcers and the fleshy excrescences which grow in them, as also for spots and films on the eyes; and have recommended it to be taken, in doses of one cyathus, for. ulcerations of the lungs, and for tapeworm.

There is an oil extracted from this pitch, known as "pisselæpon," the properties of which are of increased activity for all the purposes before-mentioned. It is a well-known fact that the saw-dust of cedar will put serpents to flight, and that a similar effect is produced by anointing the body with the berries bruised in oil.

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CHAP. 12.

CEDRIDES: TEN REMEDIES.

Cedrides, or in other words, the fruit of the cedar, is curative of coughs, acts as a diuretic, and arrests looseness of the bowels. It is good also for ruptures, convulsions, spasms, and strangury, and is employed, as a pessary, for affections of the uterus. It is used also to neutralize the venom of the sea-hare, and for the cure of the various affections above-mentioned, as also of gatherings and inflammations.

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CHAP. 13.

GALBANUM: TWENTY-THREE REMEDIES.

We have already given some description of galbanum: to be good, it should be neither too moist nor too dry, but just in the state which we have mentioned. It is taken by itself for inveterate coughs, asthma, ruptures, and convulsions; and it is employed externally for sciatica, pains in the sides, inflamed tumours, boils, denudations of the bones, scrofulous sores, nodes upon the joints, and tooth-ache. It is applied with honey also, to ulcerations of the head. In combination with oil of roses or with nard, it is used as an injection for suppurations of the ears; and the odour of it is useful for epilepsy, hysterical suffocations, and faintness at the stomach. Employed as a pessary or as a fumigation, it brings away the fœtus in cases of miscarriage; branches too of hellebore covered with it and laid beneath the patient, have a similar effect.

We have already stated that serpents are driven away by the fumes of burnt galbanum, and they will equally avoid persons whose body has been rubbed with it. It is curative also of the sting of the scorpion. In protracted deliveries, a piece of galbanum the size of a bean is given in one cyathus of wine: it has the effect also of reducing the uterus when displaced, and, taken with myrrh and wine, it brings away the dead fœtus. In combination with myrrh and wine too, it neutralizes poisons — those which come under the denomination of "toxica" in particular. The very touch of it, mixed with oil and spondylium, is sufficient to kill a serpent. It is generally thought to be productive of strangury.

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CHAP. 14. (6.)

HAMMONIACUM: TWENTY-FOUR REMEDIES.

Of a similar nature to galbanum is hammoniacum, a tear-like gum, the qualities of which are tested in manner already stated. It is of an emollient, warming, resolvent, and dispellent nature. Employed as an ingredient in eye-salves, it improves the sight. It disperses prurigo, effaces the marks of sores, removes spots in the eyes, and allays tooth-ache, more particularly when burnt. It is very useful too, taken in drink, for hardness of breathing, pleurisy, affections of the lungs, diseases of the bladder, bloody urine, maladies of the spleen, and sciatica: employed in a similar manner, it acts as a purgative upon the bowels. Boiled with an equal proportion of pitch or wax, and with oil of roses, it is good for diseases of the joints, and for gout. Employed with honey it ripens hard tumours, extracts corns, and has an emollient effect upon indurations. In combination with vinegar and Cyprian wax, or oil of roses, it is extremely efficacious as a liniment for affections of the spleen. In cases of extreme lassitude, it is an excellent plan to use it as a friction, with vinegar and oil, and a little nitre.

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CHAP. 15.

STORAX: TEN REMEDIES.

In speaking too of the exotic trees, we have made mention of the properties of storax. In addition to those which we have already mentioned, it ought to be very unctuous, without alloy, and to break to pieces in whitish fragments. This substance is curative of cough, affections of the fauces, diseases of the chest, and obstructions or indurations of the uterus. Taken in drink, or employed as a pessary, it acts as an emmenagogue; it has a laxative effect also upon the bowels. I find it stated that, taken in moderate doses, storax dispels melancholy; but that when employed in large quantities, it promotes it. Used as an injection it is good for singings in the ears, and employed as a friction, for scrofulous swellings and nodes of the sinews. It neutralizes poisons of a cold nature, and consequently, hemlock.

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CHAP. 16.

SPONDYLIUM: SEVENTEEN REMEDIES.

At the same time we have also spoken of spondylium; an infusion of which is poured upon the head in cases of phrenitis and lethargy, and of head-ache of long standing. Combined with old oil, it is taken in drink for affections of the liver, jaundice, epilepsy, hardness of breathing, and hysterical suffocations, maladies for which it is equally serviceable in the shape of a fumigation. It relaxes the bowels, and with rue it is applied to ulcers of a serpiginous nature. The juice which is extracted from the blossom is a most useful injection for suppurations of the ears; but the moment it is extracted it should be covered up, as flies and other insects of a similar nature are remarkably fond of it. Scrapings of the root, introduced into the interior of fistulas, have a caustic effect upon their callosities; and they are some- times used, in combination with the juice, as an injection for the ears. The root itself also is prescribed for jaundice, and for diseases of the liver and uterus. If the head is rubbed with the juice, it will make the hair curl.

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CHAP. 17.

SPHAGNOS, SPHACOS, OR BRYON: FIVE REMEDIES.

Sphagnos, sphacos, or bryon, grows, as we have already stated, in Gaul. A decoction of it, employed as a sitting-bath, is useful for affections of the uterus: mixed with nasturtium, and beaten up in salt water, it is good for the knees and for swellings in the thighs. Taken in drink with wine and dried resin, it acts very powerfully as a diuretic. Pounded in wine with juniper berries, and taken in drink, it draws off the water in dropsy.

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CHAP. 18.

THE TEREBINTH: SIX REMEDIES.

The leaves and root of the terebinth are used as applica- tions for gatherings; and a decoction of them is strengthening to the stomach. The seed of it is taken in wine for head-ache and strangury: it is slightly laxative to the bowels, and acts as an aphrodisiac.

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CHAP. 19.

THE PITCH-TREE AND THE LARCH: EIGHT REMEDIES.

The leaves of the pitch-tree and the larch, beaten up and boiled in vinegar, are good for tooth-ache. The ashes of the bark are used for excoriations and burns. Taken in drink this substance arrests diarrhœa, and acts as a diuretic; and used as a fumigation, it reduces the uterus when displaced. The leaves of the pitch-tree are particularly good for the liver, taken in doses of one drachma in hydromel.

It is a well-known fact that forests planted solely with trees from which pitch and resin are extracted, are remarkably beneficial for patients suffering from phthisis, or who are un- able to recover their strength after a long illness: indeed it is said, that in such cases to breathe the air of localities thus planted, is more beneficial even than to take a voyage to Egypt. or to go on a summer's journey to the mountains to drink the milk there, impregnated with the perfumes of plants.

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CHAP. 20.

THE CHAMÆPITYS: TEN REMEDIES.

The chamæpitys, called in Latin “abiga,” because it promotes abortion, and known to some as “incense of the earth,” has branches a cubit in length, and the odour and blossoms of the pine. Another variety of it, which is somewhat shorter, has all the appearance of being bent down- wards; and there is a third, which, though it has a similar smell, and consequently the same name, is altogether smaller, with a stem the thickness of one’s finger, and a diminutive, rough, pale leaf: it is found growing in rocky localities. All these varieties are in reality herbaceous productions; but in consequence of the resemblance of the name, I have thought it as well not to defer the consideration of them.

These plants are good for stings inflicted by scorpions, and are useful as an application, mixed with dates or quinces, for maladies of the liver: a decoction of them with barley-meal is used for the kidneys and the bladder. A decoction of them in water is used also for jaundice and for strangury. The kind last mentioned, in combination with honey, is good for wounds inflicted by serpents, and a pessary is made of it, with honey, as a detergent for the uterus. Taken in drink it brings away coagulated blood, and rubbed upon the body it acts as a sudorific: it is particularly useful also for the kidneys. Pills of a purgative nature are made of it for dropsy, with figs. Taken in wine, in doses of one victoriatus, it dispels lumbago, and cures coughs that are not of an inveterate description. A decoction of it in vinegar, taken in drink, will instantaneously bring away the dead fœtus, it is said.

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CHAP. 21.

THE PITYUSA: SIX REMEDIES.

For a similar reason, too, we shall accord the same distinction to the pityusa, a plant which some persons reckon among the varieties of the tithymalus. It is a shrub, re- sembling the pitch-tree in appearance, and with a diminutive purple blossom. A decoction of the root, taken in doses of one hemina, carries off the bilious and pituitous secretions by stool, and a spoonful of the seed, used as a suppository, has a similar effect. A decoction of the leaves in vinegar removes scaly eruptions of the skin; and in combination with boiled rue, it effects the cure of diseases of the mamillæ, gripings in the bowels, wounds inflicted by serpents, and incipient gatherings of most kinds.

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CHAP. 22.

RESINS: TWENTY-TWO REMEDIES.

In treating, first of wines, and then of trees, we have stated that resin is the produce of the trees above-mentioned, and have described the several varieties of it, and the countries in which they are respectively produced. There are two principal kinds of resin, the dry and the liquid. The dry resins are extracted from the pine and the pitch-tree, the liquid from the terebinth, the larch, the lentisk, and the cypress; these last producing it in the province of Asia and in Syria. It is an error to suppose that the resin of the pitch- tree is the same as that of the larch; for the pitch-tree yields an unctuous resin, and of the same consistency as frankincense, while that of the larch is thin, like honey in colour, and of a powerful odour. It is but very rarely that medical men make use of liquid resin, and when they do, it is mostly that produced by the larch, which is administered in an egg for cough and ulcerations of the viscera. The resin of the pine, too, is far from extensively used, and that of the other kinds is always boiled before use: on the various methods of boiling it, we have enlarged at sufficient length already.

As to the produce of the various trees, the resin of the terebinth is held in high esteem, as being the most odoriferous and the lightest, the kinds which come from Cyprus and Syria being looked upon as the best. Both these kinds are the colour of Attic honey; but that of Cyprus has more body, and dries with greater rapidity. In the dry resins the qualities requisite are whiteness, purity, and transparency: but whatever the kind, the produce of mountainous districts is always preferred to that of champaign countries, and that of a north- eastern aspect to that of any other quarter. Resins are dissolved in oil as a liniment and emollient cataplasm for wounds; but when they are used as a potion, bitter almonds are also employed. The curative properties of resins consist in their tendency to close wounds, to act as a detergent upon gatherings and so disperse them, and to cure affections of the chest.

The resin of the terebinth * * * it is used too, warmed, as a liniment for pains in the limbs, the application being removed after the patient has taken a walk in the sun. Among slave-dealers too, there is a practice of rubbing the bodies of the slaves with it, which is done with the greatest care, as a corrective for an emaciated appearance; the resin having the property of relaxing the skin upon all parts of the body, and rendering it more capable of being plumped out by food.

Next after the resin of the terebinth comes that of the lentisk; it possesses astringent properties, and is the most powerful diuretic of them all. The other resins are laxative to the bowels, promote the digestion of crudities, allay the violence of inveterate coughs, and, employed as a fumigation, disengage the uterus of foreign bodies with which it is surcharged: they are particularly useful too as neutralizing the effects of mistletoe; and, mixed with bull suet and honey, they are curative of inflamed tumours and affections of a similar nature. The resin of the lentisk is very convenient as a bandoline for keeping stubborn eyelashes in their place: it is useful also in cases of fractures, suppurations of the ears, and prurigo of the generative organs. The resin of the pine is the best of them all for the cure of wounds in the head.

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CHAP. 23. (7.)

PITCH: TWENTY-THEEE REMEDIES.

We have also stated on a previous occasion from what tree pitch is extracted, and the methods employed for that purpose. Of this also there are two kinds; thick pitch and liquid pitch. Of the several varieties of thick pitch the most useful for medicinal purposes is that of Bruttium; for being both extremely unctuous and very resinous, it reunites the properties both of resin and of pitch, that of a yellow reddish colour being the most highly esteemed. As to the statement made in addition to this, that the produce of the male tree is the best, I do not believe that any such distinction is at all possible.

Pitch is of a warming, cicatrizing tendency: mixed with polenta it is particularly useful as a neutralizer of the venom of the cerastes, and in combination with honey it is used for quinzy, catarrhs, and fits of sneezing caused by phlegm. With oil of roses it is used as an injection for the ears, and employed as a liniment with wax it heals lichens. It relaxes the bowels, also, and used as an electuary, or applied with honey to the tonsillary glands, it facilitates expectoration. Applied topically, it acts as a detergent upon ulcers, and makes new flesh. Mixed with raisins and axle-grease, it forms a detergent plaster for carbuncles and putrid ulcers, and, with pine-bark or sulphur, for serpiginous sores. Pitch has been administered too by some, in doses of one cyathus, for phthisis and inveterate coughs. It heals chaps of the Feet and rectum, inflamed tumours, and malformed nails; and used as a fumigation, it is curative of indurations and derangements of the uterus, and of lethargy. Boiled with barley-meal and the urine of a youth who has not arrived at puberty, it causes scrofulous sores to suppurate. Dry pitch is used also for the cure of alopecy. For affections of the mamillæ, Bruttian pitch is warmed in wine with fine spelt meal, and applied as hot as can be borne.

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CHAP. 24.

PISSELÆON AND PALIMPISSA: SIXTEEN REMEDIES.

We have already described the way in which liquid pitch and the oil known as pisselæon are made. Some persons boil the pitch over again, and give it the name of “palimpissa.” For quinzy and affections of the uvula, liquid pitch is employed internally. It is used also for the cure of ear-ache, for the improvement of the sight, and as a salve for the lips; and is employed for hysterical suffocations, inveterate coughs, profuse expectorations, spasms, nervousness, opisthotony, paralysis, and pains in the sinews. It is a very excellent remedy too for itch in dogs and beasts of burden.

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CHAP. 25.

PISSASPHALTOS: TWO REMEDIES.

There is pissasphaltos too, a natural production of the territory of the Apolloniates, and consisting of pitch mixed with bitumen. Some persons, however, make this mixture artificially, and employ it for the cure of itch in cattle, and of injuries done by the young sucklings to the mamillæ. The most esteemed portion of it is that which floats on the surface when boiled.

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CHAP. 26.

ZOPISSA: ONE REMEDY.

We have already stated that zopissa is the pitch, macerated with salt-water and wax, that has been scraped from off the bottoms of ships. The best kind is that taken from ships which have been to sea for the first time. It is used as an ingredient in plasters of an emollient nature, employed to disperse gatherings.

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CHAP. 27.

THE TORCH-TREE: ONE BEMEDY.

A decoction in vinegar of the wood of the torch-tree makes a most efficacious gargle for tooth-ache.

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CHAP. 28.

THE LENTISK: TWENTY-TWO REMEDIES.

The seed, bark, and tear-like juices of the lentisk are diuretics, and act astringently upon the bowels: a decoction of them, used as a fomentation, is curative of serpiginous sores, and is applied topically for humid ulcerations and erysipelas; it is employed also as a collutory for the gums. The teeth are rubbed with the leaves in cases of tooth-ache, and they are rinsed with a decoction of the leaves when loose: this decoction has the effect also of staining the hair. The gum of this tree is useful for diseases of the rectum, and all cases in which desiccatives and calorifics are needed; a decoction too of the gum is good for the stomach, acting as a carminative and diuretic; it is applied also to the head, in cases of headache, with polenta. The more tender of the leaves are used as an application for inflammations of the eyes.

The mastich produced by the lentisk is used as a bandoline for the hairs of the eye-lids, in compositions for giving a plumpness to the face, and in cosmetics for smoothing the skin. It is employed for spitting of blood and for inveterate coughs, as well as all those purposes for which gum acacia is in request. It is used also for the cure of excoriations; which are fomented either with the oil extracted from the seed, mixed with wax, or else with a decoction of the leaves in oil. Fomentations too are made of a decoction of it in water for diseases of the male organs. I know for a fact, that in the illness of Considia, the daughter of M. Servilius, a personage of consular rank, her malady, which had long resisted all the more severe methods of treatment, was at last successfully treated with the milk of goats that had been fed upon the leaves of the lentisk.

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CHAP. 29. (8.)

THE PLANE-TREE: TWENTY-FIVE REMEDIES.

The plane-tree neutralizes the bad effects of bites inflicted by the bat. The excrescences of this tree, taken in doses of four denarii, in wine, act as an antidote to the venom of serpents of all kinds and of scorpions, and are curative of burns. Pounded with strong vinegar, squill vinegar in particular, they arrest hæmorrhage of every kind; and with the addition of honey, they remove freckles, carcinomatous sores, and black spots of long standing on the skin.

The leaves again, and the bark of this tree, are used in the form of liniments for gatherings and suppurations, and a decoction of them is employed for a similar purpose. A decoction of the bark in vinegar is remedial for affections of the teeth, and the more tender of the leaves boiled in white wine are good for the eyes. The down which grows upon the leaves is injurious to both the ears and eyes. The ashes of the excrescences of this tree heal such parts of the body as have been burnt or frost-bitten. The bark, taken in wine, reduces the inflammation caused by the stings of scorpions.

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CHAP. 30.

THE ASH: FIVE REMEDIES.

We have already made some mention of the virtues possessed by the ash as an antidote to the venom of serpents. The seed of it is enclosed in follicules, which are good for diseases of the liver, and, in combination with wine, for pains in the sides: they are employed also for drawing off the water in dropsy. They have the property, too, of diminishing obesity, and of gradually reducing the body to a state of comparative emaciation, the follicules being pounded in wine and administered in proportion to the bodily strength; thus, for instance, to a child, five of them are given in three cyathi of wine, but for persons in more robust health, seven are prescribed, in five cyathi of wine.

We must not omit to state that the shavings and saw-dust of this wood are of a highly dangerous nature, according to some.

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CHAP. 31.

THE MAPLE: ONE REMEDY.

The root of the maple, beaten up in wine, is extremely efficacious as a topical application for pains in the liver.

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CHAP. 32.

THE POPLAR: EIGHT REMEDIES.

We have already mentioned, when speaking of the unguents, the use that is made of the berries of the white poplar. A potion prepared from the bark is good for sciatica and strangury, and the juice of the leaves is taken warm for ear-ache. So long as a person holds a sprig of poplar in his hand, there is no fear of chafing between the thighs.

The black poplar which grows in Crete is looked upon as the most efficacious of them all. The seed of it, taken in vinegar, is good for epilepsy. This tree produces a resin also to a small extent, which is made use of for emollient plasters. The leaves, boiled in vinegar, are applied topically for gout. A moisture that exudes from the clefts of the black poplar removes warts, and pimples caused by friction. Poplars produce also on the leaves a kind of sticky juice, from which bees prepare their propolis: indeed this juice, mixed with water, has the same virtues as propolis.

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CHAP. 33.

THE ELM: SIXTEEN REMEDIES.

The leaves, bark, and branches of the elm have the property of filling up wounds and knitting the flesh together: the inner membrane too, of the bark, and the leaves, steeped in vinegar, are applied topically for leprosy. The bark, in doses of one denarius, taken in one hemina of cold water, acts as a purgative upon the bowels, and is particularly useful for carrying off pituitous and aqueous humours. The gum also which this tree produces is applied topically to gatherings, wounds, and burns, which it would be as well to foment with the decoction also. The moisture which is secreted on the follicules of the tree gives a finer colour to the skin, and improves the looks. The foot-stalks of the leaves that first appear, boiled in wine, are curative of tumours, and bring them to a head: the same, too, is the effect produced by the inner bark.

Many persons are of opinion that the bark of this tree, chewed, is a very useful application for wounds, and that the leaves, bruised and moistened with water, are good for gout. The moisture too that exudes from the pith of the tree, as already stated, on an incision being made, applied to the head, causes the hair to grow and prevents it from falling off.

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CHAP. 34.

THE LINDEN-TREE: FIVE REMEDIES.

The linden-tree is useful, though in a less marked degree, for nearly all the same purposes as the wild olive. The leaves, however, are the only part that is made use of for ulcers upon infants; chewed, too, or employed in the form of a decoction, they are diuretic. Used as a liniment they arrest menstruation when in excess, and an infusion of them, taken in drink, carries off superfluous blood.

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CHAP. 35.

THE ELDER: FIFTEEN REMEDIES.

There are two kinds of elder, one of which grows wild and is much smaller than the other; by the Greeks it is known as the “chamæacte,” or “helion.” A decoction of the leaves, seed, or root of either kind, taken in doses of two cyathi, in old wine, though bad for the upper regions of the stomach, carries off all aqueous humours by stool. This decoction is very cooling too for inflammations, those attendant upon recent burns in particular. A poultice is made also of the more tender leaves, mixed with polenta, for bites inflicted by dogs. The juice of the elder, used as a fomentation, reduces abscesses of the brain, and more particularly of the membrane which envelopes that organ. The berries, which have not so powerful an action as the other parts of the tree, stain the hair. Taken in doses of one acetabulum, in drink, they are diuretic. The softer leaves are eaten with oil and salt, to carry off pituitous and bilious secretions.

The smaller kind is for all these purposes the more efficacious of the two. A decoction of the root in wine, taken in doses of two cyathi, brings away the water in dropsy, and acts emolliently upon the uterus: the same effects are produced also by a sitting-bath made of a decoction of the leaves. The tender shoots of the cultivated kind, boiled in a saucepan and eaten as food, have a purgative effect: the leaves taken in wine, neutralize the venom of serpents. An application of the young shoots, mixed with he-goat suet, is remarkably good for gout; and if they are macerated in water, the infusion will destroy fleas. If a decoction of the leaves is sprinkled about a place, it will exterminate flies. “Boa” is the name given to a malady which appears in the form of red pimples upon the body; for its cure the patient is scourged with a branch of elder. The inner bark, pounded and taken with white wine, relaxes the bowels.

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CHAP. 36.

THE JUNIPER: TWENTY-OXE REMEDIES.

The juniper is of a warming and resolvent nature beyond all other plants: in other respects, it resembles the cedar. There are two species of this tree, also, one of which is larger than the other: the odour of either, burnt, repels the ap- proach of serpents. The seed is good for pains in the stomach, chest, and sides; it dispels flatulency and sudden chills, soothes cough, and brings indurations to a head. Applied topically, it checks the growth of tumours; and the berries, taken in red wine, act astringently upon the bowels: they are applied also to tumours of the abdomen. The seed is used as an ingredient in antidotes of an aperient nature, and is diuretic in its effects. It is used as a liniment for defluxions of the eyes, and is prescribed for convulsions, ruptures, griping pains in the bowels, affections of the uterus, and sciatica, either in a dose of four berries in white wine, or in the form of a decoction of twenty berries in wine.

There are persons who rub the body with juniper berries as a preventive of the attacks of serpents.

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CHAP. 37. (9.)

THE WILLOW: FOURTEEN REMEDIES. THE WILLOW OF AMLERIA: ONE REMEDY.

The fruit of the willow, before it arrives at maturity, is covered with a down like a spider's web: gathered before it is ripe, it arrests discharges of blood from the mouth. The bark of the upper branches, reduced to ashes and mixed with water, is curative of corns and callosities: it removes spots also upon the face, being still more efficacious for that purpose if mixed with the juices of the tree.

The juices produced by the willow form three different varieties; one of which exudes in the shape of a gum from the tree itself, and another distils from an incision some three fingers in width, made in the bark while the tree is in blossom. This last is very useful for dispersing humours which impede the sight, acting also as an inspissative when needed, promoting the discharge of the urine, and bringing abscesses of all kinds to a head. The third kind of juice exudes from the wounds, when the branches are lopt off with the bill. Either of these juices, warmed in a pomegranate rind, is used as an injection for diseases of the ears. The leaves, too, boiled and beaten up with wax, are employed as a liniment for similar purposes, and for gout. The bark and leaves, boiled in wine, form a decoction that is remarkably useful as a fomentation for affections of the sinews. The blossoms, bruised with the leaves, remove scaly eruptions of the face; and the leaves, bruised and taken in drink, check libidinous tendencies, and effectually put an end to them, if habitually employed.

The seed of the black willow of Ameria, mixed with litharge in equal proportions, and applied to the body just after the bath, acts as a depilatory.

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CHAP. 38.

THE VITEX: THIRTY-THREE REMEDIES.

Not much unlike the willow, for the use that is made of it in wicker-work, is the vitex, which also resembles it in the leaves and general appearance, though the smell of it is more agreeable. The Greeks call it "lygos," or "agnos," from the fact that the matrons of Athens, during the Thesmophoria, a period when the strictest chastity is observed, are in the habit of strewing their beds with the leaves of this tree.

There are two species of vitex: the larger one, like the willow, attains the full proportions of a tree; while the other, which is smaller, is branchy, with a paler, downy leaf. The first kind, generally known as the "white" vitex, bears a white blossom mixed with purple, whereas the black one has a flower that is entirely purple. Both of these trees grow on level spots of a marshy nature.

The seed of these trees, taken in drink, has a sort of vinous flavour, and has the reputation of being a febrifuge. It is said also to act as a sudorific, if the body is rubbed with it mixed with oil, and to have the effect of dispelling extreme lassitude: it acts too as a diuretic and emmenagogue. The produce of both trees is trying to the head, like wine, and indeed the odour of them is very similar. They have the effect also of removing flatulence in the lower regions of the body, act astringently upon the bowels, and are remarkably useful for dropsy and affections of the spleen. They promote the secretion of the milk, and neutralize the venom of serpents, when of a cold nature more particularly. The smaller kind, however, is the more efficacious of the two for injuries inflicted by serpents, the seed being taken in doses of one drachma, in wine or oxycrate, or else the more tender leaves in doses of two drachmæ.

From both trees also a liniment is prepared for the bites of spiders, but it is quite sufficient to rub the wounds with the leaves; and if a fumigation is made from them, or if they are spread beneath the bed, they will repel the attacks of all venomous creatures. They act also as an antaphrodisiac, and it is by this tendency in particular that they

neutralize the venom of the phalangium, the bite of which has an exciting effect upon the generative organs. The blossoms and young shoots, mixed with oil of roses, allay head-aches arising from inebriation. A decoction of the seed used as a fomentation cures head-ache, however intense it may be; and employed as a fumigation or as a pessary, the seeds acts as a detergent upon the uterus. Taken in drink with honey and penny-royal, it has a laxative effect; pounded and used with barley-meal, it quickly brings abscesses and hard tumours to a head, and has an emollient effect.

The seed, in combination with saltpetre and vinegar, removes lichens and freckles; mixed with honey, it heals ulcers and eruptions of the mouth; applied with butter and vine-leaves, it reduces swellings of the testes; used with water, as a lini- ment, it cures chaps of the rectum; and employed with salt, nitre, and wax, it is good for sprains. The seed and leaves are used as ingredients also in emollient plasters for diseases of the sinews, and for gout; and a decoction of the seed in oil is employed as a fomentation for the head in cases of phrenitis and lethargy. Persons who carry a sprig of this plant in the hand, or stuck in the girdle, will be proof, it is said, against chafing between the thighs.

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CHAP. 39.

THE ERICA; ONE REMEDY.

The Greeks give the name of “erice,” to a shrub that is but little different from the myrice. It has the colour, and very nearly the leaf, of rosemary. It neutralizes the venom of serpents, it is said.

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CHAP. 40.

THE BROOM; FIVE REMEDIES.

The broom is used for making withes; the flowers of it are greatly sought by bees. I have my doubts whether this is not the same plant that the Greek writers have called “sparton,” and of which, in those parts of the world, as I have already stated, they are in the habit of making fishing-nets. I doubt also whether Homer has alluded to this plant, when he speaks of the seams of the ships,— “the sparta” coming asunder; for it is certain that in those times the spartum of Spain or Africa was not as yet in use, and that vessels made of materials sown together, were united by the agency, not of spartum, but of flax.

The seed of the plant to which the Greeks now give the name of “sparton,” grows in pods like those of the kidneybean. It is as strongly drastic as hellebore, and is usually taken fasting, in doses of one drachma and a half, in four cyathi of hydromel. The branches also, with the foliage, are macerated for several days in vinegar, and are then beaten up, the infusion being recommended for sciatica, in doses of one cyathus. Some persons think it a better plan, however, to make an infusion of them in sea-water, and to inject it as a clyster. The juice of them is used also as a friction for sciatica, with the addition of oil. Some medical men, too, make use of the seed for strangury. Broom, bruised with axle-grease, is a cure for diseases of the knees.

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CHAP. 41.

THE MYRICA, OTHERWISE CALLED TAMARICA, OR TAMARIX: THREE REMEDIES.

Lenæus says, that the myrice, otherwise known as the “crica,” is a similar plant to that of which brooms are made at Aneria. He states also that, boiled in wine and then beaten up and applied with honey, it heals carcinomatous sores. I would here remark, parenthetically, that some persons identify it with the tamarice. Be this as it may, it is particularly useful for affections of the spleen, the juice of it being extracted for the purpose, and taken in wine; indeed so marvellous, they say, is its antipathy to this part of the viscera, and this only, that if swine drink from troughs made of this wood, they will be found to lose the spleen. Hence it is that in maladies of the spleen victuals and drink are given to the patient in vessels made of this wood.

A medical author too, of high repute, has asserted that a sprig broken from off this tree, without being allowed to touch the earth or iron, will allay pains in the bowels, if applied to the body, and kept close to it by the clothes and girdle. The common people, as already stated, look upon this tree as illomened, because it bears no fruit, and is never propagated from seed.

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CHAP. 42.

THE BBYA: TWENTY-NINE REMEDIES.

At Corinth, and in the vicinity of that city, the Greeks give the name of "brya" to a plant of which there are two varieties; the wild brya, which is altogether barren, and the cultivated one. This last, when found in Syria and Egypt, produces a ligneous fruit, somewhat larger than a gall-nut, in great abundance, and of an acrid flavour; medical men employ it as a substitute for galls in the compositions known as "antheræ." The wood also, with the blossoms, leaves, and bark of the tree, is used for similar purposes, but their properties are not so strongly developed. The bark is pounded also, and given for discharges of blood from the mouth, irregularities of the catamenia, and cœliac affections: beaten up and applied to the part affected, it checks the increase of all kinds of abscesses.

The juice too is extracted from the leaves for similar purposes, and a decoction is made of them in wine; they are applied also to gangrenes, in combination with honey. A decoction of them taken in wine, or the leaves themselves applied with oil of roses and wax, has a sedative effect: it is in this form that. they are used for the cure of epinyctis. This decoction is useful also for tooth-ache or ear-ache, and the root is employed for similar purposes. The leaves too have this additional use — they are applied with polenta to serpiginous sores. The seed, in doses of one drachma, is administered in drink for injuries inflicted by spiders or the phalangium; and mixed with the grease of poultry, it is applied to boils. It is very efficacious also for stings inflicted by all kinds of serpents, the asp excepted. The decoction, used as a fomentation, is curative of jaundice, phthiriasis, and lice; it also arrests the catamenia when in excess. The ashes of the tree are employed for all these purposes; there is a story told, too, that, mixed with the urine of an ox, and taken in the food or drink, they will act most effectually as an antaphrodisiac. The charcoal too of this wood is quenched in urine of a similar nature, and kept in a shady spot. When it is the intention of the party to rekindle the flames of desire, it is set on fire again. The magicians say, that the

urine of an eunuch will have a similar effect.

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CHAP. 43.

THE BLOOD-RED SHRUB: ONE REMEDY.

Nor is the blood-red shrub looked upon as a less ill- omened plant than the last. The inner bark of it is used to re-open ulcers which have healed too rapidly.

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CHAP. 44.

THE SILER: THREE REMEDIES.

The leaves of the siler, applied to the forehead, allay head-ache; and the seed of it, beaten up with oil, is curative of phthiriasis. Serpents also are greatly in dread of this tree, and it is for this reason that the country-people are in the habit of carrying a walking-stick made of it.

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CHAP. 45.

THE PRIVATE: EIGHT REMEDIES.

The ligustrum, or privet, if it is the same tree as the cyprus of the East, has also its own medicinal uses in Europe. The juice of it is used for affections of the sinews and joints, and for sudden chills; and the leaves are universally employed, with a sprinkling of salt, for the cure of inveterate sores and of ulcerations of the mouth. The berries are curative of phthiriasis and chatings between the thighs, for which last purpose the leaves also are employed. The berries are made use of for the cure of pip in poultry.

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CHAP. 46.

THE ALDER: ONE KEMEDY.

The leaves of the alder, steeped in boiling water, are an undoubted remedy for tumours.

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CHAP. 47.

THE SEVERAL VARIETIES OF THE IVY: THIRTY-NINE REMEDIES

We have already enumerated some twenty varieties of the ivy. The medicinal properties of them all are of a doubtful nature; taken in considerable quantities they disturb the mental faculties and purge the brain. Taken internally they are injurious to the sinews, but applied topically they are beneficial to those parts of the body. Ivy possesses properties similar to those of vinegar. All the varieties of the ivy are of a refrigerative nature, and taken in drink they are diuretic. The softer leaves, applied to the head, allay head-ache, acting more particularly upon the brain and the membrane which envelopes that organ. For this purpose the leaves are bruised with vinegar and oil of roses and then boiled, after which some more rose-oil is added. The leaves too are applied to the fore- head, and the mouth is fomented with a decoction of them, with which the head is rubbed as well. They are useful also for the spleen, the leaves being applied topically, or an infusion of them taken in drink. A decoction of them is used for cold shiverings in fevers, and for pituitous eruptions; or else they are beaten up in wine for the purpose. The umbels too, taken in drink or applied externally, are good for affections of the spleen, and an application of them is useful for the liver; employed as a pessary, they act as an emmenagogue. The juice of the ivy, the white cultivated kind more particularly, cures diseases of the nostrils and removes habitually offensive smells. Injected into the nostrils it purges the head, and with the addition of nitre it is still more efficacious for that purpose. In combination with oil, the juice is injected for suppurations or pains in the ears. It is a corrective also of the deformities of scars. The juice of white ivy, heated with the aid of iron, is still more efficacious for affections of the spleen; it will be found sufficient, however, to take six of the berries in two cyathi of wine. Three berries of the white ivy, taken in oxymel, expel tape-worm, and in the treatment of such cases it is a good plan to apply them to the abdomen as well. Erasistratus prescribes twenty of the golden-coloured berries of the ivy which we have-mentioned as the

"chrysocarpos," to be beaten up in one sextarius of wine, and he says that if three cyathi of this preparation are taken for dropsy, it will carry off by urine the water that has been secreted beneath the skin. For cases of tooth-ache he recommends five berries of the chrysocarpos to be beaten up in oil of roses, and warmed in a pomegranate-rind, and then injected into the ear opposite the side affected. The berries which yield a juice of a saffron colour, taken beforehand in drink, are a preservative against crapulence; they are curative also of spitting of blood and of griping pains in the bowels. The whiter umbels of the black ivy, taken in drink, are productive of sterility, in males even. A decoction in wine of any kind of ivy is useful as a liniment for all sorts of ulcers, those even of the malignant kind known as "cacoethes." The tears which distil from the ivy are used as a depilatory, and for the cure of phthiriasis. The blossoms too, of all the varieties, taken twice a day in astringent wine, a pinch in three fingers at a time, are curative of dysentery and looseness of the bowels: they are very useful also, applied to burns with wax. The umbels stain the hair black. The juice extracted from the root is taken in vinegar for the cure of wounds inflicted by the phalangium. I find it stated too, that patients suffering from affections of the spleen are cured by drinking from vessels made of the wood of the ivy. The berries are bruised also, and then burnt, and a liniment is prepared from them for burns, the parts being fomented with warm water first.

Incisions are sometimes made in the ivy to obtain the juice, which is used for carious teeth, it having the effect of breaking them, it is said; the adjoining teeth being fortified with wax against the powerful action of the juice. A kind of gum even is said to be found in the ivy, which, it is asserted, is extremely useful, mixed with vinegar, for the teeth.

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CHAP. 48.

THE CISTHOS: FIVE REMEDIES.

The Greeks give the name of “cisthos” — a word very similar to “cissos,” the Greek name of the ivy — to a plant which is somewhat larger than thyme, and has a leaf like that of ocimum. There are two varieties of this plant; the male, which has a rose-coloured blossom, and the female, with a white one. The blossom of either kind, taken in astringent wine, a pinch in three fingers at a time, is good for dysentery and looseness of the bowels. Taken in a similar manner twice a day, it is curative of inveterate ulcers: used with wax, it heals burns, and employed by itself it cures ulcer. ations of the mouth. It is beneath these plants more particularly that the hypocisthis grows, of which we shall have occasion to speak when treating of the herbs.

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CHAP. 49.

THE CISSOS ERYTIRANOS: TWO REMEDIES. THE CHAMÆCISSOS: TWO REMIEDIES. THE SMILAX: THREE RE- MEDIES. THE CLEMATIS: EIGHTEEN REMEDIES.

The plant called “cissos erythranos” by the Greeks, is similar to the ivy: taken in wine, it is good for sciatica and lumbago. The berries, it is said, are of so powerful a nature as to produce bloody urine. “Chamæcissos” also is a name given by them to a creeping ivy which never rises from the surface of the ground: bruised in wine, in doses of one acetabulum, it is curative of affections of the spleen, the leaves of it being applied topically with axle-grease to burns.

The smilax also, otherwise known as the “anthophoros,” has a strong resemblance to ivy, but the leaves of it are smaller. A chaplet, they say, made of an uneven number of the leaves, is an effectual cure for head-ache. Some writers mention two kinds of smilax, one of which is all but perennial, and is found climbing the trees in umbrageous valleys, the berries hanging in clusters. These berries, they say, are remarkably efficacious for all kinds of poisons; so much so indeed, that infants to whom the juice of them has been habitually administered, are rendered proof against all poisons for the rest of their life. The other kind. it is said, manifests a predilection for cultivated localities, and is often found growing there; but as for medicinal properties, it has none. The former kind, they say, is the smilax, the wood of which we have mentioned as emitting a sound, if held close to the ear.

Another plant, similar to this, they call by the name of “clematis:” it is found adhering to trees, and has a jointed stem. The leaves of it cleanse leprous sores, and the seed acts as an aperient, taken in doses of one acetabulum, in one hemina of water, or in hydromel. A decoction of it is prescribed also for a similar purpose.

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CHAP. 50. (11.)

THE REED: NINETEEN REMEDIES.

We have already treated of twenty-nine varieties of the reed, and there is none of her productions in which that mighty power of Nature, which in our successive Books we have described, is more fully displayed than in this. The root of the reed, pounded and applied to the part affected, extracts the prickles of fern from the body, the root of the fern having a similar effect upon splinters of the reed. Among the numerous varieties which we have described, the scented reed which is grown in Judæa and Syria as an ingredient in our unguents, boiled with hay-grass or parsley-seed, has a diuretic effect: employed as a pessary, it acts as an emmenagogue. Taken in drink, in doses of two oboli, it is curative of convulsions, diseases of the liver and kidneys, and dropsy. Used as a fumigation, and with resin more particularly, it is good for coughs, and a decoction of it with myrrh is useful for scaly eruptions and running ulcers. A juice, too, is collected from it which has similar properties to those of elaterium.

In every kind of reed the part that is the most efficacious is that which lies nearest the root; the joints also are efficacious in a high degree. The ashes of the Cyprian reed known as the "donax," are curative of alopecy and putrid ulcers. The leaves of it are also used for the extraction of pointed bodies from the flesh, and for erysipelas and all kinds of gatherings. The common reed, beaten up quite fresh, has also considerable extractive powers, and not in the root only, for the stem, it is said, has a similar property. The root is used also in vinegar as a topical application for sprains and for pains in the spine; and beaten up fresh and taken in wine it acts as an aphrodisiac. The down that grows on reeds, put into the ears, deadens the hearing.

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CHAP. 51.

THE PAPYRUS AND THE PAPER MADE FROM IT: THREE REMEDIES.

Of a kindred nature with the reed is the papyrus of Egypt; a plant that is remarkably useful, in a dried state, for dilating and drying up fistulas, and, by its expansive powers, opening an entrance for the necessary medicaments. The ashes of paper prepared from the papyrus are reckoned among the caustics: those of the plant, taken in wine, have a narcotic effect. The plant, applied topically in water, removes callosities of the skin.

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CHAP. 52.

THE EBONY: FIVE REMEDIES.

The ebony-tree does not grow in Egypt even, as we have already stated, and it is not our intention to speak here of the medicinal properties of the vegetable productions of foreign climates. Still, however, the ebony must not be omitted, on account of the marvels related of it. The saw-dust of this wood, it is said, is a sovereign remedy for diseases of the eyes, and the pulp of the wood, rubbed upon a whetstone moistened with raisin wine, dispels all films which impede the sight. The root too, they say, applied with water, is curative of white specks in the eyes, and, with the addition of root of dracunculus, in equal proportions, and of honey, of cough. Medical men reckon ebony also in the number of the caustics.

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CHAP. 53

THE RHODODENDRON: ONE REMEDY.

The rhododendron has not so much as found a Latin name among us, its other names being “rhododaphne” and “nerium.” It is a marvellous fact, but the leaves of this plant are poisonous to quadrupeds; while for man, if taken in wine with rue, they are an effectual preservative against the venom of serpents. Sheep too, and goats, it is said, if they drink water in which the leaves have been steeped, will die immediately.

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CHAP. 54.

THE RHUS OR SUMACH-TREE; TWO VARIETIES OF IT: EIGHT REMEDIES. STOMATICE.

Nor vet has the tree called “rhus” any Latin name, although it is employed in numerous ways. Under this name are comprehended a wild plant, with leaves like those of myrtle, and a short stem, which is good as an expellent of tapeworm; and the shrub which is known as the “currier’s plant,” of a reddish colour, a cubit in height, and about the thickness of one’s finger, the leaves of which are dried and used, like pomegranate rind, for curing leather.

Medical men also employ the leaves of these plants for the treatment of contusions, and for the cure of cœliac affections, and of ulcers of the rectum and phagedænic sores; for all which purposes they are pounded with honey and applied with vinegar. A decoction of them is injected for suppurations of the ears. With the branches, boiled, a stomatice is also made, which is used for the same purposes as that prepared from mulberries; it is more efficacious, however, mixed with alum. This preparation is applied also to reduce the swelling in dropsy.

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CHAP. 55.

RHUS ERYTHROS: NINE REMEDIES.

Rhus erythros is the name given to the seed of this shrub. It possesses properties of an astringent and cooling nature, and is used as a seasoning for provisions, in place of salt. It has a laxative effect, and, used in conjunction with silphium, it gives a finer flavour to meat of all kinds. Mixed with honey, it is curative of running ulcers, pimples on the tongue, contusions, bruises, and excoriations. It causes ulcers of the head to cicatrize with the greatest rapidity; and taken with the food, it arrests excessive menstruation.

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CHAP. 56.

THE ERYTHIRODANXU: ELEVEN REMEDIES.

The erythrodanus, by some called “ereuthodanus,” and in Latin, “rubia,” is quite a different plant. It is used for dyeing wool, and skins for leather are prepared with it. Used medicinally, it is a diuretic, and, employed with hydronel, it is turative of jaundice. Employed topically with vinegar, it leals lichens; and a potion is prepared from it for sciatica and paralysis, the patient while using it taking a bath daily. The root of it and the seed are effectual as an emmenagogue the act astringently upon the bowels, and disperse gatherings. The branches, together with the leaves, are applied to wounds inflicted by serpents; the leaves too have the property of staining the hair. I find it stated by some writers that this shrub is curative of jaundice, even if worn as an amulet only, and looked at every now and then.

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CHAP. 57.

THE ALYSSON: TWO REMEDIES.

The plant known as the “Alyson” differs only from the preceding one in the leaves and branches, which are more diminitive. It receives its name from the fact, that, taken in vinetar and worn as an amulet, it prevents persons bitten by dogs rom becoming rabid. It is a marvellous fact too, that is added to the effect that the person bitten has only to look at thi shrub, and the flow of corrupt matter from the wound will b staunched immediately.

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CHAP. 58.

THE RADICULT OR STRUTHION: THIRTEEN REMEDIES. THE APOCYNUMI: TWO OBSERVATIONS UPON IT.

The adicula, which we have already mentioned as being called "struthion" by the Greeks, is used by dyers for preparing Wool. A decoction of it, taken internally, is curative of jaunoce and diseases of the chest. It is diuretic also, and laxative and acts as a detergent upon the uterus, for which reasons medical men have given it the name of the "golden beverage." Taken with honey, it is a sovereign remedy for cough; and it is used for hardness of breathing, in doses of a spoonful. Applied with polenta and vinegar to the pats affected, it removes leprous sores. Used with panax and not of the caper-plant, it breaks and expels calculi, and a decoction of it in wine with barley-meal disperses inflamed tumours. It is used as an ingredient in emollient plasters and eye-sakes for the sight, and is found to be one of the most useful stenutories known; it is good too for the liver and the spleen. Taken in hydrormel, in doses of one denarius, it effects the cure of asthma, as also of pleurisy and all pains in the sides.

The apocynum is a shrub with leaves like those of ivy, hit softer, and not so long in the stalk, and the seed of it is pointed and downy, with a division running down it, and a very powerful smell. Given in their food with water, the eed is poisonous to dogs and all other quadrupeds.

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CHAP. 59.

ROSEMARY: EIGHTEEN REMEDIES.

There are two kinds of rosemary; one of which is baren, and the other has a stem with a resinous seed, known as “cachrys.” The leaves have the odour of frankincase. The root, applied fresh, effects the cure of wounds, proapsus of the rectum, condylomata, and piles. The juice f the plant, as well as of the root, is curative of jaundice, and such diseases as require detergents; it is useful also for the sight. The seed is given in drink for inveterate diseases of the chest, and, with wine and pepper, for affections of the uteus; it acts also as an emmenagogue, and is used with meal o darnel as a liniment for gout. It acts also as a deterget upon freckles, and is used as an application in diseases which require calorifics or sudorifics, and for convulsions. The plant itself, or else the root, taken in wine, increases the milk, and the leaves and stem of the plant are applied with vinegar to scrofulous sores; used with honey, they are very useful for cough.

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CHAP. 60.

THE SEED CALLED CACHRYS.

As already stated, there are several kinds of cachrys; but that which is produced by rosemary above-mentioned, when rubbed, is found to be of a resinous nature. It neutralizes poisons and the venom of animals, that of serpents excepted. It acts also as a sudorific, dispels griping pains in the bowels, and increases the milk in nursing women.

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CHAP. 61.

THE HERB SAVIN: SEVEN REMEDIES.

Of the herb savin, known as “brathy” by the Greeks, there are two varieties, one of them with a leaf like that of the tamarix, the other with that of the cypress; for which reason some persons have called this last the Cretan cypress. It is used by many for fumigations, as a substitute for frankin- cense; employed in medicine, it is said to have the same effect as cinnamon, if taken in doses twice as large. It reduces gatherings, disperses corrosive sores, acts as a detergent upon ulcers, and, used as a pessary and as a fumigation, brings away the dead fœtus. It is employed as a topical application for erysipelas and carbuncles, and, taken with honey in wine, is curative of jaundice.

The smoke of this plant, they say, cures the pip in all kinds of poultry.

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CHAP. 62.

SELAGO: TWO REMEDIES.

Similar to savin is the herb known as “selago.” Care is taken to gather it without the use of iron, the right hand being passed for the purpose through the left sleeve of the tunic, as though the gatherer were in the act of committing a theft. The clothing too must be white, the Feet bare and washed clean, and a sacrifice of bread and wine must be made before gathering it: it is carried also in a new napkin. The Druids of Gaul have pretended that this plant should be carried about the person as a preservative against accidents of all kinds, and that the smoke of it is extremely good for all maladies of the eyes.

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CHAP. 63.

SAMOLUS: TWO REMEDIES.

The Druids, also, have given the name of “samolus” to a certain plant which grows in humid localities. This too, they say, must be gathered fasting with the left hand, as a preservative against the maladies to which swine and cattle are subject. The person, too, who gathers it must be careful not to look behind him, nor must it be laid anywhere but in the troughs from which the cattle drink.

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CHAP. 64.

GUM: ELEVEN REMEDIES.

We have already spoken of the different kinds of gum; the better sort of each kind will be found the most effective. Gum is bad for the teeth; it tends to make the blood coagulate, and is consequently good for discharges of blood from the mouth. It is useful for burns, but is bad for diseases of the trachea. It exercises a diuretic effect, and tends to neutralize all acridities, being astringent in other respects. The gum of the bitter-almond tree, which has the most astringent properties of them all, is calorific also in its effects. Still, however, the gum of the plum, cherry, and vine is greatly preferred: all which kinds, applied topically, are productive of astringent and desiccative effects, and, used with vinegar, heal lichens upon infants. Taken in must, in doses of four oboli, they are good for inveterate coughs.

It is generally thought that gum, taken in raisin wine, improves the complexion, sharpens the appetite, and is good for calculi in the bladder. It is particularly useful too for wounds and affections of the eyes.

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CHAP. 65. (12.)

THE EGYPTIAN OR ARABIAN THORN: FOUR REMEDIES.

When speaking of the perfumes, we have descanted upon the merits of the Egyptian or Arabian thorn. This, too, is of an astringent nature, and acts as a desiccative upon fluxes of all kinds, discharges of blood from the mouth, and excessive menstruation; for all which purposes the root is still more efficacious.

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CHAP. 66.

THE WHITE THORN: TWO REMEDIES. THE ACANTHION; ONE REMEDY.

The seed of the white thorn is useful as a remedy for the stings of scorpions, and a chaplet made of it, is good for headache. Similar to this plant is that known to the Greeks as the “acanthion;” though it is much smaller in the leaf, which is pointed at the extremity, and covered with a down like a cobweb in appearance. This downy substance is gathered in the East, and certain textures are made of it similar to those of silk. An infusion of the leaves or root of this plant is taken for the cure of opisthotony.

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CHAP. 67.

GUM ACACIA: EIGHTEEN REMEDIES.

Gum acacia is produced also from the white and black thorns of Egypt, and from a green thorn as well; the produce, however, of the former trees is by far the best. There is also a similar gum found in Galatia, but of very inferior quality, the produce of a more thorny tree than those last mentioned. The seed of all these trees resembles the lentil in appearance, only that it is smaller, as well as the pod which contains it: it is gathered in autumn, before which period it would be too powerful in its effects. The juice is left to thicken in the pods, which are steeped in rain-water for the purpose, and then pounded in a mortar; after which, the juice is extracted by means of presses. It is then dried in the mortars in the sun, and when dry is divided into tablets. A similar juice is extracted from the leaves, but it is by no means so useful as the other. The seed is used also, as a substitute for nut-galls in curing leather.

The juice extracted from the leaves, as also the extremely black juice of the Galatian acacia, is held in no esteem. The same too with that of a deep red colour. The gum which is of a purple, or of an ashy, grey colour, and which dissolves with the greatest rapidity, possesses the most astringent and cooling qualities of them all, and is more particularly useful as an ingredient in compositions for the eyes. When required for these purposes, the tablets are steeped in water by some, while some again scorch them, and others reduce them to ashes. They are useful for dyeing the hair, and for the cure of erysipelas, serpiginous sores, ulcerations of the humid parts of the body, gatherings, contusions of the joints, chilblains, and hangnails. They are good also for cases of excessive menstruation, procidence of the uterus and rectum, affections of the eyes, and ulcerations of the generative organs and mouth.

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CHAP. 68. (13.)

ASPALATHOS: ONE REMEDY.

The common thorn too, with which the fulling coppers are filled, is employed for the same purposes as the radicula. In the provinces of Spain it is commonly employed as an ingredient in perfumes and unguents, under the name of “aspalathos.” There is no doubt, however, that there is also a wild thorn of the same name in the East, as already mentioned, of a white colour, and the size of an ordinary tree.

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CHAP. 69.

THE ERYSISCEPTRUM, ADIPSATHEON, OR DIAXYLON: EIGHT REMEDIES.

There is also found in the islands of Nisyros and of Rhodes, a shrub of smaller size, but fill as thorny, known by some as the erysisceptrum, by others as the adipsatheon, and by the Syrians as the diaxylon. The best kind is that which is the least ferulaceous in the stem, and which is of a red colour, or inclining to purple, when the bark is removed. It is found growing in many places, but is not everywhere odoriferous. We have already stated how remarkably sweet the odour of it is, when the rainbow has been extended over it.

This plant cures fetid ulcers of the mouth, polypus of the nose, ulcerations or carbuncles of the generative organs, and chaps; taken in drink it acts as a carminative, and is curative of strangury. The bark is good for patients troubled with discharges of blood, and a decoction of it acts astringently on the bowels. It is generally thought that the wild plant is productive of the same effects.

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CHAP. 70.

THE THORN CALLED APPENDIX: TWO REMEDIES. THE PYRACANTHA: ONE REMEDY.

There is a thorn also known as the appendix; that name being given to the red berries which hang from its branches. These berries eaten by themselves, raw, or else dried and boiled in wine, arrest looseness of the bowels and dispel griping pains in the stomach. The berries of the pyracantha are taken in drink for wounds inflicted by serpents.

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CHAP. 71.

THE PALIURUS: TEN REMEDIES.

The paliurus, too, is a kind of thorn. The seed of it, known by the people of Africa as “zura,” is extremely efficacious for the sting of the scorpion, as also for urinary calculi and cough. The leaves are of an astringent nature, and the root disperses inflamed tumours, gatherings, and abscesses; taken in drink it is diuretic in its effects. A decoction of it in wine arrests diarrhea, and neutralizes the venom of serpents: the root more particularly is administered in wine.

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CHAP. 72.

THE AGRIFOLIA. THE AQUIFOLIA: ONE REMEDY. THE YEW: ONE PROPERTY BELONGING TO IT.

The agrifolia, pounded, with the addition of salt, is good for diseases of the joints, and the berries are used in cases of excessive menstruation, cœliac affections, dysentery, and cholera; taken in wine, they act astringently upon the bowels. A decoction of the root, applied externally, extracts foreign bodies from the flesh, and is remarkably useful for sprains and tumours.

The tree called “aquifolia,” planted in a town or country- house, is a preservative against sorceries and spells. The blossom of it, according to Pythagoras, congeals water, and a staff made of the wood, if, when thrown at any animal, from want of strength in the party throwing it, it falls short of the mark, will roll back again towards the thrower, of its own accord — so remarkable are the properties of this tree. The smoke of the yew kills rats and mice.

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CHAP. 73.

THE BRAMBLE: FIFTY-ONE REMEDIES.

Nor yet has Nature destined the bramble to be only an annoyance to mankind, for she has bestowed upon it mulberries of its own, or, in other words, a nutritive aliment even for mankind. These berries are of a desiccative, astringent, nature, and are extremely useful for maladies of the gums, tonsillary glands, and generative organs. They neutralize also the venom of those most deadly of serpents, the hæmorrhoiss and the prester; and the flowers or fruit will heal wounds inflicted by scorpions, without any danger of abscesses forming. The shoots of the bramble have a diuretic effect: and the more tender ones are pounded, and the juice extracted and then dried in the sun till it has attained the consistency of honey, being considered a most excellent remedy, taken in drink or applied externally, for maladies of the mouth and eyes, discharges of blood from the mouth, quinzy, affections of the uterus, diseases of the rectum, and celiac affections. The leaves, chewed, are good for diseases of the mouth, and a topical ap- plication is made of them for running ulcers and other maladies of the head. In the cardiac disease they are similarly applied to the left breast by themselves. They are applied topically also for pains in the stomach and for procidence of the eyes. The juice of them is used as an injection for the ears, and, in combination with cerate of roses, it heals condylomata.

A decoction of the young shoots in wine is an instantaneous remedy for diseases of the uvula; and eaten by themselves like cymæ, or boiled in astringent wine, they strengthen loose teeth. They arrest fluxes of the bowels also, and discharges of blood, and are very useful for dysentery. Dried in the shade and then burnt, the ashes of them are curative of procidence of the uvula. The leaves too, dried and pounded, are very useful, it is said, for ulcers upon beasts of burden. The berries produced by this plant would seem to furnish a stomatice superior even to that prepared from the cultivated mulberry. Under this form, or else only with hypocisthis and honey, the berries are administered for cholera, the cardiac disease, and

wounds inflicted by spiders.

Among the medicaments known as “styptics,” there is none that is more efficacious than a decoction of the root of the bramble in wine, boiled down to one third. Ulcerations of the mouth and rectum are bathed with it, and fomentations of it are used for a similar purpose; indeed, it is so remarkably powerful in its effects, that the very sponges which are used become as hard as a stone.

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CHAP. 74.

HE CYNOSBATOS: THREE REMEDIES.

There is another kind of bramble also, which bears a rose. It produces a round excrescence, similar to a chesnut in appearance, which is remarkably valuable as a remedy for calculus. This is quite a different production from the "cynorrhoda," which we shall have occasion to speak of in the succeeding Book.

(14.) The cynosbatos is by some called "cynapanxis," and by others "neurospastos;" the leaf resembles the human footstep in shape. It bears also a black grape, in the berries of which there is a nerve, to which it is indebted for its name of "neurospastos." It is quite a different plant from the capparis or caper, to which medical men have also given the name of "cynosbatos." The clusters of it, pickled in vinegar, are eaten as a remedy for diseases of the spleen, and flatulency: and the string found in the berries, chewed with Chian mastich, cleanses the mouth.

The rose of the bramble, mixed with axle-grease, is curative of alopecy: and the bramble-berries themselves, combined with oil of omphacium, stain the hair. The blossom of the bramble is gathered at harvest, and the white blossom, taken in wine, is an excellent remedy for pleurisy and cœliac affections. The root, boiled down to one third, arrests looseness of the bowels and hemorrhage, and a decoction of it, used as a gargle, is good for the teeth: the juice too is employed as a fomentation for ulcers of the rectum and generative organs. The ashes of the root are curative of relaxations of the uvula.

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CHAP. 75.

THE IDÆAN BRAMBLE.

The Idæan bramble is so called from the fact that it is the only plant of the kind found growing upon Mount Ida. It is of a more delicate nature than the others, and smaller; the canes too are thinner, and not so prickly: it mostly grows beneath the shade of trees. The blossom of it, mixed with honey, is applied topically for defluxions of the eyes, and is administered in water for erysipelas and affections of the stomach. In other respects, it has properties similar to those of the plants already mentioned.

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CHAP. 76.

THE RHAMNOS; TWO VARIETIES OF IT: FIVE REMEDIES.

Among the several kinds of bramble is reckoned the plant called “rhamnos” by the Greeks. One variety of it is whiter than the other, and has a more shrublike appearance, throwing out branches armed with straight thorns, and not hooked, like those of the other kinds; the leaves too are larger. The other kind, which is found growing wild, is of a more swarthy hue, in some measure inclining to red; it bears too a sort of pod. With the root of it boiled in water a medicament is made, known as “lycium:” the seed of it is useful for bringing away the after-birth. The white kind, however, is of a more astringent and cooling nature, and better adapted for the treatment of gatherings and wounds. The leaves of both kinds, either raw or boiled, are employed topically with oil.

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CHAP. 77.

LYCIIUM: EIGHTEEN REMEDIES.

The best lycium, they say, is that prepared from the thorn of that name, known also as the "Chironian pyxacanthus," and mentioned by us when speaking of the trees of India, the lycium of those regions being generally looked upon as by far the best. The branches and roots, which are intensely bitter, are first pounded and then boiled for three days in a copper vessel, after which the woody parts are removed, and the decoction is boiled again, till it has attained the consistency of honey. It is adulterated with various bitter extracts, as also with amurca of olive oil and ox-gall. The froth or flower of this decoction is used as an ingredient in compositions for the eyes: and the other part of it is employed as a cosmetic for the face, and for the cure of itch-scabs, corroding sores in the corners of the eyes, inveterate fluxes, and suppurations of the ears. It is useful too for diseases of the tonsillary glands and gums, for coughs, and for discharges of blood from the mouth, being generally taken in pieces the size of a bean. For the cure of discharges from wounds, it is applied to the part affected; and it is similarly used for chaps, ulcerations of the genitals, excoriations, ulcers, whether putrid, serpiginous, or of recent date, hard excrescences of the nostrils, and suppurations. It is taken also by females, in milk, for the purpose of arresting the catamenia when in excess.

The Indian lycium is distinguished from the other kinds by its colour, the lumps being black outside, and, when broken, red within, though they turn black very quickly. It is bitter and remarkably astringent, and is employed for all the purposes above mentioned, diseases of the generative organs in particular.

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CHAP. 78.

SARCOCOLLA: TWO REMEDIES.

Some authors are of opinion that sarcocolla is a tearlike gum which exudes from a kind of thorn; it is similar to powdered incense in appearance, has a sweet flavour with a slight degree of bitter, and is of the consistency of gum. Pounded in wine, it arrests defluxions, and is used as a topical application for infants more particularly. This substance too becomes black when old; the whiter it is, the more highly it is esteemed.

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CHAP. 79.

OPORICE: TWO REMEDIES.

We are indebted too to the medicinal properties of trees for one very celebrated medicament, known as “oporice.” This preparation is used for dysentery and various affections of the stomach; the following being the method of preparing it. Five quinces, seeds and all, with the same number of pomegranates, one sextarius of sorbs, a similar quantity of Syrian rhus, and half an ounce of saffron, are boiled in one congius of white grape-juice at a slow heat, till the whole mixture is reduced to the consistency of honey.

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CHAP. 80.

THE TRIXAGO, CHAMÆDRYS, CHAMÆDROPS, OR TECRIA: SIXTEEN REMEDIES,

We shall now add to these plants, certain vegetable productions to which the Greeks have given names belonging to trees, so that it would be doubtful whether they themselves are not trees as well.

(15.) The chamædrys is the same plant that in Latin is called "trixago;" some persons, however, call it "chamæ- drops," and others "teucria." The leaves of it are the size of those of mint, but in their colour and indentations they resemble those of the oak. According to some, the leaves are serrated, and it was these, they say, that first suggested the idea of the saw: the flower of it borders closely upon purple. This plant is gathered in rough craggy localities, when it is replete with juice; and, whether taken internally or applied topically, it is extremely efficacious for the stings of venomous serpents, diseases of the stomach, inveterate coughs, collections of phlegm in the throat, ruptures, convulsions, and pains in the sides. It diminishes the volume of the spleen, and acts as a diuretic and emmenagogue; for which reasons it is very useful in incipient dropsy, the usual dose being a handful of the sprigs boiled down to one third in three heminæ of water. Lozenges too are made of it for the above-named purposes, by bruising it in water. In combination with honey, it heals abscesses and inveterate or sordid ulcers: a wine too is prepared from it for diseases of the chest. The juice of the leaves, mixed with oil, disperses films on the eyes; it is taken also, in vinegar, for diseases of the spleen; employed as a friction, it is of a warming nature.

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CHAP. 81.

THE CHAMÆDAPHNE: FIVE REMEDIES.

The chamædaphne consists of a single diminutive stem, about a cubit in height, the limbs of it being smaller than those of the laurel. These leaves * * * The seed, which is of a red colour, and attached to the leaves, is applied fresh for head-ache, is of a cooling nature for burning heats, and is taken for griping pains in the bowels, with wine. The juice of this plant, taken in wine, acts as an emmenagogue and diuretic; and applied as a pessary in wool, it facilitates laborious deliveries.

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CHAP. 82.

THE CHAMELÆA: SIX REMEDIES.

The leaves of the chamelæa resemble those of the olive: they are bitter, however, and odoriferous. This plant is found growing in craggy localities, and never exceeds a palm in height. It is of a purgative nature, and carries off phlegm and bile; for which purposes, the leaves are boiled with twice the quantity of wormwood, and the decoction taken with honey. The leaves, applied to ulcers, have a detergent effect. It is said, that if a person gathers it before sunrise, taking care to mention that he is gathering it for the cure of white specks in the eyes, and then wears it as an amulet, it will effect a cure: as also that, gathered in any way, it is beneficial for the eyes of beasts of burden and cattle.

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CHAP. 83.

THE CHAMÆSYCE: EIGHT REMEDIES.

The chamæsyce has leaves similar to those of the lentil, and lying close to the ground; it is found growing in dry, rocky, localities. A decoction of it in wine is remarkably useful as a liniment for improving the sight, and for dispersing cataract, cicatrizations, films, and cloudiness of the eyes. Applied in a pledget of linen, as a pessary, it allays pains in the uterus; and used topically it removes warts and excrescences of all kinds. It is very useful also for hardness of breathing.

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CHAP. 84.

THE CHAMÆCISSOS: ONE REMEDY.

The chamæcissos has ears like those of wheat, with numerous leaves, and small branches, about five in number. When in blossom it might almost be taken for the white violet: the root of it is diminutive. For sciatica, the leaves of it are taken, seven days consecutively, in doses of three oboli, in two cyathi of wine: this is a very bitter potion, however.

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CHAP. 85.

THE CHAMÆLEUCE, FARFARUM, OR FARFUGIUM: ONE REMEDY.

The chamæleuce is known among us as the “farfarum” or “farfugium:” it grows on the banks of rivers, and has a leaf like that of the poplar, only larger. The root of it is burnt upon cypress charcoal, and, by the aid of a funnel, the smoke inhaled, in cases of inveterate cough.

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CHAP. 86.

THE CHAMÆPEUCE: FIVE REMEDIES. THE CHAM- CYPARISSOS: TWO REMEDIES. TIHE AMPELOPRASON; SIX RE- MEDIES. THE STACHYS: ONE REMEDY.

The chamæpeuce has a leaf which resembles that of the larch, and is useful more particularly for lumbago and pains in the back. The chamæcyparissos is a herb which, taken in wine, counteracts the venom of serpents of all kinds, and of scorpions.

The ampeloprason is found growing in vineyards; it has leaves like those of the leek, and produces offensive eructations. It is highly efficacious for the stings of serpents, and acts as an emmenagogue and diuretic. Taken in drink or applied externally, it arrests discharges of blood from the generative organs. It is prescribed also for females after delivery, and is used for bites inflicted by dogs.

The plant known as “stachys” bears a strong resemblance also to a leek, but the leaves of it are longer and more numerous. It has an agreeable smell, and in colour inclines to yellow. It promotes menstruation.

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CHAP. 87.

THE CLINOPODION, CLEONICION, ZOPYRON, OR OCIMOÏDES: THREE REMEDIES.

The clinopodion, cleonicion, zopyron, or ocimoïdes, resem- bles wild thyme in appearance. The stem of it is tough and ligneous, and it is a palm in height. It grows in stony soils, and the leaves are trained regularly around the stem, which resembles a bed-post in appearance. This plant is taken in drink, for convulsions, ruptures, strangury, and wounds inflicted by serpents: a decoction is also made of it, and the juice is similarly employed.

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CHAP. 88.

THE CLEMATIS CENTUNCULUS; THREE REMEDIES.

We shall now have to annex some plants, of a marvellous nature no doubt, but not so well known, reserving those of a higher reputation for the succeeding Books.

Our people give the name of “centunculus,” to a creeping plant that grows in the fields, the leaves of which bear a strong resemblance to the hoods attached to our cloaks. By the Greeks it is known as the “clematis,” Taken in astringent wine it is wonderfully effectual for arresting diarrhœa: beaten up, in doses of one denarius, in five cyathi of oxymel or of warm water, it arrests hæmorrhage, and facilitates the after-birth.

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CHAP. 89.

THE CLEMATIS ECHITES, OR LAIINE.

The Greeks have other varieties also of the clematis, one of which is known as “echites” or “lagine,” and by some as the “little scammony.” Its stems are about two Feet in height, and covered with leaves: in general appearance it is not unlike scammony, were it not that the leaves are darker and more diminutive; it is found growing invineyards and cultivated soils. It is eaten as a vegetable, with oil and salt, and acts as a laxative upon the bowels. It is taken also for dysentery, with linseed, in astringent wine. The leaves of this plant are applied with polenta for defluxions of the eyes, the part affected being first covered with a pledget of wet linen. Applied to scrofulous sores, they cause them to suppurate, and if some axle-grease is then applied, a perfect cure will be effected. They are applied also to piles, with green oil, and are good for phthisis, in combination with honey. Taken with the food, they increase the milk in nursing women, and, rubbed upon the heads of infants, they promote the rapid growth of the hair. Eaten with vinegar, they act as an aphrodisiac.

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CHAP. 90.

THE EGYPTIAN CLEMATIS, DAPHNODES, OR POLY- GONOÏDES: TWO REMEDIES.

There is another kind also, known as the “Egyptian” clematis, otherwise as “daphnoïdes” or “polygonïdes:” it has a leaf like that of the laurel, and is long and slender. Taken in vinegar, it is very useful for the stings of serpents, that of the asp in particular.

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CHAP. 91. (16.)

DIFFERENT OPINIONS ON THE DRACONTIUM.

It is Egypt more particularly that produces the clematis known as the "aron," of which we have already made some mention when speaking of the bulbs. Respecting this plant and the dracontium, there have been considerable differences of opinion. Some writers, indeed, have maintained that they are identical, and Glaucias has made the only distinction between them in reference to the place of their growth, assuming that the dracontium is nothing else than the aron in a wild state. Some persons, again, have called the root "aron," and the stem of the plant "dracontium:" but if the dracontium is the same as the one known to us as the "dracunculus," it is a different plant altogether; for while the aron has a broad, black, rounded root, and considerably larger, — large enough, indeed, to fill the hand, — the dracunculus has a reddish root of a serpentine form, to which, in fact, it owes its name.

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CHAP. 92.

THE AON: THIRTEEN REMEDIES.

The Greeks themselves, in fact, have established an immense difference between these two plants, in attributing to the seed of the dracunculus certain hot, pungent properties, and a fetid odour so remarkably powerful as to be productive of abortion, while upon the aron, on the other hand, they have bestowed marvellous encomiums. As an article of food, however, they give the preference to the female plant, the male plant being of a harder nature, and more difficult to cook. It carries off, they say, all vicious humours from the chest, and powdered and taken in the form either of a potion or of an electuary, it acts as a diuretic and emmenagogue. Powdered and taken in oxymel, it is good for the stomach; and we find it stated that it is administered in ewe's milk for ulcerations of the intestines, and is sometimes cooked on hot ashes and given in oil for a cough. Some persons, again, are in the habit of boiling it in milk and administering the decoction; and it has been used also in a boiled state as a topical application for defluxions of the eyes, contusions, and affections of the tonsillary glands. * * * prescribes it with oil, as an injection for piles, and recommends it as a liniment, with honey, for freckles.

Cleophantus has greatly extolled this plant as an antidote for poisons, and for the treatment of pleurisy and peripneumony, prepared the same way as for coughs. The seed too, pounded with olive oil or oil of roses, is used as an injection for pains in the ears. Dieuches prescribes it, mixed in bread with meal, for the cure of coughs, asthma, hardness of breathing, and purulent expectorations. Diodotus recommends it, in combination with honey, as an electuary for phthisis and diseases of the lungs, and as a topical application even for fractured bones. Applied to the sexual parts, it facilitates delivery in all kinds of animals; and the juice extracted from the root, in combination with Attic honey, disperses films upon the eyes, and diseases of the stomach. A decoction of it with honey is curative of cough; and the juice is a marvellous remedy for ulcers of every

description, whether phagedænic, carcinomatous, or serpiginous, and for polypus of the nostrils. The leaves, boiled in wine and oil, are good for burns, and, taken with salt and vinegar, are strongly purgative; boiled with honey, they are useful also for sprains, and used either fresh or dried, with salt, for gout in the joints.

Hippocrates has prescribed the leaves, either fresh or dried, with honey, as a topical application for abscesses. Two drachmæ of the seed or root, in two cyathi of wine, are a sufficient dose to act as an emmenagogue, and a similar quantity will have the effect of bringing away the after-birth, in cases where it is retarded. Hippocrates used to apply the root also, for the purpose. . They say too, that in times of pestilence the employment of aron as an article of food is very beneficial. It dispels the fumes of wine; and the smoke of it burnt drives away serpents, the asp in particular, or else stupefies them to such a degree as to reduce them to a state of torpor. These reptiles also will fly at the approach of persons whose bodies have been rubbed with a preparation of aron with oil of laurel: hence it is generally thought a good plan to administer it in red wine to persons who have been stung by serpents. Cheese, it is said, keeps remarkably well, wrapped in leaves of this plant.

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CHAP. 93.

THE DRACUNCLUS; TWO REMEDIES.

The plant which I have spoken of as the dracunculus, is taken out of the ground just when the barley is ripening, and at the moon's increase. It is quite sufficient to have this plant about one, to be safe from all serpents; and it is said, that an infusion of the larger kind taken in drink, is very useful for persons who have been stung by those reptiles: it is stated also that it arrests the catamenia when in excess, due care being taken not to let iron touch it. The juice of it too is very useful for pains in the ears.

As to the plant known to the Greeks by the name of "dracontion," I have had it pointed out to me under three dif- ferent forms; the first having the leaves of the beet, with a certain proportion of stem, and a purple flower, and bearing a strong resemblance to the aron. Other persons, again, have described it as a plant with a long root, embossed to all appearance and full of knots, and consisting of three stems in all; the same parties have recommended a decoction of the leaves in vinegar, as curative of stings inflicted by serpents. The third plant that has been pointed out to me has a leaf larger than that of the cornel, and a root resembling that of the reed. This root, I have been assured, has as many knots on it as the plant is years old, the leaves, too, being as many in number. The plant is recommended also for the stings of serpents, administered either in wine or in water.

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CHAP. 94.

THE ARISAXOS: THREE REMEDIES.

There is a plant also called the “arisaros,” which grows in Egypt, and is similar to the aron in appearance, only that it is more diminutive, and has smaller leaves; the root too is smaller, though fully as large as a good-sized olive. The white arisaros throws out two stems, the other kind only one. They are curative, both of them, of running ulcers and burns, and are used as an injection for fistulas. The leaves, boiled in water, and then beaten up with the addition of oil of roses, arrest the growth of corrosive ulcers. But there is one very marvellous fact connected with this plant — it is quite sufficient to touch the sexual parts of any female animal with it to cause its instantaneous death.

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CHAP. 95.

THE MILLEFOIJUM OR MYRIOPHYLLON; SEVEN REMEDIES.

The myriophyllon, by our people known as the “mille- folium” has a tender stem, somewhat similar to fennel-giant ill appearance, with vast numbers of leaves, to which circum- stance it is indebted for its name. It grows in marshy localities, and is remarkably useful for the treatment of wounds. It is taken in vinegar for strangury, affections of the bladder, asthma, and falls with violence; it is extremely efficacious also for tooth-ache.

In Etruria, the same name is given to a small meadow- plant, provided with leaves at the sides, like hairs, and particularly useful for wounds. The people of that country say that, applied with axle-grease, it will knit together and unite the tendons of oxen, when they have been accidentally severed by the plough-share.

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CHAP. 96.

THE PSEUDOBUNION: FOUR REMEDIES

The pseudobunion has the leaves of the turnip, and grows in a shrub-like form, about a palm in height; the most esteemed being that of Crete. For gripings of the bowels, strangury, and pains of the thoracic organs, some five or six sprigs of it are administered in drink.

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CHAP. 97.

THE MYRRHIS, MYRZA, OR MYRIRHA: SEVEN REMEDIES.

The myrrhis, otherwise known as the myriza or myrrha, bears a strong resemblance to hemlock in the stem, leaves, and blossom, only that it is smaller and more slender: it is by no means unpleasant to the palate. Taken with wine, it acts as an emmenagogue, and facilitates parturition: they say too that in times of pestilence it is very wholesome, taken in drink. It is very useful also for phthisis, administered in broth. It sharpens the appetite, and neutralizes the venom of the phalangium. The juice of this plant, after it has been macerated some three days in water, is curative of ulcers of the face and head.

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CHAP. 98.

THE ONOBRYCHIS: THREE REMEDIES.

The onobrychis has leaves like those of the lentil, only somewhat longer; the blossom is red, and the root small and slender. It is found growing in the vicinity of springs. Dried and reduced to powder, and sprinkled in white wine, it is curative of strangury, and arrests looseness of the bowels. The juice of it, used as a friction with oil, acts as a sudorific.

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CHAP. 99. (17.)

CORACESTA AND CALLICIA.

While I am treating of plants of a marvellous nature, I am induced to make some mention of certain magical plants — for what, in fact, can there be more marvellous than they? The first who descanted upon this subject in our part of the world were Pythagoras and Democritus, who have adopted the accounts given by the Magi. Coracesta and callicia, according to Pythagoras, are plants which congeals water. I find no mention made of them, however, by any other author, and he himself gives no further particulars relative to them.

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CHAP. 100.

THE MINSAS OR CORINTHIA: ONE REMEDY.

Pythagoras gives the name of minsas too, or corinthia, to another plant; a decoction of which, used as a fomentation, will effect an instantaneous cure of stings inflicted by serpents, according to him. He adds too, that if this decoction is poured upon the grass, and a person happens to tread upon it, or if the body should chance to be sprinkled with it, the result is fatal beyond all remedy; so monstrously malignant are the venomous properties of this plant, except as neutralizing other kinds of poison.

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CHAP. 101.

THE APROXIS: SIX REMEDIES.

Pythagoras makes mention, too, of a plant called aproxis, the root of which takes fire at a distance, like naphtha, of which we have made some mention, when speaking of the marvellous productions of the earth. He says too, that if the human body happens to be attacked by any disease while the cabbage is in blossom, the person, although he may have been perfectly cured, will be sensible of a recurrence of the symptoms, every time that plant comes into blossom; a peculiarity which he attributes to it in common with wheat, hemlock, and the violet.

I am not ignorant, however, that the work of his from which I have just quoted is ascribed to the physician Cleemporus by some, though antiquity and the unbroken current of tradition concur in claiming it for Pythagoras. It is quite enough, however, to say in favour of a book, that the author has deemed the results of his labours worthy to be published under the name of so great a man. And yet who can believe that Cleemporus would do this, seeing that he has not hesitated to publish other works under his own name?

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CHAP. 102.

THE AGLAOPHOTIS OR MARMARITIS. THE ACHLE- MENIS OR HIPPOPHOBAS. THE THEOBROTION OR SEMNION. THE ADAMANTIS. THE ARIANIS. THE THŒRIONARCA. THE, ÆTHIOPIS OR MEROIS. THE OPHIUSA. THE THALASSEGLE OR POTAM- AUGIS. THE THEANGELIS. THE GELOTOPHYLLIS. THE HESTI- ATORIS OR PROTOMEDIA. THE CASIGNETES OR DIONYSONYMPHAS. THE HELIANTHES OR HELIOCALLIS. HERMESIAS. THE ÆSCHY- NOMENE. THE CROCIS. THE ŒNOTHERIS. THE ANACAMPIS- EROS.

As to Democritus, there can be no doubt that the work called "Chirocmeta" belongs to him. How very much more marvellous too are the accounts given in this book by the philosopher who, next to Pythagoras, has acquired the most intimate knowledge of the learning of the Magi! According to him, the plant aglaophotis, which owes its name to the admiration in which its beauteous tints are held by man, is found growing among the marble quarries of Arabia, on the side of Persia, a circumstance which has given it the additional name of "marmaritis." By means of this plant, he says, the Magi can summon the deities into their presence when they please.

The achæmenis, he says, a plant the colour of amber, and destitute of leaves, grows in the country of the Tradastili, an Indian race. The root of it, divided into lozenges and taken in wine in the day time, torments the guilty to such a degree during the night by the various forms of avenging deities presented to the imagination, as to extort from them a confession of their crimes. He gives it the name also of "hippophobas," it being an especial object of terror to mares.

The theobrotion is a plant found at a distance of thirty schœnis from the river Choaspes; it represents the varied tints of the peacock, and the odour of it is remarkably fine. The kings of Persia, he says, are in the habit of taking it in their food or drink, for all maladies of the body, and derangements of the mind. It has the additional name of semnion, from the use thus made of it by majesty.

He next tells us of the adamantis, a plant grown in Armenia and Cappadocia: presented to a lion, he says, the beast will fall upon its back, and drop its jaws. Its name originates in the fact that it is

impossible to bruise it. The arianis, he says, is found in the country of the Ariani; it is of a fiery colour, and is gathered when the sun is in Leo. Wood rubbed with oil will take fire on coming in contact with this plant. The therionarca, he tells us, grows in Cappadocia and Mysia; it has the effect of striking wild beasts of all kinds with a torpor which can only be dispelled by sprinkling them with the urine of the hyæna. He speaks too of the æthiopis, a plant which grows in Meroë; for which reason it is also known as the "meroïs." In leaf it resembles the lettuce, and, taken with honied wine, it is very good for dropsy. The ophiusa, which is found in Elephantine, an island also of Æthiopia, is a plant of a livid colour, and hideous to the sight. Taken by a person in drink, he says, it inspires such a horror of serpents, which his imagination continually represents as menacing him, that he commits suicide at last; hence it is that persons guilty of sacrilege are compelled to drink an infusion of it. Palm wine, he tells us, is the only thing that neutralizes its effects.

The thalassægle he speaks of as being found on the banks of the river Indus, from which circumstance it is also known as the potamaugis. Taken in drink it produces a delirium, which presents to the fancy visions of a most extraordinary nature. The theangelis, he says, grows upon Mount Li- banus in Syria, upon the chain of mountains called Dicte in Crete, and at Babylon and Susa in Persis. An infusion of it in drink, imparts powers of divination to the Magi. The gelotophyllis too, is a plant found in Bactriana, and on the banks of the Borysthenes. Taken internally with myrrh and wine, all sorts of visionary forms present themselves, and excite the most immoderate laughter, which can only be put an end to by taking kernels of the pine-nut, with pepper and honey, in palm wine.

The hestiatoris, he tells us, is a Persian plant, so called from its promotion of gaiety and good fellowship at carousals. Another name for it is protomedia, because those who eat of it will gain the highest place in the royal favour. The casignetes too, we learn, is so called, because it grows only among plants of its own kind, and is never found in company with any other; another name given to it is "dionysonymphas," from the circumstance of its being remarkably well adapted to the nature of wine. Helianthes is the name he gives to a plant found in the regions of Themiscyra and the mountainous parts

of maritime Cilicia, with leaves like those of myrtle. This plant is boiled up with lion's fat, saffron and palm wine being added; the Magi, he tells us, and Persian monarchs are in the habit of anointing the body with the preparation, to add to its graceful appearance: he states also, that for this reason it has the additional name of "heliocallis." What the same author calls "hermesias," has the singular virtue of ensuring the procreation of issue, both beautiful as well as good. It is not a plant, however, but a composition made of kernels of pine nuts, pounded with honey, myrrh, saffron, and palm wine, to which theobrotium and milk are then added. He also recommends those who wish to become parents to drink this mixture, and says, that females should take it immediately after conception, and during pregnancy. If this is done, he says, the infant will be sure to be endowed with the highest qualities, both in mind and body. In addition to what has here been stated, Democritus gives the various names by which all these plants are known to the Magi.

Apollodorus, one of the followers of Democritus, has added to this list the herb æschynomene, so called from the shrinking of its leaves at the approach of the hand; and another called "crocis," the touch of which is fatal to the phalangium. Crateuas, also, speaks of the œnotheris, an infusion of which in wine, sprinkled upon them, has the effect of taming all kind of animals, however wild. A celebrated grammarian, who lived but very recently, has described the anacampseros, the very touch of which recalls former love, even though hatred should have succeeded in its place. It will be quite sufficient for the present to have said thus much in reference to the remarkable virtues attributed to certain plants by the Magi; as we shall have occasion to revert to this subject in a more appropriate place.

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CHAP. 103. (18.)

THE ERIPIHA.

Many authors have made mention of the eriphia, a plant which contains a kind of beetle in its hollow stem. This beetle is continually ascending the interior of the stalk, and as often descending, while it emits a sound like the cry of a kid; a circumstance to which the plant is indebted for its name. There is nothing in existence, they say, more beneficial to the voice.

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CHAP. 104.

THE WOOL PLANT: ONE REMEDY. THE, LACTORIS: ONE REMEDY. THE MILITARIS: ONE REMEDY.

The wool plant, given to sheep fasting, greatly increases the milk. The plant commonly called lactoris, is equally well known: it is full of a milky juice, the taste of which produces vomiting. Some persons say that this is identical with, while others say that it only resembles, the plant known as “mili- tris.” from the fact that, applied with oil, it will effect the cure. within five days, of any wound that has been inflicted with iron.

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CHAP. 105.

THE STRATIOTES: FIVE- REMEDIES.

The Greeks speak in high terms also of the stratiotes, though that is a plant which grows in Egypt only, and during the inundations of the river Nilus. It is similar in appearance to the aïon, except that the leaves are larger. It is of a remarkably cooling nature, and, applied with vinegar, it heals wounds, as well as erysipelas and suppurations. Taken in drink with male fankincense, it is marvellously useful for discharges of blood from the kidneys.

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CHAP. 106. (19.)

A PLANT GROWING ON THE HEAD OF A STATUE: ONE REMEDY.

It is asserted also, that a plant growing on the head of a statue, gathered in the lappet of any one of the garments, and then attached with a red string to the neck, is an instantaneous cure for head-ache.

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CHAP. 107.

A PLANT GROWING ON THE BANKS OF A RIVER: ONE REMEDY.

Any plant that is gathered before sunrise on the banks of a stream or river, due care being taken that no one sees it gathered, attached to the left arm without the patient knowing what it is, will cure a tertian fever, they say.

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CHAP. 108.

THE HERB CALLED IJNGUA: ONE REMEDY.

There is a herb called “lingua,” which grows in the vicinity of fountains. The root of it, reduced to ashes and beaten up with hog’s lard — the hog, they say, must have been black and barren — will cure alopecy, the head being rubbed with it in the sun.

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CHAP. 109.

PLANTS THAT TAKE ROOT IN A SIEVE: ONE REMEDY.

Plants that take root in a sieve that has been thrown in a hedge-row, if gathered and worn upon the person by a preg- nant woman, will facilitate delivery.

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CHAP. 110.

PLANTS GROWING UPONDUNGHILLS: ONE REMEDY.

A plant that has been grown upon a dungheap in a field, is a very efficacious remedy, taken in water, for quinzy.

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CHAP. 111.

PLANTS THAT HAVE BEEN MOISTENED WITH THE URINE OF A DOG: ONE REMEDY.

A plant upon which a dog has watered, torn up by the roots, and not touched with iron, is a very speedy cure for sprains.

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CHAP. 112.

THE RODARUM: THREE REMEDIES.

We have already made mention of the rumpotinus, when speaking of the vine-growing trees. Near the tree, when not accompanied by the vine, there grows a plant, known to the Gauls as the “rodarum.” It has a knotted stem like the branch of a fig-tree, and the leaves, which are very similar to those of the nettle, are white in the middle, though in process of time they become red all over. The blossom of it is of a silvery hue. Beaten up with stale axle-grease, due care being taken not to touch it with iron, this plant is extremely useful for tumours, inflammations, and gatherings; the patient, however, on being anointed with it must spit three times on the right side. They say too, that as a remedy it is still more efficacious, if three persons of three different nations rub the right side of the body with it.

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CHAP. 113.

THE PLANT CALLED IMPIA: TWO REMEDIES.

The plant called “impia” is white, resembling rosemary in appearance. It is clothed with leaves like a thyrsus, and is terminated by a head, from which a number of small branches protrude, terminated, all of them, in a similar manner. It is this peculiar conformation that has procured for it the name of “impia,” from the progeny thus surmounting the parent. Some persons, however, are of opinion that it is so called because no animal will touch it. Bruised between two stones it yields an effervescent juice, which, in combination with wine and milk, is remarkably efficacious for quinzy.

There is a marvellous property attributed to this plant, to the effect that persons who have once tasted it will never be attacked by quinzy; for which reason it is given to swine: those among them, however, which refuse to take it will be sure to die of that disease. Some persons too are of opinion that if slips of it are put into a bird’s nest, they will effectually prevent the young birds from choking themselves by eating too voraciously.

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CHAP. 114.

THE PLANT CALLED VENUS' COMB: ONE REMEDY.

From its resemblance to a comb, they give the name of "Venus' comb" to a certain plant, the root of which, bruised with mallows, extracts all foreign substances from the human body.

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CHAP. 115.

THE EXEDUNM. THE PLANT CALLED NOTIA: TWO REMEDIES.

The plant called “exedum” is curative of lethargy. The herbaceous plant called “notia,” which is used by curriers for dyeing leather a bright, cheerful colour, and known by them under various names — is curative of cancerous ulcers; I find it also stated that, taken in wine or in oxycrate, it is extremely efficacious for stings inflicted by scorpions.

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CHAP. 116.

THE PHILANTHROPOS: ONE REMEDY. THE LAPPA CANARIA: TWO REMEDIES.

The Greeks wittily give the name of "philanthropos" to a certain plant, because it attaches itself to articles of dress. A chaplet made of this plant has the effect of relieving headache.

As to the plant known as the "lappa canaria," beaten up in wine with plantago and millefolium, it effects the cure of carcinomatous sores, the application being removed at the end of three days. Taken out of the ground without the aid of iron, and thrown into their wash, or given to them wine and milk, it cures diseases in swine. Some persons add, however, that the person, as he takes it up, must say—"This is the plant argemon, a remedy discovered by Minerva for such swine as shall taste thereof."

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CHAP. 117.

TORDYLON OR SYREON: THREE REMEDIES.

Tordylon is, according to some authorities, the seed of sili, while according to others it is a distinct plant, as known also as “syreon.” I find no particulars relative to it, except that it grows upon mountains, and that the ashes of it, taken in drink, act as an emmenagogue and facilitate expectoration. It is stated also, that for this last purpose the root is even more efficacious than the stem; that the juice of it, taken in doses of three oboli, cures diseases of the kidneys; and that the root is used as an ingredient for emollient plasters.

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CHAP. 118.

GRAMEN: SEVENTEEN REMEDIES.

Gramen is of all herbaceous productions the most common. As it creeps along the ground it throws out jointed stems, from the joints of which, as well as from the extremity of the stem, fresh roots are put forth every here and there. In all other parts of the world the leaves of it are tapering, and come to a point; but upon Mount Parnassus they resemble the leaves of the ivy, the, plant throwing out a greater number of stems than elsewhere, and bearing a blossom that is white and odoriferous. There is no vegetable production that is more grateful to beasts of burden than this, whether in a green state or whether dried and made into hay, in which last case it is sprinkled with water when given to them. It is said that on Mount Parnassus a juice is extracted from it, which is very abun- dant and of a sweet flavour.

In other parts of the world, instead of this juice a decoction of it is employed for closing wounds; an effect equally pro- duced by the plant itself, which is beaten up for the purpose and attached to the part affected, thereby preventing inflammation. To the decoction wine and honey are added, and in some cases, frankincense, pepper, and myrrh, in the proportion of one third of each ingredient; after which it is boiled again in a copper vessel, when required for tooth-ache or difluxions of the eyes. A decoction of the roots, in wine, is curative of griping pains in the bowels, strangury, and ulcerations of the bladder, and it disperses calculi. The seed is still more powerful as a diuretic, arrests looseness and vomiting, and is particularly useful for wounds inflicted by dragons. There are some authorities which give the following prescription for the cure of scrofulous sores and inflamed tumours: — From one, two, or three stems, as many as nine joints must be removed, which must then be wrapped in black wool with the grease in it. The party who gathers them must do so fasting, and must then go, in the same state, to the patient's house while he is from home. When the patient comes in, the other must say to him three times, "I come fasting to bring a remedy to a fasting

man;" and must then attach the amulet to his person, repeating the same ceremony three consecutive days. The variety of this plant which has seven joints is considered a most excellent amulet for the cure of head-ache. For excruciating pains in the bladder, some recommend a decoction of gramen, boiled down in wine to one half, to be taken immediately after the bath.

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CHAP. 119.

DACTYLOS; FIVE REMEDIES.

There are some authorities who mention three varieties of the pointed gramen. That which has at the extremity five points at the utmost, is called “dactylos.” Twisting these points together, persons introduce them into the nostrils and then withdraw them, with the view of preventing hæmorrhage. The second kind, which resembles aizoön, is employed with axle-grease for whitlows and hangnails, and for fleshy excrescences upon the nails: this also is called “dactylos,” because it is so useful as a remedy for diseases of the fingers.

The third kind, which is also known as “dactylos,” is more diminutive, and is found growing upon walls or tiles. It has certain caustic properties, and arrests the progress of serpigi- nous ulcers. By placing a wreath of gramen round the head, bleeding at the nose is stopped. In Babylonia, it is said, the gramen which grows by the wayside is fatal to camels.

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CHAP. 120.

FENUGREEK OR SILICIA: THIRTY-ONE REMEDIES.

Nor is fenugreek held in less esteem. By some it is known as "telis," by others as "carphos," and by others again as "buceras," or "ægoceras," the produce of it bearing some resemblance to horns. Among us it is known as "silicia." The mode of sowing it we have already described on the appropriate occasion. Its properties are desiccative, emollient, and resolvent. A decoction of it is useful for many female maladies, indurations for instance, tumours, and contractions of the uterus; in all which cases it is employed as a fomentation or used for a sitting-bath: it is serviceable also as an injection. It removes cutaneous eruptions on the face; and a decoction of it, applied topically with nitre or vinegar, cures diseases of the spleen or liver. In cases of difficult labour, Diocles recommends the seed pounded, in doses of one acetabulum, mixed with boiled must. After taking one third of the mixture, the patient must use a warm bath, and then, while in a perspiration, she must take another third, and, immediately after leaving the bath, the remainder — this, he says, will prove a most effectual means of obtaining relief.

The same authority recommends fenugreek boiled, with barley or linseed, in hydromel, as a pessary for violent pains in the uterus: he prescribes it also as an external application for the lower regions of the abdomen. He speaks also of treating leprous sores and freckles with a mixture composed of equal proportions of sulphur and meal of fenugreek, recommending it to be applied repeatedly in the course of the day, due care being taken not to rub the part affected.

For the cure of leprosy, Theodorus prescribes a mixture of fenugreek, and one fourth part of cleaned nasturtium, the whole to be steeped in the strongest vinegar. Damion used to give a potion by way of emmenagogue, consisting of half an acetabulum of fenugreek seed in nine cyathi of boiled must and water. There is no doubt too, that a decoction of it is remarkably useful for diseases of the uterus and for ulcerations of the intestines, and that the seed is beneficial for

affections of the joints and chest. Boiled with mallows and then taken in honied wine, fenugreek is extolled in the highest terms, as serviceable for affections of the uterus and intestines. Indeed, the very steam that arises from the decoction may be productive of considerable benefit. A decoction too of fenugreek seed is a corrective of the rank odours of the armpits. Meal of fenugreek, with wine and nitre, speedily removes ring-worm and dandriff of the head; and a decoction of it in hydromel, with the addition of axle-grease, is used for the cure of diseases of the generative organs, inflamed tumours, imposthumes of the parotid glands, gout in the Feet and hands, maladies of the joints, and denudations of the bones. Kneaded with vinegar, it effects the cure of sprains, and, boiled in oxymel only, it is used as a liniment for affections of the spleen. Kneaded with wine, it acts as a detergent upon carcinomatous sores; after which, applied with honey, it effects a perfect cure. A pottage too is made of this meal, which is taken for ulcerations of the chest and chronic coughs; it is kept boiling a considerable time, in order to remove the bitterness, after which honey is added.

We shall now proceed to speak of the plants which have gained a higher degree of reputation.

SUMMARY. — Remedies, narratives, and observations, eleven hundred and seventy-six.

ROMAN ATUTHORS QUOTED. — C. Valgius, Pompeius Lenæus, Sextius Niger who wrote in Greek, Julius Bassus who wrote in Greek, Antonius Castor, Cornelius Celsus.

FOREIGN AUTHORS QUOTED. — Theophrastus, Apollodorus, Democritus, Orpheus, Pythagoras, Mago, Menan- der who wrote the "Biochresta," Nicander, Homer, Hesiod, Musæus, Sophocles, Anaxilaüs.

MEDICAL AUTHORS QUOTED. — Mnesitheus, Callimachus, Phanias the physician, Timaristus, Simus, Hippocrates, Chrysippus, Diocles, Ophelion, Heraclides, Hicesius, Dionysius, Apollodorus of Citium, Apollodorus of Tarentum, Praxagoras, Plistonicus, Medius, Dieuches, Cleophantus, Philistion, Asclepiades, Crateuas, Petronius Diodotus, Iollas, Erasistratus, Diagoras, Andreas, Mnesides, Epicharmus, Damion, Sosimenes, Tlepolemus, Metrodorus, Solon, Lycus, Olympias of Thebes, Philinus, Petrichus, Micton, Glaucias,

Xenocrates.

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BOOK XXV. THE NATURAL HISTORY OF WILD PLANT

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CHAP. 1. (1.)

WHEN THE WAILD PLANTS WERE FIRST BROUGHT INTO USE.

THE more highly esteemed plants of which I am now about to speak, and which are produced by the earth for medicinal purposes solely, inspire me with admiration of the industry and laborious research displayed by the ancients. Indeed there is nothing that they have not tested by experiment or left untried; no discovery of theirs which they have not disclosed, or which they have not been desirous to leave for the benefit of posterity. We, on the contrary, at the present day, make it our object to conceal and suppress the results of our labours, and to defraud our fellow-men of blessings even which have been purchased by others. For true it is, beyond all doubt, that those who have gained any trifling accession of knowledge, keep it to themselves, and envy the enjoyment of it by others; to leave mankind uninstructed being looked upon as the high prerogative of learning. So far is it from being the habit with them to enter upon new fields of discovery, with the view of benefitting mankind at large, that for this long time past it has been the greatest effort of the ingenuity of each, to keep to himself the successful results of the experience of former ages, and so bury them for ever!

And. yet, by Hercules! a single invention before now has elevated men to the rank of gods; and how many an individual has had his name immortalized in being bestowed upon some plant which he was the first to discover, thanks to the gratitude which prompted a succeeding age to make some adequate return! If it had been expended solely upon the plants which are grown to please the eye, or which invite us by their nutrimental properties, this laborious research on the part of the ancients would not have been so surprising; but in addition to this, we find them climbing by devious tracts to the very summit of mountains, penetrating to the very heart of wilds and deserts, and searching into every vein and fibre of the earth-and all this, to discover the hidden virtues of every root, the properties of the leaf of every plant, and the various purposes to which they might be applied; converting thereby those vegetable

productions, which the very beasts of the field refuse to touch, into so many instruments for our welfare.

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CHAP. 2. (2.)

THE LATIN AUTHORS WHO HAVE WRITTEN UPON THESE PLANTS.

This subject has not been treated of by the writers in our own language so extensively as it deserves, eager as they have proved themselves to make enquiry into everything that is either meritorious or profitable. M. Cato, that great master in all useful knowledge, was the first, and, for a long time, the only author who treated of this branch of learning; and briefly as he has touched upon it, he has not omitted to make some mention of the remedial treatment of cattle. After him, another illustrious personage, C. Valgius, a man distinguished for his erudition, commenced a treatise upon the same subject, which he dedicated to the late Emperor Augustus, but left unfinished. At the beginning of his preface, replete as it is with a spirit of piety, he expresses a hope that the majestic sway of that prince may ever prove a most efficient remedy for all the evils to which mankind are exposed.

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CHAP. 3.

AT WHAT PERIOD THE ROMANS ACQUIRED SOME KNOW- LEDGE OF THIS SUBJECT.

The only person among us, at least so far as I have been able to ascertain, who had treated of this subject before the time of Valgius, was Pompeius Lenæus, the freedman of Pompeius Magnus; and it was in his day, I find, that this branch of knowledge first began to be cultivated among us. Mithridates, the most powerful monarch of that period, and who was finally conquered by Pompeius, is generally thought to have been a more zealous promoter of discoveries for the benefit of mankind, than any of his predecessors — a fact evinced not only by many positive proofs, but by universal report as well. It was he who first thought, the proper precautions being duly taken, of drinking poison every day; it being his object, by becoming habituated to it, to neutralize its dangerous effects. This prince was the first discoverer too of the various kinds of antidotes, one of which, indeed, still retains his name; and it is generally supposed that he was the first to employ the blood of the ducks of Pontus as an ingredient in antidotes, from the circumstance that they derive their nutriment from poisons.

It was to Mithridates that Asclepiades, that celebrated physician, dedicated his works, still extant, and sent them, as a substitute for his own personal attendance, when requested by that monarch to leave Rome and reside at his court. It is a well-known fact, that this prince was the only person that was ever able to converse in so many as two-and-twenty languages, and that, during the whole fifty-six years of his reign, he never required the services of an interpreter when conversing with any individuals of the numerous nations that were subject to his sway.

Among the other gifts of extraordinary genius with which he was endowed, Mithridates displayed a peculiar fondness for enquiries into the medical arts; and gathering items of information from all his subjects, extended, as they were, over a large proportion of the world, it was his habit to make copies of their communications, and

to take notes of the results which upon experiment had been produced. These memoranda, which he kept in his private cabinet, fell into the hands of Pompeius, when he took possession of the royal treasures; who at once commissioned his freedman, Lenæus the grammarian, to translate them into the Latin language: the result of which was, that his victory was equally conducive to the benefit of the republic and of mankind at large.

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CHAP. 4.

GREEK AUTHORS WHO HAVE DELINEATED THE PLANTS IN COLOURS.

In addition to these, there are some Greek writers who have treated of this subject, and who have been already mentioned on the appropriate occasions. Among them, Crateuas, Dionysius, and Metrodorus, adopted a very attractive method of description, though one which has done little more than prove the remarkable difficulties which attended it. It was their plan to delineate the various plants in colours, and then to add in writing a description of the properties which they possessed. Pictures, however, are very apt to mislead, and more particularly where such a number of tints is required, for the imitation of nature with any success; in addition to which, the diversity of copyists from the original paintings, and their comparative degrees of skill, add very considerably to the chances of losing the necessary degree of resemblance to the originals. And then, besides, it is not sufficient to delineate a plant as it appears at one period only, as it presents a different appearance at each of the four seasons of the year.

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CHAP. 5.

THE FIRST GREEK AUTHORS WHO WROTE UPON PLANTS.

Hence it is that other writers have confined themselves to a verbal description of the plants, indeed some of them have not so much as described them even, but have contented themselves for the most part with a bare recital of their names, considering it sufficient if they pointed out their virtues and properties to such as might Feel inclined to make further enquiries into the subject. Nor is this a kind of knowledge by any means difficult to obtain; at all events, so far as regards myself, with the exception of a very few, it has been my good fortune to examine them all, aided by the scientific researches of Antonius Castor, who in our time enjoyed the highest reputation for an intimate acquaintance with this branch of knowledge. I had the opportunity of visiting his garden, in which, though he had passed his hundredth year, he cultivated vast numbers of plants with the greatest care. Though he had reached this great age, he had never experienced any bodily ailment, and neither his memory nor his natural vigour had been the least impaired by the lapse of time.

There was nothing more highly admired than an intimate knowledge of plants, in ancient times. It is long since the means were discovered of calculating before-hand, not only the day or the night, but the very hour even at which an eclipse of the sun or moon is to take place; and yet the greater part of the lower classes still remain firmly persuaded that these phenomena are brought about by compulsion, through the agency of herbs and enchantments, and that the knowledge of this art is confined almost exclusively to females. What country, in fact, is not filled with the fabulous stories about Medea of Colchis and other sorceresses, the Italian Circe in particular, who has been elevated to the rank of a divinity even? It is with reference to her, I am of opinion, that Æschylus, one of the most ancient of the poets, asserts that Italy is covered with plants endowed with potent effects, and that many writers say the same of Circeii, the place of her abode. Another great proof too that such is the case, is the fact, that the nation of the Marsi, descendants of a son of Circe,

are well known still to possess the art of taming serpents.

Homer, that great parent of the learning and traditions of antiquity, while extolling the fame of Circe in many other respects, assigns to Egypt the glory of having first discovered the properties of plants, and that; too at a time when the portion of that country which is now watered by the river Nilus was not in existence, having been formed at a more recent period by the alluvion of that river. At all events, he states that numerous Egyptian plants were sent to the Helena of his story, by the wife of the king of that country, together with the celebrated nepenthes, which ensured oblivion of all sorrows and forgetfulness of the past, a potion which Helena was to administer to all mortals. The first person, however, of whom the remembrance has come down to us, as having treated with any degree of exactness on the subject of plants, is Orpheus; and next to him Musæus and Hesiod, of whose admiration of the plant called polium we have already made some mention on previous occasions. Orpheus and Hesiod too we find speaking in high terms of the efficacy of fumigations. Homer also speaks of several other plants by name, of which we shall have occasion to make further mention in their appropriate places.

In later times again, Pythagoras, that celebrated philosopher, was the first to write a treatise on the properties of plants, a work in which he attributes the origin and discovery of them to Apollo, Æsculapius, and the immortal gods in general. Democritus too, composed a similar work. Both of these philosophers had visited the magicians of Persia, Arabia, Æthiopia, and Egypt, and so astounded were the ancients at their recitals, as to learn to make assertions which transcend all belief. Xanthus, the author of some historical works, tells us, in the first of them, that a young dragon was restored to life by its parent through the agency of a plant to which he gives the name of "ballis," and that one Tylon, who had been killed by a dragon, was restored to life and health by similar means. Juba too assures us that in Arabia a man was resuscitated by the agency of a certain plant. Democritus has asserted — and Theophrastus believes it — that there is a certain herb in existence, which, upon being carried thither by a bird, the name of which we have already given, has the effect, by the contact solely, of instantaneously drawing a

wedge from a tree, when driven home by the shepherds into the wood.

These marvels, incredible as they are, excite our admiration nevertheless, and extort from us the admission that, making all due allowance, there is much in them that is based on truth. Hence it is too that I find it the opinion of most writers, that there is nothing which cannot be effected by the agency of plants, but that the properties of by far the greater part of them remain as yet unknown. In the number of these was Herophilus, a celebrated physician, a saying of whose is reported, to the effect that some plants may possibly exercise a beneficial influence, if only trodden under foot. Be this as it may, it has been remarked more than once, that wounds and maladies are sometimes inflamed upon the sudden approach of persons who have been journeying on foot.

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CHAP. 6.

WHY A FEW OF THE PLANTS ONLY HAVE BEEN USED MEDICINALLY. PLANTS, THE MEDICINAL PROPERTIES OF WHICH HAVE BEEN MIRACULOUSLY DISCOVERED. THE CYNORRHODOS: TWO REMEDIES. THE PLANT CALLED DRACUNCULUS: ONE REMEDY. THE BRITANNICA: FIVE REMEDIES.

Such was the state of medical knowledge in ancient times, wholly concealed as it was in the language of the Greeks. But the main reason why the medicinal properties of most plants remain still unknown, is the fact that they have been tested solely by rustics and illiterate people, such being the only class of persons that live in the midst of them: in addition to which, so vast is the multitude of medical men always at hand, that the public are careless of making any enquiries about them. Indeed, many of those plants, the medicinal properties of which have been discovered, are still destitute of names — such, for instance, as the one which we mentioned when speaking of the cultivation of grain, and which we know for certain will have the effect of keeping birds away from the crops, if buried at the four corners of the field.

But the most disgraceful cause of all, why so few simples are known, is the fact that those even who are acquainted with them are unwilling to impart their knowledge; as though, forsooth, they should lose for ever anything that they might think fit to communicate to others! Added to all this, there is no well-ascertained method to guide us to the acquisition of this kind of knowledge; for, as to the discoveries that have been made already, they have been due, some of them, to mere accident, and others again, to say the truth, to the interposition of the Deity.

Down to our own times, the bite of the mad dog, the symptoms of which are a dread of water and an aversion to every kind of beverage, was incurable; and it was only recently that the mother of a soldier who was serving in the prætorian guard, received a warning in a dream, to send her son the root of the wild rose, known as the cynorrhodos, a plant the beauty of which had attracted her attention in a shrubbery the day before, and to request him to drink the extract

of it. The army was then serving in Lacetania, the part of Spain which lies nearest to Italy; and it so happened that the soldier, having been bitten by a dog, was just beginning to manifest a horror of water when his mother's letter reached him, in which she entreated him to obey the words of this divine warning. He accordingly complied with Her request, and, against all hope or expectation, his life was saved; a result which has been experienced by all who have since availed then- selves of the same resource. Before this, the cynorrhodos had been only recommended by writers for one medicinal purpose; the spongy excrescences, they say, which grow in the midst of its thorns, reduced to ashes and mixed with honey, will make the hair grow again when it has been lost by alopecy. I know too, for a fact, that in the same province there was lately discovered in the land belonging to a person with whom I was staying, a stalked plant, the name given to which was dracunculus. This plant, about an inch in thickness, and spotted with various colours, like a viper's skin, was generally reported to be an effectual preservative against the sting of all kinds of serpents. I should remark, however, that it is a different plant from the one of the same name of which mention has been made in the preceding Book, having altogether another shape and appear- ance. There is also another marvellous property belonging to it: in spring, when the serpents begin to cast their slough, it shoots up from the ground to the height of about a couple of Feet, and again, when they retire for the winter it conceals itself within the earth, nor is there a serpent to be seen so long as it remains out of sight. Even if this plant did nothing else but warn us of impending danger, and tell us when to be on our guard, it could not be looked upon otherwise than as a beneficent provision made by Nature in our behalves.

(3.) It is not, however, the animals only that are endowed with certain baneful and noxious properties, but, sometimes, waters even, and localities as well. Upon one occasion, in his German campaign, Germanicus Cæsar had pitched his camp beyond the river Rhenus; the only fresh water to be obtained being that of a single spring in the vicinity of the sea-shore. It was found, however, that within two years the habitual use of this water was productive of loss of the teeth and a total relaxation of the joints of the knees: the names given to these maladies, by medical men, were "stomacace" and "sceloturbe."

A remedy for them was discovered, however, in the plant known as the “britannica,” which is good, not only for diseases of the sinews and mouth, but for quinzy also, and injuries inflicted by serpents. This plant has dark oblong leaves and a swarthy root: the name given to the flower of it is “vibones,” and if it is gathered and eaten before thunder has been heard, it will ensure safety in every respect. The Frisii, a nation then on terms of friendship with us, and within whose territories the Roman army was encamped, pointed out this plant to our soldiers: the name given to it, however, rather surprises me, though possibly it may have been so called because the shores of Britannia are in the vicinity, and only separated by the ocean. At all events, it was not called by this name from the fact of its growing there in any great abundance, that is quite certain, for at the time I am speaking of, Britannia was still independent.

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CHAP. 7.

WHAT DISEASES ARE ATTENDED WITH THE GREATEST PAIN. NAMES OF PERSONS WHO HAVE DISCOVERED FAMOUS PLANTS.

In former times there was a sort of ambition, as it were, of adopting plants, by bestowing upon them one's name, a thing that has been done before now by kings even, as we shall have occasion to show: so desirable a thing did it appear to have made the discovery of some plant, and thus far to have contributed to the benefit of mankind. At the present day, however, it is far from impossible that there may be some who will look upon these researches of ours as frivolous even, so distasteful to a life of ease and luxury are the very things which so greatly conduce to our welfare.

Still, however, it will be only right to mention in the first place those plants the discoverers of which are known, their various properties being classified according to the several maladies for the treatment of which they are respectively employed: in taking a review of which one cannot do otherwise than bewail the unhappy lot of mankind, subject as it is, in addition to chances and changes, and those new afflictions which every hour is bringing with it, to thousands of diseases which menace the existence of each mortal being. It would seem almost an act of folly to attempt to determine which of these diseases is attended with the most excruciating pain, seeing that every one is of opinion that the malady with which for the moment he himself is afflicted, is the most excruciating and insupportable. The general experience, however, of the present age has come to the conclusion, that the most agonizing torments are those attendant upon strangury, resulting from calculi in the bladder; next to them, those arising from maladies of the stomach; and in the third place, those caused by pains and affections of the head; for it is more generally in these cases, we find, and not in others, that patients are tempted to commit suicide.

For my own part, I am surprised that the Greek authors have gone so far as to give a description of noxious plants even; in using which term, I wish it to be understood that I do not mean the poisonous

plants merely; for such is our tenure of life that death is often a port of refuge to even the best of men. We meet too, with one case of a somewhat similar nature, where M. Varro speaks of Servius Clodius, a member of the Equestrian order, being so dreadfully tormented with gout, that he had his legs rubbed all over with poisons, the result of which was, that from that time forward all sensation, equally with all pain, was deadened in those parts of his body. But what excuse, I say, can there be for making the world acquainted with plants, the only result of the use of which is to derange the intellect, to produce abortion, and to cause numerous other effects equally pernicious? So far as I am concerned, I shall describe neither abortives nor philtres, bearing in mind, as I do, that Lucullus, that most celebrated general, died of the effects of a philtre. Nor shall I speak of other ill-omened devices of magic, unless it be to give warning against them, or to expose them, for I most emphatically condemn all faith and belief in them. It will suffice for me, and I shall have abundantly done my duty, if I point out those plants which were made for the benefit of mankind, and the properties of which have been discovered in the lapse of time.

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CHAP. 8. (4.)

MOLY: THREE REMEDIES.

According to Homer, the most celebrated of all plants is that, which, according to him, is known as moly among the gods. The discovery of it he attributes to Mercury, who was also the first to point out its uses as neutralizing the most potent spells of sorcery. At the present day, it is said, it grows in the vicinity of Lake Pheneus, and in Cyllene, a district of Arcadia. It answers the description given of it by Homer, having a round black root, about as large as an onion, and a leaf like that of the squill: there is no difficulty experienced in taking it up. The Greek writers have delineated it as having a yellow flower, while Homer, on the other hand, has spoken of it as white. I once met with a physician, a person extremely well acquainted with plants, who assured me that it is found growing in Italy as well, and that he would send me in a few days a specimen which had been dug up in Campania, with the greatest difficulty, from a rocky soil. The root of it was thirty Feet in length, and even then it was not entire, having been broken in the getting up.

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CHAP. 9.

THE DODECATHEOS: ONE REMEDY.

The plant next in esteem to moly, is that called dodecatheos, it being looked upon as under the especial tutelage of all the superior gods. Taken in water, it is a cure, they say, for maladies of every kind. The leaves of it, seven in number, and very similar to those of the lettuce, spring from a yellow root.

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CHAP. 10.

THE PÆONIA, PENTOROBUS, OR GLYCYSIDE: ONE REMEDY.

The plant known as “pæonia” is the most ancient of them all. It still retains the name of him who was the first to discover it, being known also as the “pentorobus” by some, and the “glycyside” by others; indeed, this is one of the great difficulties attendant on forming an accurate knowledge of plants, that the same object has different names in different districts. It grows in umbrageous mountain localities, and puts forth a stem amid the leaves, some four fingers in height, at the summit of which are four or five heads resembling Greek nuts in appearance; enclosed in which, there is a considerable quantity of seed of a red or black colour. This plant is a preservative against the illusions practised by the Fauni in sleep. It is generally recommended to take it up at night; for if the wood-pecker of Mars should perceive a person doing so, it will immediately attack his eyes in defence of the plant.

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CHAP. 11.

THE PANACES ASCLEPION: TWO REMEDIES.

The panaces, by its very name, gives assurance of a remedy for all diseases: there are numerous kinds of it, and the discovery of its properties has been attributed to the gods. One of these kinds is known by the additional name of “asclepion,” in commemoration of the circumstance that Æsculapius gave the name of Panacia to his daughter. The juice of it, as we have had occasion to remark already, coagulates like that of fennel-giant; the root is covered with a thick rind of a salt flavour.

After this plant has been taken up, it is a point religiously observed to fill the hole with various kinds of grain, a sort of expiation, as it were, to the earth. We have already stated, when speaking of the exotic productions, where and in what manner this juice is prepared, and what kind is the most esteemed. That which is imported from Macedonia is known as “bucolicon,” from the fact that the neatherds there are in the habit of collecting it as it spontaneously exudes: it evaporates, however, with the greatest rapidity. As to the other kinds, that more particularly is held in disesteem which is black and soft, such being a proof, in fact, that it has been adulterated with wax.

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CHAP. 12.

THE PANACES HERACLEON: THREE REMEDIES.

A second kind of panaces is known by the name of “heracleon,” from the fact that it was first discovered by Hercules. Some persons, however, call it “Heracleotic origanum,” or wild origanum, from its strong resemblance to the origanum of which we have already spoken: the root of it is good for nothing.

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CHAP. 13.

THE PANACES CHIRONION: FOUR REMEDIES.

A third kind of panaces is surnamed “chironion,” from him who first discovered it. The leaf is similar to that of lapathum, except that it is larger and more hairy; the flower is of a golden colour, and the root diminutive. It grows in rich, unctuous soils. The flower of this plant is extremely effi- cacious; hence it is that it is more generally used than the kinds previously mentioned.

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CHAP. 14.

THE PANACES CENTAURION OR PHARNACION: THREE REMEDIES.

A fourth kind of panaces, discovered also by Chiron, is known by the additional name of “centaurion:” it is also called “pharnacion,” from King Pharnaces, it being a matter in dispute whether it was really discovered by Chiron or by that prince. It is grown from seed, and the leaves of it are longer than those of the other kinds, and serrated at the edge. The root, which is odoriferous, is dried in the shade, and is used for imparting an aroma to wine. Some writers distin- guish two varieties of this plant-the one with a smooth leaf, the other of a more delicate form.

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CHAP. 15.

THE HERACLEON SIDERION: FOUR REMEDIES.

The heracleon siderion is also another discovery of Hercules. The stem is thin, about four fingers in length, the flower red, and the leaves like those of coriander. It is found growing in the vicinity of lakes and rivers, and is extremely efficacious for the cure of all wounds made by iron.

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CHAP. 16.

THE AMPELOS CHIRONIA: ONE REMEDY.

The ampelos Chironia also, which we have already mentioned when speaking of the vines, is a discovery due to Chiron. We have spoken too, on a previous occasion, of a plant, the discovery of which is attributed to Minerva.

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CHAP. 17.

HYOSCYAMOS, KNOWN ALSO AS THE APOLLINARIS OR ALTERCUM; FIVE VARIETIES OF IT: THREE REMEDIES.

To Hercules also is attributed the discovery of the plant known as the "apollinaris," and, among the Arabians, as the "altercum" or "altercangenum:" by the Greeks it is called "hyoscyamos." There are several varieties of it; one of them, with a black seed, flowers bordering on purple, and a prickly stem, growing in Galatia. The common kind again, is whiter, more shrublike, and taller than the poppy. The seed of a third variety is similar to that of irio in appearance; but they have, all of them, the effect of producing vertigo and insanity. A fourth kind again is soft, lanuginous, and more unctuous than the others; the seed of it is white, and it grows in maritime localities. It is this kind that medical men employ, as also that with a red seed. Sometimes, however, the white seed turns of a reddish colour, if not sufficiently ripe when gathered; in which case it is rejected as unfit for use: indeed, none of these plants are gathered until they are perfectly dry. Hyoscyamos, like wine, has the property of flying to the head, and consequently of acting injuriously upon the mental faculties.

The seed is either used in its natural state, or else the juice of it is extracted: the juice also of the stem and leaves is sometimes extracted, separately from the seed. The root is sometimes made use of; but the employment of this plant in any way for medical purposes is, in my opinion, highly dangerous. For it is a fact well ascertained, that the leaves even will exercise a deleterious effect upon the mind, if more than four are taken at a the; though the ancients were of opinion that the leaves act as a febrifuge, taken in wine. From the seed, as already stated, an oil is extracted, which, injected into the cars, deranges the intellect. It is a singular thing, but we find remedies mentioned for those who have taken this juice, as though for a poison, while at the same time we find it prescribed as a potion among the various remedies. In this way it is that experiments are multiplied without end, even to forcing the very poisons themselves

to act as antidotes.

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CHAP. 18. (5.)

LINOZOSTIS, PARTHENION, HERMUPOA, OR MER- CURIALIS; TWO VARIETIES OF IT: TWENTY-TWO REMEDIES.

Linozostis or parthenion is a discovery attributed to Mer- cury: hence it is that among the Greeks it is known as "hermupoa" by many, while among us it is universally known as "mercurialis." There are two varieties of this plant, the male and the female, the last possessing more decided properties than the other, and having a stem a cubit in height, and sometimes branchy at the summit, with leaves somewhat narrower than those of ocimum. The joints of the stem lie close together, and the axils are numerous: the seed hangs downwards, having the joints for its basis. In the female plant the seed is very abundant, but in the male it is less so, lies closer to the joints, and is short and wreathed. In the female plant the seed hangs more loosely, and is of a white colour. The leaves of the male plant are swarthy, while those of the female are whiter: the root, which is made no use of, is very diminutive.

Both of these plants grow in cultivated champaign localities. A marvellous property is mentioned as belonging to them: the male plant, they say, ensures the conception of male children, the female plant of females; a result which is ensured by drinking the juice in raisin wine, the moment after conception, or by eating the leaves, boiled with oil and salt, or raw with vinegar. Some persons, again, boil the plant in a new earthen vessel with heliotropium and two or three ears of corn, till it is thoroughly done; and say that the decoction should be taken in drink by the female, and the plant eaten for three days successively, the regimen being commenced the second day of menstruation. This done, on the fourth day she must take a bath, immediately after which the sexual congress must take place.

Hippocrates has lavished marvellous encomiums upon these plants for the maladies of females, while at the present day no physician recognizes their utility for such purpose. It was his practice to employ them for affections of the uterus, in the form of a pessary,

in combination with honey, rose-oil, oil of iris, or oil of lilies. He employed them also as an emmenagogue, and for the purpose of bringing away the after-birth; effects which are equally produced, according to him, by taking them in drink, or using them in the form of a fomentation. It was his practice also, to inject the juice of these plants in cases of fetid odours of the ears, and then to wash the ear with old wine. The leaves also were used by him as a cataplasm for the abdomen, defluxions of the eyes, strangury, and affections of the bladder; a decoction too, of the plants is prescribed by him, with frankincense and myrrh.

For the purpose of relaxing the bowels, or in cases of fever, a handful of this plant is boiled down to one half, in two sextarii of water, the decoction being taken with salt and honey: if a pig's foot or a cock is boiled with it, it will be all the more beneficial. Some persons have been of opinion, that as a purgative the two kinds of mercurialis ought to be used together, or else that a decoction should be made of the plant in combination with mallows. These plants act as a detergent upon the chest, and carry off the bilious secretions, but they are apt to be injurious to the stomach. We shall have to speak further of their properties on the appropriate occasions.

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CHAP. 19.

THE ACIIILLEOS, SIDERITIS, PANACES HERACLEON, MILLEFOLIUM, OR SCOPÆ REGLÆ; SIX VARIETIES OF IT: THREE REMEDIES.

Achilles too, the pupil of Chiron, discovered a plant which heals wounds, and which, as being his discovery, is known as the "achilleos." It was by the aid of this plant, they say, that he cured Telephus. Other authorities, however, assert that He was the first to discover that verdigris is an extremely useful ingredient in plasters; and hence it is that he is sometimes represented in pictures as scraping with his sword the rust from off a spear into the wound of Telephus. Some again, are of opinion that he made use of both remedies.

By some persons this plant is called "panaces heracleon," by others, "sideritis," and by the people of our country, "millefolium:" I the stalk of it, they say, is a cubit in length, branchy, and covered from the bottom with leaves somewhat smaller than those of fennel. Other authorities, however, while admitting that this last plant is good for wounds, affirm that the genuine achilleos has a bluish stem a foot in length, destitute of branches, and elegantly clothed all over with isolated leaves of a round form. Others again, maintain that it has a squared stem, that the heads of it are small and like those of horehound, and that the leaves are similar to those of the quercus — they say too, that this last has the property of uniting the sinews when cut asunder. Another statement is, that the sideritis is a plant that grows on garden walls, and that it emits, when bruised, a fetid smell; that there is also another plant, very similar to it, but with a whiter and more unctuous leaf, a more delicate stem, and mostly found growing in vineyards.

They speak also of another sideritis, with a stem two cubits in length, and diminutive branches of a triangular shape: the leaf, they say, resembles that of fern, and has a long footstalk, the seed being similar to that of beet. All these plants, it is said, are remarkably good for the treatment of wounds. The one with the largest leaf is known among us by the name of "scopæ regiæ," and is used for the

cure of quinzy in swine.

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CHAP. 20.

THE TEUCRION, HEMIONION, OR SPLENION: TWO REMEDIES.

At the same period also, Teucer discovered the teucrion, a plant known to some as the “hemionion.” It throws out thin rush-like stems, with diminutive leaves, and grows in rugged, uncultivated spots: the taste of it is rough, and it never blossoms or produces seed. It is used for the cure of affections of the spleen, and it is generally understood that its properties were discovered in the following manner: — The entrails of a victim having been placed upon this plant, it attached itself to the milt, and entirely consumed it; a property to which it is indebted for the name of “splenion,” given to it by some. It is said too, that swine which have fed upon the root of this plant are found to have no milt.

Some authors give this name also to a ligneous plant, with branches like those of hyssop, and a leaf resembling that of the bean; they say too, that it should be gathered while in blossom, from which we may conclude that they entertain no doubt that it does blossom. That which grows on the moun- tains of Cilicia and Pisidia is more particularly praised by them.

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CHAP. 21.

MELAMIPODIUM, HELLEBORE, OR VERATRUM: THREE VARIETES OF IT. THE WAY IN WHICH IT IS GATHERED, AND HOW THES QUALITY OF IT IS TESTED.

The repute of Melampus, as being highly skilled in the arts of divination, is universally known. This personage has given a name to one species of hellebore, known as the "Melampodion." Some persons, however, attribute the discovery of this plant to a shepherd of that name, who remarked that his she-goats were violently purged after browsing upon it, and afterwards cured the daughters of Prœtus of madness, by, giving them the milk of these goats. It will be the best plan, therefore, to take this opportunity of treating of the several varieties of hellebore. The two principal kinds are the white and the black; though, according to most authorities, this difference exists in the root only. There are some authors, however, who assure us that the leaves of the black hellebore are similar to those of the plane-tree, only darker, more diminutive, and more jagged at the edges: and who say, that the white hellebore has leaves like those of beet when first shooting, though at the same time of a more swarthy colour, with reddish veins on the under side. The stem, in both kinds, is ferulaceous, a palm in height, and covered with coats like those of the bulbs, the root, too, being fibrous like that of the onion.

The black hellebore kills horses, oxen, and swine; hence it is that those animals avoid it, while they eat the white kind. The proper time, thay say, for gathering this last, is harvest. It grows upon Mount Œta in great abundance; and the best of all is that found upon one spot on that mountain, in the vicinity of Pyra. The black hellebore is found growing every- where, but the best is that of Mount Helicon; which is also equally celebrated for the qualities of its other plants. The white hellebore of Mount Œta is the most highly esteemed, that of Pontus occupying the second place, and the produce of Elea the third; which last, it is generally said, grows in the vineyards there. The fourth rank is held by the white hellebore of Mount Parnassus, though it is often adulterated with that of the

neighbouring districts of Ætolia.

Of these kinds it is the black hellebore that is known as the "melampodium:" it is used in fumigations, and for the purpose of purifying houses; cattle, too, are sprinkled with it, a certain form of prayer being repeated. This last plant, too, is gathered with more numerous ceremonies than the other: a circle is first traced around it with a sword, after which, the person about to cut it turns towards the East, and offers up a prayer, entreating permission of the gods to do so. At the same time he observes whether an eagle is in sight — for mostly while the plant is being gathered that bird is near at hand — and if one should chance to fly close at hand, it is looked upon as a presage that he will die within the year. The white hellebore, too, is gathered not without difficulty, as it is very oppressive to the Head; more particularly if the precaution has not been used of eating garlic first, and of drinking wine every now and then, care being taken to dig up the plant as speedily as possible.

Some persons call the black hellebore "ectomon," and others "polyrrhizon:" it purges by stool, while the white hellebore acts as an emetic, and so carries off what might other- wise have given rise to disease. In former days hellebore was regarded with horror, but more recently the use of it has become so familiar, that numbers of studious men are in the habit of taking it for the purpose of sharpening the intellectual powers required by their literary investigations. Carneades, for instance, made use of hellebore when about to answer the treatises of Zeno; Drusus too, among us, the most famous of all the tribunes of the people, and whom in particular the public, rising from their seats, greeted with loud applause-to whom also the patricians imputed the Marsic war-is well known to have been cured of epilepsy in the island of Anti- cyra; a place at which it is taken with more safety than else- where, from the fact of sesamoïdes being combined with it, as already stated. In Italy the name given to it is "veratrum."

These kinds of hellebore, reduced to powder and taken alone, or else in combination with radicula, a plant used, as already mentioned, for washing wool, act as a sternutatory, and are both of them productive of narcotic effects. The thinnest and shortest roots are selected, and among them the lower parts in particular, which

have all the appearance of having been cut short; for, is to the upper part, which is the thickest, and bears a resemblance to an onion, it is given to dogs only, as a purgative. The ancients used to select those roots the rind of which was the most fleshy, from an idea that the pith extracted there from was of a more refined nature. This substance they covered with wet sponges, and, when it began to swell, used to split it longitudinally with a needle; which done, the fila- ments were dried in the shade, for future use. At the present day, however, the fibres of the root with the thickest rind are selected, and given to the patient just as they are. The best hellebore is that which has an acrid, burning taste, and when broken, emits a sort of dust. It retains its efficacy, they say, so long as thirty years.

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CHAP. 22.

TWENTY-FOUR REMEDIES DERIVED FROM BLACK HELLE- BORE. HOW IT SHOULD BE TAKEN.

Black hellebore is administered for the cure of paralysis, insanity, dropsy — provided there is no fever — chronic gout, and diseases of the joints: it has the effect too, of carrying off the bilious secretions and morbid humours by stool. It is given also in water as a gentle aperient, the proportion being one drachma at the very utmost, and four oboli for a moderate dose. Some authorities have recommended mixing scammony with it, but salt is looked upon as more safe. If given in any considerable quantity in combination with a sweet substance, it is highly dangerous: used in the form of a fomentation, it disperses films upon the eyes; and hence it is that some medical men have pounded it and used it for an eye-salve. It ripens and acts detergently upon scrofulous sores, suppurations, and indurated tumours, as also upon fistulas, but in this latter case it must be removed at the end of a couple of days. In combination with copper filings and sandarach, it removes warts; and it is applied to the abdominal regions, with barley-meal and wine, in cases of dropsy.

This plant is employed for the cure of pituitous defluxions in cattle and beasts of burden, a slip of it being passed through the ear, and removed at the same hour on the fol- lowing day. With frankincense also, wax, and pitch, or else pisselæon, it is used for the cure of itch in quadrupeds.

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CHAP. 23.

TWENTY-THREE REMEDIES DERIVED FROM WHITE HELLEBORE.

The best white hellebore is that which acts most speedily as a sternutatory; but it would seem to be a much more formidable plant than the black kind; more particularly if we read in the ancient authors the precautions used by those about to take it, against cold shiverings, suffocation, unnatural drowsiness, continuous hiccup or sneezing, derangements of the stomach, and vomitings, either retarded or prolonged, too sparing or in excess. Indeed, it was generally the practice to administer other substances to promote vomiting, and to carry off the hellebore by the aid of purgatives or clysters, while bleeding even was frequently had recourse to. In addition to all this, however successful the results may prove, the symptoms by which it is attended are really most alarming, by reason of the various colours which the matter vomited presents: besides which, after the vomiting has subsided, the physician has to pay the greatest attention to the nature of the alvine evacuations, the due and proper use of the bath, and the general regimen adopted by the patient; all of them inconveniences in themselves, and preceded by the terrors naturally inspired by the character of the drug; for one story is, that it has the property of consuming flesh, if boiled with it.

The great error, however, on the part of the ancients was, that in consequence of these fears, they used to give it too sparingly, the fact being, that the larger the dose, the more speedily it passes through the body. Themison used to give no more than two drachmæ, but at a later period as much as four drachmæ was administered; in conformity with the cele- brated eulogium passed upon it by Herophilus, who was in the habit of comparing hellebore to a valiant general, and saying, that after it has set in motion all within, it is the first to sally forth and show the way. In addition to these particulars, there has been a singular discovery made: the hellebore which, as we have already stated, has been cut with a small pair of scissors, is passed through a sieve, upon which the pith makes its way through, while the outer coat remains behind. The latter acts as a purgative,

while the former is used for the purpose of arresting vomiting when that evacuation is in excess.

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CHAP. 24.

EIGHTY-EIGHT OBSERVATIONS UPON THE TWO KINDS OF HELLEBORE.

In order to secure a beneficial result, due precautions must be taken not to administer hellebore in cloudy weather; for if given at such a time, it is sure to be productive of excruciating agonies. Indeed there is no doubt that summer is a better time for giving it than winter: the body too, by an abstinence from wine, must be prepared for it seven days previously, emetics being taken on the fourth and third days before, and the patient going without his evening meal the previous day. White hellebore, too, is administered in a sweet medium, though lentils or pottage are found to be the best for the purpose. There has been a plan also, lately discovered, of splitting a radish, and inserting the hellebore in it, after which the sections are pressed together; the object being that the strength of the hellebore may be incorporated with the radish, and modified thereby.

At the end of about four hours it generally begins to be brought up again; and within seven it has operated to the full extent. Administered in this manner, it is good for epilepsy, as already stated, vertigo, melancholy, insanity, delirium, white elephantiasis, leprosy, tetanus, palsy, gout, dropsy, incipient tympanitis, stomachic affections, cynic spasms, sciatica, quartan fevers which defy all other treatment, chronic coughs, flatulency, and recurrent grippings in the bowels.

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CHAP. 25.

TO WHAT PERSONS HELLEBORE SHOULD NEVER BE ADMINISTERED.

It is universally recommended not to give hellebore to aged people or children, to persons of a soft and effeminate habit of body or mind, or of a delicate or tender constitution. It is given less frequently too to females than to males; and persons of a timorous disposition are recommended not to take it: the same also, in cases where the viscera are ulcerated or tumefied, and more particularly when the patient is afflicted with spitting of blood, or with maladies of the side or fauces. Hellebore is applied, too, externally, with salted axle-grease, to morbid eruptions of the body and suppurations of long standing: mixed with polenta, it destroys rats and mice. The people of Gaul, when hunting, tip their arrows with hellebore, taking care to cut away the parts about the wound in the animal so slain: the flesh, they say, is all the more tender for it. Flies are destroyed with white hellebore, bruised and sprinkled about a place with milk: phthiriasis is also cured by the use of this mixture.

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CHAP. 26. (6.)

THE MITHRIDATIA.

Crateuas ascribes the discovery of one plant to Mithridates himself, the name of which is “mithridatia.” Near the root it has two leaves resembling those of the acanthus, between which it puts forth a stem supporting a flower at the extremity, like a rose.

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CHAP. 27.

THE SCORDOTIS OR SCORDION: FOUR REMEDIES.

Lennæus attributes to Mithridates the discovery of another plant, the scordotis or scordion, which has been described, he tells us, by the hand even of that prince. This plant, he says, is a cubit in height, and has a square stem, branchy, covered with downy leaves, and resembling the quercus in appearance: it is found growing in Pontus, in rich, humid soils, and has a bitter taste.

There is another variety also of this plant, with a larger leaf, and resembling wild mint in appearance. They are both of them used for numerous purposes, both individually and in combination with other ingredients, as antidotes.

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CHAP. 28.

THE POLEMONIA, PHILETÆRIA, OR CHILIODYNAMUS: SIX REMEDIES.

The polemonia is known as the “philetæria” by some, in consequence of the contest which has arisen between certain kings for the honour of its discovery. The people of Cappadocia also give it the name of “chiliodynamus.” The root of it is substantial, and it has slender branches, with umbels hanging from the extremities, and a black seed. In other respects, it bears a resemblance to rue, and is found growing in mountainous localities.

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CHAP. 29.

THE EUPATORIA: ONE REMEDY.

The eupatoria also is a plant under royal patronage. The stem of it is ligneous, hairy, and swarthy, and a cubit or more in length. The leaves, arranged at regular intervals, resemble those of cinquefoil or hemp; they have five indentations at the edge, and are swarthy like the stem, and downy. The root is never used. The seed, taken in wine, is a sovereign remedy for dysentery.

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CHAP. 30.

CENTAURION OR CHIRONION: TWENTY REMEDIES.

Centaury, it is said, effected a cure for Chiron, on the occasion when, while handling the arms of Hercules, his guest, he let one of the arrows fall upon his foot: hence it is that by some it is called "chironion." The leaves of it are large and oblong, serrated at the edge, and growing in thick tufts from the root upwards. The stems, some three cubits in height and jointed, bear heads resembling those of the poppy. The root is large and spreading, of a reddish colour, tender and brittle, a couple of cubits in length, and full of a bitter juice, somewhat inclining to sweet.

This plant grows in rich soils upon declivities; the best in quality being that of Arcadia, Elis, Messenia, Mount Pholoë, and Mount Lycæus: it grows also upon the Alps, and in numerous other localities, and in Lycia they prepare a lycium from it. So remarkable are its properties for closing wounds, that pieces of meat even, it is said, are soldered together, when boiled with it. The root is the only part in use, being administered in doses of two drachmæ in the several cases hereafter men- tioned. If, however, the patient is suffering from fever, it should be bruised and taken in water, wine being used in other cases. A decoction of the root is equally useful for all the same purposes.

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CHAP. 31.

THE CENTAURION LEPTON, OR LIBATION, KNOWN ALSO AS FELL TERRÆ: TWENTY-TWO REMEDIES.

There is another centaury also, with diminutive leaves, known by the additional name of “lepton.” By some persons it is called “libadion,” from the circumstance that it grows upon the borders of fountains. It is similar to origanum in appearance, except that the leaves are narrower and longer. The stem is angular, branchy, and a palm in height; the flower is like that of the lychnis, and the root is thin, and never used. It is in the juice that its medicinal properties are centred: it being gathered in the autumn, and the juice extracted from the leaves. Some persons cut up the stalks, and steep them for some eighteen days in water, and then extract the juice.

In Italy this kind of centaury is known as “gall” of the earth,” from its extreme bitterness. The Gauls give it the name of “exacum;” from the circumstance that, taken in drink, it purges off all noxious substances by alvine evacuation.

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CHAP. 32.

THE CENTAURIS TRIORCHIS: TWO REMEDIES.

There is a third kind of centaury also, known as the “centauris triorchis.” It is but rarely that a person cuts it without wounding himself. The juice emitted is just the colour of blood. Theophrastus relates that this plant is under the protection of the triorchis, a kind of hawk, which attacks those who gather it; a circumstance to which it owes its name. Ignorant persons are in the habit of confounding all these characteristics, and attributing them to the centaury first named.

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CHAP. 33. (7).

CLYMENUS : TWO REMEDIES.

Clymenus is a plant so called, after a certain king. It has leaves like those of ivy, numerous branches, and a hollow, jointed stem. The smell of it is powerful, and the seed like that of ivy: it grows in wild and mountainous localities. We shall have to state hereafter, of what maladies it is curative, taken in drink, but it is as well to take the present opportunity of remarking that, while effecting a cure, in the male sex it neutralizes the generative powers.

The Greeks speak of this plant as being similar to the plantago in appearance, with a square stem, and a seed in capsules, interlaced like the arms of the polypus. The juice of this plant, too, is used, being possessed of refreshing pro- perties in a very high degree.

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CHAP. 34.

GENTIAN: THIRTEEN REMEDIES.

Gentian was first discovered by Gentius, king of Illyria. It is a plant to be found everywhere, but that of Illyria is the finest. It has a leaf like that of the ash, but equal in size to a lettuce-leaf: the stem is tender, about the thickness of the thumb, hollow and empty, and covered with leaves at regular intervals. This stem is sometimes three cubits in length, and the root is flexible, swarthy, and inodorous. It is found in the greatest abundance in humid localities at the foot of the Alps. The root and juice are the parts of it that are used: the root is possessed of certain warming pro- perties, but it should never be taken by women in a state of pregnancy.

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CHAP. 35.

THE LYSIMACHIA: EIGHT REMEDIES,

King Lysimachus first discovered the plant which from him has received the name of lysimachia, and the merits of which have been so highly extolled by Erasistratus. This plant has green leaves resembling those of the willow, and a purple blossom: it has all the appearance of a shrub, the branches are erect, and it has a pungent smell. It is found growing in watery soils. The properties of it are so extremely powerful, that if placed upon the yoke when beasts of burden are restive, it will be sure to overcome all stubbornness on their part.

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CHAP. 36.

ARTEMISIA, PARTHENIS, BOTRYS, OR AMBROSIA: FIVE REMEDIES.

Women too have even affected an ambition to give their name to plants: thus, for instance, Artemisia, the wife of King Mausolus, adopted the plant, which before was known by the name of "parthenis." There are some persons, however, who are of opinion that it received this surname from the goddess Artemis Ilithyia, from the fact of its being used for the cure of female complaints more particularly. It is a plant with numerous branches, like those of wormwood, but the leaves of it are larger and substantial.

There are two varieties of it; one has broader leaves than the other, which last is of a slender form, with a more diminutive leaf, and grows nowhere but in maritime districts.

Some persons again, give this name to a plant which grows more inland, with a single stem, extremely diminutive leaves, and numerous blossoms which open at the ripening of the grape, and the odour of which is far from unpleasant. In addition to this name, this last plant is known as "botrys" to some persons, and "ambrosia" to others: it grows in Cappadocia.

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CHAP. 37.

NYMPHÆA, HERACLEON, RHOPALON, OR MADON; TWO VARIETIES OF IT: FOUR REMEDIES.

The plant called “nymphæa,” owes its name, they say, to a Nymph who died of jealousy conceived on account of Hercules, for which reason it is also known as “heracleon” by some. By other persons, again, it is called “rhopalon,” from the resemblance of its root to a club. * * * * and hence it is that those who take it in drink become impotent for some twelve days, and incapacitated for procreation. That of the first quality is found in Orchomenia and at Marathon: the people of Bœotia call it “madon,” and use the seed for food. It grows in spots covered with water; the leaves of it are large, and float upon the surface, while others are to be seen springing from the roots below. The flower is very similar to a lily in appearance, and after the plant has shed its blossom, the place of the flower is occupied by a head like that of the poppy. The stem is slender, and the plant is usually cut in autumn. The root, of a swarthy hue, is dried in the sun; garlic manifests a peculiar antipathy to it.

There is another nymphæa also, which grows in the river Peneus, in Thessaly: the root of it is white, and the head yellow, about the size of a rose.

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CHAP. 38.

TWO VARIETIES OF EUPHORBIA: FOUR REMEDIES. THE CHAMELÆA.

In the time, too, of our fathers, King Juba discovered a plant, to which he gave the name of "euphorbia," in honour of his physician, Euphorbus, the brother of the same Musa, whom We have mentioned as having saved the life of the late Emperor Augustus. It was these brothers who introduced the practice of douching the body with large quantities of cold water, immediately after the bath, for the purpose of bracing the system: whereas in former times, as we find stated in the works of Homer even, it was the practice to wash the body with warm water only. With reference to euphorbia, there is a treatise still in existence, written upon it by King Juba, in which he highly extols its merits: he discovered it growing upon Mount Atlas, and describes it as resembling a thyrsus in appearance, and bearing leaves like those of the acanthus.

The properties of this plant are so remarkably powerful, that the persons engaged in collecting the juices of it are obliged to stand at a considerable distance. The incisions are made with a long pole shod with iron, the juice flowing into receivers of kid-leather placed beneath. The juice has all the appearance of milk, as it exudes, but when it has coagulated and dried, it assumes the form and consistency of frankincense. The persons engaged in collecting it, find their sight improved thereby. This juice is an excellent remedy for the stings of serpents: in whatever part of the body the wound may have been inflicted, the practice is to make an incision in the crown of the head, and there introduce the medicament. The Gætuli who collect it, are in the habit of adulterating it with warm milk; a fraud, however, easily to be detected by the agency of fire, that which is not genuine emitting a most disgusting smell.

Much inferior to this is the juice extracted, in Gaul, from the chamelæa, a plant which bears the grain of Cnidos. When broken asunder, it resembles hammoniacum in appearance; and however slightly tasted, it leaves a burning sensation in the mouth, which lasts a considerable time, and increases every now and then, until, in fact,

it has quite parched the fauces.

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CHAP. 39. (8.)

TWO VARIETIES OF THE PLANTAGO: FORTY-SIX REMEDIES.

The physician Themiso, too, has conferred some celebrity upon the plantago, otherwise a very common plant; indeed he has written a treatise upon it, as though he had been the first to discover it. There are two varieties; one, more diminutive than the other, has a narrower and more swarthy leaf, strongly resembling a sheep's tongue in appearance: the stem of it is angular and bends downwards, and it is generally found growing in meadow lands. The larger kind has leaves enclosed with ribs at the sides, to all appearance, from the fact of which being seven in number, the plant has been called "heptapleuron" by some. The stem of it is a cubit in height, and strongly resembles that of the turnip. That which is grown in a moist soil is considered much the most efficacious: it is possessed of marvellous virtues as a desiccative and as an astringent, and has all the effect of a cautery. There is nothing that so effectually arrests the fluxes known by the Greeks as "rheumatismi."

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CHAP. 40.

BUGLOSSOS: THREE REMEDIES.

To an account of the plantago may be annexed that of the buglossos, the leaf of which resembles an ox tongue. The main peculiarity of this plant is, that if put into wine, it pro- motes mirth and hilarity, whence it has obtained the additional name of “euphrosynum.”

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CHAP. 41.

CYNOGLOSSOS: THREE REMEDIES.

To this plant we may also annex an account of the cynoglossos, the leaf of which resembles a dog's tongue, and which produces so pleasing an effect in ornamental gardening. The root, it is said, of the kind which bears three stems surmounted with seed, is very useful, taken in water, for tertian, and of that with four stems, for quartan, fevers.

There is another plant very similar to it, which bears diminutive burrs resembling those of the lappa: the root of it, taken in water, is curative of wounds inflicted by frogs or serpents.

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CHAP. 42.

THE BUPHTALMOS OR CACHLA: ONE REMEDY.

There is the buphthalmos also, so called from its resemblance to an ox's eye, and with a leaf like that of fennel. It grows in the vicinity of towns, and is a branchy plant, with numerous stems, which are boiled and eaten. Some persons give it the name of "cachla." In combination with wax, it disperses scirrhi.

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CHAP. 43.

PLANTS WHICH HAVE BEEN DISCOVERED BY CERTAIN NATIONS. THE SCYTHICE: ONE REMEDY.

Entire nations, too, have been the discoverers of certain plants. The Scythæ were the first to discover the plant known as “scythice,” which grows in the vicinity of the Palus Mæotis. Among its other properties, this plant is remarkably sweet, and extremely useful for the affection known as “asthma.” It is also possessed of another great recommendation — so long as a person keeps it in his mouth, he will never experience hunger or thirst.

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CHAP. 44.

THE HIPPACE: THREE REMEDIES.

The hippace, another plant that grows in Scythia, is possessed of similar properties: it owes its name to the circumstance that it produces the like effect upon horses. By the aid of these two plants, the Scythæ, they say, are enabled to endure hunger and thirst, so long as twelve days even.

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CHAP. 45.

THE ISCHÆMON: TWO REMEDIES.

The Thracians were the first to discover the ischæmon, which, it is said, has the property of stanching the flow of blood, not only when a vein has been opened, but when it has been cut asunder even. This is a creeping plant; it is like millet in appearance, and the leaves of it are rough and lanuginous. It is used as a plug for the nostrils. The kind that grows in Italy, attached to the body as an amulet, has the property of arresting hæmorrhage.

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CHAP. 46.

THE CESTROS, PSYCHOTROPEION, VETTONICA, OR SERRA- TULA: FORTY-EIGHT REMEDIES.

The Vettones, a people of Spain, were the original discoverers of the plant known as the “vettonica” in Gaul, the “serratula” in Italy, and the “cestros” or “psychotrophon” in Greece. This is a plant more highly esteemed than any other: it puts forth an angular stem two cubits in height, and throws out leaves from the root, with serrated edges, and closely resembling those of lapathum. The seed of it is purple: the leaves are dried and powdered, and used for numerous purposes. There is a wine also prepared from it, and a vinegar, remarkably beneficial to the stomach and the eyesight. Indeed, this plant enjoys so extraordinary a reputation, that it is a common belief even that the house which contains it is insured against misfortunes of every kind.

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CHAP. 47.

THE CANTABRICA: TWO REMEDIES.

In Spain, too, is found the cantabrica, which was first dis- covered by the nation of the Cantabri in the time of the late Emperor Augustus. It grows everywhere in those parts, having a stem like that of the bulrush, a foot in height, and bearing small oblong flowers, like a calathus in shape, and enclos- ing an extremely diminutive seed. Nor indeed, in other respects, have the people of Spain been wanting in their researches into the nature of plants; for at the present day even it is the custom in that country, at their more jovial entertainments, to use a drink called the hundred-plant drink, combined with a proportion of honied wine; it being their belief, that the wine is rendered more whole- some and agreeable by the admixture of these plants. It still remains unknown to us, what these different plants are, or in what number exactly they are used: as to this last question, however, we may form some conclusion from the name that is given to the beverage.

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CHAP. 48.

CONSILIGO: ONE REMEDY.

Our own age, too, can remember the fact of a plant being discovered in the country of the Marsi. It is found growing also in the neighbourhood of the village of Nervesia, in the territory of the Æquicoli, and is known by the name of “consiligo.” It is very useful, as we shall have occasion to mention in the appropriate place, in cases of phthisis where recovery is considered more than doubtful.

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CHAP. 49.

THE IBERIS: SEVEN REMEDIES.

It is but very lately, too, that Servilius Democrates, one of our most eminent physicians, first called attention to a plant to which he gave the name of iberis, a fanciful appellation only, bestowed by him upon this discovery of his in the verses by him devoted to it. This plant is found mostly growing in the vicinity of ancient monuments, old walls, and overgrown footpaths: it is an evergreen, and its leaves are like those of nasturtium, with a stem a cubit in height, and a seed so diminutive as to be hardly perceptible; the root, too, has just the smell of nasturtium. Its properties are more strongly developed in summer, and it is only used freshgathered: there is considerable difficulty in pounding it.

Mixed with a small proportion of axle-grease, it is extremely useful for sciatica and all diseases of the joints; the application being kept on some four hours at the utmost, when used by the male sex, and about half that time in the case of females. Immediately after its removal, the patient must take a warm bath, and then anoint the body all over with oil and wine the same operation being repeated every twenty days, so long as there are any symptoms of pain remaining. A similar method is adopted for the cure of all internal defluxions; it is never applied, however, so long as the inflammation is at its height, but only when it has somewhat abated.

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CHAP. 50.

PLANTS WHICH HAVE BEEN DISCOVERED BY CERTAIN ANIMALS. CHELIDONIA: SIX REMEDIES.

The brute animals also have been the discoverers of certain plants: among them, we will name chelidonia first of all. It is by the aid of this plant that the swallow restores the sight of the young birds in the nest, and even, as some persons will have it, when the eyes have been plucked out. There are two varieties of this plant; the larger kind has a branchy stem, and a leaf somewhat similar to that of the wild parsnip, but larger. The plant itself is some two cubits in height, and of a whitish colour, that of the flower being yellow. The smaller kind has leaves like those of ivy, only rounder and not so white. The juice of it is pungent, and resembles saffron in colour, and the seed is similar to that of the poppy.

These plants blossom, both of them, at the arrival of the swallow, and wither at the time of its departure. The juice is extracted while they are in flower, and is boiled gently in a copper vessel on hot ashes, with Attic honey, being esteemed a sovereign remedy for films upon the eyes. This juice is employed also, unmixed with any other substance, for the eyesalves, which from it take their name of “chelidonia.”

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CHAP. 51.

THE DOG-PLANT: ONE REMEDY.

Dogs, too, are in the habit of seeking a certain plant, as a stimulant to the appetite; but although they eat it in our presence, it has never yet been discovered what it is, it being quite impossible to recognize it when seen half-chewed. There has also been remarked another bit of spitefulness in this animal, though in a much greater degree, in reference to another plant. When stung by a serpent, it cures itself, they say, by eating a certain herb, taking care, however, never to gather it in presence of man.

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CHAP. 52.

THE ELAPHOBOSCON.

The hind, with a much greater degree of frankness, has discovered to us the elaphoboscon, a plant of which we have already spoken, and which is also called “helxine,” from the assistance it affords those animals in yeaning.

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CHAP. 53.

DICTAMNON: EIGHT REMEDIES. PSEUDODICTAMNON OR CHONDRIS. IN WHAT PLACES THE MOST POWERFUL PLANTS ARE FOUND. HOW THAT MILK IS DRUNK IN ARCADIA FOR THE BENEFICIAL EFFECTS OF THE PLANTS UPON WHICH THE CATTLE FEED.

It is the hind, too, that, as already stated, first made us acquainted with dictamnon, or dittany; for when wounded, it eats some of this plant, and the weapon immediately falls from the body. This plant grows nowhere but in Crete. The branches of it are remarkably thin; it resembles pennyroyal in appearance, and is hot and acrid to the taste. The leaves are the only part employed, it being destitute of blossom, seed, and stem: the root is thin., and never used. In Crete even, it is found growing only in a very limited locality, and is sought by goats with singular avidity.

In place of it, the pseudodictamnum is employed, a plant that is found growing in many countries. In leaf it is similar to the other, but the branches are more diminutive: by some persons it is known as "chondris." Its properties not being so strongly developed, the difference is immediately recognized: for an infusion of the very smallest piece of the real dittany, is sufficient to burn the mouth. The persons who gather it are in the habit of enclosing it in a stem of fennel-giant or in a reed, which they close at the ends that the virtues of it may not escape. Some persons say, that both plants grow indiscriminately in numerous localities, the inferior sort being the produce of rich soils, and the genuine dittany being found nowhere but in rugged, uncultivated spots.

There is, again, a third plant called "dictamnum," which, however, has neither the appearance nor the properties of the other plant so called; the leaves of it are like those of sisymbrium, but the branches are larger.

There has long been this impression with reference to Crete, that whatever plant grows there is infinitely superior in its properties to a similar plant the produce of any other country; the second rank being given to the produce of Mount Parnassus. In addition to this, it is generally asserted that simples of excellent quality are found upon

Mount Pelion in Thessaly, Mount Teleuthrius in Eubœa, and throughout the whole of Arcadia and Laconia. Indeed, the Arcadians, they say, are in the habit of using, not the simples themselves, but milk, in the spring season more particularly; a period at which the field plants are swollen with juice, and the milk is medicated by their agency. It is cows' milk in especial that they use for this purpose, those animals being in the habit of feeding upon nearly every kind of plant. The potent properties of plants are manifested by their action upon four-footed animals in two very remarkable instances: in the vicinity of Abdera and the tract known as the Boundary of Diomedes, the horses, after pasturing, become inflamed with frantic fury; the same is the case, too, with the male asses, in the neighbourhood of Potniæ.

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CHAP. 54.

THE ARISTOLOCHIA, CLEMATITIS, CRETICA, PLISTOTO- CHIA, LOCHIA POLYRRHIZOS, OR APPLE OF THE EARTH: TWENTY- TWO REMEDIES.

In the number of the most celebrated plants is the aristo- lochia, which would appear to have derived its name from females in a state of pregnancy, as being ἀρίστη λοχούσαιχ. Among us, however, it is known as the "malum terræ," or apple of the earth, four different varieties of it being distinguished. One of these has a root covered with tubercles of a rounded shape, and leaves of a mixed appearance, between those of the mallow and the ivy, only softer and more swarthy. The second kind is the male plant, with an elongated root some four fingers in length, and the thickness of a walking-stick. A third variety is extremely thin and long, similar to a young vine in appearance: it has the most strongly-marked properties of them all, and is known by the additional names of "clematitis," and "cretica." All these plants are the colour of boxwood, have a slender stem, and bear a purple flower and small berries like those of the caper: the root is the only part that is possessed of any virtues.

There is also a fourth kind, the name given to which is "plistolochia;" it is more slender than the one last mentioned, has a root thickly covered with filaments, and is about as thick as a good-sized bulrush: another name given to it is "polyrrhizos." The smell of all these plants is medicinal, but that of the one with an oblong root and a very slender stem, is the most agreeable: this last, in fact, which has a fleshy outer coat, is well adapted as an ingredient for nardine unguents even. They grow in rich champaign soils, and the best time for gathering them is harvest; after the earth is scraped from off them, they are put by for keeping.

The aristolochia that is the most esteemed, however, is that which comes from Pontus; but whatever the soil may happen to be, the more weighty it is, the better adapted it is for medicinal purposes. The aristolochia with a round root is recommended for the stings of serpents, and that with an oblong root * * * * But in this is centred its

principal reputation; applied to the uterus with raw beef, as a pessary, immediately after conception, it will ensure the birth of male issue, they say. The fishermen on the coasts of Campania give the round root the name of “poison of the earth;” and I myself have seen them pound it with lime, and throw it into the sea; immediately on which the fish flew towards it with surprising avidity, and being struck dead in an instant, floated upon the surface.

The kind that is known as “polyrrhizos,” is remarkably good, they say, for convulsions, contusions, and falls with violence, an infusion of the root being taken in water: the seed, too, is useful for pleurisy and affections of the sinews. It is considered, too, to be possessed of warming and strengthening properties, similar to those of satyrion, in fact.

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CHAP. 55.

THE EMPLOYMENT OF THESE PLANTS FOR INJURIES INFLICTED BY SERPENTS.

But it will be as well now to mention the various uses made of these plants, and the effects produced by them, beginning with that most dangerous of all evils that can befall us, stings inflicted by serpents. In such cases the plant britannica effects a cure, and the same is the case with the root of all the varieties of panaces, administered in wine. The flower, too, and seed of panaces chironion are taken in drink, or applied externally with wine and oil: cunila bubula, too, is looked upon as particularly useful for this purpose, and the root of polemonia or phileteris is taken in doses of four drachmæ in unmixed wine. Teucria, sideritis, and scordotis, are used in wine, plants particularly good, all of them, for injuries inflicted by snakes; the juice or leaves, or else a decoction of them, being taken in drink or applied to the wound. For a similar purpose also, the root of the greater centaury is taken, in doses of one drachma to three cyathi of white wine. Gentian, too, is particularly good for the stings of snakes, taken either fresh or dried, in doses of two drachmæ, mixed with rue and pepper in six cyathi of wine. The odour, too, of lysimachia puts serpents to flight.

Chelidonia is also given in wine to persons who have been stung; and betony in particular is used as an external application to the wound, a plant the virtues of which are so extraordinary, it is said, that if a circle of it is traced around a serpent, it will lash itself to death with its tail. The seed of this plant is also administered in such cases, in doses of one denarius to three cyathi of wine; or else it is dried and powdered, and applied to the wound, in the proportion of three denarii of powder to one sextarius of water.

Cantabrica, dittany, and aristolochia, are also similarly used, one drachma of the root of this last plant being taken every now and then in a semisextarius of wine. It is very useful too, rubbed in with vinegar, and the same is the case, also, with plistolochia: indeed it will be quite sufficient to suspend this last over the hearth, to make

all serpents leave the house.

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CHAP. 56. (9.)

THE ARIGEMONIA: FOUR REMEDIES.

The argemonia, too, is remedial in such cases; the root of it being taken, in doses of one denarius, in three cyathi of wine. It will be as well, however, to enter into some further details in reference to this plant and others, which I shall have occasion next to mention; it being my intention first to describe, under each head, those plants which are the most efficacious for the treatment of the affection under consideration.

The argemonia has leaves like those of the anemone, but divided like those of parsley: the head grows upon a slender stem resembling that of the wild poppy, and the root is also very similar to that of the same plant. The juice is of a saffron colour, acrid and pungent: the plant is commonly found in the fields of this country. Among us there are three varieties of it distinguished, the one being the most highly approved of, the root of which smells like frankincense.

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CHAP. 57.

AGARIC: THIRTY-THREE REMEDIES.

Agaric is found growing in the form of a fungus of a white colour, upon the trees in the vicinity of the Bosporus. It is administered in doses of four oboli, beaten up in two cyathi of oxymel. The kind that grows in Galatia is generally looked upon as not so efficacious. The male agaric is firmer than the other, and more bitter; it is productive too of head-ache. The female plant is of a looser texture; it has a sweet taste at first, which speedily changes into a bitter flavour.

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CHAP. 58.

THE ECHIOS; THREE VARIETIES OF IT: TWO REMEDIES.

Of the echios there are two kinds; one of which resembles pennyroyal in appearance, and has a concave leaf. It is administered, in doses of two drachmæ, in four cyathi of wine. The other kind is distinguished by a prickly down, and bears small heads resembling those of vipers: it is usually taken in wine and vinegar. Some persons give the name of "echios personata" to a kind of echios with larger leaves than the others, and burrs of considerable size, resembling that of the lappa. The root of this plant is boiled and administered in vinegar.

Henbane, pounded with the leaves on, is taken in wine, for the sting of the asp in particular.

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CHAP. 59.

HIERABOTANE, PERISTEREON, OR VERBENACA; TWO VARIETIES OF IT: TEN REMEDIES.

But among the Romans there is no plant that enjoys a more extended renown than hierabotane, known to some persons as "peristereon," and among us more generally as "verbenaca." It is this plant that we have already mentioned as being borne in the hands of envoys when treating with the enemy, with this that the table of Jupiter is cleansed, with this that houses are purified and due expiation made. There are two varieties of it: the one that is thickly covered with leaves is thought to be the female plant; that with fewer leaves, the male. Both kinds have numerous thin branches, a cubit in length, and of an angular form. The leaves are smaller than those of the quercus, and narrower, with larger indentations. The flower is of a grey colour, and the root is long and thin. This plant is to be found growing everywhere, in level humid localities. Some persons make no distinction between these two varieties, and look upon them as identical, from the circumstance of their being productive of precisely similar effects.

The people in the Gallic provinces make use of them both for soothsaying purposes, and for the prediction of future events; but it is the magicians more particularly that give utterance to such ridiculous follies in reference to this plant. Persons, they tell us, if they rub themselves with it will be sure to gain the object of their desires; and they assure us that it keeps away fevers, conciliates friendship, and is a cure for every possible disease; they say, too, that it must be gathered about the rising of the Dog-star — but so as not to be shone upon by sun or moon — and that honey-combs and honey must be first presented to the earth by way of expiation. They tell us also that a circle must first be traced around it with iron; after which it must be taken up with the left hand, and raised aloft, care being taken to dry the leaves, stem, and root, separately in the shade. To these statements they add, that if the banqueting couch is sprinkled with water in which it has been steeped, merriment and hilarity will be

greatly promoted thereby.

As a remedy for the stings of serpents, this plant is bruised in wine.

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CHAP. 60.

THE BLATTARIA: ONE REMEDY.

There is a plant very similar in appearance to verbascum, so much so, indeed, as to be frequently gathered for it by mistake. The leaves, however, are not so white, the stems are more numerous, and the flower is of a yellow colour. Thrown upon the ground, this plant attracts black beetles to it, whence its Roman appellation “blattaria.”

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CHAP. 61.

LEMONIUM : ONE REMEDY.

Lemonium furnishes a milky juice, which thickens like gum. It grows in moist, watery localities, and is generally administered, in doses of one denarius, in wine.

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CHAP. 62.

QUINQUEFOLIUM, KNOWN ALSO AS PENTAPETES, PEN- TAPHYLLON, OR CHAMÆZELON: THIRTY-THREE REMEDIES.

There is no one to whom quinquefolium is unknown, being recommended by a sort of strawberry which it bears: The Greeks give it the name of pentapetes, pentaphyllon, and Chammæzelon. The root, when taken up, is red; but as it dries it becomes black and angular. Its name is derived from the number of its leaves: it puts forth and withers with the leaves of the vine. This plant also is employed in the purification of houses.

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CHAP. 63.

THE SPARGANION : ONE REMEDY.

The root, too, of the plant known as the sparganion, is taken in white wine, as a remedy for the stings of serpents.

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CHAP. 64.

FOUR VARIETIES OF THE DAUCUS: EIGHTEEN REMEDIES.

Petronius Diodotus has distinguished four kinds of daucus, which it would be useless here to describe, the varieties being in reality but two in number. The most esteemed kind is that of Crete, the next best being the produce of Achaia, and of all dry localities. It resembles fennel in appearance, only that its leaves are whiter, more diminutive, and hairy on the surface. The stem is upright, and a foot in length, and the root has a remarkably pleasant taste and smell. This kind grows in stony localities with a southern aspect.

The inferior sorts are found growing everywhere, upon declivities for instance, and in the hedges of fields, but always in a rich soil. The leaves are like those of coriander, the stem being a cubit in length, the heads round, often three or more in number, and the root ligneous, and good for nothing when dry. The seed of this kind is like that of cummin, while that of the first kind bears a resemblance to millet; in all cases it is white, acrid, hot, and odoriferous. The seed of the second kind has more active properties than that of the first; for which reason it should be used more sparingly.

If it is considered really desirable to recognize a third variety of the daucus, there is a plant of this nature very similar to the staphylinos, known as the "pastinaca erratica," with an oblong seed and a sweet root. Quadrupeds will touch none of these plants, either in winter or in summer, except indeed, after abortion. The seed of the various kinds is used, with the exception of that of Crete, in which case it is the root that is employed; this root being particularly useful for the stings of serpents. The proper dose is one drachma, taken in wine. It is administered also to cattle when stung by those reptiles.

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CHAP. 65.

THE THERIONARCA: TWO REMEDIES.

The therionarca, altogether a different plant from that of the Magi, grows in our own climates, and is a branchy plant, with greenish leaves, and a rose-coloured flower. It has a deadly effect upon serpents, and the very contact of it is suf- ficient to benumb a wild beast, of whatever kind it be.

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CHAP. 66.

THE PERSOLATA OR ARCION; EIGHT REMEDIES.

The persolata, a plant known to every one, and called “arcion” by the Greeks, has a leaf, larger, thicker, more swarthy, and more hairy than that of the gourd even, with a large white root. This plant also is taken, in doses of two denarii, in wine.

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CHAP. 67.

CYCLAMINOS OR TUBER TERRÆ: TWELVE REMEDIES.

So too, the root of cyclaminos is good for injuries inflicted by serpents of all kinds. It has leaves smaller than those of ivy, thinner, more swarthy, destitute of angles, and covered with whitish spots. The stem is thin and hollow, the flowers of a purple colour, and the root large and covered with a black rind; so much so, in fact, that it might almost be taken for the root of rape. This plant grows in umbrageous localities, and by the people of our country is known as the "tuber terræ." It ought to be grown in every house, if there is any truth in the assertion that wherever it grows, noxious spells can have no effect. This plant is also what is called an "amulet;" and taken in wine, they say, it produces all the symptoms and appearances of intoxication. The root is dried, cut in pieces, like the squill, and put away for keeping. When wanted, a decoction is made of it, of the consistency of honey. Still, however, it has some deleterious properties; and a pregnant woman, it is said, if she passes over the root of it, will be sure to miscarry.

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CHAP. 68.

THE CYCLAMINOS CISSANTHEMOS: FOUR REMEDIES.

There is also another kind of cyclaminos, known by the additional name of “cissanthemos;” the stems of it, which are jointed, are good for nothing. It is altogether different from the preceding plant, and entwines around the trunks of trees. It bears a berry similar to that of the ivy, but soft; and the flower is white and pleasing to the sight. The root is never used. The berries are the only part of it in use, being of an acrid, viscous taste. They are dried in the shade, after which they are pounded and divided into lozenges.

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CHAP. 69.

THE CYCLAMINOS CHAMÆCISSOS: THREE REMEDIES.

A third kind of cyclaminos has also been shown to me, the additional name of which is “chamæcissos.” It consists of but a single leaf, with a branchy root, formerly employed for killing fish.

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CHAP. 70.

PEUCEDANUM: TWENTY-EIGHT REMEDIES.

But in the very first rank among these plants, stands peucedanum, the most esteemed kind of which is that of Arcadia, the next best being that of Samothrace. The stem resembles that of fennel, is thin and long, covered with leaves close to the ground, and terminating in a thick black juicy root, with a powerful smell. It grows on umbrageous mountains, and is taken up at the end of autumn. The largest and tenderest roots are the most esteemed; they are cut with bone-knives into slips four fingers in length, and left to shed their juice in the shade; the persons employed taking the precaution of rubbing the head and nostrils with rose-oil, as a preservative against vertigo.

There is also another kind of juice, which adheres to the stems, and exudes from incisions made therein. It is considered best when it has arrived at the consistency of honey: the colour of it is red, and it has a strong but agreeable smell, and a hot, acrid taste. This juice, as well as the root and a decoction of it, enters into the composition of numerous medicaments, but the juice has the most powerful properties of the two. Diluted with bitter almonds or rue, it is taken in drink as a remedy for injuries inflicted by serpents. Rubbed upon the body with oil, it is a preservative against the attacks of those reptiles.

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CHAP. 71. (10.)

EBULUM : SIX REMEDIES.

A fumigation, too, of ebulum, a plant known to every one, will put serpents to flight.

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CHAP. 72.

POLEMONIA: ONE REMEDY.

The root of polemonia even worn as an amulet only, is particularly useful for repelling the attacks of scorpions, as also the phalangium and other small insects of a venomous nature. For injuries inflicted by the scorpion, aristolochia is also used, or agaric, in doses of four oboli to four cyathi of wine. For the bite of the phalangium, vervain is employed, in combination with wine or oxycrate: cinquefoil, too, and daucus, are used for a similar purpose.

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CHAP. 73.

PHLOMOS OR VERBASCUM: FIFTEEN REMEDIES.

Verbascum has the name of “phlomos” with the Greeks. Of this plant there are two principal kinds; the white, which is considered to be the male, and the black, thought to be the female. There is a third kind, also, which is only found in the woods. The leaves of these plants are larger than those of the cabbage, and have a hairy surface: the stem is upright, and more than a cubit in height, and the seed black, and never used. The root is single, and about the thickness of the finger. The two principal kinds are found growing in champaign localities. The wild verbascum has leaves like those of elelisphacus, but of an elongated form; the branches are ligneous.

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CHAP. 74.

THE PHLOMIS: ONE REMEDY. THE LYCHNITIS OR THRYALLIS.

There are also two varieties of the phlomis, hairy plants, with rounded leaves, and but little elevated above the surface of the earth. A third kind, again, is known as the "lychnitis" by some persons, and as the "thryallis" by others: it has three leaves only, or four at the very utmost, thick and unctuous, and well adapted for making wicks for lamps. The leaves of the phlomos which we have mentioned as the female plant, if wrapped about figs, will preserve them most efficiently from decay, it is said. It seems little better than a loss of time to give the distinguishing characteristics of these three kinds, the effects of them all being precisely the same.

For injuries inflicted by scorpions, an infusion of the root is taken, with rue, in water. Its bitterness is intense, but it is quite as efficacious as the plants already mentioned.

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CHAP. 75.

THE THELYPHONON OR SCORPIO: ONE REMEDY.

The thelyphonon is a plant known as the “scorpio” to some, from the peculiar form of its roots, the very touch of which kills the scorpion: hence it is that it is taken in drink for stings inflicted by those reptiles. If a dead scorpion is rubbed with white hellebore, it will come to life, they say. The thelyphonon is fatal to all quadrupeds, on the application of the root to the genitals. The leaf too, which bears a resemblance to that of cyclaminos, is productive of a similar effect, in the course of the same day. It is a jointed plant, and is found growing in unbrageous localities. Juice of betony or of plantago is a preservative against the venom of the scorpion.

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CHAP. 76.

THE PHLYNION, NEURAS, OR POTERION ; ONE REMEDY.

Frogs, too, have their venom, the bramble-frog in particular, and I myself have seen the Psylli, in their exhibitions, irritate them by placing them upon flat vessels made red hot, their bite being fatal more instantaneously than the sting even of the asp. One remedy for their poison is the phrynion, taken in wine, which has also the additional names of “neuras” and “poterion:” it bears a small flower, and has numerous fibrous roots, with an agreeable smell.

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CHAP. 77.

THE ALISMA, DAMASONION, OR LYRON: SEYENTEEN REMEDIES

Similar, too, are the properties of the alisma, known to some persons as the "danmasonion," and as the "lyron" to others. The leaves of it would be exactly those of the plantago, were it not that they are narrower, more jagged at the edges, and bent downwards in a greater degree. In other respects, they present the same veined appearance as those of the plantago. This plant has a single stern, slender, a cubit in height, and terminated by a spreading head. The roots of it are numerous, thin like those of black hellebore, acrid, unctuous, and odoriferous: it is found growing in watery localities.

There is another kind also, which grows in the woods, of a more swarthy colour, and with larger leaves. The root of them both is used for injuries inflicted by frogs and by the sea-hare, in doses of one drachma taken in wine. Cyclaminos, too, is an antidote for injuries inflicted by the sea-hare.

The bite of the mad dog lias certain venomous properties, as an anitidote to which we have the cynorrhodos, of which we have spoken elsewhere already. The plantago is useful for the bites of all kinds of animals, either taken in drink or applied topically to the part affected. Betony is taken on similar occasions, in old wine, unmixed.

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CHAP. 78.

PERISTEREOS: SIX REMEDIES.

The name of peristereos is given to a plant with a tall stem, covered with leaves, and throwing out other stems from the top. It is much sought by pigeons, to which circumstance it owes its name. Dogs will never bark, they say, at persons who have this plant about them.

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CHAP. 79.

REMEDIES AGAINST CERTAIN POISONS.

Closely approaching in their nature to these various kinds of poisons, are those which have been devised by man for his own destruction. In the number of antidotes to all these artificial poisons as well as to the spells of sorcery, the very first place must be accorded to the moly of Homer; next to which come the mithridatia, scordotis, and centaury. The seed of betony carries offail kinds of noxious substances by stool; being taken for the purpose in honied wine or raisin wine, or else pulverized, and taken, in doses of one drachma, in four cyathi of old wine: in this last case, however, the patient must bring it off the stomach by vomit and then repeat the dose. Persons who accustom themselves to take this plant daily, will never experience any injury, they say, from substances of a poisonous nature.

When a person has taken poison, one most powerful remedy is aristolochia, taken in the same proportions as those used for injuries inflicted by serpents. The juice, too, of cinquefoil is given for a similar purpose; and in both cases, after the patient has vomited, agaric is administered, in doses of one denarius, in three cyathi of hydromel.

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CHAP. 80.

THE ANTIRREHINUM, ANARRHINON, OR LYCHNIS AGRIA: THREE REMDIES.

The name of antirrhinum or anarrhinon is given to the lychnis agria, a plant which resembles flax in appearance, is destitute of root, has a flower like that of the hyacinth, and a seed similar in form to the muzzle of a calf. According to what the magicians say, persons who rub themselves with this plant improve their personal appearance thereby; and they may ensure themselves against all noxious substances and poisons, by wearing it as a bracelet.

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CHAP. 81.

EUCLEA: ONE EBMEDY.

The same is the case, too, with the plant to which they give the name of “euclea,” and which, they tell us, rubbed upon the person, will ensure a more extended consideration. They say, too, that if a person carries artemisia about him, he will be ensured against all noxious drugs, the attacks of wild beasts of every kind, and sunstroke even. This last plant is taken also in wine, in cases of poisoning by opium. Used as an amulet, or taken in drink, it is said to be particularly efficacious for injuries inflicted by frogs.

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CHAP. 82.

TIE PERICARPUM; TWO VARIETIES OF IT: TWO REMEDIES.

The pericarpum is a kind of bulbous plant. There are two varieties of it; one with a red outer coat, and the other, similar in appearance to the black poppy, and possessed of greater virtues than the first. They are both, however, of a warming nature, for which reason they are administered to persons who have taken hemlock, a poison for which frankincense and panaces are used, chironion in particular. This last, too, is given in cases of poisoning by fungi.

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CHAP. 83. (11.)

REMEDIES FOR DISEASES OF THE HEAD. NYMPHÆA HERACLIA: TWO REMEDIES.

But we shall now proceed to point out the various classes of remedies for the several parts of the body, and the maladies to which those parts are subject, beginning in the first place with the head.

The root of nymphæa heraclia effects the cure of alopecy, if they are beaten up together, and applied. The polythrixs differs from the callitrichos in having white, rushlike suckers, larger leaves, and more numerous; the main stem, too, is larger. This plant strengthens the hair, prevents it from falling off, and makes it grow more thickly.

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CHAP. 84.

THE LINGULACA : ONE REMEDY.

The same is the case too with the lingulaca, a plant that grows in the vicinity of springs, and the root of which is reduced to ashes, and beaten up with hog's lard. Due care must be taken, however, that it is the lard of a female, of a black colour, and one that has never farrowed. Tile application is rendered additionally efficacious, if the ointment is applied in the sun. Root, too, of cyclaminos is employed in the same manner for a similar purpose. A decoction of root of hellebore in oil or in water is used for the removal of porrigo. Fur the cure of head-ache, root of all kinds of panaces is used. beaten up in oil; as also aristolochia and iberis, this last being applied to the head for an hour or more, if the patient can; bear it so long, care being taken to bathe in the meanwhile. The daucus, too, is curative of head-ache. Cyclasninos, intro- duced into the nostrils with honey, clears the head: used in the form of a liniment, it heals ulcers of the head. Peristereos, also, is curative of diseases of the head.

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CHAP. 85.

THE CACALIA OR LEONTICE: THREE REMEDIES.

The name of “cacalia” or “leontice” is given to a plant with seed resembling small pearls in appearance, and hanging down between large leaves: it is mostly found upon mountains. Fifteen grains of this seed are macerated in oil, and the head is rubbed with the mixture, the contrary way to the hair.

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CHAP. 86.

THE CALLITRICHOS: ONE REMEDY.

A sternutatory, too, is prepared from the callitrichos. The leaves of this plant are similar to those of the lentil, and the stems resemble fine rushes; the root is very diminutive. It grows in shady, moist localities, and has a burning taste in the mouth.

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CHAP. 87.

HYSSOP: TEN REMEDIES.

Hyssop, beaten up in oil, is curative of phthiriasis and prurigo of the head. The best hyssop is that of Mount Taurus in Cilicia, next to which in quality is the produce of Pamphylia and Smyrna. This plant is injurious to the stomach: taken with figs, it produces alvine evacuations, and used in combination with honey, it acts as an emetic. It is generally thought that, beaten up with honey, salt, and cum- min, it is curative of the stings of serpents.

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CHAP. 88.

THE LONCHITIS : FOUR REMEDIES.

The lonchitis is not, as most writers have imagined, the same plant as the xiphion or phasganion, although the seed of it does bear a resemblance to the point of a spear. The lonchitis, in fact, has leaves like those of the leek, of a reddish colour near the root, and more numerous there than on the upper part of the stem. It bears diminutive heads, which are very similar to our masks of comedy, and from which a small tongue protrudes: the roots of it are remarkably long. It grows in thirsty, arid soils.

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CHAP. 89.

THE XIPHION OR PHASGANION: FOUR REMEDIES.

The xiphion or phasganion, on the other hand, is found growing in humid localities. On first leaving the ground it has the appearance of a sword; the stem of it is two cubits in length, and the root is fringed like a hazel nut.

This root should always be taken up before harvest, and dried in the shade. The upper part of it, pounded with frankincense, and mixed with an equal quantity of wine, extracts fractured bones of the cranium, purulent matter in all parts of the body, and bones of serpents, when accidentally trodden upon; it is very efficacious, too, for poisons. In cases of head-ache, the head should be rubbed with hellebore, boiled and beaten up in olive oil, or oil of roses, or else with peucedanum steeped in olive oil or rose oil, and vinegar. This last plant, made lukewarm, is very good also for hemicrania and vertigo. It being of a heating nature, the body is rubbed with the root as a sudorific.

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CHAP. 90.

PSYLLION, CYNOÏDES, CRYSTALLION, SICELICON, OR CYNOMYIA; SIXTEEN REMEDIES. TIRYSELINUM: ONE REMEDY.

Psyllion, cynoïdes, crystallion, sicelicon, or cynomyia, has a slender root, of which no use is made, and numerous thin branches, with seeds resembling those of the bean, at the extremities. The leaves of it are not unlike a dog's head in shape; and the seed, which is enclosed in berries, bears a resemblance to a flea — whence its name "psyllion." This plant is generally found growing in vineyards, is of a cooling nature, and is extremely efficacious as a dispellent. The seed of it is the part made use of; for head-ache, it is applied to the forehead and temples with rose oil and vinegar, or else with oxycrate; it is used as a liniment for other purposes also. Mixed in the proportion of one acetabulum to one sextarius of water, it is left to coagulate and thicken; after which it is beaten up, and the thick solution is used as a liniment for all kinds of pains, abscesses, and inflammations.

Aristolochia is used as a remedy for wounds in the head; it has the property, too, of extracting fractured bones, not only from other parts of the body, but the cranium in particular. The same, too, with plistolochia.

Thryselinum is a plant not unlike parsley; the root of it, eaten, carries off pituitous humours from the head.

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CHAP. 91. (12.)

REMEDIES FOR DISEASES OF THE EYES.

It is generally thought that the greater centaury strengthens the sight, if the eyes are fomented with it steeped in water; and that by employing the juice of the smaller kind, in combination with honey, films and cloudiness may be dispersed, marks obliterated, and small flies removed which have got into the eve. It is thought also that sideritis is curative of albugo in beasts of burden. As to chelidonia, it is marvellously good for all the affections above mentioned. Root of panaces is applied, with polenta, to defluxions of the eyes; and for the purpose of keeping them down, henbane-seed is taken, in doses of one obolus, with an equal proportion of opium, in wine. Juice, too, of gentian is used as a lini- ment, and it sometimes forms an ingredient in the more active eyesalves, as a substitute for meconium. Euphorbia, applied in the form of a liniment, improves the eyesight, and for ophthalmia juice of plantago is injected into the eyes.

Aristolochia disperses films upon the eyes; and iberis, attached to the head with cinquefoil, is curative of defluxions and other diseases of the eyes. Verbascum is applied topically to defluxions of the eyes, and vervain is used for a similar purpose, with rose oil and vinegar. For the treatment of cataract and dimness of sight, cyclaminos is reduced to a pulp and divided into lozenges. Juice, too, of peucedanum, as already mentioned, mixed with meconium and oil of roses, is good for the sight, and disperses films upon the eyes. Psyllion, applied to the forehead, arrests defluxions of the eyes.

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CHAP. 92. (13.)

THE ANAGALLIS, OR CORCHORON; TWO VARIE- TIES OF IT: SIX REMEDIES.

The anagallis is called “corchoron” by some. There are two kinds of it, the male plant, with a red blossom, and the female, with a blue flower. These plants do not exceed a palm in height, and have a tender stem, with diminutive leaves of a rounded form, drooping upon the ground. They grow in gardens and in spots covered with water, the blue anagallis being the first to blossom. The juice of either plant, applied with honey, disperses films upon the eyes, suffusions of blood in those organs resulting from blows, and argema with a red tinge: if used in combination with Attic honey, they are still more efficacious. The anagallis has the effect also of dilating the pupil; hence the eye is anointed with it before the operation of couching for cataract. These plants are employed also for diseases of the eyes in beasts of burden.

The juice, injected into the nostrils, which are then rinsed with wine, acts as a detergent upon the head: it is taken also, in doses of one drachma, in wine, for wounds inflicted by serpents. It is a remarkable fact, that cattle will refuse to touch the female plant; but if it should so happen that, deceived by the resemblance — the flower being the only distinguishing mark — they have accidentally tasted it, they immediately have recourse, as a remedy, to the plant called “asyla,” but more generally known among us as “ferus oculus.” Some persons recommend those who gather it, to prelude by saluting it before sunrise, and then, before uttering another word, to take care and extract the juice immediately if this is done, they say, it will be doubly efficacious.

As to the juice of euphorbia, we have spoken of its properties at sufficient length already. In cases of ophthalmia, attended with swelling, it will be a good plan to apply wormwood beaten up with honey, as well as powdered betony.

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CHAP. 93.

THE ÆGILOPS : TWO REMEDIES.

The fistula of the eye, called “ægilops,” is cured by the agency of the plant of the same name, which grows among barley, and has a leaf like that of wheat. The seed is pounded for the purpose, and applied with meal; or else the juice is extracted from the stem and more pulpy leaves, the ears being first removed. This juice is incorporated with meal of three-month wheat, and divided into lozenges.

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CHAP. 94.

MANDRAGORA, CIRCÆON, MORION, OR HIPPOPHLOMOS; TWO VARIETIES OF IT: TWENTY-FOUR REMEDIES.

Some persons, too, were in the habit of employing mandragora for diseases of the eyes; but more recently the use of it for such a purpose has been abandoned. It is a well-ascertained fact, however, that the root, beaten up with rose oil and wine, is curative of defluxions of the eyes and pains in those organs; and, indeed, the juice of this plant still forms an ingredient in many medicaments for the eyes. Some persons give it the name of "circæon." There are two varieties, the white mandragora, which is generally thought to be the male plant, and the black, which is considered to be the female. It has a leaf narrower than that of the lettuce, a hairy stem, and a double or triple root, black without and white within, soft and fleshy, and nearly a cubit in length.

Both kinds bear a fruit about the size of a hazel-nut, enclosing a seed resembling the pips of a pear in appearance. The name given to the white plant by some persons is "arsen," by others "morion," and by others again, "hippophlomos." The leaves of it are white, while those of the other one are broader, and similar to those of garden lapathum in appearance. Persons, when about to gather this plant, take every precaution not to have the wind blowing in their face; and, after tracing three circles round it with a sword, turn towards the west and dig it up. The juice is extracted both from the fruit and from the stalk, the top being first removed; also from the root, which is punctured for the purpose, or else a decoction is made of it. The filaments, too, of the root are made use of, and it is sometimes cut up into segments and kept in wine.

It is not the mandragora of every country that will yield a juice, but where it does, it is about vintage time that it is collected: it has in all cases a powerful odour, that of the root and fruit the most so. The fruit is gathered when ripe, and dried in the shade; and the juice, when extracted, is left to thicken in the sun. The same is the case, too, with the juice of the root, which is extracted either by pounding

it or by boiling it down to one third in red wine. The leaves are best, kept in brine; indeed, when fresh, the juice of them is a baneful poison, and these noxious properties are far from being entirely removed, even when they are preserved in brine. The very odour of them is highly oppressive to the head, although there are countries in which the fruit is eaten. Persons ignorant of its properties are apt to be struck dumb by the odour of this plant when in excess, and too strong a dose of the juice is productive of fatal effects.

Administered in doses proportioned to the strength of the patient, this juice has a narcotic effect; a middling dose being one cyathus. It is given, too, for injuries inflicted by serpents, and before incisions or punctures are made in the body, in order to ensure insensibility to the pain. Indeed, for this last purpose, with some persons, the odour of it is quite sufficient to induce sleep. The juice is taken also as a substitute for hellebore, in doses of two oboli, in honied wine: hellebore, however, is more efficacious as an emetic, and as an evacuant of black bile.

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CHAP. 95.

HEMLOCK: THIRTEEN REMEDIES.

Hemlock, too, is a poisonous plant, rendered odious by the use made of it by the Athenian people, as an instrument of capital punishment: still, however, as it is employed for many useful purposes, it must not be omitted. It is the seed that is noxious, the stalk being eaten by many people, either green, or cooked in the saucepan. This stem is smooth, jointed like a reed, of a swarthy hue, often as much as two cubits in height, and branchy at the top. The leaves are like those of coriander, only softer, and possessed of a powerful odour. The seed is more substantial than that of anise, and the root is hollow and never used. The seed and leaves are possessed of refrigerating properties; indeed, it is owing to these properties that it is so fatal, the cold chills with which it is attended commencing at the extremities. The great remedy for it, provided it has not reached the vitals, is wine, which is naturally of a warming tendency; but if it is taken in wine. it is irremediably fatal.

A juice is extracted from the leaves and flowers; for it is at the time of its blossoming that it is in its full vigour. The seed is crushed, and the juice extracted from it is left to thicken in the sun, and then divided into lozenges. This preparation proves fatal by coagulating the blood — another deadly property which belongs to it; and hence it is that the bodies of those who have been poisoned by it are covered with spots. It is sometimes used in combination with water as a medium for diluting certain medicaments. An emollient poultice is also prepared from this juice, for the purpose of cooling the stomach; but the principal use made of it is as a topical application, to check defluxions of the eyes in summer, and to allay pains in those organs. It is employed also as an ingre- dient in eyesalves, and is used for arresting fluxes in other parts of the body: the leaves, too, have a soothing effect upon all kinds of pains and tumours, and upon defluxions of the eyes.

Anaxilaüs makes a statement to the effect, that if the mamillæ are rubbed with hemlock (luring virginity, they will always be hard and

firm: but a better-ascertained fact is, that applied to the mamillæ, it dries up the mill in women re- cetntly delivered; as also that, applied to the testes at the age of puberty, it acts most effectually as an antaphrodisiac. As to those cases in which it is recommended to take it internally as a remedy, I shall, for my own part, decline to mention them. The most powerful hemlock is that grown at Susa, in Parthia, the next best being the produce of Laconia, Crete, and Asia. In Greece, the hemlock of the finest quality is that of Megara, and next to it, that of Attica.

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CHAP. 96.

CRETHMOS AGRIOS : ONE REMEDY.

Crethmos agrios, applied to the eyes, removes rheum; and, with the addition of polenta, it causes tumours to disappear.

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CHAP. 97.

MOLYBDÆNA: ONE REMEDY.

Molybdæna also grows everywhere in the fields, a plant commonly known as “plumbago.” It has leaves like those of lapathum, and a thick, hairy root. Chewed and applied to the eye from time to time, it removes the disease called “plumbum,” which affects that organ.

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CHAP. 98.

THE FIRST KIND OF CAPNOS, KNOWN ALSO AS CHICKEN'S FOOT: ONE REMEDY.

The first kind of capnos, known also as "chicken's foot," is found growing on walls and hedges: it has very thin, straggling branches, with a purple blossom. It is used in a green state, and the juice of it disperses films upon the eyes; hence it is that it is employed as an ingredient in medicinal compositions for the eyes.

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CHAP. 99.

THE ARBORESCENT CAPNOS: THREE REMEDIES.

There is another kind of capnos also, similar both in name and properties, but different in appearance. It is a branchy plant, is extremely delicate, has leaves like those of coriander, is of an ashy colour, and bears a purple flower: it grows in gardens, and amid crops of barley. Employed in the form of an ointment for the eyes, it improves the sight, producing tears in the same way that smoke does, to which, in fact, it owes its name. It has the effect also of preventing the eyelashes, when pulled out, from growing again.

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CHAP. 100.

THE ACORON OR AGRION: FOURTEEN REMEDIES.

The acoron has leaves similar to those of the iris, only narrower, and with a longer stalk; the roots of it are black, and not so veined, but in other respects are similar to those of the iris, have an acrid taste and a not unpleasant smell, and act as a carminative. The best roots are those grown in Pontus, the next best those of Galatia, and the next those of Crete; but it is in Colchis, on the banks of the river Phasis, and in various other watery localities, that they are found in the greatest abundance, When fresh, they have a more powerful odour than when kept for some time: these of Crete are more blanched than the produce of Pontus. They are cut into pieces about a finger in length, and dried in leather bags in the shade.

There are some authors who give the name of "acoron" to the root of the oxymyrsine; for which reason also some prefer giving that plant the name of "acorion." It has powerful properties as a calorific and resolvent, and is taken in drink for cataract and films upon the eyes; the juice also is extracted, and taken for injuries inflicted by serpents.

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CHAP. 101.

THE COTYLEDON: TWO VARIETIES OF IT: SIXTY-ON, REMEDIES.

The cotyledon is a small herbaceous plant, with a diminu- tive, tender stem, and an unctuous leaf, with a concave surface like that of the cotyloïd cavity of the thigh. It grows in maritime and rocky localities, is of a green colour, and has a rounded root like an olive: the juice of it is remedial for diseases of the eyes.

There is another kind also of the same plant, the leaves of which are of a dirty green colour, larger than those of the other, and growing in greater numbers about the root, which is surrounded with them just as the eye is with the socket. These leaves have a remarkably astringent taste, and the stem is of considerable length, but extremely slender. This plant is employed for the same purposes as the iris and aizoüm.

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CHAP. 102.

THE GREATER AIZOÜM, ALSO CALLED BUPHTHALMOS, ZOÖPHTHALMOS, STERGETHRON, HYPOGESON, AMBROSION, AMERIMNON, SEDTUM MAGNUM, OR DIGITELLUS: THIRTY-SIX REMIIEDIES. TIHE SMALLER AIZOÜM, ALSO CALLED ERITHALES, TRITHALES, CHRYSOTHALES, ISOETES OR SEDUM: THIRTY-TWO REMEDIES.

Of the plant known as aizoüm there are two kinds; the larger of which is sown in earthen pots. By some persons it is known as “buphthalmos,” and by others as “zoöpthalmos,” or else as stergethron,” because it forms an ingredient in the composition of philtres. Another name given to it is “hypogeson,” from the circumstance that it generally grows upon the eaves of houses: some persons, again, give it the names of “ambrosion” and “amerimnon.” In Italy it is known as “sedum magnum,” “oculus,” or “digitellus.” The other kind of aizoüm is more diminutive, and is known by some persons as “erithales” and by others as “trithales,” from the circusmstance that it blossoms three times in the year. Other names given to it are “chrysothales” and “isoëtes:” but aizoüm is the colmmon appellation of them both, from their being always green.

The larger kind exceeds a cubit in height, and is somewhat thicker than the thumb: at the extremity, the leaves are simi- lar to a tongue in shape, and are fleshy, unctuous, full of juice, and about as broad as a person’s thumb. Some are bent downwards towards the ground, while others again stand upright, the outline of them resembling an eye in shape. The smaller kind grows upon walls, old rubbish of houses, and tiled roof,; it is branchy from the root, anti covered with leaves to the extremity. These leaves are narrow, pointed, and juicy: the stem is a palm in height, and the root is never used.

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CHAP. 103.

THE ANDRACHLE AGRIA OR ILLECEBRA: THIRTY-TWO REMEDIES.

A similar plant is that known to the Greeks by the name of "andrachle agria," and by the people of Italy as the "illece- bra." Its leaves, though small, are larger than those of the last-named plant, but growing on a shorter stem. It grows in craggy localities, and is gathered for use as food. All these plants have the same properties, being cooling and astringent. The leaves, applied topically, or the juice, in form of a liniment, are curative of defluxions of the eyes: this juice too acts as a detergent upon ulcers of the eyes, makes new flesh, and causes them to cicatrize; it cleanses the eyelids also of viscous matter. Applied to the temples, both the leaves and the juice of these plants are remedial for head-ache; they neutralize the venom also of the phalangium; and the greater aizoüm, in particular, is an antidote to aconite. It is asserted, too, that those who carry this last plant about them will never be stung by the scorpion.

These plants are curative of pains in the ears; which is the case also with juice of henbane, applied in moderate quantities, of achillea, of the smaller centaury and plantago, of peucedanum in combination with rose-oil and opium, and of acoron mixed with rose-leaves. In all these cases, the liquid is made warm, and introduced into the ear with the aid of a syringe. The cotyledon is good, too, for suppurations in the ears, mixed with deer's marrow made hot. The juice of pounded root of ebulum is strained through a linen cloth, and then left to thicken in the sun: when wanted for use, it is moistened with oil of roses, and made hot, being employed for the cure of imposthumes of the parotid glands. Vervain and plantago are likewise used for the cure of the same malady, as also sideritis, mixed with stale axle-grease.

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CHAP. 104.

A REMEDY FOR DISEASES OF THE NOSTRILS.

Aristolochia, mixed with cyperus, is curative of polypus of the nose.

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CHAP. 105.

REMEDIES FOR DISEASES OF THE TEETH.

The following are remedies for diseases of the teeth: root of panaces, chewed, that of the chironion in particular, and juice of panaces, used as a collutory; root, too, of henbane, chewed with vinegar, and root of polemonia. The root of plantago is chewed for a similar purpose, or the teeth are rinsed with a decoction of the juice mixed with vinegar. The leaves, too, are said to be useful for the gums, when swollen with sanious blood, or if there are discharges of blood therefrom. The seed, too, of plantago is a cure for abscesses in the gums, and for gum-boils. Aristolochia has a strengthening effect upon the gums and teeth; and the same with vervain, either chewed with the root of that plant, or boiled in wine and vinegar, the decoction being employed as a gargle. The same is the case, also, with root of cinquefoil, boiled down to one third, in wine or vinegar; before it is boiled, however, the root should be washed in sea or salt water: the decoction, too, must be kept a considerable time in the mouth. Some persons prefer cleaning the teeth with ashes of cinquefoil.

Root of verbascum is also boiled in wine, and the decoction used for rinsing the teeth. The same is done too with hyssop and juice of peucedanum, mixed with opium; or else the juice of the root of anagallis, the female plant in particular, is injected into the nostril on the opposite side to that in which the pain is felt.

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CHAP. 106.

ERIGERON, PAPPUS, ACANTHIS, OR SENECIO: EIGHT REMEDIES.

Erigeron is called by our people "senecio." It is said that if a person, after tracing around this plant with an imple- ment of iron, takes it up and touches the tooth affected with it three times, taking care to spit each time on the ground, and then replaces it in the same spot, so as to take root again, he will never experience any further pain in that tooth. This plant has just the appearance and softness of trixago, with a number of small reddish-coloured stems: it is found growing upon walls, and the tiled roofs of houses. The Greeks have given it the name of "erigeron," because it is white in spring. The head is divided into numerous downy filaments, which resemble those of the thorn, protruding from between the divisions of the head: hence it is that Callimachus has given it the name of "acanthis," while others, again, call it "pappus."

After all, however, the Greek writers are by no means agreed as to this plant; some say, for instance, that it has leaves like those of rocket, while others maintain that they resemble those of the robur, only that they are considerably smaller. Some, again, assert that the root is useless, while others aver that it is beneficial for the sinews, and others that it produces suffocation, if taken in drink. On. the other hand, some have prescribed it in wine, for jaundice and all affections of the bladder, heart, and liver, and give it as their opinion that it carries off gravel from the kidneys. It has been prescribed, also, by them for sciatica, the patient taking one drachma in oxymel, after a walk; and has been recommended as extremely useful for griping pains in the bowels, taken in raisin wine. They assert, also, that used as an aliment with vinegar, it is wholesome for the thoracic organs, and recommend it to be grown in the garden for these several purposes.

In addition to this, there are some authorities to be found, which distinguish another variety of this plant, but without mentioning its peculiar characteristics. This last they recom- mend to be taken in water, to neutralize the venom of serpents, and prescribe it to be

eaten for the cure of epilepsy. For my own part, however, I shall only speak of it in accordance with the uses made of it among us Romans, uses based upon the results of actual experience. The down of this plant, beaten up with saffron and a little cold water, is applied to defluxions of the eyes; parched with a little salt, it is employed for the cure of scrofulous sores.

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CHAP. 107.

THE EPHEMERON: TWO REMEDIES.

The ephemeron has leaves like those of the lily, but smaller; a stem of the same height, a blue flower, and a seed of which no use is made. The root is single, about the thickness of one's finger, and an excellent remedy for diseases of the teeth; for which purpose it is cut up in pieces, and boiled in vinegar, the decoction being used warm as a collutory. The root, too, is employed by itself to strengthen the teeth, being inserted for the purpose in those that are hollow or carious.

Root of chelidonia is also beaten up with vinegar, and kept in the mouth. Black hellebore is sometimes inserted in carious teeth; and a decoction of either of these last-mentioned plants, in vinegar, has the effect of strengthening loose teeth.

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CHAP. 108.

THE LABRUM VENEREUM : ONE REMEDY.

Labrum Venereum is the name given to a plant that grows in running streams. It produces a small worm, which is crushed by being rubbed upon the teeth, or else enclosed in wax and inserted in the hollow of the tooth. Care must be taken, however, that the plant, when pulled up, does not touch the ground.

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CHAP. 109.

THE BATRACHION, RANUNCULUS, OR STRUMUS ; FOUR VARIETIES OF IT: FOURTEEN REMEDIES.

The plant known to the Greeks as “batrachion,” we call ranunculus. There are four varieties of it, one of which has leaves somewhat thicker than those of coriander, nearly the size of those of the mallow, and of a livid hue: the stem of the plant is long and slender, and the root white; it grows on moist and well-shaded embankments. The second kind is more foliated than the preceding one, the leaves have more numerous incisions, and the stems of the plant are long. The third variety is smaller than the others, has a powerful smell, and a flower of a golden colour. The fourth kind is very like the one last mentioned, but the flower is milk-white.

All these plants have caustic properties: if the leaves are applied unboiled, they raise blisters like those caused by the action of fire; hence it is that they are used for the removal of leprous spots, itch-scabs, and brand marks upon the skin. They form an ingredient also in all caustic preparations, and are applied for the cure of alopecy, care being taken to remove them very speedily. The root, if chewed for some time, in cases of tooth-ache, will cause the teeth to break; dried and pulverized, it acts as a sternutatory.

Our herbalists give this plant the name of “strumus,” from the circumstance of its being curative of strumous sores and inflamed tumours, for which purpose a portion of it is hung up in the smoke. It is a general belief, too, with them, that if it is replanted, the malady so cured will reappear — a criminal practice, for which the plantago is also employed. The juice of this last-mentioned plant is curative of internal ulcerations of the mouth; and the leaves and root are chewed for a similar purpose, even when the mouth is suffering from defluxions. Cinquefoil effects the cure of ulcerations and offensive breath; psyllium is used also for ulcers of the mouth.

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CHAP. 110.

REMEDIAL PREPARATIONS FOR OFFENSIVE BREATH : TWO KINDS OF THEM.

We shall also here make mention of certain preparations for the cure of offensive breath — a most noisome inconvenience. For this purpose, leaves of myrtle and lentisk are taken in equal proportions, with one half the quantity of Syrian nut-galls; they are then pounded together and sprinkled with old wine, and the composition is chewed in the morning. In similar cases, also, ivy berries are used, in combination with cassia and myrrh; these ingredients being mixed, in equal proportions, with wine.

For offensive odours of the nostrils, even though attended with carcinoma, the most effectual remedy is seed of dracontium beaten up with honey. An application of hyssop has the effect of making bruises disappear. Brand marks in thle face are healed by rubbing them with mandragora.

SUMMARY. — Remedies, narratives, and observations, twelve hundred and ninety-two.

ROMAN AUTHORS QUOTED. — C. Valgius, Pompeius Lennæus, Sextius Niger who wrote in Greek, Julius Bassus who wrote in Greek, Antonius Castor, Cornelius Celsus, Fabi- anus

FOREIGN AUTHORS QUOTED. — Theophrastus, Apollodorus, Peniocritus, Juba, Orpheus, Pythagoras, Mago, Menan- der who wrote the “Biochresta,” Nicander, Homer,Hesiod, Musæus, Sophocles, Xanthus, Anaxilaüs.

MEDICAL AUTHORS QUOTED. — Mnesitheus, Callimachus, Phanias the physician, Timaristus, Simus, Hippocrates, Chrysippus, Diocles, Ophelion, Heraclides, Hicesius, Dionysius, Apollodorus of Citium, Apollodorus of Tarentum, Praxagoras, Plistonicus, Medius, Dieuches, Cleophantus, Philistion, Asclepiades, Crateuas, Petronius Diodotus, Iollas, Erasistratus, Diagoras, Andreas, Mnesides, Epicharmus, Damion, Sosimenes, Tlepolemus, Metrodorus, Solon, Lycus, Olympias of Thebes, Philinus, Petrichus, Micton, Glaucias, Xenocrates.

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BOOK XXVI. A CONTINUATION OF THE REMEDIES DERIVED FROM PLANTS, CLASSIFIED ACCORDING TO PARTICULAR DISEASES.

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CHAP. 1. (1.)

NEW FORMS OF DISEASE.

THE face of man has recently been sensible of new forms of disease, unknown in ancient times, not only to Italy, but to almost the whole of Europe. Still, however, they have not as yet extended to the whole of Italy, nor have they made any very great inroads in Illyricum, Gaul, or Spain, or indeed any other parts, to so great an extent as in Rome and its environs. Though unattended with pain, and not dangerous to life, these diseases are of so loathsome a nature, that any form of death would be preferable to them.

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CHAP. 2.

THE NATURE OF LICHEN.

The most insupportable of all these diseases is the one which, after its Greek appellation, is known to us as “lichen.” In consequence, however, of its generally making its first appearance at the chin, the Latin’s, by way of joke, originally — so prone are mankind to make a jest of the misfortunes of others — gave it the name of “mentagra;” an appellation which has since become established in general use. In many cases, however, this disease spreads over the interior of the mouth, and takes possession of the whole face, with the sole exception of the eyes; after which, it passes downwards to the neck, breast, and hands, covering them with foul furfuraceous eruptions.

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CHAP. 3.

AT WHAT PERIOD LICHEN FIRST MADE ITS APPEARANCE IN ITALY.

This curse was unknown to the ancients, and in the times of our fathers even, having first entered Italy in the middle of the reign of the Emperor Tiberius Claudius Cæsar; where it was introduced from Asia, in which country it had lately made its appearance, by a member of the equestrian order at Rome, a native of Perusiun, secretary to the quæstor. The disease, however, did not attack either females or slaves, nor yet the lower orders, or, indeed, the middle classes, but only the nobles, being communicated even by the momentary contact requisite for the act of salutation. Many of those who persevered in undergoing a course of remedial treatment, though cured of the disease, retained scars upon the body more hideous even than the malady itself; it being treated with cauteries, as it was certain to break out afresh, unless means were adopted for burning it out of the body by cauterizing to the very bone.

Upon this occasion several physicians repaired to Rome from Egypt, that fruitful parent of maladies of this nature, men who devoted themselves solely to this branch of medical practice; and very considerable were the profits they made. At all events, it is a well-known fact that Manilius Cornutus, a personage of prætorian rank, and legatus of the province of Aquitania, expended no less a sum than two hundred thousand sesterces upon his cure.

It is much more frequently, on the other hand, that we hear of new forms of diseases attacking the lower orders; a singular fact, and one quite unequalled for the marvellous phænomena which sometimes attend these outbreaks. Thus, for instance, we find an epidemic suddenly making its appearance in a certain country, and then confining itself, as though it had made its election so to do, to certain parts of the body, certain ages, and even certain pursuits in life. In the same way, too, while one class of diseases attacks the young, another confines itself to adults; while one malady extends itself only to the higher classes, another is felt exclusively by the poor.

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CHAP. 4.

CARBUNCLE.

We find it stated in the Annals, that it was in the censorship of L. Paulus and Q. Marcius that carbuncle was first introduced into Italy, a malady which till then had confined itself solely to the province of Gallia Narbonensis. In the year in which I am writing these lines, two persons of consular rank have died of this disease, Julius Rufus and Q. Lecanius Bassus; the former in consequence of an incision unskilfully made by his medical attendants, the latter through a wound upon the thumb of the left hand by pricking a carbuncle with a needle, a wound so small originally as to be hardly perceptible.

This disease makes its appearance in the more hidden parts of the human body, and mostly beneath the tongue. It originally has the form of a hard, red, pimple, with a blackish head mostly, though sometimes of a livid colour. It produces tension of the flesh, but unattended with swelling, pain, or any itching sensation; indeed, the only symptom that accompanies it is a confirmed drowsiness, which overpowers the patient, and carries him off in the course of three days. Sometimes, however, it is accompanied with shuddering, and small pustules about the sore; and occasionally, though but rarely, with fever. When these symptoms extend to the fauces and œsophagus, death ensues with the greatest rapidity.

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CHAP. 5

ELEPHANTIASIS.

We have already stated that elephantiasis was unknown in Italy before the time of Pompeius Magnus. This malady, too, like those already mentioned, mostly makes its first appearance in the face. In its primary form it bears a considerable resemblance to a small lentil upon the nose; the skin gradually dries up all over the body, is marked with spots of various colours, and presents an unequal surface, being thick in one place, thin in another, indurated every here and there, and covered with a sort of rough scab. At a later period, the skin assumes a black hue, and compresses the flesh upon the bones, the fingers and toes becoming swollen.

This disease was originally peculiar to Egypt. Whenever it attacked the kings of that country, it was attended with peculiarly fatal effects to the people, it being the practice to temper their sitting-baths with human blood, for the treatment of the disease. As for Italy, however, its career was very soon cut short: the same was the case, too, with the disease known as “gemursa” Fée thinks that this may have been a sort of abscess similar to those between the fingers which are known as *fourches* by the French, and by medical men as “Aposthema phalangum.” Gruner considers it to be a sort of Elephantiasis, and Triller identifies it with the disease called *Gumretha* by the Talmudists. to the ancients, a malady which made its appearance between the toes, and the very name of which is now buried in oblivion.

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CHAP. 6.

COLIC.

It is a remarkable fact that some diseases should disappear from among us, while others, again, should continue to prevail, colic for example. It was only in the reign of Tiberius Cæsar that this malady made its appearance in Italy, the emperor himself being the first to be attacked by it; a circumstance which produced considerable mystification throughout the City, when it read the edict issued by that prince excusing his inattention to public business, on the ground of his being laid up with a disease, the very name of which was till then unknown. To what cause are we to attribute these various diseases, or how is it that we have thus incurred the anger of the gods? Was it deemed too little for man to be exposed to fixed and determinate classes of maladies, already more than three hundred in number, that he must have new forms of disease to alarm him as well? And then, in addition to all these, not less in number are the troubles and misfortunes which man brings upon himself!

The remedies which I am here describing, are those which were universally employed in ancient times, Nature herself, so to say, making up the medicines: indeed, for a long time these were the only medicines employed.

(2.) Hippocrates, it is well known, was the first to compile a code of medical precepts, a thing which he did with the greatest perspicuity, as his treatises, we find, are replete with information upon the various plants. No less is the information which we gain from the works of Diocles of Carystus, second only in reputation, as well as date, to Hippocrates. The same, too, with reference to the works of Praxagoras, Chrysippus, and, at a later period, Erasistratus of Cos. Herophilus too, though himself the founder of a more refined system of medicine, was extremely profuse of his commendations of the use of simples. At a later period, however, experience, our most efficient instructor in all things, medicine in particular, gradually began to be lost sight of in mere words and verbiage: it being found, in fact, much more agreeable to sit in schools, and to listen to the talk

of a professor, than to go a simpling in the deserts, and to be searching for this plant or that at all the various seasons of the year.

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CHAP. 7. (3.)

TE NEW SYSTEM OF MEDICINE: ASCLEPIADES THE PHYSICIAN.

Still, however, the ancient theories remained unshaken, based as they were upon the still existing grounds of universally acknowledged experience; until, in the time of Pom- peius Magnus, Asclepiades, a professor of rhetoric, who considered himself not sufficiently repaid by that pursuit, and whose readiness and sagacity rendered him better adapted for any other than forensic practice, suddenly turned his attention to the medical art. Having never practised medicine, and being totally unacquainted with the nature of remedies — a knowledge only to be acquired by personal examination and actual experience — as a matter of course, he was obliged to renounce all previously-established theories, and to trust rather to his flowing periods and his well-studied discourses, for gaining an influence upon the minds of his audience.

Reducing the whole art of medicine to an estimation solely of primary causes, he made it nothing but a merely col- jectural art, and established it as his creed, that there are five great principles of' treatment for all diseases in common; diet, use or non-use of wine, frictions, exercise on foot, and ex- ercise in a carriage or on horseback. As every one perceived that each of these methods of treatment lay quite within his own reach, all, of course, with the greatest readiness gave their assent, willing as they were to believe that to be true which was so easy of acquisition; and hence it was that he attracted nearly all the world about him, as though he had been sent among mankind on a special mission from heaven.

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CHAP. 8.

TIE CHANGES EFFECTED BY ASCLEPIADES IN THE PRACTICE OF MEDICINE.

In addition to this, he had a wonderful tact in gaining the full confidence of his patients: sometimes he would make then a promise of wine, and then seize the opportune moment for administering it, while on other occasions, again, he would prescribe cold water: indeed, as Herophilus, among the ancients, had been the first to enquire into the primary causes of disease, and Cleophantus had brought into notice the treat- ment of diseases by wine, so did Asclepiades, as we learn from M. Varro, prefer to be indebted for his surname and repute to the extensive use made by him of cold water as a remedy. He employed also various other soothing remedies for his patients; thus, for instance, it was he that introduced swinging beds, the motion of which might either lull the malady, or induce sleep, as deemed desirable. It was he, too, that brought baths into such general use, — a method of treatment that was adopted with the greatest avidity — in addition to numerous other modes of treatment of a pleasant and soothing nature. By these means he acquired a great professional reputation, and a no less extended fame; which was very considerably enhanced by the following incident: meeting the funeral procession of a person unknown to him, he ordered the body to be removed from the funeral pile and carried home, and was thus the means of saving his life. This circumstance I am the more desirous to mention, that it may not be imagined that it was on slight grounds only that so extensive a revolution was effected in the medical art.

There is, however, one thing, and one thing only, at which we have any ground for indignation,-the fact, that a single individual, and he belonging to the most frivolous nation in the world, a man born in utter indigence, should all on a sudden, and that, too, for the sole purpose of increasing his income, give a new code of medical laws to mankind; laws, however, be it remembered, which have been annulled by numerous authorities since his day. The success of Asclepiades was considerably promoted by many of the usages of

ancient medicine, repulsive in their nature, and attended with far too much anxiety: thus, for instance, it was the practice to cover up the patient with vast numbers of clothes, and to adopt every possible method of promoting the perspiration; to order the body to be roasted before a fire; or else to be continually sending the patient on a search for sunshine, a thing hardly to be found in a showery climate like that of this city of ours; or rather, so to say, of the whole of Italy, so prolific as it is of fogs and rain. It was to remedy these inconveniences, that he introduced the use of hanging baths, an invention that was found grateful to invalids in the very highest degree.

In addition to this, he modified the tortures which had hitherto attended the treatment of certain maltdies; as in quinzy for instance, the cure of which before his time had been usually effected by the introduction of an instrument into the throat. He condemned, and with good reason, the indiscriminate use of emetics, which till then had been resorted to in; most extraordinary degree. He disapproved also of the practice of administering internally potions that are naturally injurious to the stomach, a thing that may truthfully be pronounced of the greater part of them. Indeed it will be as well to take an early opportunity of stating what are the medicaments which act beneficially upon the stomach.

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CHAP. 9. (4).

REMARKS IN DISPRAISE OF THE PRACTICES OF MAGIC.

But above all things, it was the follies of magic more particularly that contributed so essentially to his success — follies which had been carried to such a pitch as to destroy all confidence in the remedial virtues of plants. Thus, for instance, it was stoutly maintained that by the agency of the plant aethiopis rivers and standing waters could be dried up, and that by the very touch * * * * all bars and doors might be opened: that if the plant achænis were thrown into the ranks of the enemy it would be certain to create a panic and put them to flight: that latace was given by the Persian kings to their ambassadors, to ensure them an abundant supply of everything wherever they might happen to be: with numerous other reveries of a similar nature. Where, I should like to know, were all these plants, when the Cimbri and Teutones brought upon us the horrors of warfare with their terrific yells? or when Lucullus defeated, with a few legions, so many kings who ruled over the Magi? Why is it too that the Roman generals have always made it their first care in warfare to make provision for the victualling of their troops? And how was it that at Pharsalia the troops of Cæsar were suffering from famine, if an abundance of everything could have been ensured by the fortunate possession of a single plant? Would it not have been better too for Scipio Æmilianus to have opened the gates of Carthage by touching them with a herb, than to have taken so many years to batter down its bulwarks with his engines of war?

Turning to the present moment, let them, by the agency of the herb meroïs, dry up the Pomptine Marshes, if they can, and by these means restore so much territory to the regions of Italy in the neighbourhood of our city. In the works, too, of Democritus, already mentioned, we find a recipe for the composition of a medicament which will ensure the procreation of issue, both sure to be good and fortunate. — What king of Persia, pray, ever obtained that blessing? It really would be a marvellous fact that human credulity, taking its

rise originally in the very soundest of notions, should have ultimately arrived at such a pitch as this, if the mind of man understood, under any circumstances, how to keep within the bounds of moderation; and if the very system of medicine thus introduced by Asclepiades, had not been carried to a greater pitch of extravagance than the follies of magic even, an assertion which I shall prove on a more appropriate occasion.

Such, however, is the natural constitution of the human mind, that, be the circumstances what they may, commencing with what is necessary it speedily arrives at the point of launching out in excess.

We will now resume our account of the medicinal properties of the plants mentioned in the preceding Book, adding to our description such others as the necessities of the case may seem to require.

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CHAP. 10.

LICHEN: FIVE REMEDIES.

As to the treatment of lichen, so noisome a disease as it is, we shall here give a number of additional remedies for it, gathered from all quarters, although those already described are by no means few in number. For the cure of lichen plantago is used, pounded, cinquefoil also, root of albucus in combination with vinegar, the young shoots of the fig-tree boiled in vinegar, or roots of marsh-mallow boiled down to one-fourth with glue and vinegar. The sores are rubbed also with pumice, and then fomented with root of rumex bruised in vinegar, or with scum of viscus kneaded up with lime. A decoction, too, of tithymalos with resin is highly esteemed for the same purpose.

But to all these remedies the plant known as "lichen," from its efficacy as a cure, is held in preference. It is found growing among rocks, and has a single broad leaf near the root. and a single long stem, with small leaves hanging from it. This plant has the property also of effacing brand marks, being beaten up with honey for that purpose. There is another kind of lichen also, which adheres entirely to rocks, like moss, and which is equally used as a topical application. The juice of it, dropt into wounds, or applied to abscesses, has the property of arresting hæmorrhage: mixed with honey, it is curative of jaundice, the face and tongue being rubbed with it. Under this mode of treatment, the patient is recommended to wash in salt water, to anoint himself with oil of almonds, and to abstain from garden vegetables. For the cure of lichen, root of thapsia is also used, bruised in honey.

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CHAP. 11.

QUINZY.

For the treatment of quinzy, we find argemonia recommended, in wine; a decoction of hyssop, boiled with figs, used as a gargle; peucedanum, with an equal proportion of sea-calf's rennet; proserpinaca, beaten up in the pickle of the mæna and oil, or else placed beneath the tongue; as also juice of cinquefoil, taken in doses of three cyathi. Used as a gargle, juice of cinquefoil is good for the cure of all affections of the fauces: verbascum, too, taken in wine, is particularly useful for diseases of the tonsillary glands.

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CHAP. 12. (5.)

SCROFULA.

For the cure of scrofula plantago is employed, chelidonia mixed with honey and axle-grease, cinquefoil, and root of per- solata — this last being applied topically, and covered with the leaf of the plant — artemisia, also, and an infusion of the root of mandragora in water. The large-leaved sideritis, cleft by the left hand with a nail, is worn attached as an amulet: but after the cure has been effected, due care must be taken to preserve the plant, in order that it may not be set again, to promote the wicked designs of the herbalists and so cause the disease to break out afresh; as sometimes happens in the cases already mentioned, and others which I find stated, in reference to persons cured by the agency of artemisia or plantago.

Damasonion, also known as alcea, is gathered at the summer solstice, and applied with rain-water, the leaves being beaten up, or the root pounded, with axle-grease, so as to admit, when applied, of being covered with a leaf of the plant. The same plan is adopted also for the cure of all pains in the neck, and tumours on all parts of the body.

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CHAP. 13.

THE PLANT CALLED BELLIS: TWO REMEDIES.

Bellis is the name of a plant that grows in the fields, with a white flower somewhat inclining to red; if this is applied with artemisia, it is said, the remedy is still more efficacious.

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CHAP. 14.

THE CONDURDUM.

The condurdum, too, is a plant with a red blossom, which flowers at the summer solstice. Suspended from the neck, it arrests scrofula, they say: the same being the case also with vervain, in combination with plantago. For the cure of all diseases of the fingers, hangnails in particular, cinquefoil is used.

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CHAP. 15.

COUGH.

Of all diseases of the chest, cough is the one that is the most oppressive. For the cure of this malady, root of panaces in sweet wine is used, and in cases where it is attended with spitting of blood, juice of henbane. Henbane, too, used as a fumigation, is good for cough; and the same with scordotis, mixed with nasturtium and dry resin, beaten up with honey: employed by itself also, scordotis facilitates expectoration, a property which is equally possessed by the greater centaury, even where the patient is troubled with spitting of blood; for which last juice of plantago is very beneficial. Betony, taken in doses of three oboli in water, is useful for purulent or bloody expectorations: root also of persolata, in doses of one drachma, taken with eleven pine-nuts; and juice of peu- cedanum.

For pains in the chest, acoron is remarkably useful; hence it is that it is so much used an ingredient in antidotes. For cough, daucus and the plant scythice are much employed, this last being good, in fact, for all affections of the chest, coughs, and purulent expectorations, taken in doses of three oboli, with the same proportion of raisin wine. The verbascum too, with a flower like gold, is similarly employed.

(6.) This last-named plant is so remarkably energetic, that an infusion of it, administered in their drink, will relieve beasts of burden, not only when troubled with cough, but when broken-winded even — a property which I find attributed to gentian also. Root of cacalia chewed, or steeped in wine, is good for cough as well as all affections of the throat. Five sprigs of hyssop, with two of rue and three figs, act detergently upon the thoracic organs and allay cough,

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CHAP. 16.

BECHION, OTHERWISE KNOWN AS ARCION, CHAMÆ LEUCE OR TUSSILAGO: THREE REMEDIES.

Bechion is known also as tussilago: there are two kinds of it. Wherever it is found growing wild, it is generally thought that there is a spring of water below, and it is looked upon as a sure sign that such is the case, by persons in search of water. The leaves are somewhat larger than those of ivy, and are some five or seven in number, of a whitish hue beneath, and a pale green on the upper surface, The plant is destitute of stem, blossom, and seed, and the root is very diminutive. Some persons are of opinion that this bechion is identical with the arcion, known also as the "chamæleuce." The smoke of this plant in a dry state, inhaled by the aid of a reed and swallowed, is curative, they say, of chronic cough; it is necessary, however, at each inhalation to take a draught of raisin wine.

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CHAP. 17.

THE BECHION, KNOWN ALSO AS SALVIA: FOUR REMEDIES.

There is another bechion also, known to some persons as “salvia,” and bearing a strong resemblance to verbascum. This plant is triturated, and the juice strained off and taken warm for cough and for pains in the side: it is considered very beneficial also for the stings of scorpions and sea- dragons. It is a good plan, too, to rub the body with this juice, mixed with oil, as a preservative against the stings of serpents. A bunch of hyssop is sometimes boiled down with a quarter of a pound of honey, for the cure of cough.

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CHAP. 18. (7.)

AFFECTIONS OF THE SIDE, CHEST, AND STOMACH.

For the cure of pains in the side and chest, verbascum is used in water, with rue; powdered betony is also taken in warm water. Juice of scordotis is used as a stomachic, centaury also, gentian taken in water, and plantago, either eaten with the food, or mixed with lentils or a pottage of alica. Betony, which is in general prejudicial to the stomach, is remedial for some stomachic affections, taken in drink or chewed, the leaves being used for the purpose. In a similar manner too, aristolochia is taken in drink, or dried agaric is chewed, a draught of undiluted wine being taken every now and then. Nymphæa heraclia is also applied topically in these cases, and juice of peucedanum. For burning pains in the stomach psyllion is applied, or else cotyledon beaten up with polenta, or aizoüm.

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CHAP. 19.

MOLON OR SYRON. AMOMUM.

Molon is a plant with a striated stem, a soft diminutive leaf, and a root four fingers in length, at the extremity of which there is a head like that of garlic; by some persons it is known as “syron.” Taken in wine, it is curative of affections of the stomach, and of hardness of breathing. For similar purposes the greater centaury is used, in an electuary; juice also of plantago, or else the plant itself, eaten with the food; pounded betony, in the proportion of one pound to half an ounce of Attic honey, taken daily in warm water; and aristolochia or agaric, taken in doses of three oboli, in warm water or asses’ milk.

For hardness of breathing an infusion of cissanthemos is taken in drink, and for the same complaint, as also for asthma, hyssop. For pains in the liver, chest, and side, if unattended with fever, juice of peucedanum is used. For spitting of blood agaric is employed, in doses of one victoriatus, bruised and administered in five cyathi of honied. wine: amomum, too, is equally useful for that purpose. For liver diseases in particular, teucria is taken fresh, in doses of four drachme to one hemina of oxycrate; or else betony, in the proportion of one drachma to three cyathi of warm water. For diseases or the heart, betony is recommended, in doses of one drachma to two cyathi of cold water. Juice of cinquefoil is remedial for diseases of the liver and lungs, and for spitting of blood as well as all internal affections of the blood. The two varieties of anagallis are wonderfully efficacious for liver complaints. Patients who eat the plant called “capnos” discharge the bile by urine. Acoron is also remedial for diseases of the liver, and daucus is useful for the thorax and the pectoral organs.

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CHAP. 20

THE EPHEDRA OR ANABASIS; THREE REMEDIES.

The ephedra, by some persons called “anabasis,” mostly grows in localities exposed to the wind. It climbs the trunks of trees, and hangs down from the branches, is destitute of leaves, but has numerous suckers, jointed like a bulrush; the root is of a pale colour. This plant is given, pounded, in astringent red wine, for cough, asthma, and gripings in the bowels. It is administered also in the form of a pottage, to which some wine should be added. For these complaints, gentian is also used, being steeped in water the day before, and then pounded and given in doses of one denarius, in three cyathi of wine.

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CHAP. 21.

GEUM: THREE REMEDIES.

Geum is a plant with thin, diminutive roots, black, and aromatic. It is curative not only of pains in the chest and sides, but is useful also for dispelling crudities, owing to its agreeable flavour. Vervain, too, is good for all affections of the viscera, and for diseases of the sides, lungs, liver, and thorax. But one invaluable remedy for diseases of the lungs, and for cases of incipient phthisis, is the root of consiligo, a plant only very recently discovered, as already mentioned. It is a most efficient remedy also for pulmonary diseases in swine and cattle, even though only passed through the ear of the animal. When used, it should he taken in water, and kept for a considerable time in the mouth, beneath the tongue. Whether the part of this plant which grows above ground is useful or not for any purpose, is at present unknown. Ilantago, eaten with the food, betony taken in drink, and agaric taken in the way prescribed for cough, are useful, all of them, for diseases of the kidneys.

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CHAP. 22.

TRIPOLIUM : THREE REMEDIES.

Tripolium is a plant found growing upon cliffs on the sea-shore against which the waves break, springing up, so to say, neither upon dry land nor in the sea. The leaves are like those of isatis, only thicker; the stem is a palm in height and divided at the extremity, and the root white, thick, and odoriferous, with a warm flavour; it is recommended for diseases of the liver, boiled with spelt. This plant is thought by some to be identical with polium, of which we have already spoken in the appropriate place.

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CHAP. 23.

THE GROMPHÆNA.

Gromphæna is the name of a plant, the stem of which is covered with leaves of a green and rose colour, arranged alter- nately. The leaves of it are administered in oxycrate, in cases of spitting of blood.

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CHAP. 24.

THE MALUNDRUM : TWO REMEDIES.

For diseases of the liver the malundrum is prescribed, a plant which grows in meadows and corn-fields, with a white odoriferous flower. The stem is diminutive, and is beaten up in old wine.

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CHAP. 25.

CHALCETUM; TWO REMEDIES. MOLEMONIUM; ONE REMEDY.

Chalcetum also is the name of a plant, which is pounded with grape husks and applied topically, for the cure of liver complaints. Root of betony acts as a gentle emetic, taken in the same way as hellebore, in doses of four drachmæ in raisin wine or honied wine. Hyssop, too, is beaten up with honey for similar purposes; but it is more efficacious if nasturtium or irio is taken first.

Molemonium is used as an emetic, being taken in doses of one denarius; the same, too, with sillybum. Both of these plants have a milky juice, which thickens like gum, and is taken with honey in the proportions above-mentioned, being particularly good for carrying off bile. On the other hand, vomiting is arrested by the use of wild cummin or powdered betony, taken in water. Crudities and distaste for food are dispelled, and the digestion promoted by employing daucus, powdered betony taken in hydromel, or else plantago boiled like greens. Hiccup is arrested by taking hemionium or aristolochia, and asthma by the use of clymenus. For pleurisy and peripneumony, the greater centaury is used, or else hyssop, taken in drink. Juice of peucedanum is also good for pleurisy.

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CHAP. 26.

HALUS OR COTONEA: FIVE REMEDIES,

The plant halus, by the people of Gaul called “sil,” and by the Veneti “cotonea,” is curative of pains in the side, affections of the kidneys, ruptures, and convulsions. It resembles cunila bubula in appearance, and the tops of it are like those of thyme. It is of a sweet flavour, and allays thirst; the roots of it are sometimes white, sometimes black.

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CHAP. 27.

THE CHAMSHOPS: ONE REMEDY. THE STŒCHAS: ONE REMEDY.

The chamærops, also, is similarly efficacious for pains in the side. It is a plant with leaves like those of myrtle, arranged in pairs around the stem, the heads of it resembling those of the Greek rose: it is taken in wine. Agaric, administered in drink, in the same manner as for cough, assuages sciatica and pains in the vertebræ: the same, too, with powdered stœchas or betony, taken in hydromel.

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CHAP. 28. (8.)

REMEDIES FOR DISEASES OF THE BELLY.

But it is the belly, for the gratification of which the greater part of mankind exist, that causes the most suffering to man. Thus, for instance, at one time it will not allow the aliments to pass, while at another it is unable to retain them. Sometimes, again, it either cannot receive the food, or, if it can, cannot digest it; indeed, such are the excesses practised at the present day, that it is through his aliment, more than anything else, that man hastens his end. This receptacle, more troublesome to us than any other part of the body, is ever craving, like some importunate creditor, and makes its calls repeatedly in the day. It is for its sake, more particularly, that avarice is so insatiate, for its sake that luxury is so refined, for its sake that men voyage to the shores even of the Phasis, for its sake that the very depths of the ocean are ransacked. And yet, with all this, no one ever gives a thought how abject is the condition of this part of our body, how disgusting the results of its action upon what it has received! No wonder then, that the belly should have to be indebted to the aid of medicine in the very highest degree

Scordotis, fresh-gathered and beaten up, in doses of one drachma, with wine, arrests flux of the bowels; an effect equally produced by a decoction of it taken in drink. Polemonia, too, is given in wine for dysentery, or two fingers' length of root of verbascum, in water; seed of nymlphæa heraclia, in wine; the upper root of xiphion, in (loses of one drachma, in vinegar; seed of plantago, beaten up in wine ; plantago itself boiled in vinegar, or else a pottage of alica mixed with the juice of the plant; plantago boiled with lentils ; plantago dried and powdered, and sprinkled in drink, with parched poppies pounded; juice of plantago, used as an injection, or taken in drink ; or betony taken in wine heated with a red-hot iron. For cœliac affections, betony is taken in astringent wine, or iberis is applied topically, as alrealdy stated. For tenesmus, root of nymphæa heraclia is taken in wine, or else psyllion in water, or a decoction of root of acoron. Juice of aizoüm arrests diarrhœa and dysentery, and expels

round tape-worm. Root of symphytum, taken in wine, arrests diarrhœa and dysentery, and daucus has a similar effect. Leaves of aizoüm beaten up in wine, and dried alcea powdered and taken in wine, are curative of griping pains in the bowels.

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CHAP. 29.

THE ASTRAGALUS: SIX REMEDIES.

Astragalus is the name of a plant which has long leaves. with numerous incisions, and running aslant near the root. The stems are three or four in number, and covered with leaves: the flower is like that of the hyacinth, and the roots are red, hairy, matted, and remarkably hard. It grows on stony local- ities, equally exposed to the sun and to falls of snow, those in the vicinity of Pheneus in Arcadia, for instance. Its properties are highly astringent; the root of it, taken in wine, arrests looseness of the bowels, having the additional effect of throw- ing downward the aqueous humours, and so acting as a diuretic; a property, in fact, which belongs to most substances which act astringently upon the bowels.

Bruised in red wine, this plant is curative of dysentery; it is only bruised, however, with the greatest difficulty. It is extremely useful, also, as a fomentation for gum-boils. The end of autumn is the time for gathering it, after the leaves are off; it being then. left to dry in the shade.

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CHAP. 30.

LADANUM: EIGHTEEN REMEDIES

Diarrhœa may be also arrested by the use of either kind of ladanum. The kind which is found in corn-fields is pounded for this purpose, and then passed through a sieve, being taken either in hydromel, or in wine of the highest quality. “Ledon” is the name of the plant from which ladanum is obtained in Cyprus, it being found adhering to the beard of the goats there; the most esteemed, however, is that of Arabia. At the present day, it is prepared in Syria and Africa also, being known as “toxicum,” from the circumstance that in gathering it, they pass over the plant a bow, with the string stretched, and covered with wool, to which the dewlike flocks of lada- num adhere. We have described it at further length, when treating of the perfumes.

This substance has a very powerful odour, and is hard in the extreme; for, in fact, there is a considerable quantity of earth adhering to it: it is most esteemed when in a pure state, aromatic, soft, green, and resinous. It is of an emollient, desiccative, and ripening nature, and acts as a narcotic: it prevents the hair from falling off, and preserves its dark colour. In combination with hydromel or oil of roses, it is used as an injection for the ears; with the addition of salt, it is employed for the cure of furfuraceous eruptions of the skin, and for running ulcers. Taken with storax, it is good for chronic cough; it is also extremely efficacious as a carminative.

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CHAP. 31.

CHONDRIS OR PSEUDODICTAMNON: ONE REMEDY. HYPO- CISTHIS OR OROBETHRON; TWO VARIETIES: EIGHT REMEDIES.

Chondris, too, or pseudodictamnon, acts astringently on the bowels. Hypocisthis, by some known also as “orobethron,” is similar to an unripe pomegranate in appearance; it grows, as already stated, beneath the cisthus, whence its name. Dried in the shade, and taken in astringent, red wine, these plants arrest diarrhœa — for there are two kinds of hypocisthis, it must be remembered, the white and the red. It is the juice of the plant that is used, being of an astringent, desiccative, nature: that of the red kind, however, is the best for fluxes of the stomach. Taken in drink, in doses of three oboli, with amylum, it arrests spitting of blood; and, employed either as a potion or as an injection, it is useful for dysentery. Vervain, too, is good for similar complaints, either taken in water, or, when there are no symptoms of fever, in Aminean wine, the proportion being five spoonfuls to three cyathi of wine.

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CHAP. 32.

LAVER OR SION: TWO REMEDIES.

Laver, too, a plant which grows in streams, preserved and boiled, is curative of griping pains in the bowels.

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CHAP. 33.

POTAMOGITON: EIGHT REMEDIES. THE STATICE: THREE REMEDIES.

Potamogeton, too, taken in wine, is useful for dysentery and cœliac affections: it is a plant similar to beet in the leaves, but smaller and more hairy, and rising but little above the surface of the water. It is the leaves that are used, being of a refreshing, astringent nature, and particularly good for diseases of the legs, and, with honey or vinegar, for corrosive ulcers.

Castor has given a different description of this plant. According to him, it has a smaller leaf, like horse-hair, with a long, smooth, stem, and grows in watery localities. With the root of it he used to treat scrofulous sores and indurations. Potamogiton neutralizes the effects of the bite of the crocodile; hence it is that those who go in pursuit of that animal, are in the habit of carrying it about them.

Achillea also arrests looseness of the bowels; an effect equally produced by the statice, a plant with seven heads, like those of the rose, upon as many stems.

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CHAP. 34.

THE CERATIA: TWO REMEDIES. LEONTOPODION, LEU- CEORON, DORIPETRON, OR THORYBETHRON. LAGOPUS: THREE REMEDIES.

The ceratia is a plant with a single leaf, and a large knotted root: taken with the food, it is curative of cœliac affections and dysentery.

Leontopodion, a plant known also as "leuceoron," "doripetron," or "thorybethron," has a root which acts astringently upon the bowels and carries off bile, being taken in doses of two denarii in hydromel. It grows in champaign localities with a poor soil: the seed, taken in drink, produces night-mare, it is said, in the sleep.

Lagopus arrests diarrhœa, taken in wine, or, if there are symptoms of fever, in water. This plant is attached to the groin, for tumours in that part of the body: it grows in cornfields. Many persons recommend, in preference to anything else, for desperate cases of dysentery, a decoction of roots of cinquefoil in milk, or else aristolochia, in the proportion of one victoriatus to three cyathi of wine. In the case of the preparations above-mentioned, which are recommended to be taken warm, it will be the best plan to heat them with a red-hot iron.

On the other hand, again, the juice of the smaller centaury acts as a purgative upon the bowels, and carries off bile, taken, in doses of one drachma, in one hemina of water with a little salt and vinegar. The greater centaury is curative of griping pains in the bowels. Betony, also, has a laxative effect, taken in the proportion of four drachmæ to nine cyathi of hydromel: the same, too, with euphorbia or agaric, taken, in doses of two drachmæ, with a little salt, in water, or else in three oboli of honied wine. Cyclaminos, also, is a purgative, either taken in water or used as a suppository; the same, too, with chamæ- cissos, employed as a suppository. A handful of hyssop, boiled down to one third with salt, or beaten up with oxymel and salt, and applied to the abdomen, promotes pituitous evacuations, and expels intestinal worms. Root also of peu- cedanum carries off pituitous humours and bile.

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CHAP. 35.

EPITHYMON OR HIPPOPHEOS: EIGHT REMEDIES.

The two kinds of anagallis, taken in hydromel, are purgative; the same, too, with epithymon, which is the blossom of a sort of thyme similar to savory; the only difference being that the flower of this plant is nearer grass green, while that of the other thyme is white. Some persons call it “hippopheos.” This plant is by no means wholesome to the stomach, as it is apt to cause vomiting, but at the same time it disperses flatulency and gripings of the bowels. It is taken also, in the form of an electuary, for affections of the chest, with honey, or in some cases, with iris. Taken in doses of from four to six drachmæ, with honey and a little salt and vinegar, it relaxes the bowels.

Some persons, again, give a different description of epithymon: according to them, it is a plant without a root, diminutive, and bearing a flower resembling a small hood, and of a red colour. They tell us, too, that it is dried in the shade and taken in water, in doses of half an acetabulum; and that it has a slightly laxative effect upon the bowels, and carries off the pituitous humours and bile. Nymphæa is taken for similar purposes, in astringent wine.

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CHAP. 36.

PYCNOCOMON; FOUR REMEDIES.

Pycnocomon, too, is a purgative. It is a plant with leaves like those of rocket, only thicker and more acrid; the root is round, of a yellow colour, and with an earthy smell. The stem is quadrangular, of a moderate length, thin, and surmounted with a flower like that of ocimum. It is found growing in rough stony soils. The root, taken in doses of two denarii in hydromel, acts as a purgative upon the bowels, and effectually carries off bile and pituitous humours. The seed, taken in doses of one drachma in wine, is productive of dreams and restlessness. Capnos, too, carries off bile by the urine.

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CHAP. 37.

POLYPODION: THREE REMEDIES.

Polypodion, known to us by the name of “filicula,” bears some resemblance to fern. The root of it is used medicinally; being fibrous, and of a grass green colour within, about the thickness of the little finger, and covered with cavernous suckers like those on the arms of the polypus. This plant is of a sweetish taste, and is found growing among rocks and under trees. The root is steeped in water, and the juice extracted; sometimes, too, it is cut in small pieces and sprinkled upon cabbage, beet, mallows, or salt meat; or else it is boiled with pap, as a gentle aperient for the bowels, in cases of fever even. It carries off bile also and the pituitous humours, but acts injuriously upon the stomach. Dried and powdered and applied to the nostrils, it cauterizes polypus of the nose. It has neither seed nor flower.

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CHAP. 38.

SCAMMONY; EIGHT REMEDIES.

Scammony, also, is productive of derangement of the stomach. It carries off bile, and acts strongly as a purgative upon the bowels; unless, indeed, aloes are added, in the proportion of two drachmæ of aloes to two oboli of scammony. The drug thus called is the juice of a plant that is branchy from the root, and has unctuous, white, triangular, leaves, with a solid, moist root, of a nauseous flavour: it grows in rich white soils. About the period of the rising of the Dogstar, an excavation is made about the root, to let the juice collect: which done. it is dried in the sun and divided into tablets. The root itself, too, or the outer coat of it, is sometimes dried. The scammony most esteemed is that of Colophon, Mysia, and Priene. In appearance it ought to he smooth and shiny, and as much like bull glue as possible: it should present a fungous surface also, covered with minute holes; should melt with the greatest rapidity, have a powerful smell, and be sticky like gum. When touched with the tongue, it should give out a white milky liquid; it ought also to be extremely light, and to turn white when melted.

This last feature is recognized in the spurious scammony also, a compound of meal of fitches and juice of marine tithy- malos, which is mostly imported from Judea, and is very apt to choke those who use it. The difference may be easily detected, however, by the taste, as tithymalos imparts a burning sensation to the tongue. To be fully efficacious, scammony should be two years old; before or after that age it is useless. It has been prescribed to be taken by itself also, in doses of four oboli, with hydromel and salt: but the most advantageous mode of using it is in combination with aloes, care being taken to drink honied wine the moment it begins to operate. The root, too, is boiled down in vinegar to the consistency of honey, and the decoction used as a liniment for leprosy. The head is also rubbed with this decoction, mixed with oil, for head-ache.

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CHAP. 39.

THE TITHYMALOS CHARACIAS.

The tithymalos is called by our people the “milk plant,” and by some persons the “goat lettuce.” They say, that if characters are traced upon the body with the milky juice of this plant, and powdered with ashes, when dry, the letters will be perfectly visible; an expedient which has been adopted before now by intriguers, for the purpose of communicating with their mistresses, in preference to a correspondence by letter. There are numerous varieties of this plant. The first kind has the additional name of “characias,” and is generally looked upon as the male plant. Its branches are about a finger in thickness, red and full of juice, five or six in number, and a cubit in length. The leaves near the root are almost exactly those of the olive, and the extremity of the stem is surmounted with a tuft like that of the bulrush: it is found growing in rugged localities near the sea-shore. The seed is gathered in autumn, together with the tufts, and after being dried in the sun, is beaten out and put by for keeping. As to the juice, the moment the down begins to appear upon the fruit, the branches are broken off and the juice of them is received upon either meal of fitches or else figs, and left to dry therewith. Five drops are as much as each fig ought to receive; and the story is, that if a dropsically patient eats one of these figs he will have as many motions as the fig has received drops. While the juice is being collected, due care must be taken not to let it touch the eyes. From the leaves, pounded, a juice is also extracted, but not of so useful a nature as the other kind: a decoction, too, is made from the branches.

The seed also is used, being boiled with honey and made up into purgative pills. These seeds are sometimes inserted in hollow teeth with wax: the teeth are rinsed too, with a decoction of the root in wine or oil. The juice is used externally for lichens, and is taken internally both as an emetic and to promote alpine evacuation: in other respects, it is prejudicial to the stomach. Taken in drink, with the addition of salt, it carries off pituitous humours; and in combination with saltpeter, removes bile. In cases where it is

desirable that it should purge by stool, it is taken with oxycrate, but where it is wanted to act as an emetic, with raisin wine or hydromel; three oboli being a middling dose. The best method, however, of using it, is to eat the prepared figs above-mentioned, just after taking food. In taste, it is slightly burning to the throat; indeed it is of so heating a nature, that, applied externally by itself, it raises blisters on the flesh, like those caused by the action of fire. Hence it is that it is sometimes employed as a cautery.

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CHAP. 40.

THE TITHYMALOS MYRTITES, OR CARYITES; TWENTY- ONE REMEDIES.

A second kind of tithymalos is called “myrtites” by some persons, and “caryites” by others. It has leaves like those of myrtle, pointed and prickly, but with a softer surface, and grows, like the one already mentioned, in rugged soils. The tufted heads of it are gathered just as barley is beginning to swell in the ear, and, after being left for nine days in the shade, are thoroughly dried in the sun. The fruit does not ripen all at once, some, indeed, not till the ensuing year. The name given to this fruit is the “nut,” whence the Greek appellation “caryites.” It is gathered at harvest, and is washed and dried, being given with twice the quantity of black poppy, in doses of one acetabulum in all.

As an emetic, this kind is not so efficacious as the preceding one, and, indeed, the same may be said of all the others. Some physicians recommend the leaf to be taken in the manner already mentioned, but say that the nut should either be taken in honied wine or raisin wine, or else with sesame. It carries off pituitous humours and bile by stool, and is curative of ulcerations of the mouth. For corrosive sores of the mouth, the leaf is eaten with honey.

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CHAP. 41.

THE TITHYMALOS PARALIOS, OR TITHYMALIS: FOUR REMEDIES.

A third kind of tithymalos is known by the additional name of “paralios,” or else as “tithymalis.” The leaf is round, the stem a palm in height, the branches red, and the seed white. This seed is gathered just as the grape is beginning to form, and is dried and pounded; being taken as a purgative, in doses of one acetabulum.

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CHAP. 42.

THE TITHYMALOS HELIOSCOPIOS : EIGHTEEN REMEDIES.

A fourth kind of tithymalos is known by the additional name of "helioscopios." It has leaves like those of purslain, and some four or five small branches standing out from the root, of a red colour, half a foot in height, and full of juice. This plant grows in the vicinity of towns: the seed is white, and pigeons are remarkably fond of it. It receives its additional name of "helioscopios" from the fact that the heads of it turn with the sun. Taken in doses of half an acetabulum, in oxymel, it carries off bile by stool: in other respects it has the same properties as the characias, above-mentioned.

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CHAP. 43.

THE TITHYMALOS CYPARISSIAS : EIGHTEEN REMEDIES.

In the fifth place we have the tithymalos known as “cyparissias,” from the resemblance of its leaves to those of the cypress. It has a double or triple stem, and grows in champaign localities. Its properties are exactly similar to those of the helioscopios and characias.

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CHAP. 44.

THE TITHYMALOS PLATYPHYLLOS, CORYMBITES, OR AMYGDALITES: THREE REMEDIES.

The sixth kind is called “platyphyllos” by some, and “corymbites” or “amygdalites” by others, from its resemblance to the almond-tree. The leaves of this kind are the largest of all: it has a fatal effect upon fish. An infusion of the root or leaves, or the juice, taken in doses of four drachmæ, in honied wine, or hydromel, acts as a purgative. It is particularly useful also for carrying off the aqueous humours.

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CHAP. 45.

THE TITHYMALOS DENDROÏDES, COBIOS, OR LEPTO- PHYLLOS: EIGHTEEN REMEDIES.

The seventh kind has the additional name of “dendroïdes,” and is known by some persons as “cobios,” and by others as “leptophyllos.” It grows among rocks, and is by far the most shrubby of all the varieties of the tithymalos. The stems of it are small and red, and the seed is remarkably abun- dant. Its properties are the same as those of the characias.

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CHAP. 46.

THE APIOS ISCHAS, OR RAPHANOS AGRIA: TWO REMEDIES.

The apios ischas or raphanos agria, throws out two or three rush-like branches of a red colour, creeping upon the ground, and bearing leaves like those of rue. The root resembles that of an onion, only that it is larger, for which reason some have called it the "wild radish." The interior of this root is composed of a mammose substance, containing a white juice: the outer coat is black. It grows in rugged, mountainous spots, and sometimes in pasture lands. It is taken up in spring, and pounded and put into an earthen vessel, that portion of it being removed which floats upon the surface. The part which remains acts purgatively, taken in doses of an obolus and a half in hydromel, both as an emetic and by stool. This juice is administered also, in doses of one acetabulum, for dropsy.

The root of this plant is dried and powdered, and taken in drink: the upper part of it, they say, carries off bile by acting as an emetic, the lower part, by promoting alvine evacuation.

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CHAP. 47.

REMEDIES FOR GRIPING PAINS IN THE BOWELS.

Every kind of panaces is curative of gripings in the bowels; as also betony, except in those cases where they arise from indigestion. Juice of peucedanum is good for flatulency, acting powerfully as a carminative: the same is the case, also, with root of acoron and with daucus, eaten like lettuce as a salad. Ladanum of Cyprus, taken in drink, is curative of intestinal affections; and a similar effect is produced by powdered gentian, taken in warm water, in quantities about as large as a bean. For the same purpose, plantago is taken in the morning, in doses of two spoonfuls, with one spoonful of poppy in four cyathi of wine, due care being taken that it is not old wine. It is given, too, at the last moment before going to sleep, and with the addition of nitre or polenta, if a considerable time has elapsed since the last meal. For colic, an injection of the juice is used, one hemina at a time, even in cases where fever has supervened.

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CHAP. 48.

REMEDIES FOR DISEASES OF THE SPLEEN.

Agaric, taken in doses of three oboli in one cyathus of old wine, is curative of diseases of the spleen. The same, too, with the root of every kind of panaces, taken in honied wine: teucria, also, is particularly useful for the same purpose, taken in a dry state, or boiled down in the proportion of one handful to three heminæ of vinegar. Teucria, too, is applied with vinegar to wounds of the spleen, or, if the patient cannot bear the application of vinegar, with figs or water. Polemo- nia is taken in wine, and betony, in doses of one drachma, in three cyathi of oxymel: aristolochia, too, is used in the same manner as for injuries inflicted by serpents. Argemonia, it is said, taken with the food for seven consecutive days, diminishes the volume of the spleen; and a similar effect is attributed to agaric, taken in doses of two oboli, in oxymel. Root, too, of nymphæa heraclia, taken in wine, or by itself, diminishes the spleen.

Cissanthemos, taken twice a day, in doses of one drachma in two cyathi of white wine, for forty consecutive days, gradually carries off the spleen, it is said, by urine. Hyssop, boiled with figs, is very useful for the same purpose: root of lonchitis, also, boiled before it has shed its seed. A decoction of root of peucedanum is good for the spleen and kidneys. Acoron, taken in drink, diminishes the spleen; and the roots of it are very beneficial for the viscera and iliac regions. For similar purposes, seed of clymenus is taken, for thirty consecutive days, in doses of one denarius, in white wine. Powdered betony is also used, taken in a potion with honey and squill vinegar; root too of lonchitis is taken in water. Tourism is used externally for diseases of the spleen; sodium, also, in combination with wax: and agaric, mixed with powdered fenugreek.

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CHAP. 49.

REMEDIES FOR CALCULI AND DISEASES OF THE BLADDER.

For diseases of the bladder and calculi (affections which, as :already observed, produce the most excruciating torments), palimonies is highly efficacious, taken in wine; agaric also, and leaves or root of plantago, taken in raisin wine. Betony, too, is very good, as already observed, when speaking of diseases of the liver. This last plant is used also for hernia, applied topically or taken in drink: it is remarkably efficacious too for stranger. For calculi some persons recommend betony, vervain, and milfoil, in equal proportions in water, as a sovereign remedy. It is universally agreed that dittany is curative of strangury, and that the same is the case with ainquefoil, boiled down to one third in wine: this last plant is very useful, too, taken internally and applied topically, for rupture of the groin.

The upper part of the root of xiphion has a diuretic effect upon infants; it is administered also in water for rupture of the groin, and is applied topically for diseases of the bladder. Juice of peucedanumn is employed for hernia in infants, and psyllion is used as an application in cases of umbilical bernia. The two kinds of anagallis are diuretic, and a similar effect is produced by a decoction of root of acoron, or the plant itself bruised and taken in drink; this last is good too for all affections of the bladder. Both the stem and root of cotyledon are used for the cure of calculi; and for all inflammations of the genitals, myrrh is mixed in equal proportions with the stem and seed. The more tender leaves of ebulum, beaten up and taken with wine, expel calculi of the bladder, and an application of them is curative of diseases of the testes. Erigeron, with powdered frankincense and sweet wine, is curative of inflammation of the testes; and root of symphytum, applied topically, reduces rupture of the groin. The white hypocisthis is curative of corroding ulcers of the genitals. Artemisia is prescribed also in sweet wine for the cure of calculi and of strangury; and root of nymphæa heraclia, taken in wine, allays pains in the bladder.

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CHAP. 50.

CRETHMOS: ELEVEN REMEDIES. CACHRY.

A similar property belongs also to crethmos, a plant highly praised by Hippocrates. This is one of the wild plants that are commonly eaten — at all events, we find Callimachus mentioning it as one of the viands set on table by the peasant Hecale. It is a species of garden batis, with a stem a paln in height, and a hot seed, odoriferous like that of libanotis, and round. When dried, the seed bursts asunder, and discloses in the interior a white kernel, known as “cachry” to some The leaf is unctuous and of a whitish colour, like that of the olive, only thicker and of a saltish taste. The roots are three or four in number, and about a finger in thickness: the plant grows in rocky localities, upon the sea-shore. It is eaten raw or else boiled with cabbage, and has a pleasant, aromatic flavour; it is preserved also in brine.

This plant is particularly useful for strangury, the leaves, stem, or root being taken in wine. It improves the complexion of the skin also, but if taken in excess is very apt to produce flatulency. Used in the form of a decoction it relaxes the bowels, has a diuretic effect, and carries off the humours from the kidneys. The same is the case also with alcea: dried and powdered and taken in wine, it removes strangury, and, with the addition of daucus, is still more efficacious: it is good too for the spleen, and is taken in drink as an antidote to the venom of serpents. Mixed with their barley it is remarkably beneficial for beasts of burden, when suffering from pituitous defluxions or strangury.

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CHAP. 51.

THE ANTHYLLION; TWO REMEDIES THE ANTHYLLIS: TWO REMEDIES.

The anthyllion is a plant very like the lentil. Taken in wine, it is remedial for diseases of the bladder, and arrests hæmorrhage. Another variety of it is the anthyllis, a plant resembling the chamæpitys, with a purple flower, a powerful smell, and a root like that of endive.

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CHAP. 52.

CEPÆA: ONE REMEDY.

The plant known as “cepæa” is even more efficacious. It resembles purslain in appearance, but has a darker root, that is never used: it grows upon the sands of the sea-shore, and has a bitter taste. Taken in wine with root of asparagus, it is remarkably useful for diseases of the bladder.

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CHAP. 53.

HYPERICON, CHAMÆPITYS, OR CORISON: NINE REMEDIES.

Hypericon, otherwise known as the “chamæpitys” or “orison,” is possessed of similar properties. It is a plant with a stem like that of a garden vegetable, thin, red, and a cubit in length. The leaf is similar to that of rue, and has an acrid smell: the seed is enclosed in a swarthy pod, and ripens at the same time as barley. This seed is of an astringent nature, arrests diarrhœa, and acts as a diuretic: it is taken also for diseases of the bladder, in wine.

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CHAP. 54.

CAROS OR HYPERICON: TEN REMEDIES.

There is another hypericon also, known as “caros” by some. The leaves of it resemble those of the tamarix, beneath which it grows, but are more unctuous and not so red. It is an odoriferous plant, somewhat more than a palm in height, of a sweet flavour, and slightly pungent. The seed is of a warming nature, and is consequently productive of eructations; it is not, however, injurious to the stomach. This plant is particularly useful for strangury, provided the bladder be not ulcerated; taken in wine, it is curative of pleurisy also.

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CHAP. 55.

THE CALLITHRIX: ONE REMEDY. THE PERPRESSA: ONE REMEDY. THE CHRYSANTHEMUM: ONE REMEDY. THE ANTHEMIS: ONE REMEDY.

Callithrix, beaten up with cummin seed, and administered in white wine, is useful also for diseases of the bladder. Leaves of vervain, boiled down to one third, or root of vervain, in warm honied wine, expel calculi of the bladder.

Perpressa, a plant which grows in the vicinity of Arretium and in Illyricum, is boiled down to one third in three heminæ of water, and the decoction taken in drink: the same too with trefoil, which is administered in wine; and the same with the chrysanthemum. The anthemis also is an expellent of calculi. It is a plant with five small leaves running from the root, two long stems, and a flower like a rose. The roots of it are pounded and administered alone, in the same way as raw laver.

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CHAP. 56.

SILAUS: ONE REMEDY.

Silaus is a plant which grows in running streams with a gravelly bed. It bears some resemblance to parsley, and is a cubit in height. It is cooked in the same manner as the acid vegetables, and is of great utility for affections of the bladder. In cases where that organ is affected with eruptions, it is used in combination with root of panaces, a plant which is otherwise bad for the bladder.

The erratic apple, too, is an expellent of calculi. For this purpose, a pound of the root is boiled down to one half in a congius of wine, and one hemina of the decoction is taken for three consecutive days, the remainder being taken in wine with sium. Sea-nettle is employed too for the same purpose, daucus, and seed of plantago in wine.

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CHAP. 57.

THE PLANT OF FULVIUS.

The plant of Fulvius too — so called from the first discoverer of it, and well known to herbalists — bruised in wine, acts as a diuretic.

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CHAP. 58.

REMEDIES FOR DISEASES OF THE TESTES AND OF THE FUNDAMENT.

Scordion reduces swellings of the testes. Henbane is curative of diseases of the generative organs. Strangury is cured by juice of peucedanum, taken with honey; as also by the seed of that plant. Agaric is also used for the same purpose, taken in doses of three oboli in one cyathus of old wine; root of trefoil, in doses of two drachmæ in wine; and root or seed of daucus, in doses of one drachma. For the cure of sciatica, the seed and leaves of erythrodanum are used, pounded; panaces, taken in drink; polemonia, employed as a friction; and leaves of aristolochia, in the form of a decoction. Agaric, taken in doses of three oboli in one cyathus of old wine, is curative of affections of the tendon known as "platys" and of pains in the shoulders. Cinquefoil is either taken in drink or applied topically for the cure of sciatica; a decoction of scammony is used also, with barley meal; and the seed of either kind of hypericon is taken in wine.

For diseases of the fundament and for excoriations plantago is remarkably efficacious; for condylomata, cinquefoil; and for procidence of the rectum, root of cyclaminos, applied in vinegar. The blue anagallis reduces procidence of the rectum, while, on the contrary, that with a red flower has a tendency to bear it down. Cotyledons is a marvellous cure for condylomatous affections and piles; and root of acoron, boiled in wine and beaten up, is a good application for swelling of the testes. According to what Cato says, those who carry about them Pontic wormwood, will never experience chafing between the thighs.

(9.) Some persons add pennyroyal to the number of these plants: gathered fasting, they say, and attached to the hinder part of the body, it will be an effectual preservative against all pains in the groin, and will allay them in cases where they already exist.

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CHAP. 59.

INGUINALIS OR ARGEMO.

Inguinalis again, or, as some persons call it, “argemo,” a plant commonly found growing in bushes and thickets, needs only to be held in the hand to be productive of beneficial effects upon the groin.

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CHAP. 60.

REMEDIES FOR INFLAMED TUMOURS. CHRYSIPPIOS: ONE REMEDY.

Panaces, applied with honey, heals inflammatory tumours; an effect which is equally produced by plantago applied with salt, cinquefoil, root of persolata used in the same way as for scrofula; damasonium also, and verbascum pounded with the root, and then sprinkled with wine, and wrapped in a leaf warmed upon ashes, and applied hot. Persons of experience in these matters have asserted that it is of primary importance that the application should be made by a maiden, as also that she must be naked at the time, and fasting. The patient must be fasting too, and the damsel must say, touching him with the back of her hand, "Apollo forbids that a disease shall increase which a naked virgin restrains." So saying, she must withdraw her hand, and repeat to the above effect three times, both of them spitting upon the ground each time.

Root, too, of mandragora is used for this purpose, with water; a decoction of root of scammony with honey; sideritis beaten up with stale grease; horehound with stale axlegrease; or chrysippios, a plant which owes its name to its discoverer — with pulpy figs.

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CHAP. 61. (10.)

APHRODISIACS AND ANT APHRODISIACS.

Nymphæa heraclia, used as already stated, acts most powerfully as an ant aphrodisiac; the same too if taken once every forty days in drink. Taken in drink fasting, or eaten with the food, it effectually prevents the recurrence of libidinous dreams. The root too, used in the form of a liniment and applied to the generative organs, not only represses all prurient desires, but arrests the seminal secretions as well; for which reason, it is said to have a tendency to make flesh and to improve the voice.

The upper part of the root of xiphion, taken in wine, acts as an aphrodisiac. The same is the case too with the wild crethmos, or agrees as it is called, and with holmium, beaten up with polenta.

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CHAP. 62.

THE ORCHIDS OR SERAPES: FIVE MEDICINAL PROPERTIES. SATYR ION.

But there are few plants of so marvellous a nature as the orchids or serapias, a vegetable production with leaves like those of the leek, a stem a palm in height, a purple flower, and a twofold root, formed of tuberosities which resemble the testes in appearance. The larger of these tuberosities, or, as some say, the harder of the two. taken in water, is provocative of lust; while the smaller, or, in other words, the softer one, taken in goat's milk, acts as an antaphrodisiac. Some persons describe this plant as having a leaf like that of the squill, only smoother and softer, and a prickly stem. The roots heal ulcerations of the mouth, and are curative of pituitous discharges from the chest; taken in wine they act astringently upon the bowels.

Satyrion is also a powerful stimulant. There are two kinds of it: the first has leaves like those of the olive, but longer, a stem four fingers in length, a purple flower, and a double root, resembling the human testes in shape. This root swells and increases in volume one year, and resumes its original size the next. The other kind is known as the "satyrios orchis," and is supposed to be the female plant. It is distinguished from the former one by the distance between its joints, and its more branchy and shrublike form. The root is employed in philtres: it is mostly found growing near the sea. Beaten up and applied with polenta, or by itself, it heals tumours and various other affections of the generative organs. The root of the first kind, administered in the milk of a colonic sheep, causes tentigo; taken in water it produces a contrary effect.

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CHAP. 63.

SATYRION: THREE MEDICINAL PROPERTIES. SATY- RION ERYTHRAÏCON: FOUR MEDICINAL PROPERTIES.

The Greeks give the name of “satyrion” to a plant with red leaves like those of the lily, but smaller, not more than three of them making their appearance above ground. The stem, they say, is smooth and bare and a cubit in length, and the root double; the lower part, which is also the larger, pro- moting the conception of male issue, the upper or smaller part, that of female.

They distinguish also another kind of satyrion, by the name of “erythraïcon” it has seed like that of the vitex, only larger, smooth, and hard; the root, they say, is covered with a red rind, and is white within and of a sweetish taste: it is mostly found in mountainous districts. The root, we are told, if only held in the hand, acts as a powerful aphrodisiac, and even more so, if it is taken in rough, astringent wine. It is administered in drink, they say, to rams and he-goats when inactive and sluggish; and the people of Sarmatia are in the habit of giving it to their stallions when fatigued with covering, a defect to which they give the name of “prosedamum.” The effects of this plant are neutralized by the use of hydromel or lettuces.

The Greeks, however, give the general name of “satyrion” to all substances of a stimulating tendency, to the cratægis for example, the thelygonon, and the arrenogonon, plants, the seed of which bears a resemblance to the testes. Persons who carry the pith of branches of tithymalos about them, are rendered more amorous thereby, it is said. The statements are really incredible, which Theophrastus, in most cases an author of high authority, makes in relation to this subject; thus, for instance, he says that by the contact only of a cer- tain plant, a man has been enabled, in the sexual congress, to repeat his embraces as many as seventy times even! The name and genus, however, of this plant, he has omitted to mention.

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CHAP. 64.

REMEDIES FOR THE GOUT AND DISEASES OF THE FEET.

Sideritis, attached to the body as an amulet, reduces varicose veins, and effects a painless cure. Gout used to be an extremely rare disease, not in the times of our fathers and grandfathers only, but within my own memory even. Indeed, it may justly be considered a foreign complaint; for if it had been formerly known in Italy, it would surely have found a Latin name. It should, however, by no means be looked upon as an incurable malady; for before now, in many instances, it has quitted the patient all at once, and still more frequently, a cure has been effected by proper treatment.

For the cure of gout, roots of panaces are used, mixed with raisins; juice of henbane, or the seed, combined with meal; scordion, taken in vinegar; iberis, as already mentioned; vervain, beaten up with axle-greaseor root of cyclaminos, a decoction of which is good also for chilblains.

As cooling applications for gout, root of xiphion is used; seed of psyllion; hemlock, with litharge or axle-grease; and, at the first symptoms of red gout, or, in other words, hot gout, the plant aizoüm. For either kind of gout, erigeron, with axle-grease, is very useful; leaves of plantago, beaten up with a little salt; or argemonia, pounded with honey. An. application of vervain is also remedial, and it is a good plan to soak the feet in a decoction of that plant in water.

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CHAP. 65.

LAPPAGO OR MOLLUGO: ONE REMEDY. ASPERUGO: ONE REMEDY.

Lappago is employed also for this disease; a plant similar to the anagallis, were it not that it is more branchy, bristling with a greater number of leaves, covered with rugosities, full of a more acrid juice, and possessed of a powerful smell. The kind that resembles anagallis most closely, is known as mollugo. Asperugo is a similar plant, only with a more prickly leaf. The juice of the first is taken daily, in doses of one denarius, in two cyathi of wine.

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CHAP. 66.

PHYCOS THALASSION OR SEA-WEED: THREE VARIETIES OF IT. LAPPA BOARIA.

But it is the phycos thalassion, or sea-weed, more particularly, that is so excellent a remedy for the gout. It resembles the lettuce in appearance, and is used as the basis in dyeing tissues with the purple of the murex. Used before it becomes dry, it is efficacious as a topical application not only for gout, but for all diseases of the joints. There are three kinds of it; one with a broad leaf, another with a longer leaf of a reddish hue, and a third with a crisped leaf, and used in Crete for dyeing cloths. All these kinds have similar properties; and we find Nicander prescribing them in wine as an antidote to the venom of serpents even. The seed also of the plant which we have spoken of as "psyllion," is useful for the cure of gout: it is first steeped in water, and one hemina of the seed is then mixed with two spoonfuls of resin of Colophon, and one spoonful of frankincense. Leaves of mandragora, too, are highly esteemed for this purpose, beaten up with polenta.

(11.) For swellings of the ankles, slime, kneaded up with oil, is wonderfully useful, and for swellings of the joints the juice of the smaller centaury; this last being remarkably good also for diseases of the sinews. Centauris, too, is very useful; and for pains in the sinews of the shoulder-blades, shoulders, vertebræ, and loins, an infusion of betony is taken in drink in the same way as for diseases of the liver. Cinquefoil is applied topically to the joints, and a similar use is made of the leaves of mandragora, mixed with polenta, or else the root, beaten up fresh with wild cucumber or boiled in water. For chaps upon the toes, root of polypodion is used; and for diseases of the joints, juice of henbane with axle-grease; amomum, with a decoction of the plant; centunculus, boiled; or fresh moss steeped in water, and attached to the part till it is quite dry.

The root, too, of lappa boaria, taken in wine, is productive of similar effects. A decoction of cyclaminos in water, is curative of chilblains, and all other affections resulting from cold. For chilblains,

cotyledon is also employed with axle-grease, leaves of batrachion, and juice of epithymum. Ladanum, mixed with castoreum, and vervain applied with wine, extract corns from the feet.

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CHAP. 67.

MALADIES WHICH ATTACK THE WHOLE OF THE BODY.

Having now finished the detail of the diseases which are perceptible in individual parts of the body, we shall proceed to speak of those which attack the whole of the body. The following I find mentioned as general remedies: in preference to anything else, an infusion of dodecatheos, a plant already described, should be taken in drink, and then the roots of the several kinds of panaces, in maladies of long standing more particularly: seed, too, of panaces should be used for intestinal complaints. For all painful affections of the body we find juice of scordium recommended, as also that of betony: this last, taken in a potion, is particularly excellent for removing a wan and leaden hue of the skin, and for improving its gene- ral appearance.

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CHAP. 68.

THE GERANION, MYRRHIS, OR MYRTIS; THREE VARIE- TIES OF IT: SIX REMEDIES.

The plant geranion has the additional names of “myrrhis” and “myrtis.” It is similar to hemlock in appearance, but has a smaller leaf and a shorter stem, rounded, and of a pleasant taste and odour. Such, at all events, is the description given of it by our herbalists; but the Greeks speak of it as bearing leaves a little whiter than those of the mallow, thin downy stems, and branches at intervals some two palms in length, with small heads at their extremities, in the midst of the leaves, resembling the bill of a crane. There is also another variety of this plant, with leaves like those of the anemone, but with deeper incisions, and a root rounded like an apple, sweet, and extremely useful and refreshing for invalids when recovering their strength; this last would a- most seem to be the true geranion.

For phthisis this plant is taken, in the proportion of one drachma to three cyathi of wine, twice a day; as also for flatulency. Eaten raw, it is productive of similar effects. The juice of the root is remedial for diseases of the ear; and for opisthotony the seed is taken in drink, in doses of four drachmæ, with pepper and myrrh. Juice of plantago, taken in drink is curative of phthisis, and a decoction of it is equally good for the purpose. Plantago taken as a food with oil and salt immediately after rising in the morning, is extremely refreshing; it is prescribed, too, in cases of atrophy, on alternate day. Betony is given with honey, in the form of an electuary, for phthisis, in pieces the size of a bean; agaric, too, is taken in doses of two oboli in raisin wine, or else daucus with the greater centaury in wine. For the cure of phagedæna.a <*>une given in common to bulimia and to a corrosive kind of ulcer, tithymalos is taken in combination with sesame.

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CHAP. 69.

THE ONOTHERAS OR ONEAR: THREE REMEDIES.

Among the various evils by which the whole of the body in common is afflicted, that of wakefulness is the most common. Among the remedies for it we find panaces mentioned, clymenus, and aristolochia, the odour of the plant being inhaled and the head rubbed with it. Aizoü, or houseleek, is beneficial, wrapped in black cloth and placed beneath the pillow, without the patient being aware of it. The onotheras too, or onear, taken in wine, has certain exhilarating pro-properties; it has leaves like those of the almond tree, a rose-coloured flower, numerous branches, and a long root, with a xinous smell when dried: n infusion of this root has a soothing effect upon wild beasts even.

For fits of indigestion attended with nausea, betony is taken in drink: used similarly after the evening meal, it faci- litates the digestion. Taken in the proportion of one drachma to three cyathi of oxymel, it dispels crapulence. The same is the case, too, with agaric, taken in warm water after eating. Betony is curative of paralysis, it is said; the same, too, with brais, as already stated. This last is good, too, for numbness of the limbs : the same being the case with argemonia, a plant which disperses those affections which might otherwise necessitate the application of the knife.

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CHAP. 70.

REMEDIES FOR EPILEPSY.

Epilepsy is cured by the root of the panaces which we have spoken of as the "heraclion," taken in drink with sea-calf's rennet, the proportions being three parts of panaces and one of rennet. For the same purpose an infusion of plantago is taken, or else betony or agaric, with oxymel, the former in doses of one drachma, the latter in doses of three oboli; leaves of cinquefoil are taken, also, in water. Archezostis is also curative of epilepsy, but it must be taken constantly for a year; root of bacchar, too, dried and powdered, and taken in warm water, in the proportion of three cyathi to one cyathus of coriander; centunculus also, bruised in vinegar, warn water, or honey; vervain, taken in wine; hyssop berries, three in number, pounded and taken in water, for sixteen days consecutively; peucedanum, taken in drink with sea-calf's rennet, in equal proportions; leaves of cinquefoil, bruised is wine and taken for thirty days; powdered betony, in doses of three denarii, with one cyathus of squill vinegar and an ounce of Attic honey; as also scammony, in the proportion of two oboli to four drachmæ of castoreum.

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CHAP. 71.

REMEDIES FOR FEVERS.

Agaric, taken in warm water, alleviates cold fevers: sideritis, in combination with oil, is good for tertian fevers; bruised ladanum also, which is found in corn fields; plantago, taken in doses of two drachmæ, in hydromel, a couple of hours before the paroxysms come on; juice of the root of plantago made warm or subjected to pressure; or else the root itself beaten up in water made warm with a hot iron. Some medical men prescribe three roots of plantago, in three cyathi of water; and in a similar manner, four roots for quartan fevers. When buglossos is beginning to wither, if a person takes the pith out of the stem, and says while so doing, that it is for the cure of such and such a person suffering from fever, and then attaches seven leaves to the patient, just before the paroxysms come on, he will experience a cure, they say.

Fevers too, those which are attended with recurrent cold shiverings more particularly, are cured by administering one drachma of betony, or else agaric, in three cyathi of hydromel. Some medical men recommend three leaves of cinquefoil for tertian, four for quartan, and an increased number for other fevers; while others again prescribe in all cases three oboli of cinquefoil, with pepper, in hydromel.

Vervain, administered in water, is curative of fever, in beasts of burden even; but care must be taken, in cases of tertian fever, to cut the plant at the third joint, and of quartan fever at the fourth. The seed of either kind of hypericons is taken also for quartan fevers and cold shiverings. Powdered betony modifies these fits, and panaces is of so warming a nature that persons when about to travel amid the snow are recommended to drink an infusion of it, and to rub the body all over with the plant. Aristolochia also arrests shivering produced by cold.

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CHAP. 72.

REMEDIES FOR PHRENITIS, LETHARGY, AND CARBUNCLES.

Phlebitis is cured by sleep induced by the agency of an infusion of peucedanum in vinegar, poured upon the head, or else by the juice of either kind of anagallis. On the other hand, when patients are suffering from lethargy, it is with the greatest difficulty that they are aroused; a result which may be effected, they say, by touching the nostrils with juice of peucedanum in vinegar. For the cure of insanity, betony is administered in drink. Panaces brings carbuncles to a head, and makes them break; and they are equally cured by powdered betony applied in water, or else cabbage leaves mixed with frankincense in warm water, and taken in considerable quantities. For a similar purpose, a red-hot coal is extinguished in the patient's presence, and the ashes are taken up with the finger and applied to the sore. Bruised plantago is also used for the cure of carbuncles.

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CHAP. 73.

REMEDIES FOR DROPSY. ACTE OR EBULUM. CHAMÆACTE.

For the cure of dropsy, tithymalos characias is employed; panaces also; plantago, used as a diet, dry bread being eaten first, without any drink; betony, taken in doses of two drachme in two cyathi of ordinary wine or honied wine; agaric or seed of lonchitis, in doses of two spoonfuls, in water; psyllion, taken in wine; juice of either anagallis; root of cotyledon in honied wine; root of ebulum, fresh gathered, with the mould shaken off, but not washed in water, a pinch in two fingers being taken in one hemina of old wine mulled; root of trefoil, taken in doses of two drachmæ in wine; the tithymalos known as "platyphyllos;" seed of the hypericon, otherwise known as "caros;" the plant called "acte" — the same thing as ebulum according to some — the root of it being pounded in three cyathi of wine, if there are no symptoms of fever, or the seed of it being administered in red wine; a good handful of vervain also, boiled down in water to one half. But of all the remedies for this disease, juice of chamæacte is looked upon as by far the most efficacious.

Morbid or pituitous eruptions are cured by the agency of plantago, or else root of cyclaminos with honey. Leaves of ebulum, bruised in old wine and applied topically, are curative of the disease called "boa," which makes its appearance in the form of red pimples. Juice of strychnos, applied as a liniment, is curative of prurigo.

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CHAP. 74.

REMEDIES FOR ERYSIPELAS.

For the cure of erysipelas, aizoüm is used, or else pounded leaves of hemlock, or root of mandragora; this last being cut into round slices like cucumber and suspended over must, after which it is hung up in the smoke, and then pounded in wine or vinegar. It is a good plan too to use fomentations with myrtle wine: two ounces of mint beaten up in vinegar with one ounce of live sulphur, form a mixture sometimes employed; as also soot mixed with vinegar.

There are several kinds of erysipelas, one in particular which attacks the middle of the body, and is known as “zoster:” should it entirely surround the body, its effects are fatal. For this disease, plantago is remedial, mixed with Cimolian chalk; vervain, used by itself; or root of persolata. For other kinds of erysipelas of a spreading nature, root of cotyledon is used, mixed with honied wine; aizoüm also, or juice of linozostis, in combination with vinegar.

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CHAP. 75. (12.)

REMEDIES FOR SPRAINS.

For the cure of sprains, root of polypodion is used, in the form of a liniment: the pain and swelling are modified also by using seed of psyllion; leaves of plantago beaten up with a little salt; seed of verbascum, boiled in wine and pounded; or hemlock with axle-grease. Leaves of ephemeron are applied topically to tumours and tuberosities, so long as they are capable of being dispersed.

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CHAP. 76.

REMEDIES FOR JAUNDICE.

It is upon the eyes in particular that jaundice is productive of so remarkable an effect; the bile penetrating between the membranes, so extremely delicate as they are and so closely united. Hippocrates tells us that the appearance of jaundice on or after the seventh day in fevers is a fatal symptom; but I am acquainted with some instances in which the patients survived after having been reduced to this apparently hopeless state. We may remark also, that jaundice sometimes comes on without fever supervening. It is combated by taking the greater centaury, as already mentioned, in drink; agaric, in doses of three oboli in old wine; or leaves of vervain, in doses of three oboli, taken for four consecutive days in one hemina of mulled wine. But the most speedy cure of all is effected by using juice of cinquefoil, in doses of three cyathi, with salt and honey. Root of cyclaminos is also taken in drink in doses of three drachmæ, the patient sitting in a warm room free from all cold and draughts, the infusion expelling the bile by its action as a sudorific.

Leaves of tussilago are also used in water for this purpose; the seed of either kind of linozostis, sprinkled in the drink, or made into a decoction with chick-pease or wormwood: hyssop berries taken in water; the plant lichen, all other vegetables being carefully abstained from while it is being used; polythrix, taken in wine; and struthion, in honied wine.

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CHAP. 77.

REMEDIES FOR BOILS.

There are boils also, known as “furunculi,” which make their appearance indiscriminately on all parts of the body, and are productive of the greatest inconvenience: sometimes indeed, when the constitution is exhausted, they are fatal in their effects. For their cure, leaves of pycnocomon are employed, beaten up with polenta, if the boil has not come to a head. They are dispersed also by an application of leaves of ephedron.

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CHAP. 78.

REMEDIES FOR FISTULA.

Fistulas, too, insidiously attack all parts of the body, owing to unskilfulness on the part of medical men in the use of the knife. The smaller centaury is used for their cure, with the addition of lotions and boiled honey: juice of plantago is also employed, as an injection; cinquefoil, mixed with salt and honey; ladanum, combined with castoreum; cotyledon, applied hot with stag's marrow; pith of the root of verbascum reduced to a liquid state in the shape of a lotion, and injected; root of aristolochia; or juice of tithymalos.

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CHAP. 79.

REMEDIES FOR ABSCESSES AND HARD TUMOURS.

Abscesses and inflammations are cured by an application of leaves of argemonia. For indurations and gatherings of all descriptions a decoction of vervain or cinquefoil in vinegar is used; leaves or root of verbascum; a liniment made of wine and hyssop; root of acoron, a decoction of it being used as a fomentation; or else aizoüm. Contusions also, hard tumours, and fistulous abscesses are treated with illecebra.

All kinds of foreign substances which have pierced the flesh are extracted by using leaves of tussilago, daucus, or seed of leontopodium pounded in water with polenta. To suppurations, leaves of pycnocomon are applied, beaten up with polenta, or else the seed of that plant, or orchis. An application of root of satyrion is said to be a most efficacious remedy for deep-seated diseases of the bones. Corrosive ulcers and all kinds of gatherings are treated with sea-weed, used before it has dried. Root, too, of alcima disperses gatherings.

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CHAP. 80.

REMEDIES FOR BURNS.

Burns are cured by the agency of plantago, or of arction, so effectually indeed as to leave no scar. The leaves of this last plant are boiled in water, beaten up, and applied to the sore. Roots of cyclaminos are used, in combination with aizoüm; the kind of hypericon also, which we have mentioned as being called “corissum.”

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CHAP. 81.

REMEDIES FOR DISEASES OF THE SINEWS AND JOINTS.

For diseases of the sinews and joints, plantago, beaten up with salt, is a very useful remedy, or else argemonia, pounded with honey. Patients affected with spasms or tetanus are rubbed with juice of peucedanum. For indurations of the sinews, juice of ægilops is employed, and for pains in those parts of the body erigeron or epithymum, used as a liniment, with vinegar. In cases of spasms and opisthotony, it is an excellent plan to rub the part affected with seed of the hype- ricon known as “caros,” and to take the seed in drink. Phrynion, it is said, will effect a cure even when the sinews have been severed, if applied instantaneously, bruised or chewed. For spasmodic affections, fits of trembling, and opisthotony, root of alcima is administered in hydromel; used in this manner, it has a warming effect when the limbs are benumbed with cold.

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CHAP. 82.

REMEDIES FOR HÆMORRHAGE.

The red seed of the plant called “pæmonia” arrests hæmorrhage; the root also is possessed of similar properties. But it is clymenus that should be employed, when there are discharges of blood at the mouth or nostrils, from the bowels, or from the uterus. In such cases, lysimachia also is taken in drink, applied topically, or introduced into the nostrils; or else seed of plantago, or cinquefoil, is taken in drink, or employed in the form of a liniment. Hemlock seed is introduced into the nostrils, for discharges of blood there, or else it is pounded and applied in water; aizoüm also, and root of astragalus. Ischæmon and achillea likewise arrest hæmorrhage.

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CHAP. 83. (13.)

HIPPURIS, OTHERWISE CALLED EPHEDRON, ANABASIS, OR EQUISÆTUM; THREE KINDS OF IT: EIGHTEEN REMEDIES.

Equisætum, a plant called "hippuris" by the Greeks, and which we have mentioned in terms of condemnation, when treating of meadow lands — it being, in fact, a sort of hair of the earth, similar in appearance to horse-hair — is used by runners for the purpose of diminishing the spleen. For this purpose it is boiled down in a new earthen vessel to one third, the vessel being filled to the brim, and the decoction taken in doses of one hemina for three successive days. It is strictly forbidden, however, to eat any food of a greasy nature the day before taking it.

Among the Greeks there are various opinions in relation to this plant. According to some, who give it the same name of "hippuris," it has leaves like those of the pine tree, and of a swarthy hue; and, if we are to believe them, it is possessed of virtues of such a marvellous nature, that if touched by the patient only, it will arrest hæmorrhage. Some authorities call it "hippuris," others, again, "ephedron," and others "anabasis;" and they tell us that it grows near trees, the trunks of which it ascends, and hangs down therefrom in numerous tufts of black, rush-like hair, much like a horse's tail in appearance. The branches, we are told, are thin and articulated, and the leaves, few in number, small, and thin, the seed round, and similar to coriander in appearance, and the root ligneous: it grows, they say, in plantations more particularly.

This plant is possessed of astringent properties. The juice of it, kept in the nostrils, arrests bleeding therefrom, and it acts astringently upon the bowels. Taken in doses of three cyathi, in sweet wine, it is a cure for dysentery, is an efficient diuretic, and is curative of cough, hardness of breathing, rup- tures, and serpiginous affections. For diseases of the intestines and bladder, the leaves are taken in drink; it has the property, also, of reducing ruptures of the groin.

The Greek writers describe another hippuris, also, with shorter

tufts, softer and whiter. This last, they say, is remark- ably good for sciatica, and, applied with vinegar, for wounds, it having the property of stanching the blood. Bruised nym- phæa is also applied to wounds. Peucedanum is taken in drink with cypress seed, for discharges of blood at the mouth or by the lower passages. Sideritis is possessed of such remark- able virtues, that applied to the wound of a gladiator just inflicted, it will stop the flow of blood; an effect which is equally produced by an application of charred fennel-giant, or of the ashes of that plant. For a similar purpose, also, the fungus that is found growing near the root of fennel-giant is still more efficacious.

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CHAP. 84.

STEPHANOMELIS.

For bleeding at the nostrils, seed of hemlock, pounded in water, is considered efficacious, as also stephanomelis, applied with water. Powdered betony, taken with goat's milk, or bruised plantago, arrests discharges of blood from the ma- millæ. Juice of plantago is administered to patients when vomiting blood. For local discharges of blood, an application of root of persolata with stale axle-grease is highly spoken of.

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CHAP. 85.

REMEDIES FOR RUPTURES AND CONVULSIONS. ERYSITHALES: ONE REMEDY.

For ruptures, convulsions, and falls with violence, the greater centaury is used; root of gentian pounded or boiled; juice of betony — this last being employed also for ruptures produced by straining the vocal organs or sides — panaces; scordium; or aristolochia taken in drink. For contusions and falls, agaric is taken, in doses of two oboli, in three cyathi of honied wine, or if there are symptoms of fever, hydromel; the verbascum, also, with a golden flower; root of acoron the several varieties of Aizoüm, the juice of the larger kind being particularly efficacious; juice of symphytum, or a decoction of the root of that plant; daucus, unboiled; erysithales, a plant with a yellow flower and a leaf like that of acanthus, taken in wine; chamærops; irio, taken in pottage; plantago taken any way, as also * * * *

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CHAP. 86.

REMEDIES FOR PHTHIRIASIS.

Phthiriasis is a disease which proved fatal to the Dictator Sylla, and which developes itself by the production of insects in the blood, which ultimately consume the body. It is combated by using the juice of Taminian grapes or of hellebore, the body being rubbed all over with it, in combination with oil. A decoction of Taminian grapes in vinegar, has the effect, also, of ridding the clothes of these vermin.

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CHAP. 87. (14.)

REMEDIES FOR ULCERS AND WOUNDS.

Of ulcers there are numerous kinds, which are treated in various ways. The root of all the varieties of panaces is used as an application for running ulcers, in warm wine.

That which we have spoken of as the "chironion" is particularly good as a desiccative: bruised with honey, it opens tumours, and is useful for serpiginonus ulcers, the cure of which appears more than doubtful; in which case it is amalgamated with flower of copper tempered with wine, either the seed, flower, or root, being employed for the purpose. Mixed with polenta it is good for old wounds. The following are also good detergents for wounds: heraclion siderion, apollinaris, psyllion, tragacantha, and scordotis mixed with honey. Powdered scordotis applied by itself, consumes fleshy excrescences on the body. Polemonia is curative of the malignant ulcer known as "cacoëthes." The greater centaury, sprinkled in powder, or applied in the form of a liniment, or the leaves of the smaller centaury, boiled or pounded, act as a detergent upon inveterate ulcers, and effect a cure. To recent wounds, the follicules of the clymenus are applied. Gentian is applied to scrpiginous ulcers, the root being bruised or else boiled down in water to the consistency of honey; the juice also of the plant is employed. For wounds, a kind of lycium is prepared from gentian.

Lysimachia is curative of recent wounds, and plantago of all kinds of ulcerations, those on females, infants, and aged persons more particularly. This plant, when softened by the action of fire, is better still: in combination with cerate it acts as a detergent upon ulcers with indurated edges, and arrests the progress of corrosive sores: when applied bruised, it should be covered with its own leaves. Chelidonia also acts as a desiccative upon suppurations, abscesses, and fistulous ulcers; indeed, it is so remarkably useful for the cure of wounds, as to be employed as a substitute for spodium even. In cases where the cure is almost hopeless, it is applied with axle- grease. Dittany, taken internally, causes arrows to fall from the flesh; used as a liniment, it has the effect of extracting other kinds of pointed

weapons: the leaves are taken in the proportion of one obolus to one cyathus of water. Nearly equal in its efficacy is pseudo-dictamnon: they are both of them useful, also, for dispersing suppurations.

Aristolochia cauterizes putrid sores, and, applied with honey, acts as a detergent upon sordid ulcers. At the same time also, it removes maggots, and extracts hard cores, and all foreign bodies adhering to the flesh, arrows more particularly, and, applied with resin, splintered bones. Used by itself, it fills the cavities made by ulcers with new flesh, and, employed with iris, in vinegar, it closes recent wounds. Vervain, or cinquefoil with salt and honey, is remedial for ulcers of long standing. Roots of persolata are applied to recent wounds inflicted with iron, but for old wounds, it is the leaves that are employed: in both cases, in combination with axle-grease, the sore being then covered with the leaves of the plant. Damasonium is used for wounds the same way as for scrofula, and leaves of verbascum are employed with vinegar or wine.

Vervain is useful for all kinds of callosities or putrid sores; root of nymphæa heraclia is curative of running ulcers; and the same is the case with root of cyclaminos, either used by itself, or in combination with vinegar or honey. This last root is useful also for the cure of steatomatous tumours, and hyssop for that of running ulcers; an effect equally produced by peucedanum, a plant which exercises so powerful an influence upon fresh wounds, as to cause exfoliation even of the bones. The two varieties of anagallis are possessed of similar properties, and act as a check upon the corrosive sores known as “nomæ” and upon defluxions; they are useful also in cases of recent wounds, those of aged people in particular. Fresh leaves of mandragora, applied with cerate, are curative of apostemes and sordid ulcers: the root too is used, with honey or oil, for wounds.

Hemlock, incorporated with flour of winter wheat by the agency of wine — as also the plant Aizoüm — is curative of herpetic eruptions, and corrosive or putrid sores. Erigeron is employed for ulcers which breed maggots. Root of astra- galus is used for the cure of recent wounds or of ulcers of long standing; and upon these last either kind of hypocisthis acts as a detergent. Seed of leontopodium, bruised in water and applied with polenta, extracts pointed weapons from the flesh: a result equally produced by using seed of

pycnocomon. The tithymalos characias supplies its juice for the cure of gangrenes, phagedænic sores, and putrid ulcers; or else a decoction is made of the branches with polenta and oil. Roots of orchis have a similar effect; in addition to which, ‘applied, either dry or fresh gathered, with honey and vinegar, they are curative of the ulcer known as “cacoëthes.” Onothera also, used by itself; is curative of ulcers when rapidly gaining head.

The people of Scythia employ scythice for the treatment of wounds. For carcinoma, argemonia, applied with honey, is extremely efficacious. For sores that have prematurely closed, root of asphodel is boiled, in manner already stated. and then beaten up with polenta, and applied. For all kinds of wounds apollinaris is very useful. Root of astragalus, reduced to powder, is good for running ulcers; the same, too, with callithrix, boiled in water. For blisters, more particularly when caused by the shoes, vervain is used, as also pounded lysimachia, or nymphæa dried and powdered; but when they have assumed the form of inveterate ulcers, polythrix will be found more serviceable.

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CHAP. 88.

POLYCNEMON: ONE REMEDY.

Polycnemon is a plant which resembles cunila bubula; it has a seed like that of pennyroyal, a ligneous stem with numerous articulations, and odoriferous umbels, with a pleasant though pungent smell. This plant is chewed and applied to wounds inflicted with iron, the application being removed at the end of four days. Symphyton causes sores to cicatrize with the greatest rapidity; the same, too, with sideritis, which is applied in combination with honey. The seed and leaves of verbascum, boiled in wine and pounded, are used for the extraction of all foreign substances adhering to the body; and a similar use is made of leaves of mandragora mixed with polenta, and roots of cyclaminos with honey. Leaves of trixago, bruised in oil, are used for ulcers of a serpiginous nature more particularly, as also sea-weed bruised with honey. Betony, with the addition of salt, is employed for the cure of carcinomatous sores and inveterate blisters on the neck.

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CHAP. 89.

REMEDIES FOR WARTS. AND APPLICATIONS FOR THE REMOVAL OF SCARS.

Argemonia with vinegar, or root of batrachion, removes warts; this last having the effect also of bringing off malformed nails. The juice or the leaves, applied topically, of either kind of linozostis, remove warts. All the varieties of tithy- malos are efficacious for the removal of every kind of wart, as also of hangnails and wens. Ladanum imparts a fresh colour and seemly appearance to scars.

(15.) The traveller who carries artemisia attached to his person, or elelisphacus, will never be sensible of lassitude, it is said.

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CHAP. 90.

REMEDIES FOR FEMALE DISEASES.

One great remedy for all female diseases in common, is the black seed of the herbaceous plant pæonia, taken in hydro- mel: the root also is an effectual emmenagogue. Seed of panaces, mixed with wormwood, acts as an emmenagogue and as a sudorific: the same, too, with scordotis, taken internally or applied topically. Betony, in doses of one drachma to three cyathi of wine, is taken for various affections of the uterus, as also directly after child-birth. Excessive menstruation is arrested by a pessary of achillea, or else a sitting-bath composed of a decoction of that plant. Seed of henbane in wine is used as a liniment for diseases of the mamillæ, and the root is employed in the form of a plaster for uterine affections; chelidonia, too, is applied to the mamillæ.

Roots of panaces, applied as a pessary, bring away the after-birth and the dead fœtus, and the plant itself, taken in wine, or used as a pessary with honey, acts as a detergent upon the uterus. Polemonia, taken in wine, brings away the after-birth; used as a fumigation, it is good for suffocations of the uterus. Juice of the smaller centaury, taken in drink, or employed as a fomentation, acts as an emmenagogue. The root also of the larger centaury, similarly used, is good for pains in the uterus; scraped and used as a pessary, it expels the dead fœtus. For pains of the uterus, plantago is applied as a pessary, in wool, and for hysterical suffocations, it is taken in drink. But it is dittany that is of the greatest efficacy in cases of this description; it acts as an emmenagogue, and is an expellent of the fœtus when dead or lying transversely in the uterus. In these cases the leaves of it are taken, in doses of one obolus, in water: indeed so active is it in its effects that ordinarily it is forbidden to be introduced into the chamber of a woman lying-in. Not only is it thus efficacious when taken in drink, but even when applied topically or used as a fumiga- tion. Pseudodictamnum possesses pretty nearly the same virtues, but it acts as an emmenagogue also, boiled in doses of one denarius in unmixed wine. Aristolochia, however, is employed for a

greater number of purposes: in combination with myrrh and pepper, either taken in drink or used as a pessary, it acts as a powerful emmenagogue, and brings away the dead fœtus and the after-birth. This plant, the smaller kind in particular, used either as a fomentation, fumigation, or pessary, acts as a preventive of procidence of the uterus.

Hysterical suffocations and irregularities of the catamenia are treated with agaric, taken in doses of three oboli, in one cyathus of old wine: vervain is used also in similar cases, as a pessary, with fresh hog's lard; or else antirrhinum, with rose oil and honey. Root of Thessalian nymphæa, used as a pessary, is curative of pains in the uterus; taken in red wine, it arrests uterine discharges. Root of cyclaminos, on the other hand, taken in drink and employed as a pessary, acts as an emmenagogue: a decoction of it, used as a sitting-bath, cures affections of the bladder. Cissanthemos, taken in drink, brings away the after-birth, and is curative of diseases of the. uterus. The upper part of the root of xiphion, taken in doses of one drachma, in vinegar, promotes menstruation. A fumigation of burnt peucedanum has a soothing effect in cases of hysterical suffocation. Psyllion, taken in the proportion of one drachma to three cyathi of hydromel, is particularly good for promoting the lochial discharge. Seed of mandragora, taken in drink, acts as a detergent upon the uterus; the juice, employed in a pessary, promotes menstruation and expels the dead fetus. The seed of this plant, used with live sulphur, arrests menstruation when in excess; while batrachion, on the other hand, acts as an emmenagogue. This last plant is either used as an article of food, or is taken in drink: in a raw state, as already stated, it has a burning flavour; but when cooked, the taste of it is greatly improved by the addition of salt, oil, and cummin. Daucus, taken in drink, promotes the catamenia, and is an expellent of the after-birth in a very high degree. Ladanum, used as a fumigation, acts as a corrective upon the uterus, and is employed topically for pains and ulcerations of that organ.

Scammony, taken in drink or used as a pessary, is an expellent of the dead fœtus. Either kind of hypericon, used as a pessary, promotes menstruation: but for this purpose it is crethmos, according to Hippocrates, that is the most efficacious, the seed or root of it being

taken in wine. of the outer coat brings away the after-birth. This plant, taken in water, is good for hysterical suffocations; root of geranion also, which is peculiarly useful for the after-birth, and for inflation of the uterus. Hippuris, taken in drink or applied as a pessary, acts as a detergent upon the uterus: polygonos, taken in drink, promotes menstruation; and the sane with root of alcima. Leaves of plantago, and agaric in hydromel, have a similar effect. Artemisia, bruised and applied as a pessary, with oil of iris, figs, or myrrh, is curative of diseases of the uterus; the root, too, of this plant, taken in drink, is so strongly purgative as to expel the dead fœtus even. A decoction of the branches, used as a sitting-bath, promotes menstruation and brings away the after-birth; the same, too, with the leaves, taken in doses of one drachma in drink. The leaves, if applied to the lower regions of the abdomen with barley-meal, will prove equally efficacious.

Acoron is very useful for internal complaints of females; as also the two varieties of conyza, and crethmos. Either kind of anthyllis, taken in wine, is remarkably good for uterine affections, griping pains in that organ, and retardations of the after-birth. Callithrix, applied as a fomentation, is curative of affections of the vagina: it removes scaly eruptions also of the head, and, beaten up in oil, it stains the hair. Geranion, taken in white wine, or hypocisthis in red, arrests all uterine discharges. Hyssop modifies hysterical suffocations. Root of vervain, taken in water, is a most excellent remedy for all accidents incident to, or consequent upon, delivery. Some persons mix bruised cypress seed with peucedanum in red wine. Seed, too, of psyllion, boiled in water and taken warm, has a soothing effect upon all defluxions of the uterus. Symphyton, bruised in wine, promotes menstruation. Juice of scordotis, in the proportion of one drachma to four cyathi of hydromel, accelerates delivery. Leaves of dittany are given for the same purpose, in water, with remarkable success. It is a well-known fact, too, that these leaves, to the extent of a single obolus even, will bring away the fœtus instantaneously, even when dead, without the slightest inconvenience to the patient. Pseudodictamnum is productive of a somewhat similar effect, but not in so marked a degree: cyclaminos, too, attached as an amulet; cissanthemos, taken in drink; and powdered betony, in

hydromel.

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CHAP. 91.

ARSENOGONON: ONE MEDICINAL PROPERTY. THELY- GONON: ONE MEDICINAL PROPERTY.

Arsenogonon and thelygonon are plants, both of them, with clusters resembling the blossoms of the olive, but paler, and a white seed like that of the poppy. By taking thelygonon in drink, they say, the conception of female issue is ensured. Arsenogonon differs from it in the seed, which resembles that of the olive, but in no other respect. By taking this last plant in drink, male issue may be ensured — that is, if we choose to believe it. Some persons, however, assert that both plants resemble ocimum, but that the seed of arsenogonon is double, and resembles the testes in appearance.

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CHAP. 92.

MASTOS: ONE REMEDY.

Aizoüm, which we have spoken of under the name of digi- tellus, is the great specific for diseases of the mamillæ. The milk is increased by taking erigeron in raisin wine, or else sonchos boiled with spelt. The plant known as “mastos,” applied topically, removes the hairs from the mamillæ, which make their appearance after child-birth: it has the effect also of dispersing scaly crusts upon the face, and other cutaneous affections. Gentian also, nymphæa heraclia employed in a liniment, and root of cyclaminos, remove all blemishes of the skin. Seeds of cacalia, mixed with melted wax, plump out the skin of the face and make wrinkles disappear. Root of acoron, also, removes all spots upon the skin.

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CHAP. 93.

APPLICATIONS FOR THE HAIR. LYSIMACHIA. OPHRYS.

Lysimachia imparts a blonde tint to the hair, and the hypericon, otherwise called "corisson," makes it black. The same too, with ophrys, a plant with indentations, which re sembles the cabbage, but has only two leaves. Polemonia, too, boiled in oil, imparts blackness to the hair.

As for depilatories, I reckon them in the number of cosmetics, fit for women only, though men use them now-a-days. For this purpose archezostis is looked upon as highly efficacious, as also juice of tithymalos, applied with oil every now and then in the sun, or after pulling out the hairs. Hyssop, applied with oil, heals itch-scab in beasts, and side- citis is particularly useful for quinzy in swine.

But let us now turn to the remaining plants of which we have to speak.

SUMMARY. — Remedies, narratives, and observations, one thousand and nineteen.

ROMAN AUTHORS QUOTED. — M. Varro, C. Valgius, Pompeius Lenæus, Sextius Niger who wrote in Greek, Julius Bassus who wrote in Greek, Antonius Castor, Cornelius Celsus.

FOREIGN AUTHORS QUOTED. — Theophrastus, Democritus, Juba, Orpheus, Pythagoras, Mago, Menander who wrote the "Biochresta," Nicander, Homer, Hesiod, Musæus, Sophocles, Xanthus, Anaxilaüs.

MEDICAL AUTHORS QUOTED. — Mnesitheus, Callimachus, Phanias the physician, Timaristus, Simus, Hippocrates, Chrysippus, Diocles, Ophelion, Heraclides, Hicesius, Dionysius, Apollodorus of Citium, Apollodorus of Tarentum, Praxagoras, Plistonicus, Medius, Dieuches, Cleophantus, Philistion, Asclepiades, Creteuas, Petronius Diadotus, Iollas, Erasistratus, Diagoras, Andreas, Mnesides, Epicharmus, Damion, Tlepolemus, Metrodorus, Solo, Lycus, Olympias of Thebes, Philinus, Petrichus, Micton, Glaucias, Xenocrates.

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BOOK XXVII. A DESCRIPTION OF PLANTS, AND OF THE REMEDIES DERIVED FROM THEM.

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CHAP. 1. (1.)

RESEARCHES OF THE ANCIENTS UPON THIS SUBJECT.

THE further I proceed in this work, the more I am impressed with admiration of the ancients; and the greater the number of plants that remain to be described, the more I am induced to venerate the zeal displayed by the men of former times in their researches, and the kindly spirit manifested by them in transmitting to us the results thereof. Indeed their bounteousness in this respect would almost seem to have surpassed the munificent disposition even of Nature herself, if our knowledge of plants had depended solely upon man's spirit of discovery: but as it is, it is evident beyond all doubt that this knowledge has emanated from the gods themselves, or, at all events, has been the result of divine inspiration, even in those cases where man has been instrumental in communicating it to us. In other words, if we must confess the truth — a marvel surpassed by nothing in our daily experience — Nature herself, that common parent of all things, has at once produced them, and has discovered to us their properties.

Wondrous indeed is it, that a Scythian plant should be brought from the shores of the Palus Mæotis, and the euphorbia from Mount Atlas and the regions beyond the Pillars of Hercules, localities where the operations of Nature have reached their utmost limit! That in another direction, the plant britannica should be conveyed to us from isles of the Ocean situate beyond the confines of the earth! That the æthiopis should reach us from a climate scorched by the luminaries of heaven! And then, in addition to all this, that there should be a perpetual interchange going on between all parts of the earth, of productions so instrumental to the welfare of mankind! Results, all of them, ensured to us by the peace that reigns under the majestic sway of the Roman power, a peace which brings in presence of each other, not individuals only, belonging to lands and nations far separate, but mountains even, and heights towering above the clouds, their plants and their various productions! That this great bounteousness of the gods may know no end, is my prayer, a bounteousness which seems to have granted the Roman sway as a second luminary for the benefit

of mankind.

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CHAP. 2. (2.)

ACONITE, OTHERWISE CALLED THELYPHONON, CAM- MARON, PARDALIANCHES, OR SCORPIO; FOUR REMEDIES.

But who, I say, can sufficiently venerate the zeal and spirit of research displayed by the ancients? It is they who have shown us that aconite is the most prompt of all poisons in its effects — so much so indeed, that female animals, if the sexual parts are but touched with it, will not survive a single day. With this poison it was that M. Cæcilius accused Calpurnius Bestia of killing his wives in their sleep, and this it was that gave rise to that fearful peroration of his, denouncing the murderous finger of the accused. According to the fables of mythology, this plant was originally produced from the foam of the dog Cerberus, when dragged by Hercules from the Infernal Regions; for which reason, it is said, it is still so remarkably abundant in the vicinity of Heraclea in Pontus, a spot where the entrance is still pointed out to the shades below.

And yet, noxious as it is, the ancients have shown us how to employ aconite for the benefit of mankind, and have taught us as the result of their experience, that, taken in mulled wine, it neutralizes the venom of the scorpion: indeed such is the nature of this deadly plant, that it kills man, unless it can find in man something else to kill. When such is the case, as though it had discovered in the body a fit rival to contend with, that substance is the sole object of its attack; finding another poison in the viscera, to it alone it confines its onslaught; and thus, a truly marvellous thing! two poisons, each of them of a deadly nature, destroy one another within the body, and the man survives. Even more than this, the ancients have handed down to us remedies employed by the animals themselves, and have shown how that venomous creatures even effect their own cure. By the contact of aconite the scorpion is struck with torpor, is quite benumbed, assumes a pallid hue, and so confesses itself vanquished. When this is the case, white hellebore is its great auxiliary: the very touch of it dispels its torpor, and the aconite is forced to yield before two foes, its own enemy and the common enemy of all.

Now, after this, if any one should be of opinion that man could, by any chance or possibility, make such discoveries as these, he must surely be guilty of ingratitude in thus appre- ciating the beneficence of the gods! In countries frequented by the panther, they rub meat with aconite, and if one of those animals should but taste it, its effects are fatal: indeed were not these means adopted, the country would soon be overrun by them. It is for this reason, too, that some persons have given to hellebore the name of "pardalianches." It has been well ascertained, however, that the panther instantaneously recovers if it can find the opportunity of eating human ordure. So far as these animals are concerned, who can entertain a doubt that it was chance only that first led them to this discovery; and that as often as this happens the discovery is only a mere repetition of the accident, there being neither reason nor an appreciation of experience to ensure its transmission among them?

(3.) It is chance, yes, it is chance that is the Deity who has made to us these numerous revelations for our practical benefit; always understanding that under this name we mean Nature, that great parent and mistress of all things: and this is evident, whether we come to the conclusion, that these wild beasts make the discovery from day to day, or that they are gifted from the first with these powers of perception. Regarded in another point of view, it really is a disgrace that all animated beings should have an exact knowledge of what is beneficial to them, with the exception of man!

The ancients, openly professing their belief that there is no evil without some admixture of good, have asserted that aconite is a remarkably useful ingredient in compositions for the eyes. It may therefore be permitted me, though I have hitherto omitted a description of the poisonous plants, to point out the characteristics of aconite, if only that it may be the more easily detected. Aconite has leaves like those of cyclaminos or of the cucumber, never more than four in number, slightly hairy, and rising from near the root. This root, which is of moderate size, resembles the sea-fish known as the "cammarus," a circumstance owing to which the plant has received the name of "cammaron" from some; while others, for the reason already mentioned, have called it "thelyphonon." The root is slightly curved, like a scorpion's tail, for which reason some persons have

given it the name of “scorpio.” Others, again, have preferred giving it the name of “myoctonon,” from the fact that the odour of it kills mice at a considerable distance even.

This plant is found growing upon the naked rocks known as “aeonæ;” and hence it is, according to some authorities, that it is called “aconitum,” there being not so much as dust even about it to conduce to its nutriment. Such is the reason given for its name by some: but according to others, it receives this appellation from the fact that it fatally exercises the same effects upon the body that the whetstone does upon the edge of iron, being no sooner employed than its effects are felt.

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CHAP. 3. (4.)

-ÆTHIOPIS: FOUR REMEDIES.

Æthiopis is a plant with leaves resembling those of phlomos, large, numerous, hairy, and springing from the root. The stem is square, rough, similar to that of arction in appearance, and with numerous axillary concavities. The seed resembles that of the fitch, being white and twofold; the roots are several in number, long, fleshy, soft, and of a viscous taste; when dry they turn black and hard, and might easily be taken for horns. In addition to Æthiopia, this plant grows upon Mount Ida in Troas, and in Messenia. The roots are gathered in autumn, and left to dry for some days in the sun, to prevent them from turning mouldy. Taken in white wine they are curative of affections of the uterus, and a decoction of them is administered for sciatica, pleurisy, and eruptions of the throat. The kind, however, which comes from Æthiopia, is by far the best, and gives instantaneous relief.

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CHAP. 4.

AGERATON: FOUR REMEDIES.

Ageraton is a ferulaceous plant, a couple of palms in height, similar to origanum in appearance, and bearing flowers like balls of gold. Used as a fumigation, this plant acts as a diuretic; and as a detergent upon the uterus, when used in a sitting bath more particularly. Its name has been given to it, from the circumstance that it keeps a very long time without fading.

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CHAP. 5.

THE ALOE; TWENTY-NINE REMEDIES.

The aloe bears a resemblance to the squill, except that it is larger, and has more substantial leaves, with streaks running obliquely. The stem is tender, red in the middle, and not unlike that of the anthericus. It has a single root, which runs straight downwards, like a stake driven into the ground; its smell is powerful, and it has a bitter taste. The most esteemed aloes are those imported from India, but it grows in the Asiatic provinces as well. This last kind, however, is never used, except that the leaves are applied fresh to wounds; indeed, these leaves, as well as the juice, are glutinous to a marvellous degree, and it is for this property that it is grown in vessels of a conical form, in the same way as the greater Aizoüm. Some persons make incisions in the stem to obtain the juice, before the seed is ripe, while others, again, make them in the leaves as well. Tearlike drops are also found adhering to it, which exude spontaneously: hence it is that some recommend that the place should be paved where it is grown, to prevent this juice from being absorbed.

Some authors have stated, that there is found in Judæa, beyond Hierosolyma, a mineral aloe, but that it is inferior to the other kinds, being of a darker colour and more humid than any of the rest. Aloes of the finest quality should be unctuous and shining, of a red colour, brittle, compact, like the substance of liver, and easily liquefied. That which is hard and black should be rejected; the same, too, when it is mixed with sand or adulterated with gum and acacia, a fraud which may be easily detected by the taste.

This plant is of an astringent nature, binding, and slightly calorific. It is employed for numerous purposes, but principally as a purgative, it being almost the only one of all the medica- ments which produce that effect, that is at the same time a good stomachic, and does not exercise the slightest noxious influence upon the stomach. It is taken in doses of one drachma, and, in cases of derangement of the stomach, it is administered two or three times a

day, in the proportion of one spoonful to two cyathi of warm or cold water, at intervals, according to the nature of the emergency. As a purgative it is mostly taken in doses of three drachmæ; and it operates still more efficaciously, if food is eaten directly afterwards. Used with astringent wine, it prevents the hair from falling off, the head being rubbed with it the contrary way of the hair, in the sun. Applied to the temples and forehead with rose oil and vinegar, or used as an infusion, in a more diluted form, it allays head-ache. It is generally agreed that it is remedial for all diseases of the eyes, but more particularly for prurigo and scaly eruptions of the eye-lids; as also for marks and bruises, applied in combination with honey, Pontic honey in particular.

It is employed, also, for affections of the tonsillary glands and gums, for all ulcerations of the mouth, and for spitting of blood, if not in excess — the proper dose being one drachma, taken in water or else vinegar. Used by itself, or in combination with vinegar, it arrests hæmorrhage, whether proceeding front wounds or from other causes. In addition to these properties, it is extremely efficacious for the cure of wounds, producing cicatrization very rapidly: it is sprinkled also upon ulcerations of the male organs, and is applied to condylomata and chaps of the fundament, either in common wine, raisin wine, or by itself in a dry state, according as a mollifying or restrictive treatment is required. It has the effect, also, of gently arresting hæmorrhoidal bleeding, when in excess. In cases of dysentery, it is used as an injection, and where the digestion is imperfect it is taken shortly after the evening meal. For jaundice, it is administered in doses of three oboli, in water. As a purgative for the bowels, it is taken in pills, with boiled honey or turpentine. It is good also for the removal of hangnails. When employed in ophthalmic preparations, it is first washed, that the more gravelly portions of it may subside; or else it is put over the fire in a pipkin, and stirred with a feather from time to time, that the whole of it may be equally warmed.

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CHAP. 6.

ALCEA: ONE REMEDY.

Alcea is a plant with leaves, resembling those of vervain, known also as “peristereon,” some three or four stems covered with leaves, a flower like that of the rose, and white roots, at most six in number, a cubit in length, and running obliquely. It grows in a soil that is rich without being dry. The root is given in wine or water, for dysentery, diarrhœa, ruptures, and convulsions.

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CHAP. 7.

THE ALYPON: ONE REMEDY.

The alypon has a small stem, with a soft head, and is not unlike beet in appearance. It has an acrid, viscous taste. extremely pungent and burning. Taken in hydromel, with a little salt, it acts as a purgative. The smallest dose is two drachmæ, a moderate dose, four, and the largest, six. When used as a purgative, it is taken in chicken broth.

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CHAP. 8.

ALSINE, A PLANT USED FOR THE SAME PURPOSES AS HELXINE: FIVE REMEDIES.

Alsine, a plant known as “myosoton” to some, grows in the woods, to which fact it is indebted for its name of “alsine.” It begins to make its appearance at mid-winter, and withers in the middle of summer. When it first puts forth, the leaves bear a strong resemblance to the ears of mice. We shall have occasion, however, to speak of another plant, which may, with much more justice, be called “myosotis.” As for alsine, it would be the same thing as helxine, were it not that it is smaller and not so hairy. It grows in gardens, and upon walls more particularly: when rubbed, it emits a smell like that of cucumber. It is used for abscesses, inflammations, and all those purposes for which helxine is employed; its properties, however, are not so active. It is applied topically, also, to defluxions of the eyes, and to sores upon the generative organs, and ulcerations, with barley meal. The juice is used as an injection for the ears.

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CHAP. 9.

THE ANDROSACES: SIX REMEDIES.

The androsaces is a white plant, bitter, without leaves, and bearing arms surmounted with follicules, containing the seed. It grows in the maritime parts of Syria, more particularly. This plant is administered for dropsy, in doses of two drachmæ, pounded or boiled, in either water, wine, or vinegar: it acts most powerfully as a diuretic. It is used also for gout, either taken internally or used as a liniment. The seed is possessed of similar properties.

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CHAP. 10.

ANDROSÆMON OR ASCYRON: SIX REMEDIES.

Androsæmon or, as some persons call it, “ascyron,” is not unlike hypericon, a plant of which we have spoken already: the stems, however, are larger, redder, and lie more closely together. The leaves are of a white colour, and like those of rue in shape; the seed resembles that of the black poppy, and the upper branches, when bruised, emit a red juice the colour of blood: these branches have also a resinous smell.

This plant grows in vineyards, and it is usually in the middle of autumn that it is taken up and hung to dry. Used as a purgative, it is bruised with the seed, and taken in the morning or just after the evening meal, in doses of two drachmæ, in hydromel, wine, or pure water, the draught amounting to one sextarius in all. It carries off bile, and is particularly good for sciatica; but in this last case, caper root must be taken with resin the day after, the dose being one drachma, to be repeated every four days: after being purged, it is the practice for the patient, if in robust health, to take wine, but if in a weak state of body, water. It is employed topically, also, for gout, burns, and wounds, as it tends to arrest the flow of blood.

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CHAP. 11.

AMBROSIA, BOTRYS, OR ARTEMISTA: THREE REMEDIES.

Ambrosia is a vague name, which has fluctuated between various plants: there is one, however, which has been more particularly designated by this appellation, a branchy, shrublike plant, with a thin stem, some three palms in height; the root of it is one third shorter, and the leaves, towards the lower part of the stem, resemble those of rue. Its diminutive branches bear a seed which hangs down in clusters, and has a vinous smell: hence it is that by some persons the plant is called “botrys,” while to others it is known as “artemisia.” The people of Cappadocia use it for garlands. It is employed in medicine as a resolvent.

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CHAP. 12.

THE ADONIS OR ONONIS: FIVE REMEDIES.

The anonis, by some called “ononis” in preference, is a branchy plant, and similar to fenugreek in appearance, except that it is more shrub-like and more hairy. It has an agreeable smell, and becomes prickly after spring. It is pickled in brine for eating. Applied fresh to ulcers, it cauterizes the margins of them. For the cure of tooth-ache, the root is boiled in oxy- crate: taken in drink, with honey, the root expels urinary calcuii. For epilepsy, it is administered in oxymel, boiled down to one half.

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CHAP. 13.

THE ANAGYROS OR ACOPON: THREE REMEDIES.

The anagyros, known to some by the name of “aco- pon,” is a shrub-like plant, with an offensive smell, and a blossom like that of the cabbage. The seed grows in small hornlike pods of considerable length, and resembles a kidney in shape; it hardens about the time of harvest. The leaves of this plant are applied to gatherings, and are attached to the person in cases of difficult parturition, care being taken to remove them the moment after delivery. In cases where the extraction of the dead fœtus is attended with difficulty, or where the after-birth or catamenia are retarded, the leaves are taken, in doses of one drachma, in raisin wine. The leaves are administered in the same manner for asthma: they are prescribed also in old wine, for injuries inflicted by the phalangium. The root is employed medicinally as a resolvent and maturative: the seed, chewed, acts as an emetic.

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CHAP. 14.

THE ANONYMOS: TWO REMEDIES.

The anonymos, through not having a name, has at last found one. It is brought from Scythia, and has been highly extolled by Hicesius, a physician of no small repute, as also by Aristogiton. Bruised in water and applied, it is remarkably useful for wounds, and taken in drink it is good for blows upon the chest or mamillæ, as also for spitting of blood: it has been thought, too, that it might be advantageously taken in a potion for wounds. I am of opinion that the additional statement, to the effect that, burnt fresh, it acts as a solder to iron or copper, is wholly fabulous.

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CHAP. 15. (5.)

APARINE, OMPHIALOCARPOS, OR PHILANTHROPOS: THREE REMEDIES.

Aparine, otherwise called “omphalocarpos” or “philanthropos,” is a ramose, hairy, plant, with five or six leaves at regular intervals, arranged circularly around the branches. The seed is round, hard, concave, and of a sweetish taste. It grows in cornfields, gardens, and meadows, and, by the aid of its prickly points, adheres to the clothes. The seed is employed to neutralize the venom of serpents, being taken in doses of one drachma, in wine: it is useful also for the bite of the phalangium. The leaves, applied topically, arrest ha- morrhage from wounds. The juice is used as an injection for the ears.

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CHAP. 16.

THE ARCTION OR ARCTURUM: FIVE REMEDIES.

The arction is by some called “arcturum” in preference: the leaves of it are like those of verbascum, except that they are more hairy; the stem is long and soft, and the seed resembles that of cummin. It grows in rocky localities, and has a tender root, white and sweet. A decoction of it is made with wine for tooth-ache, being retained for that purpose in the mouth. The plant is taken in drink for sciatica and strangury, and is applied with wine to burns and chilblains, which are fomented also with the root and seed bruised in wine.

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CHAP. 17.

THE ASPLENON OR HEMIONION: TWO REMEDIES.

Some persons call the asplenon by the name of “hemio- nion.” It has numerous leaves, a third of a foot in length, and a slimy root, pierced with holes like that of fern, white, and hairy, It is destitute of stem, flower, and and is found growing upon rocks or sheltered damp walls. The most approved kind is that of Crete. A decoction of the leaves in vinegar, taken in drink for a period of thirty days, will consume the spleen, it is said, the leaves being applied simultaneously. The leaves give relief also in hiccup. This plant should never be given to females, being productive of sterility.

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CHAP. 18.

THE ASCLEPIAS: TWO REMEDIES.

The asclepias has leaves like those of ivy, long branches, and numerous roots, thin, and odoriferous. The flower has a strong offensive smell, and the seed is like that of securidaca: it is found growing in mountainous districts. The roots are used for the cure of griping pains in the bowels, and of stings inflicted by serpents, either taken in drink or applied topically.

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CHAP. 19.

THE ASTER OR BUBONION: THREE REMEDIES.

The aster is called “bubonion” by some, from the circumstance of its being a sovereign remedy for diseases of the groin. It has a diminutive stem with oblong leaves, two or three in number; and at the summit it is surmounted with small radiated heads, like stars. This plant is taken also in drink as an antidote to the venom of serpents: but if required for the cure of inguinal complaints, it is recommended that it should be gathered with the left hand, and attached to the body near the girdle. It is of great service also, worn as an amulet, for sciatica.

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CHAP. 20.

ASCYRON AND ASCYROÏDES: THREE REMEDIES.

Ascyron and ascyroïdes are plants similar to one another, and to hypericon as well, except that the plant known as

ascyroïdes" has larger branches, ferulaceous, red all over, and bearing small yellow heads. The seed, enclosed in small calyces, is diminutive, black, and resinous. The tops of the branches, when bruised, stain like blood; for which reason some persons have given it the name of "androsæmon." The seed is used for the cure of sciatica, being taken in doses of two drachmæ, in one sextarius of hydromel. It relaxes the bowels, and carries off bile: it is applied also to burns.

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CHAP. 21.

THE APHACA: THREE REMEDIES.

The aphaca has remarkably diminutive leaves, and is but little taller than the lentil. The pods are of a larger size, and enclose some three or four seeds, of a darker colour, moister, and more diminutive than those of the lentil: it grows in cultivated fields. It is naturally more astringent than the lentil, but in other respects is applied to much the same purposes. The seed, used in a decoction, arrests fluxes of the stomach and bowels.

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CHAP. 22.

ALCIBIUM : ONE REMEDY.

I have not found it stated by authors what kind of plant alcibium is; but the root, I find, and the leaves, are pounded and employed, both externally and internally, for injuries inflicted by serpents. When the leaves are used, a handful of them is bruised in three cyathi of undiluted wine: the root is employed in the proportion of three drachmæ to the same quantity of wine.

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CHAP. 23.

ALECTOROSLOPHOS OR CRISTA: TWO REMEDIES.

Alectoroslophos, or crista, as we call it, has numerous leaves resembling a cock's comb, a thin stem, and a black seed enclosed in pods. Boiled with broken beans and honey, it is useful for cough and for films upon the eyes. The seed, too, is sprinkled whole into the eyes, and so far is it from injuring them, that it attracts and collects the filmy matter. When thus used, it changes colour, and from black becomes white, gradually swells, and comes out of itself.

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CHAP. 24. (6.)

ALUM, ALSO CALLED SYMPHYTON PETRÆON: FOURTEEN REMEDIES.

The plant which we call “alum,” and which is known to the Greeks as “symphyton petræon,” is similar to cunila bubula in appearance, having a diminutive leaf and three or four branches springing from the root, with tops like those of thyme. It is a ligneous plant, odoriferous, of a sweet flavour, and provocative of saliva: the root of it is long and red. It grows upon rocks, to which circumstance it is indebted for its additional name of “petræon;” and is extremely useful for affections of the sides and kidneys, griping pains in the bowels, diseases of the chest and lungs, spitting of blood, and eruptions of the fauces. The root is pounded and taken in drink, or else a decoction is made of it in wine; sometimes, also, it is applied externally. Chewed, it allays thirst, and is particularly refreshing to the pulmonary organs. It is employed topically for sprains and contusions, and has a soothing effect upon the intestines.

Cooked upon hot ashes, with the follicules removed, and then beaten up with nine peppercorns and taken in water, it acts astringently upon the bowels. For the cure of wounds it is remarkably efficacious, being possessed of agglutinating properties to such a remarkable degree as to solder pieces of meat together with which it is boiled; to which, in fact, it is indebted for its Greek name. It is used also for the cure of fractured bones.

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CHAP. 25. (7.)

ALGA RUFA OR RED SEA-WEED: ONE REMEDY.

Red sea-weed is useful as an application for the sting of the scorpion.

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CHAP. 26.

ACTÆA: ONE REMEDY.

Actæa has leaves with a powerful smell, rough knotted stems, a black seed like that of ivy, and soft berries. It grows in umbrageous, rugged, watery localities; and is used, in doses of one full acetabulum, for female complaints.

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CHAP. 27.

THE AMPELOS AGRIA, OR WILD VINE: FOUR REMEDIES.

Ampelos agria, or wild vine, is the name of a plant with leaves of an ashy colour, as already stated in our description of the cultivated plants, and long, tough twigs of a red hut, like that of the flower which we have mentioned, when speaking of violets, under the name of “flame of Jove.” It bears a seed which resembles the grains of the pomegranate. The root, boiled in three cyathi of water, with the addition of two cyathi of Coan wine, is slightly laxative to the bowels, and is consequently given for dropsy. It is curative also of uterine affections, and of spots upon the face in females. It is found a good plan for patients afflicted with sciatica to use the juice of this plant, bruised, applied topically, with the leaves.

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CHAP. 28.

-ABSINTHIUM OR WORMWOOD; FOUR VARIETIES: FORTY-EIGHT REMEDIES.

There are numerous kinds of absinthium; the Santonic, for instance, so called from a city in Gaul, and the Pontic, which comes from Pontus, where the cattle are fattened upon it — a diet which causes them to be destitute of gall. The Pontic wormwood, we may remark, is of the finest quality, superior to that of Italy, and much more bitter; the pith, however, of the Pontic wormwood is sweet. As to its general utility, a plant so commonly found and applied to such numerous uses, people are universally agreed; but with the Romans more particularly it has been always held in the highest esteem, from the fact of its being employed in their religious ceremonials. Thus, for instance, upon the Latin Festival, it is the custom to have a race of four-horsed chariots in the Capital, and for the conqueror to be presented with a draught of wormwood; from the circumstance, no doubt, that our forefathers were of opinion that good health was the most valuable reward they could bestow upon his skill.

This plant is very strengthening to the stomach, and hence it is that wines are flavoured with it, as already stated. A decoction of it in water is also taken, the following being the method employed in preparing it. Six drachmæ of the leaves are boiled, with the branches, in three sextarii of rain water, and the preparation is then left to cool in the open air a day and a night. Salt, too, should be added to it. When old, it is utterly useless. A dilution of wormwood steeped in water is also used, such being the name given to this method of preparing it. This dilution is made by leaving the vessel covered up for three days, any kind of water being used. Pounded wormwood is but rarely employed, and the same with the extracted juice of the seed. In cases, however, where it is extracted, the seed is subjected to pressure as soon as it begins to swell, after which it is soaked for three days in water, if used fresh, and seven, if dry. It is then boiled in a copper vessel, in the proportion of ten heminæ to forty-five sextarii of water, after which it is strained off and boiled gently to the

consistency of honey, in the same way as the juice is extracted from the smaller centaury. The juice, however, of wormwood, thus extracted, is bad for the head and stomach; whereas the decoction, on the other hand, is wholesome in the highest degree, as it acts astringently upon the stomach, carries off bile, is a powerful diuretic, has a soothing effect upon the bowels, and assuages pains in the intestines. With the addition of sile, Gallic nard, and a little vinegar, it dispels nausea and flatulency, and expels intestinal worms. It removes qualmishness, promotes the digestion, and, with the addition of rue, pepper, and salt, disperses crudities of the stomach.

The ancients were in the habit of giving wormwood as a purgative, the dose being six drachmæ of the seed with three of salt and one cyathus of honey, in one sextarius of sea water kept for some time. This preparation, however, is rendered more efficacious by doubling the proportion of salt; the seed, too, must be bruised with the greatest care, as there is considerable difficulty in pounding it. Some authorities have prescribed the dose above mentioned to he given in polenta, with the addition of pennyroyal; while others recommend the leaves to be given to children in a dried fig, to disguise their bitterness. Taken with iris, wormwood acts as a detergent upon the thoracic organs: for jaundice it is used raw, with parsley or adiantum. In cases of flatulency, it is sipped every now and then, warmed in water; for liver complaints it is taken with Gallic nard, and for diseases of the spleen, with vinegar, pap, or figs. Taken in vinegar it neutralizes the bad effects of fungi and of viscus: in wine it is an antidote to the poison of hemlock, and to the bite of the shrew-mouse, and is curative of wounds inflicted by the seadragon and the scorpion. It contributes also very greatly to the improvement of the sight, and is used as an external application, with raisin wine, for defluxions of the eyes, and with honey, for bruises.

The steam of a decoction of wormwood is curative of affections of the ears; and when they are attacked with running sores, a liniment of wormwood bruised with honey is applied. Three or four sprigs of wormwood, with one root of Gallic nard, taken in six cyathi of water, act as a diuretic and as an emmenagogue; indeed, if taken with honey, or employed as a pessary with wool, it has especial virtues as an emmenagogue. In combination with honey and nitre it is useful

for quinzy, and an infusion of it in water is good for epinyctis. A topical application is made of it for recent wounds, provided always they have not been touched with water: it is employed also for ulcers upon the head. In combination with Cyprian wax or figs, it is highly recommended as a plaster for the iliac regions: it is curative also of prurigo, but it must never be administered in fevers. Taken in drink, it is a preventive of sea sickness; and, worn attached to the body, beneath an apron, it arrests inguinal swellings. The smell of it induces sleep, a similar effect being produced by placing it under the pillow unknown to the party. Kept among clothes it preserves them from worms, and used as a liniment, with oil, or burnt as a fumigation, it has the effect of driving away gnats.

Writing ink, mixed with an infusion of wormwood, effectually protects the writings from the attacks of mice. Ashes of wormwood, mixed with rose unguent, stain the hair black.

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CHAP. 29.

ABSINTHIUM: MARINUM OR SERIPHUM.

There is a sea wormwood also, known as “seriphum” by some, the most esteemed being that of Taposiris in Egypt. Those initiated in the mysteries of Isis carry a branch of it in the hand. It has a narrower leaf than the preceding plant, and is not so bitter; it is injurious to the stomach, has a laxative effect upon the bowels, and expels intestinal worms. It is taken in drink with oil and salt; or else an infusion of it is taken in a pottage made of meal of three-month wheat. When employed as a decoction, a handful is used to one sextarius of water, the mixture being boiled down to one half.

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CHAP. 30. (8.)

THE BALLOTES, MELAMPRASION, OR BLACK LEEK: THREE REMEDIES.

The Greeks give to the ballotes the other name of “melamprasion,” meaning “black leek.” It is a branchy plant, with black angular stems, covered with hairy leaves, larger and darker than those of the leek, and possessed of a powerful smell. The leaves, bruised and applied with salt, are highly efficacious for bites inflicted by dogs: cooked upon hot ashes and applied in a cabbage leaf, they are curative of condylomata. Mixed with honey, this plant acts as a detergent upon sordid ulcers.

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CHAP. 31.

BOTRYS, AMBROSIA, OR ARTEMISIA: ONE REMEDY.

Botrys is a shrublike plant, which has small yellow branches, with the seed growing all round them, and leaves resembling those of endive. It is found upon the banks of running streams, and is used for the cure of hardness of breathing. The people of Cappadocia call this plant “ambrosia,” others again, “artemisia.”

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CHAP. 32.

THE BRABYLA: ONE REMEDY.

The brabyla is possessed of astringent properties like those of the quince, but beyond this, authors give no particulars relative to it.

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CHAP. 33.

BRYON MARITIMUM: FIVE REMEDIES.

Sea bryon is a plant, no doubt, with leaves like those of the lettuce, of a wrinkled, pursed appearance, and destitute of stem, the leaves arising from a single root: it grows upon rocks more particularly, and shells sunk in the sand. It has desiccative and astringent qualities in a very high degree, properties which render it useful for reducing all kinds of abscesses and inflammations, those attendant upon gout in particular. It is good also for all affections which stand in need of cooling applications.

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CHAP. 34.

THE BUPLEURON: ONE REMEDY.

I find it stated that seed of bupleuron is given for injuries inflicted by serpents; and that the wound is fomented with a decoction of the plant, in combination with leaves of the mulberry or of origanum.

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CHAP. 35.

THE CATANANCE; ONE OBSERVATION UPON IT. THE CEMOS: ONE OBSERVATION UPON IT.

The catanance is a Thessalian plant, which it would be a mere loss of time to describe, seeing that it is only used as an ingredient in philtres. In order, however, to expose the follies of the magical art, it may not be out of place to remark that this plant has been selected for the above-named purpose, from the fact that, as it withers, it gradually contracts and assumes the shape of the claws of a dead kite.

For a similar reason we shall give no description of the plant called “cemos.”

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CHAP. 36.

THE CALYX: THREE REMEDIES.

Of the calyx there are two kinds. One of these resembles arum, and is found growing in ploughed soils; the proper time for gathering it being before it begins to wither. It is employed for the same purposes as arum; and an infusion of the root is taken as a purgative and as an emmenagogue. The stalks, boiled with the leaves and some pulse, are curative of tenesmus.

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CHAP. 37.

THE CALYX, KNOWN ALSO AS ANCHUSA OR ONOCLIA: TWO REMEDIES.

The other kind of calyx is known by some persons as “anchusa,” and by others as “onoclia.” The leaves are like those of the lettuce, but longer, and with a downy surface. The root is red, and is employed topically, in combination with fine polenta, for the cure of erysipelas: taken internally with white wine, it is good for affections of the liver.

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CHAP. 38.

THE CIRCÆA: THREE REMEDIES.

The circæa resembles the cultivated trychnon in appearance. It has a small swarthy flower, a diminutive seed, like millet, growing in small horn-shaped pods, and a root half a foot in length, generally triple or fourfold, white, odoriferous, and hot in the mouth. It is found growing upon rocks exposed to the sun. An infusion of it is prepared with wine, and administered for pains and affections of the uterus: to make it, three ounces of the pounded root should be steeped in three sextarii of wine a day and a night. This potion is effectual also for bringing away the after-birth. The seed of this plant, taken in wine or hydromel, diminishes the milk in nursing women.

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CHAP. 39.

THE CIRSION: ONE REMEDY.

The cirsion is a plant consisting of a diminutive and delicate stem, two cubits in height, of a triangular form, and covered with prickly leaves. The prickles on the leaves are downy, and the leaves themselves resemble those of buglos- sos in shape, but are smaller, and of a whitish colour. At the summit of the plant there are small purple heads, which fall off in the shape of down. This plant or the root of it, worn as an amulet, it is said, is curative of the pains attendant upon varicose veins.

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CHAP. 40.

THE CRATÆGONON; TWO KINDS OF IT: EIGHT REMEDIES.

The cratægonon is similar to an ear of corn in appearance. It is formed of numerous shoots, springing from a single root, and full of joints. It grows in umbrageous localities, and has a seed like that of millet, with a remarkably acrid taste. If a man and woman, before the evening meal, take three oboli of this seed in three cyathi of water, for forty days consecutively, before the conception of their issue, it will be sure to be of the male sex, they say.

There is another cratægonon, known also as "thelygonos," and distinguished from the last mentioned plant by the mildness of the taste. Some persons assert that females, if they take the blossom of this plant in drink, will be sure to conceive before the end of forty days. These plants, used in combination with honey, are curative of black ulcers of a chronic nature; they also fill the concavities made by fistulous ulcers with new flesh, and restore such parts of the body as are wasted by atrophy. They act as a detergent upon purulent sores, disperse inflammatory tumours, and alleviate gout and all kind of abscesses, those of the mamillæ in particular.

Under the name of "cratægos" or "cratægon," Theophrastus speaks of the tree known in Italy as the "aquifolia."

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CHAP. 41.

THE CROCODILEON: TWO REMEDIES.

The crocodileon resembles the black chamæleon in shape: the root is long, of an uniform thickness, and possessed of a pungent smell. It is found growing in sandy soils. Taken in drink, it causes a copious discharge of coagulated blood at the nostrils, and in this way, it is said, diminishes the volume of the spleen.

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CHAP. 42.

THE CYNOSORCHIS OR ORCHIS: FOUR REMEDIES.

The cynosorchis, by some called “orchis,” has leaves like those of the olive, soft, three in number, half a foot in length, and lying upon the ground. The root is bulbous, oblong, and divided into two portions, the upper one hard, and the lower one soft. These roots are eaten boiled, like bulbs, and are mostly found growing in vineyards. If males eat the upper part, they will be parents of male issue, they say; and females, if they eat the lower part, of female. In Thessaly, the men take the soft portion in goats’ milk as an aphrodisiac, and the hard part as an antaphrodisiac. Of these parts, the one effectually neutralizes the action of the other.

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CHAP. 43.

THE CHRYSOLACHANUM; TWO VARIETIES OF IT: THREE REMEDIES. COAGULUM: TERAÆ: TWO REMEDIES.

The chrysolachanum grows in pine plantations, and is similar to the lettuce in appearance. It heals wounds of the sinews, if applied without delay. There is another kind of chrysolachanum mentioned, with a golden flower, and a leaf like that of the cabbage: it is boiled and eaten as a laxative vegetable. This plant, worn as an amulet by a patient suffering from jaundice, provided it be always kept in sight, is a cure for that disease, it is said. I art not certain whether this is all that might be said about the chrysolachanum, but, at all events, it is all that I have found respecting it; for it is a very general fault on the part of our more recent herbalists, to confine their account of plants to the mere name, with a very meagre description of the peculiar features of the plant, — just as though, forsooth, they were universally known. Thus, they tell us, for instance, that a plant known as “coagulum terræ,” acts astringently upon the bowels, and that it dispels strangury, taken in water or in wine.

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CHAP. 44.

THE CUCUBALUS, STRUMUS, OR STRYCHNON: SIX REMEDIES.

The leaves of the cucubalus, they tell us, bruised with vinegar, are curative of the stings of serpents and of scorpions. Some persons call this plant by the name of “strumus,” while others give it the Greek name of “strychnon:” its berries are black. The juice of these berries, administered in doses of one cyathus, in two cyathi of honied wine, is curative of lumbago; an infusion of them with rose oil is used for head- ache, and they are employed as an application for scrofulous sores.

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CHAP. 45.

THE CONFERVA: TWO REMEDIES.

The conferva is peculiar to running streams, those of the Alpine regions more particularly; receiving its name front “conferrumino,” to solder together. Properly speaking, it is rather a fresh-water sponge than a moss or a plant, being a dense, porous mass of filaments. I know an instance where a man, who fell to the ground while lopping a tree of considerable height, and broke nearly every bone of his body, was cured by the agency of this plant. The patient’s body was covered all over with conferva, the application being continually sprinkled with water the moment it began to dry, and only removed for the purpose of changing it when the plant gave signs of losing its virtues. It is hardly credible with what rapidity he recovered.

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CHAP. 46. (9.)

THE COCCUS CNIDIUS, OR GRAIN OF CNIDOS: TWO REMEDIES.

The Cnidian grain has just the colour of the kermes berry. It is larger than a peppercorn, and has very heating properties: hence it is that when used, it is taken in crumb of bread, that it may not burn the throat in passing downwards. It is a sovereign remedy for hemlock, and arrests looseness of the bowels.

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CHAP. 47.

THE DIPSACOS: TWO REMEDIES.

The dipsacos has leaves like those of the lettuce, with prickly tubercles on the middle of the back. The stem of it, two cubits in length, is bristling all over with prickles of a similar nature. The joints of the stem are closely covered with two leaves, which form a concave axil in which a saltish dew-like liquid collects. At the summit of the stem there are small heads covered with prickles: it grows in watery localities.

This plant is used for the cure of chaps of the fundament and of fistula; in which latter case the root is boiled down in wine to the consistency of wax, to allow of its being introduced into the fistula in the form of a salve. It is employed; too, for the cure of all kinds of warts: as a liniment for which, the juice collected in the axils, as above mentioned, is also used by some.

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CHAP. 48.

THE DRYOPTERIS: TWO REMEDIES.

The dryopteris, which resembles fern in appearance, is found growing upon trees; the leaves are of a somewhat sweetish flavour and marked with slight indentations, and the root is hairy. This plant is possessed of caustic properties, and hence the root is pounded and used as a depilatory. In using it the skin is rubbed with it till perspiration is excited, the operation being repeated a second and a third time, care being taken not to remove the perspiration.

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CHAP. 49.

THE DRYOPHONON.

The dryophonon is a similar plant, with thin stems a cubit in length, and surrounded on either side with leaves about as large as the thumb and like those of the oxymyrsine in appearance, only whiter and softer: the blossom is white, and similar to that of the elder. The shoots of it are eaten boiled, and the seed is used as a substitute for pepper.

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CHAP. 50.

THE ELATINE: TWO REMEDIES.

The elatine has leaves like those of the helxine, diminu- tive, round, and hairy; its branches are small, half a foot in length, five or six in number, and covered with leaves from the root upwards. It grows in corn-fields, and has a rough flavour: hence it is found very useful for defluxions of the eyes, the leaves being beaten up and applied with polenta in a linen pledget. A decoction of this plant with linseed, taken in pottage, is good for dysentery.

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CHAP. 51.

EMPETROS. BY OUR PEOPLE CALLED CALCIFRAGA: FOUR REMEDIES.

Empetros, by the people of our country called “calcifraga,” grows on mountains near the sea, and is generally found upon rocks: the nearer it grows to the sea the salter it is, acting as an evacuant of bile and pituitous secretions. That, on the other hand, which grows at a greater distance and more inland, is of a more bitter flavour. It carries off the aqueous humours of the body, being taken for that purpose in broth of some kind, or else hydromel. When old, it loses its strength; but used fresh, either boiled in water or pounded, it acts as a diuretic, and disperses urinary calculi. Authorities who wish full credence to be given to this asserted property, assure us that pebbles boiled with it will split asunder.

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CHAP. 52.

THE EPIPACTIS OR ELLEBORINE: TWO REMEDIES.

The epipactis, called “elleborine” by some, is a diminutive plant with small leaves. Taken in drink, it is extremely useful for diseases of the liver, and as an antidote to poisons.

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CHAP. 53.

THE EPIMEDION: THREE REMEDIES.

The epimedion consists of a stem of moderate size, with ten or twelve leaves like those of ivy: it never flowers, and has a thin, black root, with a powerful smell. It grows in humid soils. This plant also has certain astringent and cooling properties, but females must be on their guard against it. The leaves, beaten up in wine, prevent the bosom from growing too large in young girls.

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CHAP. 54.

THE ENNEAPHYLLON: TWO REMEDIES.

The enneaphyllon has nine long leaves, and is of a caustic nature. It is employed topically, but when used it is wrapped in wool to prevent it from cauterizing further than desirable, for it blisters immediately. For lumbago and sciatica it is of the greatest utility.

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CHAP. 55.

TWO VARIETIES OF FILIX OR FERN, KNOWN TO THE GREEKS AS PTERIS, OR BLACHNON, AND AS THELYPTERIS, OR NYMPHÆ PTERIS: ELEVEN REMEDIES.

Of fern there are two varieties, equally destitute of blossom and of seed. The Greeks give the name of "pteris," and sometimes "blachnon," to the kind in which numerous shoots take their rise from a single root, exceeding two cubits even in length, and with a not unpleasant smell: this plant is thought to be the male fern.

The other kind is known to the Greeks as "thelypteris," and sometimes, "nymphæa pteris:" it has a single stem only, with comparatively few branches, is shorter, softer, and more tufted than the other, and has channelled leaves growing near the root. Swine are fattened upon the roots of either kind. The leaves of both kinds are arranged on either side in the form of wings, whence the Greek name "pteris." The roots are long, run obliquely, and are of a swarthy colour, more par- ticularly when dried: when wanted for use,. they should be dried in the sun. These plants are found growing everywhere, but in cold soils more particularly; they should be taken up, too, at the setting of the Vergiliæ. The root is only used at the end of three years, neither before that period nor after. They act as an expellent of intestinal worms; for tapeworm honey is taken with them, but in other cases sweet wine, for three days.

They are, both of them, extremely detrimental to the stomach, but are laxative to the bowels, carrying off first the bile and then the aqueous humours of the body. When used for tapeworm, it is the best plan to take scammony with them, in equal proportions. For rheumatic defluxions, the root is taken in doses of two oboli, in water, after a day's abstinence from food, a little honey being taken first. Neither kind must ever be given to females; for in pregnancy they are productive of abortion, and in other cases entail sterility. Powdered fern is sprinkled upon sordid ulcers, as also upon the necks of beasts of burden, when chafed. Fern-leaves kill bugs, and serpents will never harbour among them: hence it is a good plan to strew them

in places where the presence of those reptiles is suspected. The very smell, too, of burnt fern will put serpents to flight. Medical men have made this distinction as to ferns; that of Macedonia, they say, is the best, and that of Cassiope the next.

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CHAP. 56.

FEMUR BUBULUM, OR OX THIGH.

The name of femur bubulum is given to a plant which is good for the sinews, applied fresh, and beaten up with salt and vinegar.

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CHAP. 57.

GALEOPSIS, GALEOBDOLON, OR GALION: SIX REMEDIES.

Galeopsis, or as some call it, “galeobdolon” or “galion,” is a plant with a stem and leaves like those of the nettle, only smaller; and which, when bruised, emit a powerful smell. The flower is purple, and the plant is found growing everywhere, about hedges and foot-paths. The leaves and stems, bruised in vinegar, and applied topically, are curative of indurations, carcinomata, and scrofulous sores. They disperse also inflam- natory tumours and imposthumes of the parotid glands, and it is found a useful plan to foment the parts affected with a decoction of them. Applied with salt, this plant is curative of putrid ulcers and gangrenous sores.

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CHAP. 58.

THE GLAUX: ONE REMEDY.

The glaux was known in ancient times as the “eugalacton.” In the leaves it resembles the cytisus and the lentil, only that they are whiter beneath. The branches, five or six in number, are extremely thin, and, springing from the root, creep upon the ground, with small purple blossoms upon them. This plan is found in localities near the sea. It is boiled in a pottage made of similago, to increase the milk: females, however, after taking it, must immediately use the bath.

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CHAP. 59. (10).

GLAUCION: THREE REMEDIES. DIAGLAUCIA: TWO REMEDIES.

Glaucion grows in Syria and Parthia; it is a plant of stunted growth, and thickly covered with leaves, like those of the Poppy in appearance, only smaller and of a more repulsive aspect: it has an offensive smell, and a bitter, astringent taste. The seed, which is of a saffron colour, is put into a vessel coatd with potter's clay, and heated in an oven; when taken out, a juice is extracted, which is known by the same name as the plant. This juice and the leaves, bruised, are used for defluxins of the eyes, which disappear in an instant, under this treatment: an eye-salve, too, is prepared from the juice, known as "diaglaucia," to medical men. The milk, when the secretion of it is stopped, is restored by the agency of this plant, for which purpose it is taken in water.

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CHAP. 60.

THE GLYCYSIDE, PÆONIA, OR PENTOROBOS: TWENTY REMEDIES.

The glycyside, by some called "pæonia" or "pentorobos," has a stem two cubits in length, accompanied by two or three others, and of a reddish colour, with a bark like that of the laurel. The leaves are similar to those of isatis, but more unctuous, rounder, and more diminutive; the seed is enclosed in capsules, some being red and some black, there being two varieties of the plant. The female plant is generally thought to be the one to the root of which some six or eight bulbs are attached, of an elongated form; those of the male plant being more in number, as it throws out more roots than one, a palm in length, and of a white colour: it has also an astringent taste. The leaves of the female plant smell like myrrh, and lie closer together than those of the male.

Both plants grow in the woods, and they should always be taken up at night, it is said; as it would be dangerous to do so in the day-time, the woodpecker of Mars being sure to attack the eyes of the person so engaged. It is stated also that the person, while taking up the root, runs great risk of being attacked with procidence of the anus: all this, however, I take to be so much fiction, most frivolously invented topuff off their supposed marvellous properties. Both plants are used for various purposes: the red seed, taken in red wine, about fifteen in number, arrest menstruation; while the black seed, taken in the same proportion, in either raisin or other vine, are curative of diseases of the uterus. The root, taken in vine, allays all kinds of pains in the bowels, and acts as a purgaive; it cures opisthotony also, jaundice, nephritic diseases, and affections of the bladder. Boiled in wine, it is used for diseaes of the trachea and stomach, and acts astringently upon the bowels. It is eaten also by beasts of burden, but when wanted for remedial purposes, four drachmæ are sufficient.

The black seed is useful as a preventive of night-mare, being taken in wine, in number above stated: it is very good, too, to eat this seed, and to apply it externally, for gnawing pains of the stomach. Suppurations are also dispersed, when recent, with the black seed,

and when of long standing, with the red: both kinds are very useful, too, for wounds inflicted by serpents, and in cases where children are troubled with calculi, being employed at the crisis when strangury first makes its appearance.

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CHAP. 61.

GNAPHALIUM OR CHAMÆZELON: SIX REMEDIES.

Gnaphalium is called “chamæzelon” by some: its white, soft, leaves are used as flock, and, indeed, there is no perceptible difference. This plant is administered in astringent wine, for dysentery: it arrests looseness of the bowels and the catamenia, and is used as an injection for tenesmus. It is employed topically for putrid sores.

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CHAP. 62.

THE GALLIDRAGA: ONE REMEDY.

Xenocrates gives the name of “gallidraga” to a plant which resembles the leucacanthus, and grows in the marshes. It is a prickly plant, with a tall, ferulaceous stem, surmounted with a head somewhat similar to an egg in appearance. When this head is growing, in summer, small worms, he says, are generated, which are put away in a box for keeping, and are attached as an amulet, with bread, to the arm on the side on which tooth-ache is felt; indeed it is quite wonderful, he says, how soon the pain is removed. These worms, however, are of no use after the end of a year, or in cases where they have been allowed to touch the ground.

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CHAP. 63.

HOLCUS OR ARISTIS.

Holcus is a plant that grows in arid, stony, spots: it has an ear at the end of a fine stem, and looks like barley that has put forth again when cut. Attached to the head or around the arm, it extracts spikes of corn adhering to the flesh; for which reason, some persons give it the name of “aristis.”

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CHAP. 64.

HYOSERIS: ONE REMEDY.

Hyoseris resembles endive in appearance, but is a smaller plant, and rougher to the touch: pounded and applied to wounds, it heals them with remarkable rapidity.

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CHAP. 65.

THE HOLOSTEON: THREE REMEDIES.

The holosteon, so called by the Greeks by way of antiphrasis, (in the same way that they give the name of “sweet” to the gall,) is a plant destitute of all hardness, of such extreme fineness as to resemble hairs in appearance, four fingers in length, and very similar to hay-grass. The leaves of it are narrow, and it has a rough flavour: it grows upon elevated spots composed of humus. Taken in wine, it is used for ruptures and convulsions. It has the property, also, of closing wounds; indeed, if applied to pieces of meat it will solder them together.

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CHAP. 66.

THE HIPPOPHÆSTON: EIGHT REMEDIES.

The hippophæston is one of those prickly plants which fullers use in their coppers; it has neither stem nor flower, but only diminutive, empty heads, numerous small leaves of a grass-green colour, and small, soft, white roots. From these roots a juice is extracted in summer, which, taken in doses of three oboli, acts as a purgative; being used for this purpose in cases of epilepsy, fits of trembling, dropsy, vertigo, hardness of breathing, and incipient paralysis.

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CHAP. 67. (11.)

THE HYPOGLOSSA: ONE REMEDY.

The hypoglossa is a plant with leaves like those of the wild myrtle, of a concave form, prickly, and presenting another small leaf within, resembling a tongue in shape. A wreath made of these leaves, placed upon the head, alleviates headache.

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CHAP. 68.

HYPECOÖN.

Hypecoön is a plant found growing in corn-fields, with leaves like those of rue. Its properties are similar to those of juice of poppies.

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CHAP. 69.

THE IDÆA HERBA, OR PLANT OF IDA: FOUR REMEDIES.

The Idæan plant has leaves like those of the oxymyrsine; to which leaves a sort of tendril adheres, that bears a flower. This plant arrests diarrhœa, the catamenia, when in excess, and all kinds of hæmorrhage. It is of an astringent and repercussive nature.

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CHAP. 70.

THE ISOPYRON OR PHASIOLON: TWO REMEDIES.

The isopyron is called “phasiolon” by some, from the circumstance that the leaf of it, which resembles that of anise, assumes a spiral form like the tendrils of the phasiolus. At the summit of the stem, it bears small heads full of a seed like that of melanthium. These heads, taken with honey or hydromel, are good for cough and other affections of the chest; they are extremely useful also for liver complaints.

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CHAP. 71.

THE LATHYRIS: TWO REMEDIES.

The lathyris has numerous leaves like those of the lettuce, with numbers of small buds, in which the seed is contained, enclosed in envelopes like that of the caper. When these buds are dry, the seeds, about the size of a peppercorn, are taken out: they are white, sweet, and easily cleansed from the husk. Twenty of them, taken in pure water or in hydromel, are curative of dropsy, and carry off bile. Persons who require a stronger purgative, take them with the husks on. They are apt, however, to be injurious to the stomach; for which reason a plan has been adopted of taking them with fish or else chicken broth.

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CHAP. 72.

THE LEONTOPETALON OR PARDALION: TWO REMEDIES.

The leontopetalon is called “pardalion” by some: it has a leaf like that of the cabbage, and a stem half a foot in height, with numerous lateral branches, and a seed at the extremities of them, enclosed in pods like those of the chick-pea. The root resembles that of rape, and is large and black: it grows in plough lands. The root, taken in wine, neutralizes the venom of all kinds of serpents; indeed, there is nothing known that is more speedily efficacious for that purpose. It is given also for sciatica.

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CHAP. 73.

THE LYCAPSOS: TWO REMEDIES.

The lycapsos has longer and thicker leaves than those of the lettuce, and a long, hairy stem, with numerous offshoots a cubit in length; the flower is diminutive, and of a purple colour; it grows in champaign localities. In combination with barleymeal, it is used as an application for erysipelas: the juice of it, mixed with warm water, is employed as a sudorific, in fevers.

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CHAP. 74.

THE LITHOSPERMUM, EXONYCHON, DIOSPYRON, OR HERACLEOS: TWO REMEDIES.

Among all the plants, however, there is none of a more marvellous nature than the lithospermum, sometimes called "exonychon," "diospyron," or "heracleos." It is about five inches in height, with leaves twice the size of those of rue, and small ligneous branches, about the thickness of a rush. It bears close to the leaves a sort of fine beard or spike, standing by itself, on the extremity of which there are small white stones, as round as a pearl, about the size of a chick-pea, and as hard as a pebble. These stones, at the part where they adhere to the stalk, have a small cavity, and contain a seed within.

This plant is found in Italy, no doubt, but that of Crete is the most esteemed. Among all the plants, there is none that I ever contemplated with greater admiration than this; so beauteous is the conformation, that it might be fancied that the hand of an artist had arranged a row of lustrous pearls alternately among the leaves; so exquisite too the nicety in thus making a stone to grow upon a plant! The authorities say that this is a creeping plant, and that it lies upon the ground; but for my own part, I have only seen it when plucked, and not while growing. It is well known that these small stones, taken in doses of one drachma, in white wine, break and expel urinary calculi, and are curative of strangury. Indeed, there is no plant that so instantaneously proclaims, at the mere sight of it, the medicinal purposes for which it was originally intended; the appearance of it, too, is such, that it can be immediately recognized, without the necessity of having recourse to any botanical authority.

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CHAP. 75.

LAPIDIS MUSCUS, OR STONE MOSS: ONE REMEDY.

There grows near running streams, a dry, white moss, upon ordinary stones. One of these stones, with the addition of human saliva, is rubbed against another; after which the first stone is used for touching impetigo, the party so doing uttering these words: — φεύγετε χανθαρίδες, λύχος ἄγριος αἷμα διώχει.
"Cantharides begone, a wild wolf seeks your blood."

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CHAP. 76.

THE LIMEUM: ONE REMEDY.

Limeum is the name given by the Gauls to a plant, in a preparation of which, known to them as “deer’s poison,” they dip their arrows when hunting. To three modii of salivating mixture they put as much of the plant as is used for poisoning a single arrow; and a mess of it is passed down the throat, in cases where oxen are suffering from disease, due care being taken to keep them fastened to the manger till they have been purged, as they are generally rendered frantic by the dose. In case perspiration supervenes, they are drenched all over with cold water.

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CHAP. 77.

THE LEUCE, MESOLEUCON, OR LEUCAS: THREE REMEDIES.

Leuce, a plant resembling mercurialis, has received its name from the circumstance that a white line runs through the middle of the leaf; for which reason also, some give it the name of “mesoleucon.” The juice of this plant is curative of fistula, and the plant itself, bruised, is good for carcinomata. It is probably the same plant as that called “leucas,” so remarkably efficacious for the venom of all kinds of marine animals. Authors have not given a description of it, beyond telling us that the wild leucas has larger leaves than the other, and has properties more strongly developed: they state also that the seed of the cultivated kind is the more acrid of the two.

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CHAP. 78.

THE LEUCOGRAPHIS: FIVE REMEDIES.

I have not found a description given by any writer of the leucographis; a thing I am the more surprised at, as they tell us that it is good for the cure of spitting of blood, taken in doses of three oboli with saffron; as also that it is useful for cœliac affections, applied beaten up in water, and in cases of excessive menstruation. They state also that it enters into the composition of ophthalmic preparations, and that it fills up ulcers on the more tender parts of the body with new flesh.

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CHAP. 79. (12.)

THE MEDION: TREE REMEDIES.

The medion has leaves like those of the cultivated seris, a stem three feet in length, and a large, round, purple flower, at its extremity. The seed is diminutive, and the root half a foot in length: it grows upon umbrageous, sheltered rocks. The root, taken in doses of two drachmæ with honey, arrests the catamenia, the electuary being used for some days. The seed, too, is administered in wine for a similar purpose.

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CHAP. 80.

THE MYOSOTA OR MYOSOTIS: THREE REMEDIES.

The myosota or myosotis is a smooth plant, throwing out from a single root numerous hollowed stems, of a somewhat reddish colour; and bearing at the lower extremities swarthy, narrow, oblong leaves, sharp on the back, arranged in pairs at regular distances, and springing from delicate branches attached with axils to the main stems. The flower is blue, and the root, a finger in length, is provided with numerous filaments like hairs. This plant possesses certain septic and ulcerating properties, and hence is used for the cure of fistula of the eye. The Egyptians say that if upon the morning of the twenty-eight day of their month Thoth, a day which generally falls in our month of August, a person rubs himself with the juice of this plant before speaking to any one, he will be sure to have no diseases of the eyes all that year.

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CHAP. 81.

TE MYAGROS: ONE REMEDY.

The myagros is a ferulaceous plant, with leaves like those of madder: the seed is of an oily nature-indeed, an oil is extracted from it. Ulcerations of the mouth are cured by rubbing them with the juice of this plant.

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CHAP. 82.

THE NYMA: ONE REMEDY.

The plant called “nyma” bears three long leaves, like those of endive: applied to scars, it restores the skin to its natural colour.

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CHAP. 83.

THE NATRIX: ONE REMEDY.

“Natrix” is the name of a plant, the root of which, when taken out of the ground, has just the rank smell of the he-goat. It is used in Picenum for the purpose of keeping away from females what with a singular credulity they call by the name of “Fatui.” For my own part, however, I should think that persons requiring to be treated with such medicaments as these, must be labouring under a sort of mental hallucination.

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CHAP. 84.

ODONTITIS: ONE REMEDY.

Odontitis is a sort of hay-grass, which throws out from a single root numerous, small, jointed. stems, of a triangular form and of a swarthy hue. At the joints there are small leaves, somewhat longer than those of the polygonos; and in the axils formed by these leaves is the seed, similar to barley in appearance. It has a purple, diminutive flower, and is found growing in meadows. A handful of the stems, boiled in astringent wine, is used for the cure of tooth-ache, the decoction being retained for some time in the mouth.

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CHAP. 85.

THE OTHONNA: ONE REMEDY.

The othonna is a Syrian plant, resembling rocket in appearance; its leaves are pierced with numerous holes, and its flower resembles that of saffron, for which reason some persons have given it the name of “anemone.” The juice of this plant is employed in ophthalmic preparations; it is slightly pungent, of a warming nature, and astringent as it dries. It acts as a detergent upon cicatrizations, films on the eyes, and all impediments of the sight. Some say that the plant is washed and dried, and then divided into lozenges.

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CHAP. 86.

THE ONOSMA: ONE PROPERTY.

The onosma has leaves some four fingers in length, lying upon the ground, and indented like those of the anchusa: it has neither stem, blossom, nor seed. A pregnant woman, they say, if she eats of this plant, or even walks over it, will be sure to miscarry.

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CHAP. 87.

THE ONOPORDON: FIVE REMEDIES.

The onopordon, it is said, has strongly carminative effects upon asses, when they eat of it. It acts as a diuretic and as an emmenagogue, arrests diarrhœa, and disperses abscesses and suppurations.

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CHAP. 88.

THE OSYRIS: FOUR REMEDIES.

The osyris bears small, swarthy, flexible branches, covered with dark leaves like those of flax. The seed, which grows upon the branches, is black at first, but afterwards changes its colour and turns red. Cosmetics for females are prepared from these branches. A decoction of the roots, taken in drink, is curative of jaundice. The roots, cut in pieces before the seed ripens, and dried in the sun, act astringently upon the bowels: gathered after the seed has ripened, and boiled in pottage, they are curative of defluxions of the abdomen: they are taken also by themselves, bruised in rain water.

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CHAP. 89.

THE OXYS: TWO REMEDIES.

The oxys is a plant with three leaves; it is given for derangement of the stomach, and patients eat it who are suffering from intestinal hernia.

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CHAP. 90.

THE POLYANTHEMUM OR BATRACHION: THREE REMEDIES.

The polyanthemum, by some persons called “batrachion,” by virtue of its caustic properties has an excoriating effect upon scars, and restores the skin to its proper colour. It heals white morphew also.

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CHAP. 91.

THE POLYGONOS, POLYGONATOS, TEUTHALIS, CARCI- NETHRON, CLEMA, OR MYRTOPETALOS, OTHERWISE KNOW AS SANGUINARIA OR ORIOS; FOUR VARIETIES OF IT: FORTY REMEDIES.

The Greeks give the name of "polygonos" to the plant known to us as "sanguinaria." It is but little elevated above the ground, has leaves like those of rue, and resembles grass in appearance. The juice of it, injected into the nostrils, arrests hæmorrhage: taken with wine, it has a similar effect upon bleeding at any other part of the body, as also spitting of blood. Those who distinguish several kinds of polygonos, make this to be the male plant, and say that it is so called from the large number of seeds, or else from its numerous branches. Some call it "polygonatos," from the number of its joints, others, again, "teuthalis," and others, "carcinethron," "clema," or "myrtopetalos."

There are some authorities to be found, however, who say that this is the female plant, and that the male is more diminutive, less swarthy, and more jointed, with a seed protruding beneath all the leaves. However this may be, these plants are of an astringent, cooling nature. The seed is laxative, and, taken in large doses, acts as a diuretic, and arrests defluxions; indeed, if there is no defluxion, it is of no use taking it. For burning heats of the stomach, the leaves are applied topically; and they are used, in the form of a liniment, for pains in the bladder, and for erysipelas. The juice is used as an injection for suppurations of the ears, and by itself, for pains in the eyes. It is administered, also, in fevers, tertian and quartan fevers more particularly, in doses of two cyathi, just before the paroxysms come on; as also in cases of cholera, dysentery, and derangement of the stomach.

There is a third kind, which grows on the mountains, and is known as "orios," similar to a delicate reed in appearance, and having but a single stem, with numerous joints running into one another; the leaves of it are similar to those of the pitchtree, and the root is never used. This variety, however, is not so efficacious as those already mentioned, and, indeed, is used exclusively for sciatica.

A fourth kind is known as the wild polygonos: it is a shrub, almost a tree in fact, with a ligneous root, a red trunk like that of the cedar, and branches resem- bling those of spartum, a couple of palms in length, and with three or four dark-coloured, knotted joints. This kind, also, is of an astringent nature, and has a flavour like that of the quince. It is either boiled down in water to one third, or else dried and powdered for sprinkling upon ulcerations of the mouth and excoriations: it is chewed, also, for affections of the gums. It arrests the progress of corrosive ulcers and of all sores of a serpiginous nature, or which cicatrize with difficulty, and is particularly useful for ulcerations caused by snow. Herbalists employ it also for quinzy, and use it as a chaplet for head-ache; for defluxions of the eyes, they put it round the neck.

In cases of tertian fever, some persons pull it up with the left hand, and attach it as an amulet to the body; the same, too, in cases of hæmorrhage. There is no plant that is more generally kept by them in a dry state than the polygonos.

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CHAP. 92.

THE PANCRATIUM: TWELVE REMEDIES.

The pancratium is called by some the “little squill,” in preference: it has leaves like those of the white lily, but longer and thicker, and a root composed of a large, red, bulb. The juice of it, taken with meal of fitches, relaxes the bowels, and acts as a detergent upon ulcers: for dropsy, and diseases of the spleen, it is administered with honey. Some persons boil it till the water becomes sweet; the water is then poured off, and the root is pounded and divided into tablets, which are dried in the sun and used for ulcerations of the head, and other affections which require detergents. It is sometimes given for cough, a pinch in three fingers in wine, and, in the form of an electuary, for pains in the side or peripneumony.

It is administered, also, in wine, for sciatica, griping pains in the bowels, and retardations of the catamenia.

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CHAP. 93.

THE PEPLIS, SYCE, MECONION, OR MECON APHRODES: THREE REMEDIES.

The peplis, known by the various names of “syce,” “meconion,” and “mecon aphrodes,” is a shrub-like plant, springing from a single, diminutive, root. The leaves of it resemble those of rue, but are a little larger; the seed, which lies beneath the leaves, is round, and smaller than that of the white poppy. It is ordinarily gathered in vineyards, at harvest-time, and is dried with the seed on, receivers being placed beneath to catch it as it falls. This seed, taken in drink, purges the bowels, and carries off bile and pituitous secretions: one acetabulum, taken in three heminæ of hydromel, is a middling dose. It is sprinkled also upon meat and other articles of food, as a laxative medicine.

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CHAP. 94.

THE PERICLYMENOS: FIVE REMEDIES.

The periclymenos is also a shrub-like plant, with two whitish, soft, leaves, arranged at intervals. At the extremity, among the leaves, is the seed, hard, and very difficult to pluck. It grows in ploughed fields and hedges, entwining around every object from which it can gain support. The seed is dried in the shade, pounded, and divided into lozenges. These lozenges are left to dissolve, in three cyathi of white wine, for a period of thirty days, and are given for diseases of the spleen; the volume of which is gradually diminished either by discharges of bloody urine, or else by alvine evacuation, the effects of the medicament being perceptible at the end of ten days. The leaves, boiled, act as a diuretic, and are useful for hardness of breathing. Taken in drink, in manner above- mentioned, they facilitate delivery, and bring away the afterbirth.

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CHAP. 95.

PELECINON: ONE REMEDY.

We have already spoken of pelecinon as growing in cornfields, a plant which throws out a number of shoots from thin stems, and has leaves like those of the chick-pea. The seed, which is contained in pods of a curved shape, like diminutive horns and three or four in number, is similar to gith in appearance, bitter, and an excellent stomachic. It is used as an ingredient in antidotes.

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CHAP. 96.

POLYGALA: ONE REMEDY.

Polygala is a palm in height, with leaves like those of the lentil at the extremity of the stem. It has an astringent taste; taken in drink, it increases the milk in nursing women.

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CHAP. 97.

POTERION, PHRYNION, OR NEURAS: FOUR REMEDIES.

Poterion, or, as some call it, “phrynion” or “neuras,” throws out numerous branches, is shrivelled and prickly, and covered with a thick down. The leaves of it are small and round; the branches long, soft, thin, and flexible; and the blossom elongated, and of a grass-green colour. The seed is never used, but it has a pungent flavour and a powerful smell: the plant is found growing upon moist, watery, elevations. The roots are two or three in number, some two cubits in length, sinewy, white, and firm. It is dug up in autumn, and the stem yields a juice like gum, when cut. The root is said to be of wonderful efficacy as an application for the cure of wounds, more particularly of the sinews, even when severed. A decoction of it is also taken, with honey, for relaxations of the sinews, and for weakness or wounds of those parts.

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CHAP. 98.

THE PHALANGITIS, PHALANGION, OR LEUCACANTHA: FOUR REMEDIES.

The phalangitis is by some called “phalangion,” and by others “leucanthemum,” or, as I find it written in some copies, “leucacantha.” Its branches are diminutive, never less than two in number, and running in contrary directions: the blossom is white, and similar to the flower of the red lily; the seed dark and broad, resembling the half of a lentil, but much thinner; and the root slender and of a grass-green colour. The leaves, blossoms, or seed of this plant are employed for the cure of wounds inflicted by scorpions, serpents, and the phalangium, and for the removal of griping pains in the bowels.

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CHAP. 99.

THE PHYTEUMA: ONE PROPERTY.

As for the phyteuma, I think it a mere loss of time to describe it, it being only used as an ingredient in philtres.

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CHAP. 100.

THE PHYLLON: ONE PROPERTY.

The Greeks give the name of “phyllon” to a plant which grows among the rocks, in mountainous spots. The female plant is of a more grass-green colour than the other, with a thin stem, a diminutive root, and a round seed, like that of the poppy. This last kind ensures the conception of issue of the same sex; while the male plant, differing only in the seed, which resembles the olive at its first appearance, ensures the conception of male issue. They are both taken in wine.

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CHAP. 101.

THE PHELLANDRION: TWO REMEDIES.

The phellandrion grows in marshy spots, and has a leaf like that of parsley: the seed of it is taken in drink for calculi and affections of the bladder.

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CHAP. 102.

THE PHALARIS: TWO REMEDIES.

The phalaris has a long thin stem, like a reed, with a drooping flower at the extremity; the seed is like that of sesame. This plant, too, taken with milk and honey, in wine or vinegar, breaks urinary calculi, and is curative of diseases of the bladder.

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CHAP. 103.

THE POLYRRHIZON: FIVE REMEDIES.

The polyrrhizon has leaves like those of myrtle, and numerous roots. These roots are pounded and administered in wine, for injuries inflicted by serpents: they are useful, also, for cattle.

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CHAP. 104.

THE PROSERPINACA: FIVE REMEDIES.

The proserpinaca, a common plant enough, is an excellent remedy for the sting of the scorpion. Powdered and mixed with brine and oil, in which the mæna has been preserved, it is an excellent cure, they say, for quinzy. It is also stated that, however fatigued a person may be, to the extent even of losing his voice, he will be sure to be refreshed, by putting this plant beneath his tongue; and that if it is eaten, a vomit will be the result, productive of good effects.

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CHAP. 105.

RHACOMA: THIRTY-SIX REMEDIES.

Rhacoma is imported from the regions situate beyond Pontus. The root of it is similar to black costus, but smaller and somewhat redder, inodorous, and of a hot, astringent flavour; when pounded, it yields a colour like that of wine, but inclining to saffron. Applied topically, it reduces abscesses and inflammations, and heals wounds: used with raisin wine, it allays defluxions of the eyes; with honey, ecchymosis; and with vinegar, livid marks upon the skin. Reduced to powder, it is sprinkled upon malignant ulcers, and is given internally for spitting of blood, in doses of one drachma, in water. For dysentery and cœliac affections, if unattended with fever, it is administered in wine; but if there is fever, in water. It is pounded more easily when it has been steeped in water the night before. A decoction of it is given, in doses of two drachmæ, for ruptures, convulsions, contusions, and falls with violence.

In cases of pains in the chest, a little pepper and myrrh is added. When the stomach is deranged, it is taken in cold water; and the same in cases of chronic cough, purulent expectorations, liver complaint, affections of the spleen, sciatica, diseases of the kidneys, asthma, and hardness of breathing. Pounded and taken in doses of three oboli, in raisin wine, or used in the form of a decoction, it cures irritations of the trachea: applied with vinegar, it acts as a detergent upon lichens. It is taken in drink, also, for flatulency, cold shiverings, chilly fevers, hiccup, gripings of the bowels, herpetic ulcerations, oppressions of the head, vertigo attended with melancholy, lassitude accompanied with pain, and convulsions.

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CHAP. 106.

THE RESEDA: TWO REMEDIES.

In the vicinity of Ariminum, there is a well-known plant called “reseda:” it disperses abscesses and all kinds of inflammations. Those who employ it for these purposes, add the following words: “Reseda,” allay this disease! knowest thou not, knowest thou not, what chick it is that has torn up these roots? Let it have nor head nor feet!” This formula is repeated thrice, the party spitting on the ground each time.

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CHAP. 107.

THE STŒCHAS: THREE REMEDIES.

The stœchas grows only in the islands of that name. It is an odoriferous plant, with leaves like those of hyssop, and of a bitter taste. Taken in drink, it promotes menstruation, and allays pains in the chest. It forms an ingredient, also, in antidotes.

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CHAP. 108.

THE SOLANUM, BY THE GREEKS CALLED STRYCHNON: TWO REMEDIAL PROPERTIES.

The solanum, according to Cornelius Celsus, is called “strychnon” by the Greeks; it is possessed of repercussive and refrigerative properties.

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CHAP. 109.

SMYRNION: THIRTY-TWO REMEDIES. SINON: TWO REMEDIES.

Smyrnion has a stem like that of parsley, but larger leaves, and growing principally about the young shoots, which are numerous. From the midst of these shoots the leaves make their appearance, unctuous, and bending towards the ground. This plant has a medicinal smell, penetrating to a certain degree, and agreeable: the colour of it is a pale yellow, and the stems bear rounded umbels like those of dill, with a round, black seed, which dries at the beginning of summer. The root, also, is odoriferous, of an acrid, pungent flavour, soft and juicy, black on the outer coat and pale within. The smell of it partakes very much of the nature of that of myrrh, to which, in fact, it owes its name: it grows in localities of a stony nature, or covered with humus. Its medicinal properties are warming and resolvent.

The leaves and root are used as a diuretic and as an emmenagogue; the seed arrests diarrhœa; and the root, applied topically, disperses abscesses and suppurations, provided they are not inveterate, and reduces indurated tumours. It is useful, also, for injuries inflicted by the phalangium and by serpents, taken in wine, with the addition of cachrys, polium, or melissophyllum; the dose, however, must be taken a little at a time only, for otherwise it acts as an emetic, a reason for which it is sometimes administered with rue. The seed or root is curative of cough, hardness of breathing, and diseases of the thoracic organs, spleen, kidneys, and bladder; the root, too, is used for ruptures and convulsions. This plant facilitates delivery, and brings away the afterbirth; it is also given, in combination with crethmos, in wine, for sciatica. It acts as a sudorific and carminative, for which reason it is used to disperse flatulency of the stomach; it promotes, also, the cicatrization of wounds.

A juice is extracted from the root, which is very useful for female complaints, and for affections of the thoracic organs and viscera, possessing, as it does, certain calorific, digestive, and detergent properties. The seed, in particular, is given in drink for dropsy,

external applications being made of the juice, and emollient poultices applied of the dried rind of the root. It is used, also, as a seasoning for food, boiled meat in particular, with the addition of honied wine, oil, and garum.

Sinon, a plant with a flavour very like that of pepper, promotes the digestion, and is highly efficacious for pains in the stomach.

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CHAP. 110.

TELEPHION: FOUR REMEDIES.

Telephion resembles purslain in the stem and leaves. From the root of it there spring seven or eight small branches, covered with thick, fleshy leaves; it grows in cultivated spots, and among vines in particular. It is used as an application for freckles, being removed as soon as dry; it is employed, also, for white morphew, being applied some six hours each night or day, and the treatment continued for about three months: after removing it, barley-meal should be applied. Telephion is healing, also, for wounds and fistulas.

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CHAP. 11.

THE TRICHOMANES: FIVE REMEDIES.

The trichomanes is a plant that resembles the adiantum, except that it is more slender and of a darker colour; the leaves of it, which are similar to those of the lentil, lie close together, on opposite sides, and have a bitter taste. A decoction of this plant, taken in white wine, with the addition of wild cummin, is curative of strangury. Bruised and applied to the head, it prevents the hair from falling off, and, where it has come off, restores it: pounded and applied with oil, it effects the cure of alopecy. The mere taste of it is provocative of sneezing.

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CHAP. 112.

THE THALICTRUM: ONE REMEDY.

The thalictrum has leaves like those of coriander, only somewhat more unctuous, and a stem resembling that of the poppy. It is found growing everywhere, in champaign localities more particularly. The leaves, applied with honey, heal ulcers.

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CHAP. 113.

THLASPI AND PERSICON NAPY: FOUR REMEDIES.

Of thlaspi there are two kinds; the first of which has narrow leaves, about a finger in length and breadth, turned to wards the ground, and divided at the point. It has a slender stern, half a foot in length, and not wholly destitute of branches; the seed, enclosed in a crescent-shaped capsule, is similar to a lentil in shape, except that it has a jagged appearance, to which, in fact, it owes its name; the flower is white, and the plant is found near footpaths and in hedges. The seed, which has an acrid flavour, carries off bile and pituitous secretions, by vomit and by alvine evacuation, the proper dose being one acetabulum. It is used, also, for sciatica, in the form of an injection, this treatment being persevered in until it has induced a discharge of blood: it acts also as an emmenagogue, but is fatal to the fœtus.

The other thlaspi, known by some as “Persicon napy,” has broad leaves and large roots, and is also very useful as an injection for sciatica. Both plants are very serviceable for inguinal complaints; it being recommended that the person who gathers them should mention that he is taking them for diseases of the groin, for abscesses of all kinds, and for wounds, and that he should pluck them with one hand only.

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CHAP. 114.

THE TRACHINIA: ONE PROPERTY.

What sort of plant the trachinia is, the authorities do not state. I think that the assurance given by Democritus must be false: for it would be nothing less than a prodigy, for a plant, attached as an amulet, to consume the spleen in so short a time as three days.

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CHAP. 115.

THE TRAGONIS OR TRAGION: FOUR REMEDIES.

The tragonis, or tragion, grows nowhere but in the maritime districts of the Isle of Crete; it resembles the juniper in the seed, leaf, and branches. Its milky juice, which thickens in the form of a gum, or its seed, taken in drink, expels pointed weapons from the flesh. The plant, too, is pounded fresh and applied as a liniment with wine, or, dried and powdered, with honey. It increases the milk in nursing women, and is a sovereign remedy for diseases of the mamillæ.

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CHAP. 116.

THE TRAGOS OR SCORPION: FOUR REMEDIES.

There is another plant also, called “tragos,” or “scorpion” by some, half a foot in height, branchy, destitute of leaves, and bearing diminutive red clusters, with a seed like that of wheat, but pointed at the extremity: this too grows in maritime localities. Ten or twelve tops of the branches, bruised and taken in wine, are remedial in cases of cœliac affections, dysentery, spitting of blood, and excessive menstruation.

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CHAP. 117.

THE TRAGOPOGON OR COME.

There is the tragopogon, also, by some called “come;” a plant with a small stem, leaves like those of saffron, an elongated, sweet, root, and a large, swarthy calyx at the extremity of the stem. It grows in rugged soils, and is never used.

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CHAP. 118.

THE AGES OF PLANTS.

Such, then, is all that I have hitherto been enabled to learn or discover, worthy of mention, relative to plants. At the close of this subject, it seems to me that it will not be out of place to remind the reader, that the properties of plants vary according to their age. It is elaterium, as already stated, that preserves its properties the longest of all. The black chamæleon retains its virtues forty years, centaury not more than twelve, peucedanum and aristolochia six, and the wild vine one year — that is to say, if they are kept in the shade. I would remark, also, that beyond those animals which breed within the plants, there are none that attack the roots of any of those which have been mentioned by me; with the exception, indeed, of the sphondyle, a kind of creeping insect, which infests them all.

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CHAP. 119.

HOW THE GREATEST EFFICACY IN PLANTS MAY BE ENSURED.

It is also an undoubted truth, that the virtues and properties of all roots are more feebly developed, when the fruit has been allowed to ripen; and that it is the same with the seed, when incisions have been previously made in the root, for the extraction of the juice. The efficacy, too, of all plants is impaired by making habitual use of them; and these substances, if employed daily, lose equally their good or bad properties, when required to be effectual. All plants, too, have more powerful properties, when grown in soils that are cold and exposed to the north-eastern blasts, or in dry localities.

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CHAP. 120.

MALADIES PECULIAR TO VARIOUS NATIONS.

There are certain differences, also, by no means inconsiderable, in the predispositions of the various nations of the earth. I have been informed, for instance, that the people of Egypt, Arabia, Syria, and Cilicia, are subject to tapeworm and mawworm, while those of Thracia and Phrygia, on the other hand, are totally exempt from them. This, however, is less surprising than the fact that, although Attica and Bœotia are adjoining territories, the Thebans are troubled with these inflictions, while among the people of Athens they are unknown.

Considerations of this description lead me now to turn my attention to the nature of the animated beings themselves, and the medicinal properties which are inborn in them, the most assured remedies, perhaps, for all diseases.

For Nature, in fact, that parent of all things, has produced no animated being for the purpose solely of eating; she has willed that it should be born to satisfy the wants of others, and in its very vitals has implanted medicaments conducive to health. While she has implanted them in mute and inanimate objects even, she has equally willed that these, the most in- valuable aids of life, should be also derived from the life of another — a subject for contemplation, marvellous in the highest degree!

SUMMARY. — Remedies, narratives, and observations, six hundred and two.

ROMAN AUTHORS QUOTED. — Caius Valgius, Pompeius Lenæus, Sextius Niger who wrote in Greek, Julius Bassus who wrote in Greek, Antonius Castor, Cornelius Celsus.

FOREIGN AUTHORS QUOTED. — Theophrastus, Apollodorus, Democritus, Aristogiton, Orpheus, Pythagoras, Mago, Menander who wrote the “Biochresta,” Nicander.

MEDICAL AUTHORS QUOTED. — Mnesitheus, Timaristus, Simus, Hippocrates, Chrysippus, Diocles, Ophelion, Hera- clides, Hicesius, Dionysius, Apollodorus of Citium, Apol- lodorus of

Tarentum, Praxagoras, Plistonicus, Medius, Dieuches, Cleophantus, Philistion, Asclepiades, Crateuas, Petronius Diodotus, Iollas, Erasistratus, Diagoras, Andreas, Mnesides, Epicharmus, Damion, Tlepolemus, Me- trodorus, Solo, Lycus, Olympias of Thebes, Philinus, Petrichus, Micton, Glaucias, Xenocrates.

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BOOK XXVIII. REMEDIES DERIVED FROM LIVING CREATURES.

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CHAP. 1. (1.)

INTRODUCTION.

WE should have now concluded our description of the various things that are produced between the heavens and the earth, and it would have only remained for us to speak of the substances that are dug out of the ground itself; did not our exposition of the remedies derived from plants and shrubs necessarily lead us into a digression upon the medicinal properties which have been discovered, to a still greater extent, in those living creatures themselves which are thus indebted [to other objects] for the cure of their respective maladies. For ought we, after describing the plants, the forms of the various flowers, and so many objects rare and difficult to be found — ought we to pass in silence the resources which exist in man himself for the benefit of man, and the other remedies to be derived from the creatures that live among us — and this more particularly, seeing that life itself is nothing short of a punishment, unless it is exempt from pains and maladies? Assuredly not; and even though I may incur the risk of being tedious, I shall exert all my energies on the subject, it being my fixed determination to pay less regard to what may be amusing, than to what may prove practically useful to mankind.

Nay, even more than this, my researches will extend to the usages of foreign countries, and to the customs of barbarous nations, subjects upon which I shall have to appeal to the good faith of other authors; though at the same time I have made it my object to select no facts but such as are established by pretty nearly uniform testimony, and to pay more attention to scrupulous exactness than to copiousness of diction.

It is highly necessary, however, to advertise the reader, that whereas I have already described the natures of the various animals, and the discoveries due to them respectively — for, in fact, they have been no less serviceable in former times in dis- covering remedies, than they are at the present day in providing us with them — it is my present intention to confine myself to the remedial properties which are found in the animal world, a subject which has not been

altogether lost sight of in the former portion of this work. These additional details therefore, though of a different nature, must still be read in connexion with those which precede.

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CHAP. 2.

REMEDIES DERIVED FROM MAN.

We will begin then with man, and our first enquires will be into the resources which he provides for himself-a subject replete with boundless difficulties at the very outset.

Epileptic patients are in the habit of drinking the blood even of gladiators, draughts teeming with life, as it were; a thing that, when we see it done by the wild beasts even, upon the same arena, inspires us with horror at the spectacle! And yet these persons, forsooth, consider it a most effectual cure for their disease, to quaff the warm, breathing, blood from man himself, and, as they apply their mouth to the wound, to draw forth his very life; and this, though it is regarded as an act of impiety to apply the human lips to the wound even of a wild beast! Others there are, again, who make the marrow of the leg-bones, and the brains of infants, the objects of their research!

Among the Greek writers, too, there are not a few who have enlarged upon the distinctive flavours of each one of the viscera and members of the human body, pursuing their researches to the very parings of the nails! as though, forsooth, it could possibly be accounted the pursuit of health for man to make himself a wild beast, and so deserve to contract disease from the very remedies he adopts for avoiding it. Most righteously, by Hercules! if such attempts are all in vain, is he disappointed of his cure! To examine human entrails is deemed an act of impiety; what then must it be to devour them?

Say, Osthanes, who was it that first devised these practices; for it is thee that I accuse, thou uprooter of all human laws, thou inventor of these monstrosities; devised, no doubt, with the view that mankind might not forget thy name! Who was it that first thought of devouring each member of the human body? By what conjectural motives was he induced? What can possibly have been the origin of such a system of medicine as this? Who was it that thus made the very poisons less baneful than the antidotes prescribed for them? Granted that barbarous and outlandish tribes first devised such practices, must the men of Greece, too, adopt these as arts of their own?

We read, for instance, in the memoirs of Democritus, still extant, that for some diseases, the skull of a malefactor is most efficacious, while for the treatment of others, that of one who has been a friend or guest is required. Apollonius, again, informs us in his writings, that the most effectual remedy for tooth-ache is to scarify the gums with the tooth of a man who has died a violent death; and, according to Miletus, human gall is a cure for cataract. For epilepsy, Artemon has prescribed water drawn from a spring in the night, and drunk from the skull of a man who has been slain, and whose body remains unburnt. From the skull, too, of a man who had been hanged, Antæus made pills that were to be an antidote to. the bite of; mad dog. Even more than this, man has resorted to similar remedies for the cure of four-footed beasts even — for tympanitis in oxen, for instance, the horns have been perforated, and human bones inserted; and when swine have been found to be diseased, fine wheat has been given them which has lain for a night in the spot where a human being has been slain or burnt!

Far from us, far too from our writings, be such prescriptions as these! It will be for us to describe remedies only, and not abominations; cases, for instance, in which the milk of a nursing woman may have a curative effect, cases where the human spittle may be useful, or the contact of the human body, and other instances of a similar nature. We do not look upon life as so essentially desirable that it must be prolonged at any cost, be it what it may — and you, who are of that opinion, be assured, whoever you may be, that you will die none the less, even though you shall have lived in the midst of obscenities or abominations!

Let each then reckon this as one great solace to his mind, that of all the blessings which Nature has bestowed on man, there is none greater than the death which comes at a seasonable hour; and that the very best feature in connexion with it is, that every person has it in his own power to procure it for himself.

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CHAP. 3. (2.)

WHETHER WORDS ARE POSSESSED OF ANY HEALING EFFICACY.

In reference to the remedies derived from man, there arises first of all one question, of the greatest importance and always attended with the same uncertainty, whether words, charms, and incantations, are of any efficacy or not? For if such is the case, it will be only proper to ascribe this efficacy to man himself; though the wisest of our fellow-men, I should remark, taken individually, refuse to place the slightest faith in these opinions. And yet, in our every-day life, we practically show, each passing hour, that we do entertain this belief, though at the moment we are not sensible of it. Thus, for instance, it is a general belief that without a certain form of prayer it would be useless to immolate a victim, and that, with such an informality, the gods would be consulted to little purpose. And then besides, there are different forms of address to the deities, one form for entreating, another form for averting their ire, and another for commendation.

We see too, how that our supreme magistrates use certain formulæ for their prayers: that not a single word may be omitted or pronounced out of its place, it is the duty of one person to precede the dignitary by reading the formula before him from a written ritual, of another, to keep watch upon every word, and of a third to see that silence is not ominously broken; while a musician, in the meantime, is performing on the flute to prevent any other words being heard. Indeed, there are memorable instances recorded in our Annals, of cases where either the sacrifice has been interrupted, and so blemished, by imprecations, or a mistake has been made in the utterance of the prayer; the result being that the lobe of the liver or the heart has disappeared in a moment, or has been doubled, while the victim stood before the altar. There is still in existence a most remarkable testimony, in the formula which the Decii, father and son, pronounced on the occasions when they devoted themselves. There is also preserved the prayer uttered by the Vestal Tuccia, when, upon being accused of incest, she carried water in a sieve — an event which took place in the year of the City 609. Our own age even has

seen a man and a woman buried alive in the Ox Market, Greeks by birth, or else natives of some other country with which we were at war at the time. The prayer used upon the occasion of this ceremonial, and which is usually pronounced first by the Master of the College of the Quindecimviri, if read by a person, must assuredly force him to admit the potency of formulæ; when it is recollected that it has been proved to be effectual by the experience of eight hundred and thirty years.

At the present day, too, it is a general belief, that our Vestal virgins have the power, by uttering a certain prayer, to arrest the flight of runaway slaves, and to rivet them to the spot, provided they have not gone beyond the precincts of the City. If then these opinions be once received as truth, and if it be admitted that the gods do listen to certain prayers, or are influenced by set forms of words, we are bound to conclude in the affirmative upon the whole question. Our ancestors, no doubt, always entertained such a belief, and have even assured us, a thing by far the most difficult of all, that it is possible by such means to bring down lightning from heaven, as already mentioned on a more appropriate occasion.

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CHAP. 4.

THAT PRODIGIES AND PORTENTS MAY BE CONFIRMED, OR MADE OF NO EFFECT.

L. Piso informs us, in the first Book of his Annals, that King Tullus Hostilius, while attempting, in accordance with the books of Numa, to summon Jupiter from heaven by means of a sacrifice similar to that employed by him, was struck by lightning in consequence of his omission to follow certain forms with due exactness. Many other authors, too, have attested, that by the power of words a change has been effected in destinies and portents of the greatest importance. While they were digging on the Tarpeian Hill for the foundations of a temple, a human head was found; upon which deputies were sent to Olenus Calenus, the most celebrated diviner of Etruria. He, foreseeing the glory and success which attached to such a presage as this, attempted, by putting a question to them, to transfer the benefit of it to his own nation. First describing, on the ground before him, the outline of a temple with his staff— "Is it so, Romans, as you say?" said he; "here then must be the temple of Jupiter, all good and all powerful; it is here that we have found the head" — and the constant asseveration of the Annals is, that the destiny of the Roman empire would have been assuredly transferred to Etruria, had not the deputies, forewarned by the son of the diviner, made answer— "No, not here exactly, but at Rome, we say, the head was found."

It is related also that the same was the case when a certain four-horse chariot, made of clay, and intended for the roof of the same temple, had considerably increased while in the furnace; and that on this occasion, in a similar manner, the destinies of Rome were saved. Let these instances suffice then to show, that the virtues of presages lie in our own hands, and that they are valuable in each instance according as they are received. At all events, it is a principle in the doctrine of the augurs, that neither imprecations nor auspices of any kind have any effect upon those who, when entering upon an undertaking, declare that they will pay no attention whatever to them; a greater instance than which, of the indulgent disposition of

the gods towards us, cannot be found.

And then besides, in the laws themselves of the Twelve Tables, do we not read the following words— "Whosoever shall have enchanted the harvest," and in another place, "Whosoever shall have used pernicious incantations"? Verrius Flaccus cites authors whom he deems worthy of credit, to show that on the occasion of a siege, it was the usage, the first thing of all, for the Roman priests to summon forth the tutelary divinity of that particular town, and to promise him the same rites, or even a more extended worship, at Rome; and at the present day even, this ritual still forms part of the discipline of our pontiffs. Hence it is, no doubt, that the name of the tutelary deity of Rome has been so strictly kept concealed, lest any of our enemies should act in a similar manner. There is no one, too, who does not dread being spell-bound by means of evil imprecations; and hence the practice, after eating eggs or snails, of immediately breaking the shells, or piercing them with the spoon. Hence, too, those love-sick imitations of enchantments which we find described by Theocritus among the Greeks, and by Catullus, and more recently, Virgil, among our own writers. Many persons are fully persuaded that articles of pottery may be broken by a similar agency; and not a few are of opinion even that serpents can counteract incantations, and that this is the only kind of intelligence they possess — so much so, in fact, that by the agency of the magic spells of the Marsi, they may be attracted to one spot, even when asleep in the middle of the night. Some people go so far, too, as to write certain words on the walls of houses, deprecatory of accident by fire.

But it is not easy to say whether the outlandish and unpronounceable words that are thus employed, or the Latin expressions that are used at random, and which must appear ridiculous to our judgment, tend the most strongly to stagger our belief-seeing that the human imagination is always conceiving something of the infinite, something deserving of the notice of the divinity, or indeed, to speak more correctly, something that must command his intervention perforce. Homer tells us that Ulysses arrested the flow of blood from a wound in the thigh, by repeating a charm; and Theophrastus says that sciatica may be cured by similar means. Cato has preserved a formula for the cure of sprains, and M.

Varro for that of gout. The Dictator Cæsar, they say, having on one occasion accidentally had a fall in his chariot, was always in the habit, immediately upon taking his seat, of thrice repeating a certain formula, with the view of ensuring safety upon the journey; a thing that, to my own knowledge, is done by many persons at the present day.

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CHAP. 5.

A DESCRIPTION OF VARIOUS USAGES.

I would appeal, too, for confirmation on this subject, to the intimate experience of each individual. Why, in fact, upon the first day of the new year, do we accost one another with prayers for good fortune, and, for luck's sake, wish each other a happy new year? Why, too, upon the occasion of public lustrations, do we select persons with lucky names, to lead the victims? Why, to counteract fascinations, do we Romans observe a peculiar form of adoration, in invoking the Nemesis of the Greeks; whose statue, for this reason, has been placed in the Capitol at Rome, although the goddess herself possesses no Latin name? Why, when we make mention of the dead, do we protest that we have no wish to impeach their good name? Why is it that we entertain the belief that for every purpose odd numbers are the most effectual; — a thing that is particularly observed with reference to the critical days in fevers? Why is it that, when gathering the earliest fruit, apples, on pears, as the case may be, we make a point of saying

"This fruit is old, may other fruit be sent us that is new?" Why is it that we salute a person when he sneezes, an observance which Tiberius Cæsar, they say, the most unsociable of men, as we all know, used to exact, when riding in his chariot even? Some there are, too, who think it a point religiously to be observed to mention the name as well of the person whom they salute.

And then, besides, it is a notion universally received, that absent persons have warning that others are speaking of them, by the tingling of the ears. Attalus assures us, that if a person, the moment he sees a scorpion, says "Duo," the reptile will stop short, and forbear to sting. And now that I am speaking of the scorpion, I recall to mind that in Africa no one ever undertakes any matter without prefacing with the word "Africa;" while in other countries, before an enterprise is commenced, it is the practice to adjure the gods that they will manifest their good will.

In addition to this, it is very clear that there are some religious observances, unaccompanied by speech, which are considered to be

productive of certain effects. Thus, when we are at table, for instance, it is the universal practice, we see, to take the ring from off the finger. Another person, again, will take some spittle from his mouth and place it with his finger behind the ear, to propitiate and modify disquietude of mind. When we wish to signify applause, we have a proverb even which tells us we should press the thumbs. When paying adoration, we kiss the right hand, and turn the whole body to the right: while the people of the Gallic provinces, on the contrary, turn to the left, and believe that they show mere devoutness by so doing. To salute summer lightning with clapping of the hands, is the universal practice with all nations. If, when eating, we happen to make mention of a fire that has happened, we avert the inauspicious omen by pouring water beneath the table. To sweep the floor at the moment that a person is rising from table, or to remove the table or tray, as the case may be, while a guest is drinking, is looked upon as a most unfortunate presage. There is a treatise, written by Servius Sulpicius, a man of the highest rank, in which reasons are given why we should never leave the table we are eating at; for in his day it was not yet the practice to reckon more tables than guests at an entertainment. Where a person has sneezed, it is considered highly ominous for the dish or table to be brought back again, and not a taste thereof to be taken, after doing so; the same, too, where a person at table eats nothing at all.

These usages have been established by persons who entertained a belief that the gods are ever present, in all our affairs and at all hours, and who have therefore found the means of appeasing them by our vices even. It has been remarked, too, that there is never a dead silence on a sudden among the guests at table, except when there is an even number present; when this happens, too, it is a sign that the good name and repute of every individual present is in peril. In former times, when food fell from the hand of a guest, it was the custom to return it by placing it on the table, and it was forbidden to blow upon it, for the purpose of cleansing it. Auguries, too, have been derived from the words or thoughts of a person at the moment such an accident befalls him; and it is looked upon as one of the most dreadful of presages, if this should happen to a pontiff, while celebrating the feast of Dis. The proper expiation in such a case is, to

have the morsel replaced on table, and then burnt in honour of the Lar. Medicines, it is said, will prove ineffectual, if they happen to have been placed on a table before they are administered. It is religiously believed by many, that it is ominous in a pecuniary point of view, for a person to pare his nails without speaking, on the market days at Rome, or to begin at the forefinger in doing so: it is thought, too, to be a preventive of baldness and of head-ache, to cut the hair on the seventeenth and twenty-ninth days of the moon.

A rural law observed in most of the farms of Italy, forbids women to twirl their distaffs, or even to carry them uncovered, while walking in the public roads; it being a thing so prejudicial to all hopes and anticipations, those of a good harvest in particular. It is not so long ago, that M. Servilius Nonianus, the principal citizen at Rome, being apprehensive of ophthalmia, had a paper, with the two Greek letters P and A written upon it, wrapped in linen and attached to his neck, before he would venture to name the malady, and before any other person had spoken to him about it. Mucianus, too, who was thrice consul, following a similar observance, carried about him a living fly, wrapped in a piece of white linen; and it was strongly asserted, by both of them, that to the use of these expedients they owed their preservation from ophthalmia. There are in existence, also, certain charms against hail-storms, diseases of various kinds, and burns, some of which have been proved, by actual experience, to be effectual; but so great is the diversity of opinion upon them, that I am precluded by a feeling of extreme diffidence from entering into further particulars, and must therefore leave each to form his own conclusions as he may feel inclined.

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CHAP. 6. (3.)

TWO HUNDRED AND TWENTY-SIX OBSERVATIONS ON REMEDIES DERIVED FROM MAN. EIGHT REMEDIES DERIVED, FROM CHILDREN.

We have already, when speaking of the singular peculiarities of various nations, made mention of certain men of a monstrous nature, whose gaze is endowed with powers of fascination; and we have also described properties belonging to numerous animals, which it would be superfluous here to repeat. In some men, the whole of the body is endowed with remarkable properties, as in those families, for instance, which are a terror to serpents; it being in their power to cure persons when stung, either by the touch or by a slight suction of the wound. To this class belong the Psylli, the Marsi, and the people called "Ophiogenes," in the Isle of Cyprus. One Euagon, a member of this family, while attending upon a deputation at Rome, was thrown by way of experiment, by order of the consuls, into a large vessel filled with serpents; upon which, to the astonishment of all, they licked his body all over with their tongues. One peculiarity of this family — if indeed it is still in existence — is the strong offensive smell which proceeds from their body in the spring; their sweat, too, no less than their spittle, was possessed of remedial virtues. The people who are born at Tentyris, an island in the river Nilus, are so formidable to the crocodiles there, that their voice even is sufficient to put them to flight. The presence even, it is well known, of all these different races, will suffice for the cure of injuries inflicted by the animals to which they respectively have an antipathy; just in the same way that wounds are irritated by the approach of persons who have been stung by a serpent at some former time, or bitten by a dog. Such persons, too, by their presence, will cause the eggs upon which a hen is sitting to be addled, and will make pregnant cattle cast their young and miscarry; for, in fact, so much of the venom remains in their body, that, from being poisoned themselves, they become poisonous to other creatures. The proper remedy in such case is first to make them wash their hands, and then to sprinkle with the water the patient who is under medical treatment.

When, again, persons have been once stung by a scorpion they will never afterwards be attacked by hornets, wasps, or bees: a fact at which a person will be the less surprised when he learns that a garment which has been worn at a funeral will never be touched by moths; that it is hardly possible to draw serpents from their holes except by using the left hand; and that, of the discoveries made by Pythagoras, one of the most unerring, is the fact, that in the name given to infants, an odd number of vowels is portentous of lameness, loss of eyesight, or similar accidents, on the right side of the body, and an even number of vowels of the like infirmities on the left.

(4.) It is said, that if a person takes a stone or other missile which has slain three living creatures, a man, a boar, and a bear, at three blows, and throws it over the roof of a house in which there is a pregnant woman, her delivery, however difficult, will be instantly accelerated thereby. In such a case, too, a successful result will be rendered all the more probable, it a light infantry lance is used, which has been drawn from a man's body without touching the earth; indeed, if it is brought into the house it will be productive of a similar result. In the same way, too, we find it stated in the writings of Orpheus and Archelaiis, that arrows, drawn from a human body without being allowed to touch the ground, and placed beneath the bed, will have all the effect of a philtre; and, what is even more than this, that it is a cure for epilepsy if the patient eats the flesh of it wild beast killed with an iron weapon with which a human being has been slain.

Some individuals, too, are possessed of medicinal properties in certain parts of the body; the thumb of King Pyrrhus, for instance, as already mentioned. At Elis, there used to be shown one of the ribs of Pelops, which, it was generally asserted, was made of ivory. At the present day even, there are many persons, who from religious motives will never clip the hair growing upon a mole on the face.

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CHAP. 7.

PROPERTIES OF THE HUMAN SPITTLE.

But it is the fasting spittle of a human being, that is, as already stated by us, the sovereign preservative against the poison of serpents; while, at the same time, our daily experience may recognize its efficacy and utility, in many other respects. We are in the habit of spitting, for instance, as a preservative from epilepsy, or in other words, we repel contagion thereby: in a similar manner, too, we repel fascinations, and the evil presages attendant upon meeting a person who is lame in the right leg. We ask pardon of the gods, by spitting in the lap, for entertaining some too presumptuous hope or expectation. On the same principle, it is the practice in all cases where medicine is employed, to spit three times on the ground, and to conjure the malady as often; the object being, to aid the operation of the remedy employed. It is usual, too, to mark a boil, when it first makes its appearance, three times with fasting spittle. What we are going to say is marvellous, but it may easily be tested by experiment: if a person repents of a blow given to another, either by hand or with a missile, he has nothing to do but to spit at once into the palm of the hand which has inflicted the blow, and all feelings of resentment will be instantly alleviated in the person struck. This, too, is often verified in the case of a beast of burden, when brought on its haunches with blows; for upon this remedy being adopted, the animal will immediately step out and mend its pace. Some persons, however, before making an effort, spit into the hand in manner above stated, in order to make the blow more heavy.

We may well believe, then, that lichens and leprous spots may be removed by a constant application of fasting spittle; that ophthalmia may be cured by anointing, as it were, the eyes every morning with fasting spittle; that carcinomata may be effectually treated, by kneading the root of the plant known as “apple of the earth,” with human spittle; that crick in the neck may be got rid of by carrying fasting spittle to the right knee with the right hand, and to the left knee with the left; and that when an insect has got into the ear, it is

quite sufficient to spit into that organ, to make it come out. Among the counter-charms too, are reckoned, the practice of spitting into the urine the moment it is voided, of spitting into the shoe of the right foot before putting it on, and of spitting while a person is passing a place in which he has incurred any kind of peril.

Marcion of Smyrna, who has written a work on the virtues of simples, informs us that the sea scolopendra will burst asunder if spit upon; and that the same is the case with bram- ble-frogs, and other kinds of frogs. Opilius says that serpents will do the same, if a person spits into their open mouth; and Salpe tells us, that when any part of the body is asleep, the numbness may be got rid of by the person spitting into his lap, or touching the upper eyelid with his spittle. If we are ready to give faith to such statements as these, we must believe also in the efficacy of the following practices: upon the entrance of a stranger, or when a person looks at an infant while asleep, it is usual for the nurse to spit three times upon the ground; and this, although infants are under the especial guardianship of the god Fascinus, the protector, not of infants only, but of generals as well, and a divinity whose worship is entrusted to the Vestal virgins, and forms part of the Roman rites. It is the image of this divinity that is attached beneath the triumphant car of the victorious general, protecting him, like some attendant physician, against the effects of envy; while, at the same time, equally salutary is the advice of the tongue, which warns him to be wise in time, that so Fortune may be prevailed upon by his prayers, not to follow, as the destroyer of his glory, close upon his back.

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CHAP. 8.

REMEDIES DERIVED FROM THE WAX OF THE HUMAN EAR.

The human bite is also looked upon as one of the most dangerous of all. The proper remedy for it is human ear-wax: a thing that we must not be surprised at, seeing that, if applied immediately, it is a cure for the stings of scorpions even, and serpents. The best, however, for this purpose, is that taken from the ears of the wounded person. Agnails, too, it is said, may be cured in a similar manner. A human tooth, reduced to powder, is a cure, they say, for the sting of a serpent.

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CHAP. 9.

REMEDIES DERIVED FROM THE HUMAN HAIR, TEETH, ETC.

The first hair, it is said, that is cut from an infant's head, and, in fact, the hair of all persons that have not reached the age of puberty, attached to the limbs, will modify the attacks of gout. A man's hair, applied with vinegar, is a cure for the bite of a dog, and, used with oil or wine, for wounds on the head. It is said, too, if we choose to believe it, that the hair of a man torn down from the cross, is good for quartan fevers. Ashes, too, of burnt human hair are curative of carcinomata. If a woman takes the first tooth that; a child has shed, provided it has not touched the ground, and has it set in a bracelet, and wears it constantly upon her arm, it will preserve her from all pains in the uterus and adjacent parts. If the great toe is tied fast to the one next to it, it will reduce tumours in the groin; and if the two middle fingers of the right hand are slightly bound together with a linen thread, it will act as a preservative against catarrhs and ophthalmia. A stone, it is said, that has been voided by a patient suffering from calculi, if attached to the body above the pubes, will alleviate the pains of others similarly afflicted, as well as pains in the liver; it will have the effect, also, of facilitating delivery. Granius adds, however, that for this last purpose, the stone will be more efficacious if it has been extracted with the knife. Delivery, when near at hand, will be accelerated, if the man by whom the woman has conceived, unties his girdle, and, after tying it round her, unties it, adding at the same time this formula, "I have tied it, and I will untie it," and then taking his de- parture.

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CHAP. 10.

REMEDIES DERIVED FROM THE HUMAN BLOOD, THE SEXUAL CONGRESS, ETC.

The blood of the human body, come from what part it may, is most efficacious, according to Orpheus and Archelaiis, as an application for quinzy: they say, too, that if it is applied to the mouth of a person who has fallen down in a fit of epilepsy, he will come to himself immediately. Some say that, for epilepsy, the great toes should be pricked, and the drops of blood that exude therefrom applied to the face; or else, that a virgin should touch the patient with her right thumb — a cir- cumstance that has led to the belief that persons suffering from epilepsy should eat the flesh of animals in a virgin state. Æschines of Athens used to cure quinzy, carcinoma, and affections of the tonsillary glands and uvula, with the ashes of burnt excrements, a medicament to which he gave the name of "botryon." There are many kinds of diseases which disappear entirely after the first sexual congress, or, in the case of females, at the first appearance of menstruation; indeed, if such is not the case, they are apt to become chronic, epilepsy in particular. Even more than this-a man, it is said, who has been stung by a serpent or scorpion, experiences relief from the sexual congress; but the woman, on the other hand, is sensible of detriment. We are assured, too, that if persons, when washing their feet, touch the eyes three times with the water, they will never be subject to ophthalmia or other diseases of the eyes.

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CHAP. 11.

REMEDIES DERIVED FROM THE DEAD.

Scrofula, imposthumes of the parotid glands, and throat diseases, they say, may be cured by the contact of the hand of a person who has been carried off. by an early death: indeed there are some who assert that any dead body will produce the same effect, provided it is of the same sex as the patient, and that the part affected is touched with the back of the left hand. To bite off a piece from wood that has been struck by lightning, the hands being held behind the back, and then to apply it to the tooth, is a sure remedy, they say, for toothache. Some persons recommend the tooth to be fumigated with the smoke of a burnt tooth, which has belonged to another person of the same sex; or else to attach to the person a dogtooth, as it is called, which has been extracted from a body before burial. Earth, they say, taken from out of a human skull, acts as a depilatory to the eyelashes; it is asserted, also, that any plant which may happen to have grown there, if chewed, will cause the teeth to come out; and that if a circle is traced round an ulcer with a human bone, it will be effectually prevented from spreading.

Some persons, again, mix water in equal proportions from three different wells, and, after making a libation with part of it in a new earthen vessel, administer the rest to patients suffering from tertian fever, when the paroxysms come on. So, too, in cases of quartan fever, they take a fragment of a nail from a cross, or else a piece of a halter that has been used for crucifixion, and, after wrapping it in wool, attach it to the patient's neck; taking care, the moment he has recovered, to conceal it in some hole to which the light of the sun cannot penetrate.

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CHAP. 12.

VARIOUS REVERIES AND DEVICES OF THE MAGICIANS.

The following are some of the reveries of magic. A whetstone upon which iron tools have been frequently sharpened, if put, without his being aware of it, beneath the pillow of a person sinking under the effects of poison, will make him give evidence and declare what poison has been administered, and at what time and place, though at the same time he will not disclose the author of the crime. When a person has been struck by lightning, if the body is turned upon the side which has sustained the injury, he will instantly recover the power of speech — that is quite certain. For the cure of inguinal tumours, some persons take the thrum of an old web, and after tying seven or nine knots in it, mentioning at each knot the name of some widow woman or other, attach it to the part affected. To assuage the pain of a wound, they recommend the party to take a nail or any other substance that has been trodden under foot, and to wear it, attached to the body with the thrum of a web. To get rid of warts, some lie in a footpath with the face upwards, when the moon is twenty days old at least, and after fixing their gaze upon it, extend their arms above the head, and rub themselves with anything within their reach. If a person is extracting a corn at the moment that a star shoots, he will experience an immediate cure, they say. By pouring vinegar upon the hinges of a door, a thick liniment is formed, which, applied to the forehead, will alleviate headache: an effect equally produced, we are told, by binding the temples with a halter with which a man has been hanged. When a fish-bone happens to stick in the throat, it will go down immediately, if the person plunges his feet into cold water; but where the accident has happened with any other kind of bone, the proper remedy is to apply to the head some fragments of bones taken from the same dish. In cases where bread has stuck in the throat, the best plan is to take some of the same bread, and insert it in both ears.

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CHAP. 13.

REMEDIES DERIVED FROM THE HUMAN EXCRETIONS.

In Greece, where everything is turned to account, the owners of the gymnasia have introduced the very excretions even of the human body among the most efficient remedies; so much so, indeed, that the scrapings from the bodies of the athletes are looked upon as possessed of certain properties of an emollient, calorific, resolvent, and expletive nature, resulting from the compound of human sweat and oil. These scrapings are used, in the form of a pessary, for inflammations and contractions of the uterus: similarly employed, they act as an emmenagogue, and are useful for reducing condylomata and inflammations of the rectum, as also for assuaging pains in the sinews, sprains, and nodosities of the joints. The scrapings obtained from the baths are still more efficacious for these purposes, and hence it is that they form an ingredient in maturative preparations. Such scrapings as are impregnated with wrestlers' oil, used in combination with mud, have a mollifying effect upon the joints, and are more particularly efficacious as a calorific and resolvent; but in other respects their properties are not so strongly developed.

The shameless and disgusting researches that have been made will quite transcend all belief, when we find authors of the very highest repute proclaiming aloud that the male seminal fluid is a sovereign remedy for the sting of the scorpion! In the case too, of women afflicted with sterility, they recommend the application of a pessary, made of the first excrement that is voided by an infant at the moment of its birth; the name they give it is "meconium." They have even gone so far, too, as to scrape the very filth from off the walls of the gymnasia, and to assert that this is also possessed of certain calorific properties. These scrapings are used as a resolvent for inflamed tumours, and are applied topically to ulcers upon aged people and children, and to excoriations and burns.

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CHAP. 14.

REMEDIES DEPENDING UPON THE HUMAN WILL.

It would be the less becoming then for me to omit all mention of the remedies which depend upon the human will. Total abstinence from food or drink, or from wine only, from flesh, or from the use of the bath, in cases where the health requires any of these expedients, is looked upon as one of the most effectual modes of treating diseases. To this class of remedies must be added bodily exercise, exertion of the voice, anointings, and frictions according to a prescribed method: for powerful friction, it should be remembered, has a binding effect upon the body, while gentle friction, on the other hand, acts as a laxative; so too, repeated friction reduces the body, while used in moderation it has a tendency to make flesh. But the most beneficial practice of all is to take walking or carriage exercise; this last being performed in various ways. Exercise on horseback is extremely good for affections of the stomach and hips, a voyage for phthisis, and a change of locality for diseases of long standing. So, too, a cure may sometimes be effected by sleep, by a recumbent position in bed, or by the use of emetics in moderation. To lie upon the back is beneficial to the sight, to lie with the face downwards is good for a cough, and to lie on the side is recommended for patients suffering from catarrh.

According to Aristotle and Fabianus, it is towards spring and autumn that we are most apt to dream; and they tell us that persons are most liable to do so when lying on the back, but never when lying with the face downwards. Theophrastus assures us that the digestion is accelerated by lying on the right side; while, on the other hand, it is retarded by lying with the face upwards. The most powerful, however, of all remedies, and one which is always at a person's own command, is the sun: violent friction, too, is useful by the agency of linen towels and body-scrapers. To pour warm water on the head before taking the vapour-bath, and cold water after it, is looked upon as a most beneficial practice; so, too, is the habit of taking cold water before food, of drinking it every now and then

while eating, of taking it just before going to sleep, and, if practicable, of waking every now and then, and taking a draught. It is worthy also of remark, that there is no living creature but man that is fond of hot drinks, a proof that they are contrary to nature. It has been ascertained by experiment, that it is a good plan to rinse the mouth with undiluted wine, before going to sleep, for the purpose of sweetening the breath; to rinse the mouth with cold water an odd number of times every morning, as a preservative against tooth-ache; and to wash the eyes with oxycrate, as a preventive of ophthalmia. It has been remarked also, that the general health is improved by a varying regimen, subject to no fixed rules.

(5.) Hippocrates informs us that the viscera of persons who do not take the morning meal become prematurely aged and feeble; but then he has pronounced this aphorism, it must be remembered, by way of suggesting a healthful regimen, and not to promote gluttony; for moderation in diet is, after all, the thing most conducive to health. L. Lucullus gave charge to one of his slaves to overlook him in this respect; and, a thing that reflected the highest discredit on him, when, now an aged man and laden with triumphs, he was feasting in the Capitol even, his hand had to be removed. from the dish to which he was about to help himself. Surely it was a disgrace for a man to be governed by his own slave more easily than by himself!

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CHAP. 15. (6.)

REMEDIES DERIVED FROM SNEEZING.

Sneezing, provoked by a feather, relieves heaviness in the head; it is said too, that to touch the nostrils of a mule with the lips, will arrest sneezing and hiccup. For this last purpose, Varro recommends us to scratch the palm, first of one hand and then of the other; while many say that it is a good plan to shift the ring from off the left hand to the longest finger of the right, and then to plunge the hands into hot water. Theophrastus says, that aged persons sneeze with greater difficulty than others.

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CHAP. 16.

REMEDIES DERIVED FROM THE SEXUAL CONGRESS.

Democritus spoke in condemnation of the sexual congress, as being merely an act through which one human being springs from another; and really, by Hercules! the more rarely it is used the better. Still however, athletes, we find, when they become dull and heavy, are re-established by it: the voice, too, is restored by it, when from being perfectly clear, it has degenerated into hoarseness. The congress of the sexes is a cure also for pains in the loins, dimness of the eyesight, alienation of the mental difficulties, and melancholy.

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CHAP. 17.

VARIOUS OTHER REMEDIES.

To sit by a pregnant woman, or by a person to whom any remedy is being administered, with the fingers of one hand inserted between those of the other, acts as a magic spell; a discovery that was made, it is said, when Alcmena was delivered of Hercules. If the fingers are thus joined, clasping one or both knees, or if the ham of one leg is first put upon the knee of the other, and then changed about, the omen is of still worse signification. Hence it is, that in councils held by generals and persons in authority, our ancestors forbade these postures, as being an impediment to all business. They have given a similar prohibition also with reference to sacrifices and the offering of public vows; but as to the usage of uncovering the head in presence of the magistrates, that has been enjoined, Varro says, not as a mark of respect, but with a view to health, the head being strengthened by the practice of keeping it uncovered.

When anything has got into the eye, it is a good plan to close the other; and when water has got into the right ear, the person should hop about on the left foot, with the head reclining upon the right shoulder, the reverse being done when the same has happened to the left ear. If the secretion of the phlegm produces coughing, the best way of stopping it is for another person to blow in the party's face. When the uvula is relaxed, another person should take the patient with his teeth by the crown, and lift him from the ground; while for pains in the neck, the hams should be rubbed, and for pains in the hams the neck. If a person is seized in bed with cramp in the sinews of the legs or thighs, he should set his feet upon the ground: so, too, if he has cramp on the left side, he should take hold of the great toe of the left foot with the right hand, and if on the right side, the great toe of the right foot with the left hand. For cold shiverings or for excessive bleeding at the nostrils, the extremities of the body should be well rubbed with sheep's wool. To arrest incontinence of urine, the extremities of the generative organs should be tied with a thread of linen or papyrus, and a binding passed round the middle of the

thigh. For derangement of the stomach, it is a good plan to press the feet together, or to plunge the hands into hot water.

In addition to all this, in many cases it is found highly beneficial to speak but little; thus, for instance, Mæcenas Melissus, we are told, enjoined silence on himself for three years, in consequence of spitting blood after a convulsive fit. When a person is thrown from a carriage, or when, while mounting an elevation or lying extended at full length, he is menaced with any accident, or if he receives a blow, it is singularly beneficial to hold the breath; a discovery for which we are indebted to an animal, as already stated.

To thrust an iron nail into the spot where a person's head lay at the moment he was seized with a fit of epilepsy, is said to have the effect of curing him of that disease. For pains in the kidneys, loins, or bladder, it is considered highly soothing to void the urine lying on the face at full length in a reclining bath. It is quite surprising how much more speedily wounds will heal if they are bound up and tied with a Hercules' knot: indeed, it is said, that if the girdle which we wear every day is tied with a knot of this description, it will be productive of certain beneficial effects, Hercules having been the first to discover the fact.

Demetrius, in the treatise which he has compiled upon the number Four, alleges certain reasons why drink should never be taken in proportions of four cyathi or sextarii. As a preventive of ophthalmia, it is a good plan to rub the parts behind the ears, and, as a cure for watery eyes, to rub the forehead. As to the presages which are derived from man himself, there is one to the effect that so long as a person is able to see himself reflected in the pupil of the patient's eye, there need be no apprehension of a fatal termination to the malady.

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CHAP. 18.

REMEDIES DERIVED FROM THE URINE.

The urine, too, has been the subject not only of numerous theories with authors, but of various religious observances as well, its properties being classified under several distinctive heads: thus, for instance, the urine of eunuchs, they say, is highly beneficial as a promoter of fruitfulness in females. But to turn to those remedies which we may be allowed to name without impropriety — the urine of children who have not arrived at puberty is a sovereign remedy for the poisonous secretions of the asp known as the "ptyas," from the fact that it spits its venom into the eyes of human beings. It is good, too, for the cure of albugo, films and marks upon the eyes, white specks upon the pupils, and maladies of the eyelids. In combination with meal of fitches, it is used for the cure of burns, and, with a head of bulbed leek, it is boiled down to one half, in a new earthen vessel, for the treatment of suppurations of the ears, or the extermination of worms breeding in those organs: the vapour, too, of this decoction acts as an emmenagogue. Salpe recommends that the eyes should be fomented with it, as a means of strengthening the sight; and that it should be used as a liniment for sun scorches, in combination with white of egg, that of the ostrich being the most effectual, the application being kept on for a couple of hours.

Urine is also used for taking out ink spots. Male urine cures gout, witness the fullers for instance, who, for this reason, it is said, are never troubled with that disease. With stale urine some mix ashes of calcined oyster-shells, for the cure of eruptions on the bodies of infants, and all kinds of running ulcers: it is used, too, as a liniment for corrosive sores, burns, diseases of the rectum, chaps upon the body, and stings inflicted by scorpions. The most celebrated midwives have pronounced that there is no lotion which removes itching sensations more effectually; and, with the addition of nitre, they prescribe it for the cure of ulcers of the head, porrigo, and cancerous sores, those of the generative organs in particular. But the fact is, and there is no impropriety in saying so, that every person's

own urine is the best for his own case, due care being taken to apply it immediately, and unmixed with anything else; in such cases as the bite of a dog, for instance, or the quill of a hedge-hog entering the flesh, a sponge or some wool being the vehicle in which it is applied. Kneaded up with ashes, it is good for the bite of a mad dog, and for the cure of stings inflicted by serpents. As to the bite of the scolopendra, the effects of urine are said to be quite marvellous — the person who has been injured has only to touch the crown of his head with a drop of his own urine, and he will experience an instantaneous cure.

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CHAP. 19.

INDICATIONS OF HEALTH DERIVED FROM THE URINE.

Certain indications of the health are furnished by the urine. Thus, for example, if it is white at first in the morning and afterwards high-coloured, the first signifies that the digestion is going on, the last that it is completed. When the urine is red, it is a bad sign; but when it is swarthy, it is the worst sign of all. So, too, when it is thick or full of bubbles, it is a bad sign; and when a white sediment forms, it is a symptom of pains in the region of the viscera or in the joints. A green-coloured urine is indicative of disease of the viscera, a pale urine of biliousness, and a red urine of some distemper in the blood. The urine is in a bad state, too, when certain objects form in it, like bran or fine clouds in appearance. A thin, white, urine also is in a diseased state; but when it is thick and possessed of an offensive smell, it is significant of approaching death: so, too, when with children it is thin and watery.

The adepts in magic expressly forbid a person, when about to make water, to uncover the body in the face of the sun or moon, or to sprinkle with his urine the shadow of any object whatsoever. Hesiod gives a precept, recommending persons to make water against an object standing full before them, that no divinity may be offended by their nakedness being uncovered. Osthanes maintains that every one who drops some urine upon his foot in the morning will be proof against all noxious medicaments.

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CHAP. 20. (7.)

FORTY-ONE REMEDIES DERIVED FROM THE FEMALE SEX.

The remedies said to be derived from the bodies of females closely approach the marvellous nature of prodigies; to say nothing of still-born infants cut up limb by limb for the most abominable practices, expiations made with the menstrual discharge, and other devices which have been mentioned, not only by midwives but by harlots even as well! The smell of a woman's hair, burnt, will drive away serpents, and hysterical suffocations, it is said, may be dispelled thereby. The ashes of a woman's hair, burnt in an earthen vessel, or used in combination with litharge, will cure eruptions and prurigo of the eyes: used in combination with honey they will remove warts and ulcers upon infants; with the addition of honey and frankincense, they will heal wounds upon the head, and fill up all concavities left by corrosive ulcers; used with hogs' lard, they will cure inflammatory tumours and gout; and applied topically to the part affected, they will arrest erysipelas and hæmorrhage, and remove itching pimples on the body which resemble the stings of ants.

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CHAP. 21.

REMEDIES DERIVED FROM WOMAN'S MILK.

As to the uses to which woman's milk has been applied, it is generally agreed that it is the sweetest and the most delicate of all, and that it is the best of remedies for chronic fevers and cœliac affections, when the woman has just weaned her infant more particularly. In cases, too, of sickness at stomach, fevers, and gnawing sensations, it has been found by experience to be highly beneficial; as also, in combination with frankincense, for abscesses of the mamillæ. When the eyes are bloodshot from the effects of a blow, or affected with pain or defluxion, it is a very good plan to inject woman's milk into them, more particularly in combination with honey and juice of daffodil, or else powdered frankincense. In all cases, however, the milk of a woman who has been delivered of a male child is the most efficacious, and still more so if she has had male twins; provided always she abstains from wine and food of an acrid nature. Mixed with the white of an egg in a liquid state, and applied to the forehead in wool, it arrests defluxions of the eyes. If a frog has spirted its secretions into the eye, woman's milk is a most excellent remedy; and for the bite of that reptile it is used both internally and externally.

It is asserted that if a person is rubbed at the same moment with the milk of both mother and daughter, he will be proof for the rest of his life against all affections of the eyes. Mixed with a small quantity of oil, woman's milk is a cure for diseases of the ears; and if they are in pain from the effects of a blow, it is applied warm with goose-grease. If the ears emit an offensive smell, a thing that is mostly the case in diseases of long standing, wool is introduced into those organs, steeped in woman's milk and honey. While symptoms of jaundice are still visible in the eyes, woman's milk is injected, in combination with elaterium. Taken as a drink, it is productive of singularly good effects, where the poison of the sea-hare, the buprestis, or, as Aristotle tells us, the plant dorycnium has been administered; as a preventive also of the madness produced by taking

henbane. Woman's milk also, mixed with hemlock, is recommended as a liniment for gout; while some there are who employ it for that purpose in combination with wool-grease or goose-grease; a form in which it is used as an application for pains in the uterus. Taken as a drink, it arrests diarrhœa, Rabirius says, and acts as an emmenagogue; but where the woman has been delivered of a female child, her milk is of use only for the cure of face diseases.

Woman's milk is also a cure for affections of the lungs; and, mixed with the urine of a youth who has not arrived at puberty, and Attic honey, in the proportion of one spoonful of each, it removes singing in the ears, I find. Dogs which have once tasted the milk of a woman who has been delivered of a male child, will never become mad, they say.

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CHAP. 22.

REMEDIES DERIVED FROM THE SPITTLE OF FEMALES.

A woman's fasting spittle is generally considered highly efficacious for bloodshot eyes: it is good also for defluxions of those organs, the inflamed corners of the eyes being moistened with it every now and then; the result, too, is still more successful, if the woman has abstained from food and wine the day before.

I find it stated that head-ache may be alleviated by tying a woman's fillet round the head.

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CHAP. 23.

FACTS CONNECTED WITH THE MENSTRUAL DISCHARGE.

Over and above these particulars, there is no limit to the marvellous powers attributed to females. For, in the first place, hailstorms, they say, whirlwinds, and lightning even, will be scared away by a woman uncovering her body while her monthly courses are upon her. The same, too, with all other kinds of tempestuous weather; and out at sea, a storm may be lulled by a woman uncovering her body merely, even though not menstruating at the time. As to the menstrual discharge itself, a thing that in other respects, as already stated on a more appropriate occasion, is productive of the most monstrous effects, there are some ravings about it of a most dreadful and unutterable nature. Of these particulars, however, I do not feel so much shocked at mentioning the following. If the menstrual discharge coincides with an eclipse of the moon or sun, the evils resulting from it are irremediable; and no less so, when it happens while the moon is in conjunction with the sun; the congress with a woman at such a period being noxious, and attended with fatal effects to the man. At this period also, the lustre of purple is tarnished by the touch of a woman: so much more baneful is her influence at this time than at any other. At any other time, also, if a woman strips herself naked while she is menstruating, and walks round a field of wheat, the caterpillars, worms, beetles, and other vermin, will fall from off the ears of corn. Metrodorus of Scepsos tells us that this discovery was first made in Cappadocia; and that, in consequence of such multitudes of can- tharides being found to breed there, it is the practice for women to walk through the middle of the fields with their garments tucked up above the thighs. In other places, again, it is the usage for women to go barefoot, with the hair dishevelled and the girdle loose: due precaution must be taken, however, that this is not done at sun-rise, for if so, the crop will wither and dry up. Young vines, too, it is said, are injured irremediably by the touch of a woman in this state; and both rue and ivy, plants possessed of highly medicinal virtues, will die instantly upon being touched by her.

Much as I have already stated on the virulent effects of this discharge, I have to state, in addition, that bees, it is a well-known fact, will forsake their hives if touched by a menstruous woman; that linen boiling in the cauldron will turn black, that the edge of a razor will become blunted, and that copper vessels will contract a fetid smell and become covered with verdigrease, on coming in contact with her. A mare big with foal, if touched by a woman in this state, will be sure to miscarry; nay, even more than this, at the very sight of a woman, though seen at a distance even, should she happen to be menstruating for the first time after the loss of her virginity, or for the first time, while in a state of virginity. The bitumen that is found in Judæa, will yield to nothing but the menstrual discharge; its tenacity being overcome, as already stated, by the agency of a thread from a garment which has been brought in contact with this fluid. Fire itself even, an element which triumphs over every other substance, is unable to conquer this; for if reduced to ashes and then sprinkled upon garments when about to be scoured, it will change their purple tint, and tarnish the brightness of the colours. Indeed so pernicious are its properties, that women themselves, the source from which it is derived, are far from being proof against its effects; a pregnant woman, for instance, if touched with it, or indeed if she so much as steps over it, will be liable to miscarry.

Laïs and Elephant is have given statements quite at variance, on the subject of abortives; they mention the efficacy for that purpose of charcoal of cabbage root, myrtle root, or tamarisk root, quenched in the menstrual discharge; they say that she-asses will be barren for as many years as they have eaten barley-corns steeped in this fluid; and they have enumerated various other monstrous and irreconcileable properties, the one telling us, for instance, that fruitfulness may be ensured by the very same methods, which, according to the statement of the other, are productive of barrenness; to all which stories it is the best plan to refuse credit altogether. Bithus of Dyrrhachium informs us that a mirror, which has been tarnished by the gaze of a menstruous female, will recover its brightness if the same woman looks steadily upon the back of it; he states, also, that all evil influences of this nature will be entirely neutralized, if the woman carries the fish known as the sur mullet about her person.

On the other hand, again, many writers say that, baneful as it is, there are certain remedial properties in this fluid; that it is a good plan, for instance, to use it as a topical application for gout, and that women, while menstruating, can give relief by touching scrofulous sores and imposthumes of the parotid glands, inflamed tumours, erysipelas, boils, and defluxions of the eyes. According to Laïs and Salpe, the bite of a mad (log, as well as tertian or quartan fevers, may be cured by putting some menstruous blood in the wool of a black ram and enclosing it in a silver bracelet; and we learn from Diotimus of Thebes that the smallest portion will suffice of any kind of cloth that has been stained therewith, a thread even, if inserted and worn in a bracelet. The midwife Sotira informs us that the most efficient cure for tertian and quartan fevers is to rub the soles of the patient's feet therewith, the result being still more successful if the operation is performed by the woman herself, without the patient being aware of it; she says, too, that this is an excellent method for reviving persons when attacked with epilepsy.

Icetidas the physician pledges his word that quartan fever may be cured by sexual intercourse, provided the woman is just beginning to menstruate. It is universally agreed, too, that when a person has been bitten by a dog and manifests a dread of water and of all kinds of drink, it will be quite sufficient to put under his clip a strip of cloth that has been dipped in this fluid; the result being that the hydrophobia will immediately disappear. This arises, no doubt, from that powerful sympathy which has been so much spoken of by the Greeks, and the existence of which is proved by the fact, already mentioned, that dogs become mad upon tasting this fluid. It is a well-known fact, too, that the menstruous discharge, reduced to ashes, and applied with furnace soot and wax, is a cure for ulcers upon all kinds of beasts of burden; and that stains made upon a garment with it can only be removed by the agency of the urine of the same female. Equally certain it is, too, that this fluid, reduced to ashes and mixed with oil of roses, is very useful, applied to the forehead, for allaying head-ache, in women more particularly; as also that the nature of the discharge is most virulent in females whose virginity has been destroyed solely by the lapse of time.

Another thing universally acknowledged and one which I am

ready to believe with the greatest pleasure, is the fact, that if the door-posts are only touched with the menstruous fluid all spells of the magicians will be neutralized — a set of men the most lying in existence, as any one may ascertain. I will give an example of one of the most reasonable of their prescriptions — Take the parings of the toe-nails and finger-nails of a sick person, and mix them up with wax, the party saying that he is seeking a remedy for a tertian, quartan, or quotidian fever, as the case may be; then stick this wax, before sunrise, upon the door of another person — such is the prescription they give for these diseases! What deceitful persons they must be if there is no truth in it! And how highly criminal, if they really do thus transfer diseases from one person to another! Some of them, again, whose practices are of a less guilty nature, recommend that the parings of all the finger-nails should be thrown at the entrance of ant-holes, the first ant to be taken which attempts to draw one into the hole; this, they say, must be attached to the neck of the patient, and he will experience a speedy cure.

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CHAP. 24. (8.)

REMEDIES DERIVED FROM FOREIGN ANIMALS: THE ELEPHANT, EIGHT REMEDIES.

Such then are the remedies from human beings which may with any degree of propriety be described, and many of those only with the leave and good-will of the reader. The rest are of a most execrable and infamous nature, such, in fact, as to make me hasten to close my description of the remedies derived from man: we will therefore proceed to speak of the more remarkable animals, and the effects produced by them. The blood of the elephant, the male in particular, arrests all those defluxions known by the name of "rheumatismi." Ivory shavings, it is said, in combination with Attic honey, are good for the removal of spots upon the face: with the sawdust, too, of ivory, hangnails are removed. By the touch of an elephant's trunk head-ache is alleviated, if the animal happens to sneeze at the time more particularly. The right side of the trunk, attached to the body with red earth of Lemnos, acts powerfully as an aphrodisiac. Elephant's blood is good for consumption, and the liver for epilepsy.

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CHAP. 25.

TEN REMEDIES DERIVED FROM THE LION.

Lion's fat, mixed with oil of roses, protects the skin of the face from all kinds of spots, and preserves the whiteness of the complexion; it is remedial also for such parts of the body as have been frozen by snow, and for swellings in the joints. The frivolous lies of the magicians assert that persons who are anointed with lion's fat, will more readily win favour with kings and peoples; more particularly when the fat has been used that lies between the eyebrows of the animal-a place, in fact, where there is no fat to be found! The like effects they promise also from the possession of a lion's tooth, one from the right side in particular, as also the shaggy hairs that are found upon the lower jaw. The gall, used as an ointment in combination with water, improves the eyesight, and, employed with the fat of the same animal, is a cure for epilepsy; but a slight taste only must be taken of it, and the patient must run immediately after swallowing it, in order to digest it. A lion's heart, used as food, is curative of quartan fevers, and the fat, taken with oil of roses, of quotidian fevers. Wild beasts will fly from persons anointed with lion's fat, and it is thought to be a preservative even against treacherous practices.

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CHAP. 26.

TEN REMEDIES DERIVED FROM THE CAMEL.

A camel's brains, dried and taken in vinegar, are a cure, they say, for epilepsy: the same, too, with the gall, taken with honey; which is a remedy also for quinzy. A camel's tail dried, it is said, is productive of diarrhœa, and ashes of burnt camel's dung, mixed with oil, make the hair curl. These ashes, applied topically, are very useful for dysentery, as also taken in drink, the proper dose being a pinch in three fingers at a time; they are curative also of epilepsy. Camel's urine it is said, is very useful to fullers, and is good for the cure of running sores. Barbarous nations, we are told, are in the habit of keeping it till it is five years old, and then taking it as a purgative, in doses of one semisextarius. The hairs of the tail, it is said, plaited and attached to the left arm, are a cure for quartan fevers.

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CHAP. 27.

SEVENTY-NINE REMEDIES DERIVED FROM THE HYÆNA.

But of all animals, it is the hyæna that has been held in the highest admiration by the magicians, who have gone so far as to attribute to it certain magical virtues even, and the power of alluring human beings and depriving them of their senses. Of its change of sex each year, and other monstrous peculiarities in its nature, we have spoken already; we will now proceed to describe the medicinal virtues that are ascribed to it.

The hyæna, it is said, is particularly terrible to panthers; so much so, indeed, that they will not attempt to make the slightest resistance to it, and will never attack a man who has any portion of a hyæna's skin about him. A thing truly marvellous to tell of, if the hides of these two animals are hung up facing one another, the hair will fall from off the panther's skin! When the hyæna flies before the hunter, it turns off on the right, and letting the man get before it, follows in his track: should it succeed in doing which, the man is sure to lose his senses and fall from his horse even. But if, on the other hand, it turns off to the left, it is a sign that the animal is losing strength, and that it will soon be taken. The easiest method, however, of taking it, they say, is for the hunter to tie his girdle with seven knots, and to make as many knots in the whip with which he guides his horse. In addition to all this, so full of quirks and subtleties are the vain conceits of the magicians, they recommend the hyæna to be captured while the moon is passing through the sign of Gemini, and every hair of it to be preserved, if possible. They say, too, that the skin of the head is highly efficacious, if attached to a person suffering from head-ache; that the gall, applied to the forehead, is curative of ophthalmia; and that if the gall is boiled down with three cyathi of Attic honey and one ounce of saffron, it will be a most effectual preservative against that disease, the same preparation being equally good for the dispersion of films on the eyes and cataract. If, again, this preparation is kept till it is old, it will be all the better for improving the sight, due care being taken to preserve it in a box of

Cyprian copper: they assert also, that it is good for the cure of argema, eruptions and excrescences of the eyes, and marks upon those organs. For diseases of the crystalline humours of the eyes, it is recommended to anoint them with the gravy of hyæna's liver roasted fresh, incorporated with clarified honey.

We learn also, from the same sources, that the teeth of the hyæna are useful for the cure of tooth-ache, the diseased tooth being either touched with them, or the animal's teeth being arranged in their regular order, and attached to the patient; that the shoulders of this animal are good for the cure of pains in the arms and shoulders; that the teeth, extracted from the left side of the jaw, and wrapped in the skin of a sheep or hegoat, are an effectual cure for pains in the stomach; that the lights of the animal, taken with the food, are good for cœliac affections; that the lights, reduced to ashes and applied with oil, are also soothing to the stomach; that the marrow of the backbone, used with old oil and gall, is strengthening to the sinews; that the liver, tasted thrice just before the paroxysms, is good for quartan fevers; that the ashes of the vertebræ, applied in hyena's skin with the tongue and right foot of a sea-calf and a bull's gall, the whole boiled up together, are soothing for gout; that for the same disease hyæna's gall is advantageously employed in combination with stone of Assos; that for cold shiverings, spasms, sudden fits of starting, and palpitations of the heart, it is a good plan to eat some portion of a hyæna's heart cooked, care being taken to reduce the rest to ashes, and to apply it with the brains of the animal to the part affected; that this last composition, or the gall applied alone, acts as a depilatory, the hairs being first plucked out which are wanted not to grow again; that by this method superfluous hairs of the eyelids may be removed; that the flesh of the loins, eaten and applied with oil, is a cure for pains in the loins; and that sterility in females may be removed by giving them the eye of this animal to eat, in combination with liquorice and dill, conception within three days being warranted as the result.

Persons afflicted with night-mare and dread of spectres, will experience relief, they say, by attaching one of the large teeth of a hyæna to the body, with a linen thread. In fits of delirium too, it is recommended to fumigate the patient with the smoke of one of these

teeth, and to attach one in front of his chest, with the fat of the kidneys, or else the liver or skin. They assert also that a pregnant woman will never miscarry, if she wears suspended from her neck, the white flesh from a hyena's breast, with seven hairs and the genitals of a stag, the whole tied up in the skin of a gazelle. The genitals, they say, eaten with honey, act as a stimulant upon a person, according to the sex, and this even though it should be the case of a man who has manifested an aversion to all intercourse with females.

Nay, even more than all this, we are assured that if the genitals and a certain joint of the vertebræ are preserved in a house with the hide adhering to them, they will ensure peace and concord between all members of the family; hence it is that this part is known as the "joint of the spine," or "Atlantian knot." This joint, which is the first, is reckoned among the remedies for epilepsy.

The fumes of the burnt fat of this animal will put serpents to flight, they say; and the jawbone, pounded with anise and taken with the food, is a cure for shivering fits. A fumigation made therewith has the effect of an emmenagogue; and such are the frivolous and absurd conceits of the professors of the magic art, that they boldly assert that if a man attaches to his arm a tooth from the right side of the upper jaw, he will never miss any object he may happen to aim at with a dart. The palate, dried and warmed with Egyptian alum, is curative of bad odours and ulcers of the mouth, care being taken to renew the application three times. Dogs, they say, will never bark at persons who have a hyæna's tongue in the shoe, beneath the sole of the foot. The left side of the brain, applied to the nostrils, is said to have a soothing effect upon all dangerous maladies either in men or beasts. They say, too, that the skin of the forehead is a preservative against all fascinations; that the flesh of the neck, whether eaten or dried and taken in drink, is good for pains in the loins; that the sinews of the back and shoulders, used as a fumigation, are good for pains in the sinews; that the bristles of the snout, applied to a woman's lips, have all the effect of a philtre; and that the liver, administered in drink, is curative of griping pains and urinary calculi.

The heart, it is said, taken with the food or drink, is remedial for all kinds of pains in the body; the milt for pains in the spleen; the caul, in combination with oil, for inflammatoryulcers; and the

marrow for pains in the spine and weakness in the sinews. The strings of the kidneys, they say, if taken with wine and frankincense, will restore fruitfulness, in cases where it has been banished through the agency of noxious spells; the uterus, taken in drink with the rind of a sweet pomegranate, is highly beneficial for diseases of the uterus; and the fat of the loins, used as a fumigation, removes all impediments to delivery, and accelerates parturition. The marrow of the back, attached to the body as an amulet, is an effectual remedy for fantastic illusions, and the genitals of the male animal, used as a fumigation, are good for the cure of spasms. For ophthalmia, ruptures, and inflammations, the feet, which are kept for the purpose, are touched; the left feet for affections on the right side of the body, and the right feet for affections on the left. The left foot, if laid upon the body of a woman in travail, will be productive, they say, of fatal effects; but the right foot, similarly employed, will facilitate delivery. The vesicle which has contained the gall, taken in wine or with the food. is beneficial for the cardiac disease; and the bladder, taken in wine, is a good preservative against incontinence of urine. The urine, too, which is found in the bladder, taken with oil, sesame, and honey, is said to be useful for diseases of long standing.

The first rib and the eighth, used as a fumigation, are said to be useful for ruptures; the vertebræ for women in travail; and the blood, in combination with polenta, for griping pains in the bowels. If the door-posts are touched with this blood, the various arts of the magicians will be rendered of no effect; they will neither be able to summon the gods into their presence nor to converse with them, whatever the method to which they have recourse, whether lamps or basin, water or globe, or any other method.

The flesh of the hyæna, taken as food, is said to be efficacious for the bite of a mad dog, and the liver still more so. The flesh or bones of a human being which have been found in the belly of a slain hyæna, used as a fumigation, are said to be remedial for gout: but if among these remains the nails are found, it is looked upon as a presage of death to some one among those who have captured it. The excrements or bones which have been voided by the animal at the moment when killed, are looked upon as counter-charms to magic spells. The dung found in the intestines is dried and administered in

drink for dysentery; and it is applied to all parts of the body with goose-grease, in the form of a liniment, in the case of persons who have received injury from some noxious medicament. By rubbing themselves with the grease, and lying upon the skin, of a hyæna, persons who have been bitten by dogs are cured.

On the other hand, the ashes of the left pastern-bone, they say, boiled with weasel's blood, and applied to a person's body, will ensure universal hatred; a similar effect being equally produced by the eye when boiled. But the most extraordinary thing of all is, their assertion that the extremity of the rectum of this animal is a preservative against all oppression on the part of chiefs and potentates, and an assurance of success in all petitions, judgments, and lawsuits, and this, if a person only carries it about him. The anus, according to them, has so powerful an effect as a philtre, that if it is worn on the left arm, a woman will be sure to follow the wearer the moment he looks at her. The hairs, too, of this part, reduced to ashes, and applied with oil to the body of a man who is living a life of disgraceful effeminacy, will render him not only modest, they assure us, but of scrupulous morals even.

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CHAP. 28.

NINETEEN REMEDIES DERIVED FROM THE CROCODILE.

For fabulous stories connected with it the crocodile may challenge the next place; and, indeed for cunning, the one which lives both upon land and in the water is fully its equal: for I would here remark, that there are two varieties of this animal. The teeth of the right jaw of the amphibious crocodile, attached to the right arm as an amulet, acts as an aphrodisiac, that is, if we choose to believe it. The eye-teeth of the animal, filled with frankincense — for they are hollow — are a cure for periodical fevers, care being taken to let the patient remain five days without seeing the person who has attached them to his body. A similar virtue is attributed to the small stones which are found in the belly of this animal, as being a check to the cold shiverings in fevers, when about to come on; and with the same object the Ægyptians are in the habit of anointing their sick with the fat of the crocodile.

The other kind of crocodile resembles it, but is much inferior in size: it lives upon land only, and among the most odoriferous flowers; hence it is that its intestines are so greatly in request, being filled as they are with a mass of agreeable perfumes. This substance is called "crocodilea," and it is looked upon as extremely beneficial for diseases of the eyes, and for the treatment of films and cataract, being applied with leek-juice in the form of an ointment. Applied with oil of cyprus, it removes blemishes growing upon the face; and, employed with water, it is a cure for all those diseases, the nature of which it is to spread upon the face, while at the same time it restores the natural tints of the skin. An application of it makes freckles disappear, as well as all kinds of spots and pimples; and it is taken for epilepsy, in doses of two oboli, in oxymel. Used in the form of a pessary it acts as an emmenagogue. The best kind of crocodilea, is that which is the whitest, friable, and the lightest in weight: when rubbed between the fingers it should ferment like leaven. The usual method is to wash it, as they do white lead. It is sometimes adulterated with amylum or with Cimolian earth, but the most

common method of sophistication is to catch the crocodiles and feed them upon nothing but rice. It is recommended as one of the most efficient remedies for cataract to anoint the eyes with crocodile's gall, incorporated with honey. We are assured also that it is highly beneficial for affections of the uterus to make fumigations with the intestines and rest of the body, or else to envelope the patient with wool impregnated with the smoke.

The ashes of the skin of either crocodile, applied with vinegar to such parts of the body as are about to undergo an incision, or indeed the very smell of the skin when burning, will render the patient insensible to the knife. The blood of either crocodile, applied to the eyes, effaces marks upon those organs and improves the sight. The body, with the exception of the head and feet, is eaten, boiled, for the cure of sciatica, and is found very useful for chronic coughs, in children more particularly: it is equally good, too, for the cure of lumbago. These animals have a certain fat also, which, applied to the hair, makes it fall off; persons anointed with this fat are effectually protected against crocodiles, and it is the practice to drop it into wounds inflicted by them. A crocodile's heart, attached to the body in the wool of a black sheep without a speck of any other colour, due care too being taken that the sheep was the first lamb yeaned by its dam, will effectually cure a quartan fever, it is said.

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CHAP. 29.

FIFTEEN REMEDIES DERIVED FROM THE CHAMÆLEON.

To these animals we shall annex some others that are equally foreign, and very similar in their properties. To begin then with the chameleon, which Democritus has considered worthy to be made the subject of an especial work, and each part of which has been consecrated to some particular purpose — This book, in fact, has afforded me no small amusement, revealing as it does, and exposing the lies and frivolities of the Greeks. — In size, the chameleon resembles the crocodile last mentioned, and only differs from it in having the back-bone arched at a more acute angle, and a larger tail. There is no animal, it is thought, more timid than this, a fact to which it owes its repeated changes of colour. It has a peculiar ascendancy over the hawk tribe; for, according to report, it has the power of attracting those birds, when flying above it, and then leaving them a voluntary prey for other animals. Democritus asserts that if the head and neck of a chamæleon are burnt in a fire made with logs of oak, it will be productive of a storm attended with rain and thunder; a result equally produced by burning the liver upon the tiles of a house. As to the rest of the magical virtues which he ascribes to this animal, we shall forbear to mention them, although we look upon them as unfounded; except, indeed, in some few instances where their very ridiculousness sufficiently refutes his assertions.

The right eye, he says, taken from the living animal and applied with goats' milk, removes diseases of the crystalline humours of the eyes; and the tongue, attached to the body as an amulet, is an effectual preservative against the perils of child-birth. He asserts also that the animal itself will facilitate parturition, if in the house at the moment; but if, on the other hand, it is brought from elsewhere, the consequences, he says, will be most dangerous. The tongue, he tells us, if taken from the animal alive, will ensure a favourable result to suits at law; and the heart, attached to the body with black wool of the first shearing, is a good preservative against the attacks of quartan fever.

He states also that the right fore-paw, attached to the left arm in the skin of the hyena, is a most effectual preservative against robberies and alarms at night; that the pap on the right side is a preventive of fright and panics; that the left foot is sometimes burnt in a furnace with the plant which also has the name of "chamæleon," and is then made up, with some unguent, into lozenges; and that these lozenges, kept in a wooden vessel, have the effect, if we choose to believe him, of making their owner invisible to others; that the possession, also, of the right shoulder of this animal will ensure victory over all adversaries or enemies, provided always the party throws the sinews of the shoulder upon the ground and treads them under foot. As to the left shoulder of the chamæleon, I should be quite ashamed to say to what monstrous purposes Democritus devotes it; how that dreams may be produced by the agency thereof, and transferred to any person we may think proper; how that these dreams may be dispelled by the employment of the right foot; and how that lethargy, which has been produced by the right foot of this animal, may be removed by the agency of the left side.

So, too, head-ache, he tells us, may be cured by sprinkling wine upon the head, in which either flank of a chameleon has been macerated. If the feet are rubbed with the ashes of the left thigh or foot, mixed with sow's milk, gout, he says, will be the result. It is pretty generally believed, however, that cataract and diseases of the crystalline humours of the eyes may be cured by anointing those organs with the gall for three consecutive days; that serpents may be put to flight by dropping some of it into the fire; that weasels may be attracted by water into which it has been thrown; and that, applied to the body, it acts as a depilatory. The liver, they say, applied with the lungs of a bramble-frog, is productive of a similar effect: in addition to which, we are told that the liver counteracts the effects of philtres; that persons are cured of melancholy by drinking from the warm skin of a chamæleon the juice of the plant known by that name; and that if the intestines of the animal and their contents — we should bear in mind that in reality the animal lives without food — are mixed with apes' urine, and the doors of an enemy are besmeared with the mixture, he will, through its agency, become the object of universal hatred.

We are told, too, that by the agency of the tail, the course of rivers and torrents may be stopped, and serpents struck with torpor; that the tail, prepared with cedar and myrrh, and tied to a double branch of the date-palm, will divide waters that are smitten therewith, and so disclose every- thing that lies at the bottom — and I only wish that Democri- tus himself had been touched up with this branch of palm, seeing that, as he tells us, it has the property of putting an end to immoderate garrulity. It is quite evident that this philosopher, a man who has shown himself so sagacious in other respects, and so useful to his fellow-men, has been led away, in this instance, by too earnest a desire to promote the welfare of mankind.

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CHAP. 30.

FOUR REMEDIES DERIVED FROM THE SCINCUS.

Similar in appearance to the preceding animals is the scincus, which by some writers has been called the land crocodile; it is, however, whiter in appearance, and the skin is not so thick. But the main difference between it and the cro- codile is in the arrangement of the scales, which run from the tail towards the head. The largest of these animals is the Indian scincus, and next to it that of Arabia; they are brought here salted. The muzzle and fat of the scincus, taken in white wine, act as an aphrodisiac; when used with satyrion and rocket-seed more particularly, in the proportion of one drachma of each, mixed with two drachmæ of pepper; the whole being made up into lozenges of one drachma each, and so taken in drink. The flesh from the flanks, taken internally in a similar manner, in doses of two oboli, with myrrh and pepper, is generally thought to be productive of a similar effect, and to be even more efficacious for the purpose. According to Apelles, the flesh of the scincus is good for wounds inflicted by poisoned arrows, whether taken before or after the wound is inflicted: it is used as an ingredient, also, in the most celebrated anti- dotes. Sextius tells us, that, taken in doses of more than one drachma, in one semisextarius of wine, the flesh is productive of deadly results: he adds, too, that a broth prepared from it. taken with honey, acts as an antaphrodisiac.

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CHAP. 31.

SEEN REMEDIES DERIVED FROM THE HIPPOPOTAMUS.

Between the crocodile, too, and the hippopotamus there is a certain affinity, frequenting as they do the same river, and being both of them of an amphibious nature. The hippopo- tamus was the first inventor of the practice of letting blood, a fact to which we have made allusion on a previous occasion: it is found, too, in the greatest numbers in the parts above the prefecture of Saïs.

The hide, reduced to ashes and applied with water, is curative of inflamed tumours, and the fat, as well as the dung, used as a fumigation, is employed for the cure of cold agues. With the teeth of the left side of the jaw, the gums are scarified for the cure of tooth-ache. The skin of the left side of the forehead, attached to the groin, acts as an antaphrodisiac; and an application of the ashes of the same part will cause the hair to grow when lost through alopecy. The testes are taken in water, in doses of one drachma, for the cure of injuries inflicted by serpents. The blood is made use of by painters.

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CHAP. 32.

FIVE REMEDIES DERIVED FROM THE LYNX.

To foreign countries, also, belongs the lynx, which of all quadrupeds is possessed of the most piercing sight. It is said that in the Isle of Carpathus a most powerful medicament is obtained by reducing to ashes the nails of the lynx, together with the hide; that these ashes, taken in drink, have the effect of checking abominable desires in men; and that, if they are sprinkled upon women, all libidinous thoughts will be restrained. They are good too for the removal of itching sensations in any part of the body. The urine of the lynx is a remedy for strangury; for which reason the animal, it is said, is in the habit of rooting up the ground and covering it the moment it is voided. It is mentioned, too, that this urine is an effectual remedy for pains in the throat. Thus much with reference to foreign animals.

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CHAP. 33. (9.)

REMEDIES FURNISHED IN COMMON BY ANIMALS OF THE SAME CLASS, WHETHER WILD OR TAME. FIFTY-FOUR MEDICINAL USES OF MILK, WITH OBSERVATIONS THEREON.

We will now return to our own part of the world, speaking, first of all, of certain remedies common to animals in general, but excellent in their nature; such as the use of milk, for example. The most beneficial milk to every creature is the mother's milk. It is highly dangerous for nursing women to conceive: children that are suckled by them are known among us as "colostrati," their milk being thick, like cheese in appearance — the name "colostra," it should be remembered, is given to the first milk secreted after delivery, which assumes a spongy, coagulated form. The most nutritive milk, in all cases, is woman's milk, and next to that goats' milk, to which is owing, probably, the fabulous story that Jupiter was suckled by a goat. The sweetest, next to woman's milk, is camels' milk; but the most efficacious, medicinally speaking, is asses' milk. It is in animals of the largest size and individuals of the greatest bulk, that the milk is secreted with the greatest facility. Goats' milk agrees the best with the stomach, that animal browsing more than grazing. Cows' milk is considered more medicinal, while ewes' milk is sweeter and more nutritive, but not so well adapted to the stomach, it being more oleaginous than any other.

Every kind of milk is more aqueous in spring than in summer, and the same in all cases where the animal has grazed upon a new pasture. The best milk of all is that which adheres to the finger nail, when placed there, and does not run from off it. Milk is most harmless when boiled, more particularly if sea pebbles have been boiled with it. Cows' milk is the most relaxing, and all kinds of milk are less apt to inflate when boiled. Milk is used for all kinds of internal ulcerations, those of the kidneys, bladder, intestines, throat, and lungs in particular; and externally, it is employed for itching sensations upon the skin, and for purulent eruptions, it being taken fasting for the purpose. We have already stated, when speaking of the

plants, how that in Arcadia cows' milk is administered for phthisis, consumption, and cachexy. Instances are cited, also, of persons who have been cured of gout in the hands and feet, by drinking asses' milk.

To these various kinds of' milk, medical men have added another, to which they have given the name of "schiston;" the following being the usual method of preparing it. Goats' milk, which is used in preference for the purpose, is boiled in a new earthen vessel, and stirred with branches of a fig-tree newly gathered, as many cyathi of honied wine being added to it as there are semisextarii of milk. When the mixture boils, care is taken to prevent it running over, by plunging into it a silver cyathus measure filled with cold water, none of the water being allowed to escape. When taken off the fire, the constituent parts of it divide as it cools, and the whey is thus separated from the milk. Some persons, again, take this whey, which is now very strongly impregnated with wine, and, after boiling it down to one third, leave it to cool in the open air. The best way of taking it, is in doses of one semisextarius, at stated intervals, during five consecutive days; after taking it, riding exercise should be used by the patient. This whey is admi- nistered in cases of epilepsy, melancholy, paralysis, leprosy, elephantiasis, and diseases of the joints.

Milk is employed as an injection where excoriations have been caused by the use of strong purgatives; in cases also where dysentery is productive of chafing, it is similarly employed, boiled with sea pebbles or a ptisan of barley. Where, however, the intestines are excoriated, cows' milk or ewes' milk is the best. New milk is used as an injection for dysentery; and in an unboiled state, it is employed for affections of the colon and uterus, and for injuries inflicted by serpents. It is also taken internally as an antidote to the venom of cantharides, the pine-caterpillar, the buprestis, and the salamander. Cows' milk is particularly recommended for persons who have taken colchicum, hemlock, dorycnium, or the flesh of the seahare; and asses' milk, in cases where gypsum, white-lead, sulphur, or quick-silver, have been taken internally. This last is good too for constipation attendant upon fever, and is remarkably useful as a gargle for ulcerations of the throat. It is taken, also, internally, by

patients suffering from atrophy, for the purpose of recruiting their exhausted strength; as also in cases of fever unattended with head-ache. The ancients held it as one of their grand secrets, to administer to children, before taking food, a semisextarius of asses' milk, or for want of that, goats' milk; a similar dose, too, was given to children troubled with chafing of the rectum at stool. It is considered a sovereign remedy for hardness of breathing, to take cows' milk whey, mixed with nasturtium. In cases of ophthalmia, too, the eyes are fomented with a mixture of one semisextarius of milk and four drachmæ of pounded sesame.

Goats' milk is a cure for diseases of the spleen; but in such case the goats must fast a couple of days, and be fed on ivyleaves the third; the patient, too, must drink the milk for three consecutive days, without taking any other nutriment. Milk, under other circumstances, is detrimental to persons suffering from head-ache, liver complaints, diseases of the spleen, and affections of the sinews; it is bad for fevers, also, vertigo — except, indeed, where it is required as a purgative — oppression of the head, coughs, and ophthalmia. Sows' milk is extremely use- ful in cases of tenesmus, dysentery, and phthisis; authors have been found too, to assert that it is very wholesome for females.

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CHAP. 34.

TWELVE REMEDIES DERIVED FROM CHEESE.

We have already spoken of the different kinds of cheese when treating of the mamillæ and other parts of animals. Sextius attributes the same properties to mares' milk cheese that he does to cheese made of cows' milk: to the former he gives the names of "hippace." Cheese is best for the stomach when not salted, or, in other words, when new cheese is used. Old [salted] cheese has a binding effect upon the bowels, and reduces the flesh, but is more wholesome to the stomach [than new salted cheese]. Indeed, we may pronounce of aliments in general, that salt meats reduce the system, while fresh food has a tendency to make flesh. Fresh cheese, applied with honey, effaces the marks of bruises. It acts, also, emolliently upon the bowels; and, taken in the form of tablets, boiled in astringent wine and then toasted with honey on a platter, it modifies and alleviates griping pains in the bowels.

The cheese known as "saprum," is beaten up, in wine, with salt and dried sorb apples, and taken in drink, for the cure of celiac affections. Goats' milk cheese, pounded and applied to the part affected, is a cure for carbuncle of the generative organs; sour cheese, also, with oxymel, is productive of a similar effect. In the bath it is used as a friction, alternately with oil, for the removal of spots.

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CHAP. 35.

TWENTY-FIVE REMEDIES DERIVED FROM BUTTER.

From milk, too, butter is produced; held as the most delicate of food among barbarous nations, and one which distinguishes the wealthy from the multitude at large. It is mostly made from cows' milk, and hence its name; but the richest butter is that made from ewes' milk. There is a butter made also from goats' milk; but previously to making it, the milk should first be warmed, in winter. In summer it is extracted from the milk by merely shaking it to and fro in a tall vessel, with a small orifice at the mouth to admit the air, but otherwise closely stopped, a little water being added to make it curdle the sooner. The milk that curdles the most, floats upon the surface; this they remove, and, adding salt to it, give it the name of "oxygala." They then take the remaining part and boil it down in pots, and that portion of it which floats on the surface is butter, a substance of an oily nature. The more rank it is in smell, the more higthly it is esteemed. When old, it forms an ingredient in numerous compositions. It is of an astringent, emollient, repletive, and purgative nature.

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CHAP. 36.

OXYGALA: ONE REMEDY.

Oxygala, too, is prepared another way, sour milk being added to the fresh milk which is wanted to curdle. This preparation is extremely wholesome to the stomach: of its properties we shall have occasion to speak in another place.

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CHAP. 37.

THE VARIOUS USES OF FAT AND OBSERVATIONS UPON IT, FIFTY-TWO IN NUMBER.

Among the remedies common to living creatures, fat is the substance held in the next highest esteem, that of swine in particular, which was employed by the ancients for certain religious purposes even: at all events, it is still the usage for the newly-wedded bride, when entering her husband's house, to touch the door-posts with it. There are two methods of keeping hogs' lard, either salted or fresh; indeed, the older it is, the better. The Greek writers have now given it the name of "axungia," or axle-grease, in their works. Nor, in fact, is it any secret, why swine's fat should be possessed of such marked properties, seeing that the animal feeds to such a great extent upon the roots of plants — owing too, to which, its dung is applied to such a vast number of purposes. It will be as well, therefore, to premise, that I shall here speak only of the hog that feeds in the open field, and no other; of which kind it is the female that is much the most useful- if she has never farrowed, more particularly. But it is the fat of the wild boar that is held in by far the highest esteem of all.

The distinguishing properties, then, of swine's-grease, are emollient, calorific, resolvent, and detergent. Some physicians recommend it as an ointment for the gout, mixed with goose grease, bull-suet, and wool-grease: in cases, however, where the pain is persistent, it should be used in combination with wax, myrtle, resin, and pitch. Hogs' lard is used fresh for the cure of burns, and of blains, too, caused by snow: with ashes of burnt barley and nutgalls, in equal proportions, it is employed for the cure of chilblains. It is good also for excoriations of the limbs, and for dispelling weariness and lassitude arising from long journeys. For the cure of chronic cough, new lard is boiled down, in the proportion of three ounces to three cyathi of wine, some honey being added to the mixture. Old lard too, if it has been kept without salt, made up into pills and taken internally, is a cure for phthisis: but it is a general rule not to use it salted in any cases except where detergents are required, or where

there are no symptoms of ulceration. For the cure of phthisis, some persons boil down three ounces of hogs' lard and honied wine, in three cyathi of ordinary wine; and after swathing the sides, chest, and shoulders of the patient with compresses steeped in the preparation, administer to him, every four days, some tar with an egg: indeed, so potent is this composition, that if it is only attached to the knees even, the flavour of it will ascend to the mouth, and the patient will appear to spit it out, as it were.

The grease of a sow that has never farrowed, is the most useful of all cosmetics for the skin of females; but in all cases, hogs' lard is good for the cure of itch-scab, mixed with pitch and beef-suet in the proportion of one-third, the whole being made lukewarm for the purpose. Fresh hogs' lard, applied as a pessary, imparts nutriment to the infant in the womb, and prevents abortion. Mixed with white lead or litharge, it restores scars to their natural colour; and, in combination with sulphur, it rectifies malformed nails. It prevents the hair also from falling off; and, applied with a quarter of a nutgall, it heals ulcers upon the head in females. When well smoked, it strengthens the eyelashes. Lard is recommended also for phthisis, boiled down with old wine, in the proportion of one ounce to a semisextarius, till only three ounces are left; some persons add a little honey to the composition. Mixed with lime, it is used as a liniment for inflamed tumours, boils, and indurations of the mamillæ: it is curative also of ruptures, convulsions, cramps, and sprains. Used with white hellebore, it is good for corns, chaps, and callosities; and, with pounded earthen- ware which has held salted provisions, for imposthumes of the parotid glands and scrofulous sores. Employed as a friction in the bath, it removes itching sensations and pimples: but for the treatment of gout there is another method of preparing it, by mixing it with old oil, and adding pounded sarcophagus stone and cinquefoil bruised in wine, or else with lime or ashes. A peculiar kind of plaster is also made of it for the cure of inflammatory ulcers, seventy-five denarii of hogs' lard being mixed with one hundred of litharge.

It is reckoned a very good plan also to anoint ulcers with boars' grease, and, if they are of a serpiginous nature, to add resin to the liniment. The ancients used to employ hogs' lard in particular for

greasing the axles of their vehicles, that the wheels might revolve the more easily, and to this, in fact, it owes its name of “axungia.” When hogs’ lard has been used for this purpose, incorporated as it is with the rust of the iron upon the wheels, it is remarkably useful as an application for diseases of the rectum and of the generative organs. The ancient physicians, too, set a high value upon the medicinal properties of hogs’ lard in an unmixed state: separating it from the kidneys, and carefully removing the veins, they used to wash and rub it well in rain water, after which they boiled it several times in a new earthen vessel, and then put it by for keeping. It is generally agreed that it is more emollient, calorific, and resolvent, when salted; and that it is still more useful when it has been rinsed in wine.

Massurius informs us, that the ancients set the highest’ value of all upon the fat of the wolf: and that it was for this reason that the newly-wedded bride used to anoint the doorposts of her husband’s house with it, in order that no noxious spells might find admittance.

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CHAP. 38.

SUET.

Corresponding with the grease of the swine, is the suet that is found in the ruminating animals, a substance employed in other ways, but no less efficacious in its properties. The proper mode of preparing it, in all cases, is to take out the veins and to rinse it in sea or salt-water, after which it is beaten up in a mortar, with a sprinkling of sea-water in it. This done, it is boiled in several waters, until, in fact, it has lost all smell, and is then bleached by continual exposure to the sun; that of the most esteemed quality being the fat which grows about the kidneys. In case stale suet is required for any medicinal purpose, it is recommended to melt it first, and then to wash it in cold water several times; after which, it must again be melted with a sprinkling of the most aromatic wine that can be pro- cured, it being then boiled again and again, until the rank smell has totally disappeared.

Many persons recommend that the fat of bulls, lions, panthers, and camels, in particular, should be thus prepared. As to the various uses to which these substances are applied, we shall mention them on the appropriate occasions.

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CHAP. 39.

MARROW.

Common too, to all these animals, is marrow; a substance which in all cases is possessed of certain emollient, expletive, desiccative, and calorific properties. The most highly esteemed of all is deer's marrow, the next best being that of the calf, and then that of the goat, both male and female. These substances are prepared before autumn, by washing them in a fresh state, and drying them in the shade; after which they are passed through a sieve, and then strained through linen, and put by in earthen pots for keeping, in a cool spot.

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CHAP. 40.

GALL.

But among the substances which are furnished in common by the various animals, it is the gall, we may say, that is the most efficacious of all. The properties of this substance are of a calorific, pungent, resolvent, extractive, and dispersive nature. The gall of the smaller animals is looked upon as the most penetrating; for which reason it is that it is generally considered the most efficacious for the composition of eye-salves. Bull's gall is possessed of a remarkable degree of potency, having the effect of imparting a golden tint to the surface of copper even and to vessels made of other metals. Gall in every case is prepared in the following manner: it is taken fresh, and the orifice of the vesicle in which it is contained being tied fast with a strong linen thread, it is left to steep for half an hour in boiling water; after which it is dried in the shade, and then put away for keeping, in honey.

That of the horse is condemned, being reckoned among the poisons only. Hence it is that the Flamen of the Sacrifices is not allowed to touch a horse, notwithstanding that it is the custom to immolate one of these animals at the public sacrifices at Rome.

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CHAP. 41.

BLOOD.

The blood, also, of the horse is possessed of certain corrosive properties; and so, too, is mare's blood-except, indeed, where the animal has not been covered-it having the effect of cauterizing the margins of ulcers, and so enlarging them. Bull's blood too, taken fresh, is reckoned among the poisons; except, indeed, at Ægira, at which place the priestess of the Earth, when about to foretell coming events, takes a draught of bull's blood before she descends into the cavern: so powerful, in fact, is the agency of that sympathy so generally spoken of, that it may occasionally originate, we find, in feelings of religious awe, or in the peculiar nature of the locality.

Drusus, the tribune of the people, drank goats' blood, it is said; it being his object by his pallid looks to suggest that his enemy, Q. Cæpio, had given him poison, and so expose him to public hatred. So remarkably powerful is the blood of the hegoat, that there is nothing better in existence for sharpening iron implements, the rust produced by this blood giving them a better edge even than a file. Considering, however, that the blood of all animals cannot be reckoned as a remedy in common, will it not be advisable, in preference, to speak of the effects that are produced by that of each kind?

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CHAP. 42.

PECULIAR REMEDIES DERIVED FROM VARIOUS ANIMALS, AND CLASSIFIED ACCORDING TO THE MALADIES. REMEDIES AGAINST THE POISON OF SERPENTS, DERIVED FROM THE STAG, THE FAWN, THE OPHION, THE SHE-GOAT, THE KID, AND THE ASS.

We will therefore classify the various remedies, according to the maladies for which they are respectively used; and, first of all, those to which man has recourse for injuries inflicted by serpents. That deer are destructive to those reptiles no one is ignorant; as also of the fact that they drag them from their holes when they find them, and so devour them. And it is not only while alive and breathing that deer are thus fatal to serpents, but even when dead and separated limb from limb. The fumes of their horns, while burning, will drive away serpents, as already stated; but the bones, it is said, of the upper part of a stag's throat, if burnt upon a fire, will bring those reptiles together. Persons may sleep upon a deer's skin in perfect safety, and without any apprehension of attacks by serpents; its rennet too, taken with vinegar, is an effectual antidote to the stings of those reptiles; indeed, if it has been only touched by a person, he will be for that day effectually protected from them. The testes, dried, or the genitals of the male animal, are considered to be very wholesome, taken in wine, and so are the umbles, generally known as the "centipellio." Persons having about them a deer's tooth, or who have taken the precaution of rubbing the body with a deer or fawn's marrow, will be sure to repel the attacks of all serpents.

But the most effectual remedy of all is thought to be the rennet of a fawn that has been cut from the uterus of the dam, as already mentioned in another place. Deer's blood, burnt upon a fire of lentisk wood, with dracontium, cunilago, and alkanet, will attract serpents, they say; while, on the other hand, if the blood is removed and pyrethrum substituted for it, they will take to flight.

I find an animal mentioned by Greek writers, smaller than the stag, but resembling it in the hair, and to which they give the name of "ophion." Sardinia, they say, is the only country that produces it; I am of opinion, however, that it is now extinct, and for that reason I

shall not enlarge upon its medicinal properties.

(10.) As a preservative against the attacks of serpents, the brains and blood of the wild boar are held in high esteem: the liver also, dried and taken in wine with rue; and the fat, used with honey and resin. Similar properties are attributed to the liver of the domesticated boar and the outer filaments, and those only, of the gall, these last being taken in doses of four denarii; the brains also, taken in wine, are equally ef- fectual. The fumes of the burning horns or hair of a she-goat will repel serpents, they say: the ashes, too, of the horns, used either internally or externally, are thought to be an antidote to their poison. A similar effect is attributed to goats' milk, taken with Taminian grapes; to the urine of those animals, taken with squill vinegar; to goats' milk cheese, applied with origanum; and to goat suet, used with wax.

In addition to all this, as will be seen hereafter, there are a thousand other remedial properties attributed to this animal; a fact which surprises me all the more, seeing that the goat, it is said, is never free from fever. The wild animals of the same species, which are very numerous, as already stated, have a still greater efficacy attributed to them; but the hegoat has certain properties peculiar to itself, and Democritus attributes properties still more powerful to the animal when it has been the only one yeaned. It is recommended also to apply she-goat's dung, boiled in vinegar, to injuries inflicted by serpents, as also the ashes of fresh dung mixed with wine. As a general rule, persons who find that they are recovering but slowly from injuries inflicted by a serpent, will find their health more speedily re-established by frequenting the stalls where goats are kept. Those, however, whose object is a more assured remedy, attach immediately to the wound the paunch of a she-goat killed for the purpose, dung and all. Others, again, use the flesh of a kid just killed, and fumigate it with the singed hair, the smell of which has the effect of repelling serpents.

For stings of serpents, as also for injuries inflicted by the scorpion and shrew-mouse, some employ the skin of a goat newly killed, as also the flesh and dung of a horse that has been out at pasture, or a hare's rennet in vinegar. They say, too, that if a person has the body well rubbed with a hare's rennet, he will never receive injury from

venomous animals. When a person has been stung by a scorpion, she-goat's dung, boiled with vinegar, is considered a most efficient remedy: in cases too, where a buprestis has been swallowed, bacon and the broth in which it has been boiled, are highly efficacious. Nay, what is even more than this, if a person applies his mouth to an ass's ear, and says that he has been stung by a scorpion, the whole of the poison, they say, will immediately pass away from him and be transferred to the animal. All venomous creatures, it is said, are put to flight by a fumigation made by burning an ass's lights. It is considered an excellent plan too, to fumigate persons, when stung by a scorpion, with the smoke of burnt calves' dung.

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CHAP. 43.

REMEDIES FOR THE BITE OF THE MAD DOG. REMEDIES DERIVED FROM THE CALF, THE HE-GOAT, AND VARIOUS OTHER ANIMALS.

When a person has been bitten by a mad dog, it is the practice to make an incision round the wound to the quick, and then to apply raw veal to it, and to make the patient take either veal broth or hogs' lard, mixed with lime internally. Some persons recommend a he-goat's liver, and maintain that if it is applied to the wound the patient will never be attacked with hydrophobia. She-goat's dung, too, is highly spoken of, applied with wine, as also the dung of the badger, cuckoo, and swallow, boiled and taken in drink.

For bites inflicted by other animals, dried goats' milk cheese is applied with origanum and taken with the drink; and for injuries caused by the human teeth, boiled beef is applied; veal, however, is still more efficacious for the purpose, provided it is not removed before the end of four days.

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CHAP. 44.

REMEDIES TO BE ADOPTED AGAINST ENCHANTMENTS.

The dried muzzle of a wolf, they say, is an effectual preservative against the malpractices of magic; and it is for this reason that it is so commonly to be seen fastened to the doors of farm-houses. A similar degree of efficacy, it is thought, belongs to the skin of the neck, when taken whole from the animal. Indeed, so powerful is the influence of this animal, in addition to what we have already stated, that if a horse only treads in its track, it will be struck with torpor in consequence.

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CHAP. 45.

REMEDIES FOR POISONS.

In case where persons have swallowed quicksilver, bacon is the proper remedy to be employed. Poisons are neutralized by taking asses' milk; henbane more particularly, mistletoe, hemlock, the flesh of the sea-hare, opocarpathon, pharicon, and dorycnium: the same, too, where coagulated milk has been productive of bad effects, for the biestings, or first curdled milk, should be reckoned as nothing short of a poison. We shall have to mention many other uses to which asses' milk is applied; but it should be remembered that in all cases it must be used fresh, or, if not, as new as possible, and warmed, for there is nothing that more speedily loses its virtue. The bones, too, of the ass are pounded and boiled, as an antidote to the poison of the sea-hare. The wild ass is possessed of similar properties in every respect, but in a much higher degree.

Of the wild horse the Greek writers have made no mention, it not being a native of their country; we have every reason to believe, however, that it has the same properties as the animal in a tame state, but much more fully developed. Mares' milk effectually neutralizes the venom of the sea-hare and all narcotic poisons. Nor had the Greeks any knowledge from experience of the urns and the bison, although in India the forests are filled with herds of wild oxen: it is only reasonable, however, to conclude that all their medicinal properties must be much more highly developed than in the animal as found among us. It is asserted also, that cows' milk is a general counter-poison, in the cases above-mentioned, more particularly, as also where the poison of ephemeron has settled internally, or cantharides have been administered; it acting upon the poison by vomit. Broth, too, made from goats' flesh, neutral- izes the effects of cantharides, in a similar manner, it is said. To counteract the corrosive poisons which destroy by ulceration, veal or beef-suet is resorted to; and in cases where a leech has been swallowed, butter is the usual remedy, with vinegar heated with a red-hot iron. Indeed, butter employed by itself is a good remedy for poisons, for where oil

is not to be procured, it is an excellent substitute for it. Used with honey, butter heals injuries inflicted by millepedes. The broth of boiled tripe, it is thought, is an effectual repellent of the above-mentioned poisons, aconite and hemlock more particularly; veal-suet also has a similar repute.

Fresh goats' milk cheese is given to persons who have taken mistletoe, and goats' milk itself is a remedy for cantharides. Taken with Taminian grapes, goats' milk is an antidote to the effects of ephemeron. Goats' blood, boiled down with the marrow, is used as a remedy for the narcotic poisons, and kids' blood for the other poisons. Kid's rennet is administered where per- sons have taken mistletoe, the juice of the white chamæleon, or bull's blood: for which last, hare's rennet in vinegar is also used by way of antidote. For injuries inflicted by the pastinaca, and the stings or bites of all kinds of marine animals, hare's rennet, kid's rennet, or lamb's rennet is taken, in doses of one drachma, in wine. Hare's rennet, too, generally forms an ingredient in the antidotes for poisons.

The moth that is seen fluttering about the flame of a lamp is generally reckoned in the number of the noxious substances: its bad effects are neutralized by the agency of goat's liver. Goat's gall, too, is looked upon as an antidote to venomous preparations from the field weazel. But we will now return to the other remedies, classified according to the various diseases.

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CHAP. 46. (11.)

-REMEDIES FOR DIEASES OF THE HEAD, AND FOR ALOPECY.

Bears' grease, mixed with ladanum and the plant adiantum, prevents the hair from falling off; it is a cure also for alopecy and defects in the eyebrows, mixed with the fungus from the wick of a lamp, and the soot that is found in the nozzle. Used with wine, it is good for the cure of porrigo, a malady which is also treated with the ashes of deer's horns in wine: this last substance also prevents the growth of vermin in the hair. For porrigo some persons employ goat's gall, in combination with Cimolian chalk and vinegar, leaving the prepration to dry for a time on the head. Sow's gall, too, mixed with bull's urine, is employed for a similar purpose; and when old, it is an effectual cure, with the addition of sulphur, for furfuraceous eruptions. The ashes, it is thought, of an ass's genitals, will make the hair grow more thickly, and prevent it from turning grey; the proper method of applying it being to shave the head and to pound the ashes in a leaden mortar with oil. Similar effects are attributed to the genitals of an ass's foal, reduced to ashes and mixed with urine; some nard being added to render the mixture less offensive. In cases of alopecy the part affected is rubbed with bull's gall, warmed with Egyptian alum. Running ulcers of the head are successfully treated with bull's urine, or stale human urine, in combination with cyclaminos and sulphur: but the most effectual remedy is calf's gall, a substance which, heated with vinegar, has also the effect of exterminating lice. Veal suet, pounded with salt and applied to ulcers of the head, is a very useful remedy: the fat, too, of the fox is highly spoken of, but the greatest value is set upon cats' dung, applied in a similar manner with mustard.

Powdered goats' horns, or the horns reduced to ashes, those of the he-goat in particular, with the addition of nitre, tamarisk-seed, butter, and oil, are remarkably effectual for preventing the hair from coming off, the head being first shaved for the purpose. So too, the ashes of burnt goats' flesh, applied to the eye-brows with oil, impart to them a black tint. By using goats' milk, they say, lice may be exterminated;

and the dung of those animals, with honey, is thought to be a cure for alopecy: the ashes, too, of the hoofs, mixed with pitch, prevent the hair from coming off.

The ashes of a burnt hare, mixed with oil of myrtle, alleviate head-ache, the patient drinking some water that has been left in the trough after an ox or ass has been drinking there. The male organs of a fox, worn as an amulet, are productive, if we choose to believe it, of a similar effect: the same, too, with the ashes of a burnt deer's horn, applied with vinegar, rose oil, or oil of iris.

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CHAP. 47.

-REMEDIES FOR AFFECTIONS OF THE EYES.

For defluxions of the eyes, beef suet, boiled with oil, is applied to the parts affected; and for eruptions of those organs, ashes of burnt deer's horns are similarly employed, the tips of the horns being considered the most effectual for the purpose. For the cure of cataract, it is reckoned a good plan to apply a wolf's excrements: the same substance, too, reduced to ashes, is used for the dispersion of films, in combination with Attic honey. Bear's gall, too, is similarly employed; and for the cure of epinyctis, wild boar's lard, mixed with oil of roses, is thought to be very useful. An ass's hoof, reduced to ashes and applied with asses' milk, is used for the removal of marks in the eyes and indurations of the crystalline humours. Beef marrow, from the right fore leg, beaten up with soot, is employed for affections of the eyebrows, and for diseases of the eyelids and corners of the eyes. For the same purpose, also, a sort of calliblepharon is prepared from soot, the best of all being that made from a wick of papyrus mixed with oil of sesame; the soot being removed with a feather and caught in a new vessel prepared for the purpose. This mixture, too, is very efficacious for preventing superfluous eyelashes from growing again when once pulled out.

Bull's gall is made up into eye-salves with white of egg, these salves being steeped in water and applied to the eyes for four days successively. Veal suet, with goose-grease and the extracted juice of ocimum, is remarkably good for diseases of the eye-lids. Veal marrow, with the addition of an equal proportion of wax and oil or oil of roses, an egg being added to the mixture, is used as a liniment for indurations of the eyelids. Soft goats' milk cheese is used as an application, with warm water, to allay defluxions of the eyes; but when they are attended with swelling, honey is used instead of the water. In both cases, however, the eyes should be fomented with warm whey. In cases of dry ophthalmia, it is found a very useful plan to take the muscles lying within a loin of pork, and, after reducing them to ashes, to pound and apply them to the part affected.

She-goats, they say, are never affected with ophthalmia, from the circumstance that they browse upon certain kinds of herbs: the same, too, with the gazelle. Hence it is that we find it recommended, at the time of new moon, to swallow the dung of these animals, coated with wax. As they are able to see, too, by night, it is a general belief that the blood of a hegoat is a cure for those persons affected with dimness of sight to whom the Greeks have given the name of "nyctalopes." A similar virtue is attributed to the liver of a she-goat, boiled in astringent wine. Some are in the habit of rubbing the eyes with the thick gravy which exudes from a she-goat's liver roasted, or with the gall of that animal: they recommend the flesh also as a diet, and say that the patient should expose his eyes to the fumes of it while boiling: it is a general opinion, too, that the animal should be of a reddish colour. Another prescription is, to fumigate the eyes with the steam arising from the liver boiled in an earthen jar, or, according to some authorities, roasted.

Goats' gall is applied for numerous purposes: with honey, for films upon the eyes; with one-third part of white hellebore, for cataract; with wine, for spots upon the eyes, indurations of the cornea, films, webs, and argema; with extracted juice of cabbage, for diseases of the eyelids, the hairs being first pulled out, and the preparation left to dry on the parts affected; and with woman's milk, for rupture of the coats of the eye. For all these purposes, the gall is considered the most efficacious, when dried. Nor is the dung of this animal held in disesteem, being applied with honey for defluxions of the eyes. The marrow, too, of a goat, or a hare's lights, we find used for pains in the eyes; and the gall of a goat, with raisin wine or honey, for the dispersion of films upon those organs. It is recommended also, for ophthalmia, to anoint the eyes with wolf's fat or swine's marrow: we find it asserted, too, that persons who carry a wolf's tongue, inserted in a bracelet, will always be exempt from ophthalmia.

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CHAP. 48.

REMEDIES FOR DISEASES AND AFFECTIONS OF THE EARS.

Pains and diseases of the ears are cured by using the urine of a wild boar, kept in a glass vessel, or the gall of a wild boar, swine, or ox, mixed with castor-oil and oil of roses in equal proportions. But the best remedy of all is bull's gall, warmed with leek juice, or with honey, if there is any suppuration. Bull's gall too, warmed by itself in a pomegranate rind, is an excellent remedy for offensive exhalations from the ears: in combination with woman's milk, it is efficacious as a cure for ruptures of those organs. Some persons are of opinion that it is a good plan to wash the ears with this preparation in cases where the hearing is affected; while others again, after washing the ears with warm water, insert a mixture composed of the old slough of a serpent and vinegar, wrapped up in a dossil of wool. In cases, however, where the deafness is very considerable, gall warmed in a pomegranate rind with myrrh and rue, is injected into the ears; sometimes, also, fat bacon is used for this purpose, or fresh asses' dung, mixed with oil of roses: in all cases, however, the ingredients should be warmed.

The foam from a horse's mouth is better still, or the ashes of fresh horse dung, mixed with oil of roses: fresh butter too is good; beef-suet mixed with goose-grease; the urine of a bull or she-goat; or fullers' lant, heated to such a degree that the steam escapes by the neck of the vessel. For this purpose also, one third part of vinegar is mixed with a small portion of the urine of a calf, which has not begun to graze. They apply also to the ears calf's dung, mixed with the gall of that animal and sloughs of serpents, care being taken to warm the ears before the application, and all the remedies being wrapped in wool. Veal-suet, too, is used, with goose-grease and extract of ocimum; or else veal marrow, mixed with bruised cummin and injected into the ears. For pains in the ears, the liquid ejected by a boar in copulation is used, due care being taken to receive it before it falls to the ground. For fractures of the ears, a glutinous composition is made from the genitals of a calf, which is dissolved in

water when used; and for other diseases of those organs, foxes' fat is employed, goat's gall mixed with rose-oil warmed, or else extracted juice of leeks: in all cases where there is any rupture, these preparations are used in combination with woman's milk. Where a patient is suffering from hardness of hearing, ox-gall is employed, with the urine of a he or she-goat; the same, too, where there is any suppuration.

Whatever the purpose for which they are wanted, it is the general opinion that these substances are more efficacious when they have been smoked in a goat's horn for twenty days. Hare's rennet, too, is highly spoken of, taken in Aminean wine, in the proportion of one third of a denarius of rennet to one half of a denarius of sacopenum. Bears' grease, mixed with equal proportions of wax and bull-suet, is a cure for imposthumes of the parotid glands: some persons add hypocisthis to the composition, or else content themselves with employing butter only, after first fomenting the parts affected with a decoction of fenugreek, the good effects of which are augmented by strychnos. The testes, too, of the fox, are very useful for this purpose; as also bull's blood, dried and reduced to powder. She-goats' urine, made warm, is used as an injection for the ears; and a liniment is made of the dung of those animals, in combination with axle-grease.

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CHAP. 49.

REMEDIES FOR TOOTH-ACHE.

The ashes of deer's horns strengthen loose teeth and allay tooth-ache, used either as a friction or as a gargle. Some persons, however, are of opinion that the horn, unburnt and reduced to powder, is still more efficacious for all these purposes. Dentifrices are made both from the powder and the ashes. Another excellent remedy is a wolf's head, reduced to ashes: it is a well-known fact, too, that there are bones generally found in the excrements of that animal; these bones, attached to the body as an amulet, are productive of advantageous effects. For the cure of tooth-ache, hare's rennet is injected into the ear: the head also of that animal, reduced to ashes, is used in the form of a dentifrice, and, with the addition of nard, is a corrective of bad breath. Some persons, however, think it a better plan to mix the ashes of a mouse's head with the dentifrice. In the side of the hare there is a bone found, similar to a needle in appearance: for the cure of tooth-ache it is recommended to scarify the gums with this bone. The pastern-bone of an ox, ignited and applied to loose teeth which ache, has the effect of strengthening them in the sockets; the same bone, reduced to ashes, and mixed with myrrh, is also used as a dentifrice. The ashes of burnt pig's feet are productive of a similar effect, as also the calcined bones of the cotyloïd cavities in which the hip-bones move. It is a well-known fact, that, introduced into the throat of beasts of burden, these bones are a cure for worms, and that, in a calcined state, they are good for strength- ening the teeth.

When the teeth have been loosened by a blow, they are strengthened by using asses' milk, or else ashes of the burnt teeth of that animal, or a horse's lichen, reduced to powder, and injected into the car with oil. By lichen I do not mean the hippomanes, a noxious substance which I purposely forbear to enlarge upon, but an excrescence which forms upon the knees of horses, and just above the hoofs. In the heart of this animal there is also found a bone which bears a close resemblance to the eye-teeth of a dog: if the gums are scarified with this bone, or with a tooth taken from the jaw-bone of a

dead horse, corresponding in place with the tooth affected, the pain will be removed, they say. Anaxilaüs assures us that if the liquid which exudes from a mare when covered, is ignited on the wick of a lamp, it will give out a most marvellous representation of horses' heads; and the same with reference to the she-ass. As to the hippomanes, it is possessed of properties so virulent and so truly magical, that if it is only thrown into fused metal which is being cast into the resemblance of an Olympian mare, it will excite in all stallions that approach it a perfect frenzy for copulation.

Another remedy for diseases of the teeth is joiners' glue, boiled in water and applied, care being taken to remove it very speedily, and instantly to rinse the teeth with wine in which sweet pomegranate-rind has been boiled. It is, considered, also, a very efficacious remedy to wash the teeth with goats' milk, or bull's gall. The pastern-bones of a she-goat just killed, reduced to ashes, and indeed, to avoid the necessity for repetition, of any other four-footed beast reared in the farmyard, are considered to make an excellent dentifrice.

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CHAP. 50. (12.)

REMEDIES FOR DISEASES OF THE FACE.

It is generally believed that asses' milk effaces wrinkles in the face, renders the skin more delicate, and preserves its whiteness: and it is a well-known fact, that some women are in the habit of washing their face with it seven hundred times daily, strictly observing that number. Poppæa, the wife of the Emperor Nero, was the first to practise this; indeed, she had sitting-baths, prepared solely with asses' milk, for which purpose whole troops of she-asses used to attend her on her journies. Purulent eruptions on the face are removed by an application of butter, but white lead, mixed with the butter, is an improvement. Pure butter, alone, is used for serpiginous eruptions of the face, a layer of barley-meal being pow- dered over it. The caul of a cow that has just calved, is applied, while still moist, to ulcers of the face.

The following recipe may seem frivolous, but still, to please the women, it must not be omitted; the pastern-bone of a white steer, they say, boiled forty days and forty nights, till it is quite dissolved, and then applied to the face in a linen cloth, will remove wrinkles and preserve the whiteness of the skin. An application of bull's dung, they say, will impart a rosy tint to the cheeks, and not crocodilea even is better for the purpose; the face, however, must be washed with cold water, both before and after the application. Sun-burns and all other discolorations of the skin, are removed by the aid of' calves' dung kneaded up by hand with oil and gum; ulcerations and chaps of the mouth, by an application of veal or beef-suet, mixed with goose-grease and juice of' ocimum. There is another composition, also, made of veal-suet with stag's marrow and leaves of white-thorn, the whole beaten up together. Marrow, too, mixed with resin, even if it be cow marrow only, is equally good; and the broth of cow-beef is productive of similar effects. A most excellent remedy for lichens on the face is a glutinous substance prepared from the genitals of a male calf, melted with vinegar and live sulphur, and stirred together with the branch of a fig-tree: this composition is applied twice a day, and

should be used quite fresh. This glue, similarly prepared from a decoction of honey and vinegar, is a cure for leprous spots, which are also removed by applying a he-goat's liver warm.

Elephantiasis, too, is removed by an application of goats' gall; and leprous spots and furfuraceous eruptions by em- ploying bull's gall with the addition of nitre, or else asses' urine about the rising of the Dog-star. Spots on the face are removed by either bull's gall or ass's gall diluted in water by itself, care being taken to avoid the sun or wind after the skin has peeled off. A similar effect is produced, also, by using bull's gall or calf's gall, in combination with seed of cunila and the ashes of a deer's horn, burnt at the rising of Canicula.

Asses' fat, in particular, restores the natural colour to scars and spots on the skin caused by lichen or leprosy. A he-goat's gall, mixed with cheese, live sulphur, and sponge reduced to ashes, effectually removes freckles, the composition being brought to the consistency of honey before being applied. Some persons, however, prefer using dried gall, and mix with it warm bran, in the proportion of one obolus to four oboli of honey, the spots being rubbed briskly first. He-goat suet, too, is highly efficacious, used in combination with gith, sulphur, and iris; this mixture being also employed, with goose-grease, stag's marrow, resin, and lime, for the cure of cracked lips. I find it stated by certain authors, that persons who have freckles on the skin are looked upon as disqualified from taking any part in the sacrifices prescribed by the magic art.

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CHAP. 51.

REMEDIES FOR DISEASES OF THE TONSILLARY GLANDS, AND FOR SCROFULA.

Cow's milk or goat's milk is good for ulcerations of the tonsillary glands and of the trachea. It is used in the form of a gargle, warm from the udder or heated, goat's milk being the best, boiled with mallows and a little salt. A broth made from tripe is an excellent gargle for ulcerations of the tongue and trachea; and for diseases of the tonsillary glands, the kidneys of a fox are considered a sovereign remedy, dried and beaten up with honey, and applied externally. For quinzy, bull's gall or goat's gall is used, mixed with honey. A badger's liver, taken in water, is good for offensive breath, and butter has a healing effect upon ulcerations of the mouth. When a pointed or other substance has stuck in the throat, by rubbing it externally with cats' dung, the substance, they say, will either come up again or pass downwards into the stomach.

Scrofulous sores are dispersed by applying the gall of a wild boar or of an ox, warmed for the purpose: but it is only when the sores are ulcerated that hare's rennet is used, applied in a linen cloth with wine. The ashes of the burnt hoof of an ass or horse, applied with oil or water, is good for dispersing scrofu- lous sores; warmed urine also; the ashes of an ox's hoof, taken in water; cow-dung, applied hot with vinegar; goat- suet with lime; goats' dung, boiled in vinegar; or the testes of a fox. Soap, too, is very useful for this purpose, an invention of the Gauls for giving a reddish tint to the hair. This substance is prepared from tallow and ashes, the best ashes for the purpose being those of the beech and yoke-elm: there are two kinds of it, the hard soap and the liquid, both of them much used by the people of Germany, the men, in particular, more than the women.

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CHAP. 52

REMEDIES FOR PAINS IN THE NECK.

For pains in the neck, the part should be well rubbed with butter or bears' grease; and for a stiff neck, with beef suet, a substance which, in combination with oil, is very useful for the cure of scrofula. For the painful cramp, attended with inflexibility, to which people give the name of "opisthotony," the urine of a she-goat, injected into the ears, is found very useful; as also a liniment made of the dung of that animal, mixed with bulbs. In cases where the nails have been crushed, it is an excel- lent plan to attach to them the gall of any kind of animal. Whitlows upon the fingers should be treated with dried bull's gall, dissolved in warm water. Some persons are in the habit of adding sulphur and alum, of each an equal weight.

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CHAP. 53.

-REMEDIES FOR COUGH AND FOR SPITTING OF BLOOD.

A. wolf's liver, administered in mulled wine, is a cure for cough; a bear's gall also, mixed with honey; the ashes of the tips of a cow's horn; or else the saliva of a horse, taken in the drink for three consecutive days — in which last case the horse will be sure to die, they say. A deer's lights are useful for the same purpose, dried with the gullet of the animal in the smoke, and then beaten up with honey, and taken daily as an electuary: the spitter deer, be it remarked, is the kind that is the most efficacious for the purpose.

Spitting of blood is cured by taking ashes of burnt deer's horns, or else a hare's rennet in drink, in doses of one-third of a denarius, with Samian earth and myrtle-wine. The dung of this last animal, reduced to ashes and taken in the evening, with wine, is good for coughs that are recurrent at night. The smoke, too, of a hare's fur, inhaled, has the effect of bringing off from the lungs such humours as are difficult to be discharged by expectoration. Purulent ulcerations of the chest and lungs, and bad breath proceeding from a morbid state of the lungs, are successfully treated with butter boiled with an equal quantity of Attic honey till it assumes a reddish hue, a spoonful of the mixture being taken by the patient every morning: some persons, however, instead of honey prefer using larch-resin for the purpose. In cases where there are discharges of blood, cow's blood, they say, is good, taken in small quantities with vinegar; but as to bull's blood, it would be a rash thing to believe in any such recommendation. For inveterate spitting of blood, bull-glue is taken, in doses of three oboli, in warm water.

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CHAP. 54. (13.)

REMEDIES FOR AFFECTIONS OF THE STOMACH.

Ulcerations of the stomach are effectually treated with asses' milk or cows' milk. For gnawing pains in that region, beef is stewed, with vinegar and wine. Fluxes are healed by taking the ashes of burnt deer's horns; and discharges of blood by drinking the blood of a kid just killed, made hot, in doses of three cyathi, with equal proportions of vinegar and tart wine; or else by taking kid's rennet, with twice the quantity of vinegar.

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CHAP. 55.

REMEDIES FOR LIVER COMPLAINTS AND FOR ASTHMA.

Liver complaints are cured by taking a wolf's liver dried, in honied wine; or by using the dried liver of an ass, with twice the quantity of rock-parsley and three nuts, the whole beaten up with honey and taken with the food. The blood, too, of a he-goat is prepared and taken with the food. For persons suffering from asthma, the most efficient remedy of all is the blood of wild horses taken in drink; and next to that, asses' milk boiled with bulbs, the whey being the part used, with the addition of nasturtium steeped in water and tempered with honey, in the proportion of one cyathus of nasturtium to three semi-sextarii of whey. The liver or lights of a fox, taken in red wine, or bear's gall in water, facilitate the respiration.

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CHAP. 56.

REMEDIES FOR PAINS IN THE LOINS.

For pains in the loins and all other affections which require emollients, frictions with bears' grease should be used; or else ashes of stale boars' dung or swine's dung should be mixed with wine and given to the patients. The magicians, too, have added to this branch of medicine their own fanciful devices. In the first place of all, madness in he-goats, they say, may be effectually calmed by stroking the beard; and if the beard is cut off, the goat will never stray to another flock,

To the above composition they add goats' dung, and recommend it to be held in the hollow of the hand, as hot as possible, a greased linen cloth being placed beneath, and care being taken to hold it in the right hand if the pain is on the left side, and in the left hand if the pain is on the right. They recommend also that the dung employed for this purpose should be taken up on the point of a needle made of copper. The mode of treatment is, for the patient to hold the mixture in his hand till the heat is felt to have penetrated to the loins, after which the hand is rubbed with a pounded leek, and the loins with the same dung annealed with honey. They prescribe also for the same malady the testes of a hare, to be eaten by the patient. In cases of sciatica they are for applying cow-dung warmed upon hot ashes in leaves: and for pains in the kidneys they recommend a hare's kidneys to be swallowed raw, or perhaps boiled, but without letting them be touched by the teeth. If a person carries about him the pastern-bone of a hare, he will never be troubled with pains in the bowels, they say.

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CHAP. 57.

REMEDIES FOR AFFECTIONS OF THE SPLEEN.

Affections of the spleen are alleviated by taking the gall of a wild boar or hog in drink; ashes of burnt deer's horns in vinegar; or, what is best of all, the dried spleen of an ass, the good effects being sure to be felt in the course of three days. The first dung voided by an ass's foal-a substance known as "polea" by the people of Syria — is administered in oxymel for these complaints; a dried horse tongue, too, is taken in wine, a sovereign remedy which, Cæcilius Bion tells us, he first heard of when living among the barbarous nations. The milt of a cow or ox is used in a similar manner; but when it is quite fresh, the practice is to roast or boil it and take it with the food. For pains in the liver a topical application is made by bruising twenty heads of garlick in one sextarius of vinegar, and applying them in a piece of ox bladder. For the same malady the magicians recommend a calf's milt, bought at the price set upon it and without any haggling, that being an important point, and one that should be religiously observed. This done, the milt must be cut in two lengthwise, and attached to the patient's shirt, on either side; after which, the patient must put it on and let the pieces fall at his feet, and must then pick them up, and dry them in the shade. While this last is doing, the diseased liver of the patient will gradually contract, they say, and he will eventually be cured. The lights, too, of a fox are very useful for this purpose, dried on hot ashes and taken in water; the same, too, with a kid's milt, applied to the part affected.

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CHAP. 58. (14.)

REMEDIES FOR BOWEL COMPLAINTS.

To arrest looseness of the bowels, deer's blood is used; the ashes also of deer's horns; the liver of a wild boar, taken fresh and without salt, in wine; a swine's liver roasted, or that of a he-goat, boiled in five semisextarii of wine; a hare's rennet boiled, in quantities the size of a chick-pea, in wine, or, if there are symptoms of fever, in water. To this last some persons add nut-galls, while others, again, content themselves with hare's blood boiled by itself in milk. Ashes; too, of burnt horse-dung are taken in water for this purpose; or else ashes of the part of an old bull's horn which lies nearest the root, sprinkled in water; the blood, too, of a he-goat boiled upon charcoal; or a decoction made from a goat's hide boiled with the hair on.

For relaxing the bowels a horse's rennet is used, or else the blood, marrow, or liver of a she-goat. A similar effect is produced by applying a wolf's gall to the navel, with elaterium; by taking mares' milk, goats' milk with salt and honey, or a she-goat's gall with juice of cyclaminos, and a little alum — in which last case some prefer adding nitre and water to the mixture. Bull's gall, too, is used for a similar purpose, beaten up with wormwood and applied in the form of a suppository; or butter is taken, in considerable doses.

Cœliac affections and dysentery are cured by taking cow's liver; ashes of deer's horns, a pinch in three fingers swallowed in water; hare's rennet, kneaded up in bread, or, if there is any discharge of blood, taken with polenta; or else boar's dung, swine's dung, or hare's dung, reduced to ashes and mixed with mulled wine. Among the remedies, also, for the cœliac flux and dysentery, veal broth is reckoned, a remedy very commonly used. If the patient takes asses' milk for these complaints, it will be all the better if honey is added; and no less efficacious for either complaint are the ashes of asses' dung taken in wine; or else polea, the substance above-mentioned. In such cases, even when attended with a discharge of blood, we find a horse's rennet recommended, by some persons known as "hippace;" ashes of burnt horse-dung; horses' teeth pounded; and boiled cows'

milk. In cases of dysentery, it is recommended to add a little honey; and, for the cure of griping pains, ashes of deer's horns, bull's gall mixed with cum- min, or the flesh of a gourd, should be applied to the navel. For both complaints new cheese made of cows' milk is used, as an injection; butter also, in the proportion of four semisextarii to two ounces of turpentine, or else employed with a decoction of mallows or with oil of roses. Veal-suet or beef-suet is also given, and the marrow of those animals is boiled with meal, a little wax, and some oil, so as to form a sort of pottage. This marrow, too, is kneaded up with bread for a similar purpose; or else goats' milk is used, boiled down to one half. In cases, too, where there are gripings in the bowels, wine of the first running is administered. For the last-named pains, some persons are of opinion that it is a sufficient remedy to take a single dose of hare's rennet in mulled wine; though others again, who are more distrustful, are in the habit of applying a liniment to the abdomen, made of goats' blood, barley-meal, and resin.

For all defluxions of the bowels it is recommended to apply soft cheese, and for cœliac affections and dysentery old cheese, powdered, one cyathus of cheese being taken in three cyathi of ordinary wine. Goats' blood is boiled down with the marrow of those animals for the cure of dysentery; and the cœliac flux is effectually treated with the roasted liver of a she-goat, or, what is still better, the liver of a he-goat boiled in astringent wine, and administered in the drink, or else applied to the navel with oil of myrtle. Some persons boil down the liver in three sextarii of water to half a sextarius, and then add rue to it. The milt of a he or she-goat is sometimes roasted for this purpose, or the suet of a he-goat is incorporated in bread baked upon the ashes; the fat, too, of a she-goat, taken from the kidneys more particularly, is used. This last, however, must be taken by itself and swallowed immediately, being generally recommended to be taken in water moderately cool. Some persons, too, boil goats' suet in water, with a mixture of polenta, cummin, anise, and vinegar; and for the cure of cœliac affections, they rub the abdomen with a decoction of goats' dung and honey.

For both the cœliac flux and dysentery, kid's rennet is employed, taken in myrtle wine in pieces the size of a bean, or else kid's blood,

prepared in the form of a dish known by the name of “sanguiculus.” For dysentery an injection is employed, made of bull glue dissolved in warm water. Flatulency is dispelled by a decoction of calf’s dung in wine. For intestinal affections deer’s rennet is highly recommended, boiled with beef and lentils, and taken with the food; hare’s fur, also reduced to ashes and boiled with honey; or boiled goat’s milk, taken with a small quantity of mallows and some salt; if rennet is added, the remedy will be all the more effectual. Goat suet, taken in any kind of broth, is possessed of similar virtues, care being taken to swallow cold water immediately after. The ashes of a kid’s thighs are said to be marvellously efficacious for intestinal hernia; as also hare’s dung, boiled with honey, and taken daily in pieces the size of a bean; indeed, these remedies are said to have proved effectual in cases where a cure has been quite despaired of. The broth too, made from a goat’s head, boiled with the hair on, is highly recommended.

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CHAP. 59.

REMEDES FOR TENESMUS, TAPEWORM, AND AFFECTIONS OF THE COLON.

The disease called “tenesmus,” or in other words, a frequent and ineffectual desire to go to stool, is removed by drinking asses’ milk or cows’ milk. The various kinds of tapewormn are expelled by taking the ashes of deer’s horns in drink. The bones which we have spoken of as being found in the excrements of the wolf, worn attached to the arm, are curative of diseases of the colon, provided they have not been allowed to touch the ground. Polea, too, a substance already mentioned, is remarkably useful for this purpose, boiled in grape juice: the same too with swine’s dung, powdered and mixed with cummin, in a decoction of rue. The antler of a young stag, reduced to ashes and taken in wine, mixed with African snails, crushed with the shells on, is considered a very, useful remedy.

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CHAP. 60. (15.)

-REMEDIES FOR AFFECTIONS OF THE BLADDER, AND FOR URINARY CALCULI.

Diseases of the bladder, and the torments attendant upon calculi, are treated with the urine of a wild boar, or the bladder of that animal taken as food; both of them being still more efficacious if they have been thoroughly soaked first. The bladder, when eaten, should be boiled first, and if the patient is a female, it should be a sow's bladder. There are found in the liver of the wild boar certain small stones, or what in hardness resemble small stones, of a white hue, and resembling those found in the liver of the common swine: if these stones are pounded and taken in wine, they will expel calculi, it is said. So oppressed is the wild boar by the burden of his urine, that if he has not first voided it, he is unable to take to flight, and suffers himself to be taken as though he were enchained to the spot. This urine, they say, has a consuming effect upon urinary calculi. The kidneys of a hare, dried and taken in wine, act as an expellent upon calculi. We have already mentioned that in the gammon of the hog there are certain joint-bones; a decoction made from them is remarkably useful for urinary affections. The kidneys of an ass, dried and pounded, and administered in undiluted wine, are a cure for diseases of the bladder. The excrescences that grow on horses' legs, taken for forty days in ordinary wine or honied wine, expel urinary calculi. The ashes, too, of a horse's hoof, taken in wine or water, are considered highly useful for this purpose; and the same with the dung of a she-goat — if a wild goat, all the better — taken in honied wine: goats' hair, too, is used, reduced to ashes.

For carbuncles upon the generative organs, the brains and blood of a wild boar or swine are highly recommended: and for serpiginous affections of those parts, the liver of those animals is used, burnt upon juniper wood more particularly, and mixed with papyrus and arsenic; the ashes, also, of their dung; ox-gall, kneaded to the consistency of honey, with Egyptian alum and myrrh, beet-root boiled in wine being laid upon it; or else beef. Running ulcers of

those parts are treated with veal-suet and marrow, boiled in wine, or with the gall of a she-goat, mixed with honey and the extracted juice of the bramble. In cases where these ulcers are serpiginous, it is recommended to use goats' dung with honey or vinegar, or else butter by itself. Swellings of the testes are reduced by using veal-suet with nitre, or the dung of the animal boiled in vinegar. The bladder of a wild boar, eaten roasted, acts as a check upon incontinence of urine; a similar effect being produced by the ashes of the feet of a wild boar or swine sprinkled in the drink; the ashes of a sow's bladder taken in drink; the bladder or lights of a kid; a hare's brains taken in wine; the testes of a male hare grilled; the rennet of that animal taken with goose-grease and polenta; or the kidneys of an ass, beaten up and taken in undiluted wine.

The magicians tell us, that after taking the ashes of a boar's genitals in sweet wine, the patient must make water in a dog kennel, and repeat the following formula— "This I do that I may not wet my bed as a dog does." On the other hand, a swine's bladder, attached to the groin, facilitates the discharge of the urine, provided it has not already touched the ground.

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CHAP. 61.

REMEDIES FOR DISEASES OF THE GENERATIVE ORGANS AND OF THE FUNDAMENT.

For diseases of the fundament, a sovereign remedy is bear's gall, mixed with the grease; to which some persons are in the habit of adding litharge and frankincense. Butter, too, is very good, employed with goose-grease and oil of roses. The proportions in which they are mixed will be regulated by the circumstances of the case, care being taken to see that they are of a consistency which admits of their being easily applied. Bull's gall upon lint is a remarkably useful remedy, and has the effect of making chaps of the fundament cicatrize with great rapidity. Swellings of those parts are treated with veal suet — that from the loins in particular — mixed with rue. For other affections, goats' blood is used, with polenta. Goats' gall, too, is employed by itself, for the cure of condylomata, and sometimes, wolf's gall, mixed with wine.

Bears' blood is curative of inflamed tumours and apostemes upon these parts in general; as also bulls' blood, dried and powdered. The best remedy, however, is considered to be the stone which the wild ass voids with his urine, it is said, at the moment he is killed. This stone, which is in a somewhat liquefied state at first, becomes solid when it reaches the ground: attached to the thigh, it; disperses all collections of humours and all kinds of suppurations: it is but rarely found, however, and it is not every wild ass that produces it, but as a remedy it is held in high esteem. Asses' urine too, used in combination with gith, is highly recommended; the ashes of a horse's hoof, applied with oil and water; a horse's blood, that of a stone-horse in particular; the blood, also, of an ox or cow, or the gall of those animals. Their flesh too, applied warm, is productive of similar results; the hoofs reduced to ashes, and taken in water or honey; the urine of a she-goat; the flesh of a he-goat, boiled in water; the dung of these animals, boiled with honey; or else a boar's gall, or swine's urine, applied in wool.

Riding on horseback, we well know, galls and chafes the inside of

the thighs: the best remedy for accidents of this nature is to rub the parts with the foam which collects at a horse's mouth. Where there are swellings in the groin, arising from ulcers, a cure is effected by inserting in the sores three horse-hairs, tied with as many knots.

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CHAP. 62. (16.)

REMEDIES FOR GOUT AND FOR DISEASES OF THE FEET.

For the cure of gout, bears' grease is employed, mixed in equal proportions with bull-suet and wax; some persons add to the composition, hypocisthis and nut-galls. Others, again, prefer he-goat suet, mixed with the dung of a she-goat and saffron, or else with mustard, or sprigs of ivy pounded and used with perdicium, or with flowers of wild cucumber. Cowdung is also used, with lees of vinegar. Some persons speak highly in praise of the dung of a calf which has not begun to graze, or else a bull's blood, without any other addition; a *fox,* also, boiled alive till only the bones are left; a wolf boiled alive in oil to the consistency of a cerate; he-goat suet, with an equal proportion of helxine, and one-third part of mustard; or ashes of goats' dung, mixed with axle-grease. They say, too, that for sciatica, it is an excellent plan to apply this dung boiling hot beneath the great toes; and that, for diseases of the joints, it is highly efficacious to attach bears' gall or hares' feet to the part affected. Gout, they say, may be allayed by the patient always carrying about with him a hare's foot, cut off from the animal alive.

Bears' grease is a cure for chilblains and all kinds of chaps upon the feet; with the addition of alum, it is still more efficacious. The same results are produced by using goat-suet; a horse's teeth powdered; the gall of a wild boar or hog; or else the lights of those animals, applied with their grease; and this, too, where the soles are blistered, or the feet have been crushed by a substance striking against them. In cases where the feet have been frozen, ashes of burnt hare's fur are used; and for contusions of the feet, the lights of that animal are applied, sliced or reduced to ashes. Blisters occasioned by the sun are most effectually treated by using asses' fat, or else beef-suet, with oil of roses. Corns, chaps, and callosities of the feet are cured by the application of wild boars' dung or swine's dung, used fresh, and removed at the end of a couple of days. The pastern-bones of these animals are also used, reduced to ashes; or else the lights of a wild boar, swine, or deer. When the feet have been

galled by the shoes, they are rubbed with the urine of an ass, applied with the mud formed by it upon the ground. Corns are treated with beef-suet and powdered frankincense; chilblains with burnt leather, that of an old shoe, in particular; and injuries produced by tight shoes with ashes of goat-skin, tempered with oil.

The pains attendant upon varicose veins are mitigated by using ashes of burnt calves' dung, boiled with lily roots and a little honey: a composition which is equally good for all kinds of inflammations and sores that tend to suppurate. It is very useful, also, for gout and diseases of the joints, when it is the dung of a bull-calf that is used more particularly. For excoriations of the joints, the gall of a wild boar or swine is applied, in a warm linen cloth: the dung, also, of a calf that has not begun to graze; or else goat-dung, boiled in vinegar with honey. Veal-suet rectifies malformed nails, as also goat-suet, mixed with sandarach. Warts are removed by applying ashes of burnt calves' dung in vinegar, or else the mud formed upon the ground by the urine of an ass.

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CHAP. 63.

REMEDIES FOR EPILEPSY.

In cases of epilepsy, it is a good plan to eat a bear's testes, or those of a wild boar, with mares' milk or water; or else to drink a wild boar's urine with honey and vinegar, that being the best which has been left to dry in the bladder. The testes, also, of swine are prescribed, dried and beaten up in sows' milk, the patient abstaining from. wine some days before and after taking the mixture. The lights of a hare, too, are recom- mended, salted, and taken with one third of frankincense, for thirty consecutive days, in white wine: hare's rennet also and asses' brains, smoked with burning leaves, and administered in hydromel, in doses of half an ounce per day. An ass's hoofs are reduced to ashes, and taken for a month together, in doses of two spoonfuls; the testes, also, of an ass, salted and mixed with the drink, asses' milk or water in particular. The secundines, also, of a she-ass are recommended, more particularly when it is a male that has been foaled: placed beneath the nostrils of the patient, when the fits are likely to come on, this substance will effectually repel them.

There are some persons who recommend the patient to eat the heart of a black he-ass in the open air with bread, upon the first or second day of the moon: others, again, prescribe the flesh of that animal, and others the blood, diluted with vinegar, and taken for forty days together. Some mix horse- stale for this purpose, with smithy water fresh from the forge, employing the same mixture for the cure of delirium. Epilepsy is also treated with mares' milk, or the excrescences from a horse's legs, taken in honey and vinegar. The magicians highly recommend goats' flesh, grilled upon a funeral pile; as also the suet of that animal, boiled with an equal quantity of bull's gall, and kept in the gall-bladder; care being taken not to let it touch the ground, and the patient swallowing it in water, standing aloft. The smell arising from a goat's horns or deer's antlers, burnt, efficiently detects the presence of epilepsy.

In cases where persons are suddenly paralyzed, the urine of an ass's foal, applied to the body with nard, is very useful, it is

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CHAP. 64.

REMEDIES FOR JAUNDICE.

For the cure of jaundice, the ashes of a stag's antlers are employed; or the blood of an ass's foal, taken in wine. The first dung, too, that has been voided by the foal after its birth, taken in wine, in pieces the size of a bean, will effect a cure by the end of three days. The dung of a new-born colt is possessed of a similar efficacy.

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CHAP. 65.

-REMEDIES FOR BROKEN BONES.

For broken bones, a sovereign remedy is the ashes of the jaw-bone of a wild boar or swine: boiled bacon, too, tied round the broken bone, unites it with marvellous rapidity. For fractures of the ribs, goats' dung, applied in old wine, is extolled as the grand remedy, being possessed in a high degree of aperient, extractive, and healing properties.

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CHAP. 66.

REMEDIES FOR FEVERS.

Deer's flesh, as already stated, is a febrifuge. Periodical and recurrent fevers are cured, if we are to believe what the magicians tell us, by wearing the right eye of a wolf, salted, and attached as an amulet. There is one kind of fever generally known as "amphemerine" it is to be cured, they say, by the patient taking three drops of blood from an ass's ear, and swallowing them in two semi-sextarii of water. For quartan fever, the magicians recommend cats' dung to be attached to the body, with the toe of a horned owl, and, that the fever may not be recurrent, not to be removed until the seventh paroxysm is past. Who, pray, could have ever made such a discovery as this? And what, too, can be the meaning of this combination? Why, of all things in the world, was the toe of a horned owl made choice of?

Other adepts in this art, who are more moderate in their suggestions, recommend for quartan fever, the salted liver of a cat that has been killed while the moon was on the wane, to be taken in wine just before the paroxysms come on. The magicians recommend, too, that the toes of the patient should be rubbed with the ashes of burnt cow-dung, diluted with a boy's urine, and that a hare's heart should be attached to the hands; they prescribe, also, hare's rennet, to be taken in drink just before the paroxysms come on. New goats' milk cheese is also given with honey, the whey being carefully extracted first.

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CHAP. 67. (17.)

REMEDIES FOR MELANCHOLY, LETHARGY, AND PHTHSIS.

For patients affected with melancholy, calves' dung, boiled in wine, is a very useful remedy. Persons are aroused from lethargy by applying to the nostrils the callosities from an ass's legs steeped in vinegar, or the fumes of burnt goats' horns or hair, or by the application of a wild boar's liver: a remedy which is also used for confirmed drowsiness.

The cure of phthisis is effected by taking a wolf's liver boiled in thin wine; the bacon of a sow that has been fed upon herbs; or the flesh of a she-ass, eaten with the broth: this last mode in particular, being the one that is employed by the people of Achaia. They say too, that the smoke of dried cow-dung — that of the animal when grazing, I mean-is remarkably good for phthisis, inhaled through a reed; and we find it stated that the tips of cows' horns are burnt, and administered with honey, in doses of two spoonfuls, in the form of pills. Goat suet, many persons say, taken in a pottage of alica, or melted fresh with honied wine, in the proportion of one ounce of suet to one cyathus of wine, is good for cough and phthisis, care being taken to stir the mixture with a sprig of rue. One author of credit assures us that before now, a patient whose recovery has been despaired of; has been restored to health by taking one cyathus of wild goat suet and an equal quantity of milk. Some writers, too, have stated that ashes of burnt swine's dung are very useful, mixed with raisin wine; as also the lights of a deer, a spitter deer in particular, smoke-dried and beaten up in wine.

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CHAP. 68.

REMEDIES FOR DROPSY.

For dropsy, a will boar's urine is good, taken in small doses in the patient's drink; it is of much greater efficacy, however, when it has been left to dry in the bladder of the animal. The ashes, too, of burnt cow-dung, and of bulls' dung in particular — animals that are reared in herds, I mean — are highly esteemed. This dung, the name given to which is "bolbiton," is re- duced to ashes, and taken in doses of three spoonfuls to one semisextarius of honied wine; that of the female animal being used where the patient is a woman, and that of the other sex in the case of males; a distinction about which the magicians have made a sort of grand mystery. The dung of a bull-calf is also applied topically for this disease, and ashes of burnt calves' dung are taken with seed of staphylinos, in equal proportions, in wine. Goats' blood also is used, with the marrow; but it is generally thought that the blood of the he-goat is the most efficacious, when the animal has fed upon lentisk, more particularly.

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CHAP. 69.

REMEDIES FOR ERYSIPELAS, AND FOR PURULENT ERUPTIONS.

For erysipelas a liniment of bears' grease is used, that from the kidneys in particular; fresh calves' dung also, or cow-dung; dried goats' milk cheese, with leeks; or else the fine scrapings of a deer's skin, brought off with pumice-stone and beaten up in vinegar. Where there is redness of the skin attended with itching, the foam from a horse's mouth is used, or the hoof, reduced to ashes.

For the cure of purulent eruptions ashes of burnt asses' dung are applied, with butter; and for the removal of swarthy pimples, dried goats' milk cheese, steeped in honey and vinegar, is applied in the bath, no oil being used. Pustules are treated with ashes of swine's dung, applied with water, or else ashes of deer's antlers.

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CHAP. 70.

REMEDIES FOR SPRAINS, INDURATIONS, AND BOILS.

For the cure of sprains the following applications are used; wild boars' dung or swine's dung; calves' dung; wild boars' foam, used fresh with vinegar; goats' dung, applied with honey; and raw beef, used as a plaster. For swellings, swine's dung is used, warmed in an earthen pot, and beaten up with oil. The best emollient for all kinds of indurations upon the body is wolf's fat, applied topically. In the case of sores which are wanted to break, the most effectual plan is to apply cow-dung warmed in hot ashes, or else goats' dung boiled in vinegar or wine. For the cure of boils, beef-suet is applied with salt; but if they are attended with pain, it is melted with oil, and no salt is used. Goat-suet is employed in a similar manner.

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CHAP. 71.

REMEDIES FOR BURNS. THE METHOD OF TESTING BULL-GLUE; SEVEN REMEDIES DERIVED FROM IT.

For the treatment of burns, bears' grease is used, with lily roots; dried wild boars' dung also, or swine's dung; the ashes of burnt bristles, extracted from plasterers' brushes, beaten up with grease; the pastern-bone of an ox, reduced to ashes, and mixed with wax and bull's marrow or deer's marrow; or the dung of a hare. The dung, too, of a she-goat, they say, will effect a cure without leaving any scars.

The best glue is that prepared from the ears and genitals of the bull, and there is no better cure in existence for burns. There is nothing, however, that is more extensively adulterated; which is done by boiling up all kinds of old skins, and shoes even, for the purpose. The Rhodian glue is the purest of all, and it is this that painters and physicians mostly use. The whiter it is, the more highly glue is esteemed: that, on the other hand, which is black and brittle like wood, is looked upon is good for nothing.

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CHAP. 72.

REMEDIES FOR AFFECTIONS OF THE SINEWS AND FOR CONTUSIONS.

For pains in the sinews, goats' dung, boiled in vinegar with honey, is considered one of the most useful remedies, and this even where the sinew is threatened with putrefaction. Strains and contusions are healed with wild boars' dung, that has been gathered in spring and dried. A similar method is employed where persons have been dragged by a chariot or lacerated by the wheels, or have received contusions in any other way, the application being quite as effectual, should the dung happen to be fresh. Some think it a better plan, however, to boil it in vinegar; and if only powdered and taken in vinegar, they vouch for its good effects where persons are ruptured, wounded internally, or suffering from the effects of a fall.

Others again, who are of a more scrupulous tendency, take the ashes of it in water; and the Emperor Nero, it is said, was in the habit of refreshing himself with this drink, when he attempted to gain the public applause at the three-horse chariot races. Swine's dung, it is generally thought, is the next best to that of the goat.

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CHAP. 73. (18.)

REMEDIES FOR HÆMORRHAGE.

Hæmorrhage is arrested by applying deer's rennet with vinegar, hare's rennet, hare's fur reduced to ashes, or ashes of burnt asses' dung. The dung, however, of male animals is the most efficacious for this purpose, being mixed with vinegar, and applied with wool, in all cases of hæmorrhage. In the same way, too, the ashes of a horse's head or thigh, or of burnt calves' dung, are used with vinegar; the ashes also of a goat's horns or dung, with vinegar. But it is the thick blood that issues from the liver of a he-goat when cut asunder, that is looked upon as the most efficacious; or else the ashes of the burnt liver of a goat of either sex, taken in wine or applied to the nostrils with vinegar. The ashes, too, of a leather wine-bottle — but only when made of he-goat skin — are used very efficiently with an equal quantity of resin, for the purpose of stanching blood, and knitting together the lips of the wound. A kid's rennet in vinegar, or the thighs of that animal, reduced to ashes, are said to be productive of a similar result.

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CHAP. 74.

REMEDIES FOR ULCERS AND CARACINOMATOUS SORES.

Ulcers upon the legs and thighs are cured by an application of bears' grease, mixed with red earth: and those of a serpiginous nature by using wild boar's gall, with resin and white lead; the jaw-bone of a wild boar or swine, reduced to ashes; swine's dung in a dry state; or goats' dung, made luke-warm in vinegar. For otter kinds of ulcers butter is used, as a detergent, and as tending to make new flesh; ashes of deer's antlers, or deer's marrow; or else bull's gall, mixed with oil of cyprus or oil of iris. Wounds inflicted with edged weapons are rubbed with fresh swine's dung, or with dried swine's dung, powdered. When ulcers are phagedænic or fistulous, bull's gall is injected, with leek-juice or woman's milk; or else bull's blood, dried and powdered, with the plant cotyledon.

Carcinomatous sores are treated with hare's rennet, sprin- kled upon them with an equal proportion of capers in wine; gangrenes, with bears' grease, applied with a feather; and ulcers of a serpiginous nature with the ashes of an ass's hoofs, powdered upon then. The blood of the horse corrodes the flesh by virtue of certain septic powers which it possesses; dried horse-dung, too, reduced to ashes, has a similar effect. Those kinds of ulcer which are commonly known as "phagedænic," are treated with the ashes of a cow's hide, mixed with honey. Calves' flesh, as also cow-dung mixed with honey, prevents recent wounds from swelling. The ashes of a leg of veal, applied with woman's milk, are a cure for sordid ulcers, and the malignant sore known s "cacoëthes:" bull-glue, melted, is applied to recent wounds inflicted with edged weapons, the application being removed before the end of three days. Dried goats' milk cheese, applied with vinegar and honey, acts as a detergent upon ulcers; and goat suet, used in combination with wax, arrests the spread of serpiginous sores if employed with pitch and sulphur, it will effect a thorough cure. The ashes of a kid's leg, applied with woman's milk, have a similar effect upon malignant ulcers; for the cure, too, of carbuncles, a sow's brains are roasted and applied.

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CHAP. 75.

REMEDIES FOR THE ITCH.

The itch in man is cured very effectually by using the marrow of an ass, or the urine of that animal, applied with the mud it has formed upon the ground. Butter, too, is very good; as also in the case of beasts of burden, if applied with warmed resin: bull glue is also used, melted in vinegar, and incorporated with lime; or goat's gall, mixed with calcined alum. The eruption called "boa," is treated with cow-dung, a fact to which it is indebted for its name. The itch in dogs is cured by an application of fresh cows' blood, which, when quite dry, is renewed a second time, and is rubbed off the next day with strong lie-ashes.

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CHAP. 76.

METHODS OF EXTRACTING FOREIGN SUBSTANCES WHICH ADHERE TO THE, BODY, AND OF RESTORING SCARS TO THEIR NATURAL COLOUR.

Thorns and similar foreign substances are extracted from the body by using cats' dung, or that of she-goats, with wine; the rennet also of any kind of animal, that of the hare more particularly, with powdered frankincense and oil, or an equal quan- tity of mistletoe, or else with bee-glue.

Ass suet restores scars of a swarthy hue to their natural colour; and they are equally effaced by using calf's gall made warm. Medical men add myrrh, honey, and saffron, and keep the mixture in a copper box; some, too, incorporate with it flower of copper.

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CHAP. 77. (19.)

REMEDIES FOR FEMALE DISEASES.

Menstruation is promoted by using hall's gall, in unwashed wool, as a pessary: Olympias of Thebe adds hyssop and nitre. Ashes, too, of deer's horns are taken in drink for the same purpose, and for derangements of the uterus they are applied topically, as also bull's gall, used as a pessary with opium, in the proportion of two oboli. It is a good plan, too, to use fumigations for the uterus, made with deer's hair, burnt. Hinds, they say, when they find themselves pregnant, are in the habit of swallowing a small stone. This stone, when found in their excrements, or in the uterus — for it is to be found there as well — attached to the body as an amulet, is a preventive of abortion. There are also certain small stones, found in the heart and uterus of these animals, which are very useful for women during pregnancy and in travail. As to the kind of pumice-stone which is similarly found in the uterus of the cow, we have already mentioned it when treating of the formation of that animal.

A wolf's fat, applied externally, acts emolliently upon the uterus, and the liver of a wolf is very soothing for pains in that organ. It is found advantageous for women, when near delivery, to eat wolf's flesh, or, if they are in travail, to have a person near them who has eaten it; so much so, indeed, that it will act as a countercharm even to any noxious spells which may have been laid upon them. In case, however, a person who has eaten wolf's flesh should happen to enter the room at the moment of parturition, dangerous effects will be sure to follow. The hare, too, is remarkably useful for the complaints of females: the lights of that animal, dried and taken in drink, are beneficial to the uterus; the liver, taken in water with Samian earth, acts as an emmenagogue; and the rennet brings away the after-birth, due care being taken by the patient not to bathe the day before. Applied in wool as a pessary, with saffron and leek-juice, this last acts as an expellent upon the dead fœtus. It is a general opinion that the uterus of a hare, taken with the food, promotes the conception of male offspring, and that a similar effect is produced by using the

testes and rennet of that animal. It is thought, too, that a leveret, taken from the uterus of its dam, is a restorative of fruitfulness to women who are otherwise past child-bearing. But it is the blood of a hare's fœtus that the magicians recommend males to drink: while for young girls they prescribe nine pellets of hare's dung, to ensure a durable firmness to the breasts. For a similar purpose, also, they apply hare's rennet with honey; and to prevent hairs from growing again when once removed, they use a liniment of hare's blood.

For inflations of the uterus, it is found a good plan to apply wild boars' dung or swine's dung topically with oil: but a still more effectual remedy is to dry the dung, and sprinkle it, powdered, in the patient's drink, even though she should be in a state of pregnancy or suffering the pains of child-birth. By administering sow's milk with honied wine, parturition is facilitated; and if taken by itself it will promote the secretion of the milk when deficient in nursing women. By rubbing the breasts of females with sow's blood they are prevented from becoming too large. If pains are felt in the breasts, they will be alleviated by drinking asses' milk; and the same milk, taken with honey, has considerable efficacy as an emmenagogue. Stale fat, too, from the same animal, heals ulcerations of the uterus: applied as a pessary, in wool, it acts emolliently upon indurations of that organ; and, applied fresh by itself, or in water when stale, it has all the virtues of a depilatory.

An ass's milt, dried and applied in water to the breasts, promotes the secretion of the milk; and used in the form of a fumigation, it acts as a corrective upon the uterus. A fumigation made with a burnt ass's hoof; placed beneath a woman, accelerates parturition, so much so, indeed, as to expel the dead fœtus even: hence it is that it should only be employed in cases of miscarriage, it having a fatal effect upon the living fœtus. Asses' dung, applied fresh, has a wonderful effect, they say, in arresting discharges of blood in females: the same, too, with the ashes of this dung, which, used as a pessary, are very good for the uterus. If the skin is rubbed with the foam from a horse's mouth for forty days together, before the first hair has made its appearance, it will effectually prevent the growth thereof: a decoction, too, made from deer's antlers is productive of a similar effect, being all the better if they are used quite fresh. Mares' milk, used as an injection,

is highly beneficial to the uterus.

Where the fœtus is felt to be dead in the uterus, the lichens or excrescences from a horse's legs, taken in fresh water, will act as an expellent: an effect produced also by a fumigation made with the hoofs or dry dung of that animal. Procidence of the uterus is arrested by using butter, in the form of an injection; and indurations of that organ are removed by similarly employing ox-gall, with oil of roses, turpentine being applied externally in wool. They say, too, that a fumigation, made from ox-dung, acts as a corrective upon procidence of the uterus, and facilitates parturition; and that conception is promoted by the use of cows' milk. It is a well-known fact that sterility is often entailed by suffering in child-birth; an evil which may be averted, Olympias of Thebes assures us, by rubbing the parts, before sexual intercourse, with bull's gall, serpents' fat, verdigrease, and honey. In cases, too, where menstruation is too abundant, the external parts should be sprinkled with a solution of calf's gall, the moment before the sexual congress; a method which acts emolliently also upon indurations of the abdomen. Applied to the navel as a liniment, it arrests excessive discharges, and is generally beneficial to the uterus. The proportions generally adopted are — one denarius of gall, one-third of a denarius of opium, and as much oil of almonds as may appear to be requisite; the whole being applied in sheep's wool. The gall, too, of a bull-calf is beaten up with half the quantity of honey, and kept in readiness for the treatment of uterine diseases. If a woman about the time of conception eats roasted veal with the plant aristolochia, she will bring forth a male child, we are assured. Calf's marrow, boiled in wine and water with the suet, and applied as a pessary, is good for ulcerations of the uterus; the same, too, with foxes' fat and cats' dung, the last being applied with resin and oil of roses.

It is considered a remarkably good plan to subject the uterus to fumigations made with burnt goats' horns. The blood of the wild goat, mixed with sea-palm, acts as a depilatory. The gall of the other kinds of goat, used as an injection, acts emolliently upon callosities of the uterus, and ensures conception immediately after menstruation: it possesses also the virtues of a depilatory, the application being left for three days upon the flesh after the hair has

been removed. The midwives assure us that she-goats' urine, taken in drink, and the dung, applied topically, will arrest uterine discharges, however much in excess. The membrane in which the kid is enclosed in the uterus, dried and taken in wine, acts as an expel- lent upon the after-birth. For affections of the uterus, it is thought a desirable plan to fumigate it with burnt kids' hair; and for discharges of blood, kids' rennet is administered in drink, or seed of henbane is applied. According to Osthanes, if a woman's loins are rubbed with blood taken from the ticks upon a black wild bull, she will be inspired with an aversion to sexual intercourse: she will forget, too, her former love, by taking a he-goat's urine in drink, some nard being mixed with it to disguise the loathsome taste.

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CHAP. 78.

REMEDIES FOR THE DISEASES OF INFANTS.

For infants there is nothing more useful than butter, either by itself or in combination with honey; for dentition more particularly, for soreness of the gums, and for ulcerations of the mouth. A wolf's tooth, attached to the body, prevents infants from being startled, and acts as a preservative against the maladies attendant upon dentition; an effect equally produced by making use of a wolf's skin. The larger teeth, also, of a wolf, attached to a horse's neck, will render him proof against all weariness, it is said. A hare's rennet, applied to the breasts of the nurse, effectually prevents diarrhœa in the infant suckled by her. An ass's liver, mixed with a little panax, and dropped into the mouth of an infant, will preserve it from epilepsy and other diseases to which infants are liable; this, however, must be done for forty days, they say. An ass's skin, too, thrown over infants, renders them insensible to fear. The first teeth shed by a horse, attached as an amulet to infants, facilitate dentition, and are better still, when not allowed to touch the ground. For pains in the spleen, an ox's milt is administered in honey, and applied topically; and for running ulcers it is used as an application, with honey. A calf's milt, boiled in wine, is beaten up, and applied to incipient ulcers of the mouth.

The magicians take the brains of a she-goat, and, after passing them through a gold ring, drop them into the mouth of the infant before it takes the breast, as a preservative against epilepsy and other infantile diseases. Goats' dung, attached to infants in a piece of cloth, prevents them from being restless, female infants in particular. By rubbing the gums of infants with goats' milk or hare's brains, dentition is greatly facilitated.

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CHAP. 79.

PROVOCATIVES OF SLEEP.

Cato was of opinion that hare's flesh, taken as a diet, is provocative of sleep. It is a vulgar notion, too, that this diet confers beauty for nine days on those who use it; a silly play upon words, no doubt, but a notion which has gained far too extensively not to have had some real foundation. According to the magicians, the gall of a she-goat, but only of one that has been sacrificed, applied to the eyes or placed beneath the pillow, has a narcotic effect. Too profuse perspiration is checked by rubbing the body with ashes of burnt goats' horns mixed with oil of myrtle.

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CHAP. 80.

STIMLANTS FOR THE SEXUAL PASSIONS.

Among the aphrodisiacs, we find mentioned, a wild boar's gall, applied externally; swine's marrow, taken inwardly; asses' fat, mixed with the grease of a gander and applied as a liniment; the virulent substance described by Virgil as distilling from mares when covered; and the dried testes of a horse, pulverized and mixed with the drink. The right testicle, also, of an ass, is taken in a proportionate quantity of wine, or worn attached to the arm in a bracelet; or else the froth discharged by that animal after covering, collected in a piece of red cloth and enclosed in silver, as Osthanes informs us. Salpe recommends the genitals of this animal to be plunged seven times in boiling oil, and the corresponding parts to be well rubbed therewith. Balcon says that these genitals should be reduced to ashes and taken in drink; or else the urine: that has been voided by a bull immediately after covering: lie recommends, also, that the groin should be well rubbed with earth moistened with this urine.

Mouse-dung, on the other hand, applied in the form of a liniment, acts as an antaphrodisiac. The lights of a wild boar or swine, roasted, are an effectual preservative against drunkenness; they must, however, be eaten fasting, and upon the same day. The lights of a kid, too, are productive of the same effect.

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CHAP. 81. (20.)

REMARKABLE FACTS RELATIVE TO ANIMALS.

In addition to those already mentioned, there are various other marvellous facts related, with reference to these animals. When a horse-shoe becomes detached from the hoof, as often is the case, if a person takes it up and puts it by, it will act as a remedy for hiccup the moment he calls to mind the spot where he has placed it. A wolf's liver, they say, is similar to a horse's hoof in appearance; and a horse, they tell us, if it follows in the track of a wolf, will burst asunder beneath its rider. The pastern-bones of swine have a certain tendency to promote discord, it is said. In cases of fire, if some of the dung can be brought away from the stalls, both sheep and oxen may be got out all the more easily, and will make no attempt to return. The flesh of a he-goat will lose its rank smell, if the animal has eaten barley-bread, or drunk an infusion of laser the day on which it was killed. Meat that has been salted while the moon was on the wane, will never be attacked by worms. In fact, so great has been the care taken to omit no possible researches, that a deaf hare, we find, will grow fat sooner than one that can hear!

As to the remedies for the diseases of animals — If a beast of burden voids blood, an injection must be used of swine's dung mixed with wine. For the maladies of oxen, a mixture of suet is used with quicksilver, and wild garlic boiled; the whole eaten up and administered in wine. The fat, too, of a fox is employed. The liquor of boiled horse-flesh, administered in their drink, is recommended for the cure of diseased swine: and, indeed, the maladies of all four-footed beasts may be effec- tually treated by boiling a she-goat whole, in her skin, along with a bramble-frog. Poultry, they say, will never be touched by a fox, if they have eaten the dried liver of that animal, or if the cock, when treading the hen, has had a piece of fox's skin about his neck. The same property, too, is attributed to a weazel's gall. The oxen in the Isle of Cyprus cure themselves of gripings in the abdomen, it is said, by swallowing human excrements: the feet, too, of oxen will never be worn to the quick, if

their hoofs are well rubbed with tar before they begin work. Wolves will never approach a field, if, after one has been caught and its legs broken and throat cut, the blood is dropped little by little along the boundaries of the field, and the body buried on the spot from which it was first dragged. The share, too, with which the first furrow in the field has been traced in the current year, should be taken from the plough, and placed upon the hearth of the Lares, where the family is in the habit of meeting, and left there till it is consumed: so long as this is in doing, no wolf will attack any animal in the field.

We will now turn to an examination of those animals which, being neither tame nor wild, are of a nature peculiar to them- selves.

SUMMARY. — Remedies, narratives, and observations, one thousand six hundred and eighty-two.

ROMAN AUTHORS QUOTED. — M. Varro, L. Piso, Fabianus, Va- lerius Antias, Verrius Flaccus, Cato the Censor, Servius Sulpicius, Licinius Macer, Celsus, Massurius, Sextius Niger who wrote in Greek, Bithus of Dyrrhachium, Opilius the physician, Granius the physician.

FOREIGN AUTHORS QUOTED. — Democritus, Apollonius who wrote the "Myrosis," Melitus, Artemon, Sextilius, Au- tæus, Homer, Theophrastus, Lysimachus, Attalus, Xenocrates, Orpheus who wrote the "Idiophya," Archelaüs who wrote a similar work, Demetrius, Sotira, Laïs, Ele- phantis, Salpe, Olympias of Thebes, Diotimus of Thebes, Iollas, Andreas, Marcion of Smyrna, Æschines the physician, Hippocrates, Aristotle, Metrodorus of Scepsos, Icetidas the physician, Apelles the physician, Hesiod, Dalion, Cæcilius, Bion who wrote "On Powers," Anaxilaiis, King Juba.

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BOOK XXIX. REMEDIES DERIVED FROM LIVING CREATURES.

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CHAP. 1. (1.)

THE ORIGIN OF THE MEDICAL ART.

THE nature and multiplicity of the various remedies already described or which still remain to be enlarged upon, compel me to enter upon some further details with reference to the art of medicine itself: aware as I am, that no one has hitherto treated of this subject in the Latin tongue, and that if all new enterprises are difficult or of doubtful success, it must be one in particular which is so barren of all charms to recommend it, and accompanied with such difficulties of illustration. It will not improbably suggest itself, however, to those who are familiar with this subject, to make enquiry how it is that in the practice of medicine the use of simples has been abandoned, so convenient as they are and so ready prepared to our hand: and they will be inclined to feel equal surprise and indignation when they are informed that no known art, lucrative as this is beyond all the rest, has been more fluctuating, or subjected to more frequent variations.

Commencing by ranking its inventors in the number of the gods, and consecrating for them a place in heaven, the art of medicine, at the present day even, teaches us in numerous instances to have recourse to the oracles for aid. In more recent times again, the same art has augmented its celebrity, at the cost perhaps of being charged with criminality, by devising the fable that Æsculapius was struck by lightning for presuming to raise Tyndareus to life. And this example notwithstanding, it has not hesitated to relate how that others, through its agency, have since been restored to life. Already enjoying celebrity in the days of the Trojan War, its traditions from that period have ac- quired an additional degree of certainty; although in those times, we may remark, the healing art confined itself solely to the treatment of wounds.

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CHAP. 2.

PARTICULARS RELATIVE TO HIPPOCRATES. DATE OF THE ORIGIN OF CLINICAL PRACTICE AND OF THAT OF IATRALIPTICS.

Its succeeding history, a fact that is truly marvellous, remains enveloped in the densest night, down to the time of the Peloponnesian War; at which period it was restored to light by the agency of Hippocrates, a native of Cos, an island flourishing and powerful in the highest degree, and consecrated to Æsculapius. It being the practice for persons who had recovered from a disease to describe in the temple of that god the remedies to which they had owed their restoration to health, that others might derive benefit therefrom in a similar emergency; Hippocrates, it is said, copied out these prescriptions, and, as our fellow-countryman Varro will have it, after burning the temple to the ground, instituted that branch of medical practice which is known as "Clinics." There was no limit after this to the profits derived from the practice of medicine; for Prodicus, a native of Selymbria, one of his disciples, founded the branch of it known as "Iatraliptics," and so discovered a means of enriching the very anointers even and the commonest drudges employed by the physicians.

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CHAP. 3.

PARTICULARS RELATIVE TO CHRYSIPPUS AND ERASIS- TRATUS.

In the rules laid down by these professors, changes were effected by Chrysippus with a vast parade of words, and, after Chrysippus, by Erasistratus, son of the daughter of Aristotle. For the cure of King Antiochus-to give our first illustration of the profits realized by the medical art-Erasistratus received from his son, King Ptolemæus, the sum of one hundred talents.

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CHAP. 4.

THE EMPIRIC BRANCH OF MEDICINE.

Another sect again, known as that of the Empirics — be- cause it based its rules upon the results of experiment — took its rise in Sicily, having for its founder Acron of Agri- gentum, a man recommended by the high authority of Empedocles the physician.

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CHAP. 5.

PARTICULARS RELATIVE TO HEROPHILUS AND OTHER CELEBRATED PHYSICIANS. THE VARIOUS CHANGES THAT HAVE BEEN MADE IN THE SYSTEM OF MEDICINE.

These several schools of medicine, long at variance among themselves, were all of them condemned by Herophilus, who regulated the arterial pulsation according to the musical scale, correspondingly with the age of the patient. In succeeding years again, the theories of this sect were abandoned, it being found that to belong to it necessitated an acquaintance with literature. Changes, too, were effected in the school, of which, as already stated, Asclepiades had become the founder. His disciple, Themison, who at first in his writings implicitly followed him, soon afterwards, in compliance with the growing degeneracy of the age, went so far as to modify his own methods of treatment; which, in their turn, were entirely dis- placed, with the authorization of the late Emperor Augustus, by Antonius Musa, a physician who had rescued that prince from a most dangerous malady, by following a mode of treatment diametrically opposite. I pass over in silence many physicians of the very highest celebrity, the Cassii, for instance, the Calpetani, the Arruntii, and the Rubrii, men who received fees yearly from the great, amounting to no less than two hundred and fifty thousand sesterces. As for Q. Stertinius, he thought that he conferred an obligation upon the emperors in being content with five hundred thousand sesterces per annum; and indeed he proved, by an enumeration of the several houses, that a city practice would bring him in a yearly income of not less than six hundred thousand sesterces.

Fully equal to this was the sum lavished upon his brother by Claudius Cæsar; and the two brothers, although they had drawn largely upon their fortunes in beautifying the public buildings at Neapolis, left to their heirs no less than thirty millions of sesterces! such an estate as no physician but Arruntius had till then possessed.

Next in succession arose Vettius Valens, rendered so noto- rious

by his adulterous connection with Messalina, the wife of Claudius Cæsar, and equally celebrated as a professor of eloquence. When established in public favour, he became the founder of a new sect.

It was in the same age, too, during the reign of the Emperor Nero, that the destinies of the medical art passed into the hands of Thessalus, a man who swept away all the precepts of his predecessors, and declaimed with a sort of frenzy against the physicians of every age; but with what discretion and in what spirit, we may abundantly conclude from a single trait presented by his character — upon his tomb, which is still to be seen on the Appian Way, he had his name inscribed as the "Iatronices" — the "Conqueror of the Physicians." No stage-player, no driver of a three-horse chariot, had a greater throng attending him when he appeared in public: but he was at last eclipsed in credit by Crinas, a native of Massilia, who, to wear an appearance of greater discreetness and more devoutness, united in himself the pursuit of two sciences, and prescribed diets to his patients in accordance with the move- ments of the heavenly bodies, as indicated by the almanacks of the mathematicians, taking observations himself of the various times and seasons. It was but recently that he died, leaving ten millions of sesterces, after having expended hardly a less sum upon building the walls of his native place and of other towns.

It was while these men were ruling our destinies, that all at once, Charmis, a native also of Massilia, took the City by surprise. Not content with condemning the practice or preceding physicians, he proscribed the use of warm baths as well, and persuaded people, in the very depth of winter even, to immerse themselves in cold water. His patients he used to plunge into large vessels filled with cold water, and it was a common thing to see aged men of consular rank make it a matter of parade to freeze themselves; a method of treatment, in favour of which Annæus Seneca gives his personal testimony, in writings still extant.

There can be no doubt whatever, that all these men, in the pursuit of celebrity by the introduction of some novelty or other, made purchase of it at the downright expense of human life. Hence those woeful discussions, those consultations at the bedside of the patient, where no one thinks fit to be of the same opinion as another, lest he

may have the appearance of being subordinate to another; hence, too, that ominous inscription to be read upon a tomb, “It was the multitude of physicians that killed me.”

The medical art, so often modified and renewed as it has been, is still on the change from day to day, and still are we impelled onwards by the puffs which emanate from the ingenuity of the Greeks. It is quite evident too, that every one among them that finds himself skilled in the art of speech, may forthwith create himself the arbiter of our life and death: as though, forsooth, there were not thousands of nations who live without any physicians at all, though not, for all that, without the aid of medicine. Such, for instance, was the Roman people, for a period of more than six hundred years; a people, too, which has never shown itself slow to adopt all useful arts, and which even welcomed the medical art with avidity, until, after a fair experience of it, there was found good reason to condemn it.

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CHAP. 6.

WHO FIRST PRACTISED AS A PHYSICIAN AT ROME, AND AT WHAT PERIOD.

And, indeed, it appears to me not amiss to take the present opportunity of reviewing some remarkable facts in the days of our forefathers connected with this subject. Cassius Hemina, one of our most ancient writers, says that the first physician that visited Rome was Archagathus, the son of Lysanias, who came over from Peloponnesus, in the year of the City 535, L. Æmilius and M. Livius being consuls. He states also, that the right of free citizenship was granted him, and that he had a shop provided for his practice at the public expense in the Acilian Cross-way; that from his practice he received the name of "Vulnerarius;" that on his arrival he was greatly welcomed at first, but that soon afterwards, from the cruelty displayed by him in cutting and searing his patients, he acquired the new name of "Carnifex," and brought his art and physicians in general into considerable disrepute.

That such was the fact, we may readily understand from the words of M. Cato, a man whose authority stands so high of itself, that but little weight is added to it by the triumph which he gained, and the Censorship which he held. I shall, therefore, give his own words in reference to this subject.

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CHAP. 7.

THE OPINIONS ENTERTAINED BY THE ROMANS ON THE ANCIENT PHYSICIANS.

“Concerning those Greeks, son Marcus, I will speak to you more at length on the befitting occasion. I will show you the results of my own experience at Athens, and that, while it is a good plan to dip into their literature, it is not worth while to make a thorough acquaintance with it. They are a most iniquitous and intractable race, and you may take my word as the word of a prophet, when I tell you, that whenever that nation shall bestow its literature upon Rome it will mar everything; and that all the sooner, if it sends its physicians among us. They have conspired among themselves to murder all barbarians with their medicine; a profession which they exercise for lucre, in order that they may win our confidence, and dispatch us all the more easily. They are in the common habit, too, of calling us barbarians, and stigmatize us beyond all other nations, by giving us the abominable appellation of Opici. I forbid you to have anything to do with physicians.”

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CHAP. 8.

EVILS ATTENDANT UPON THE PRACTICE OF MEDICINE.

Cato, who wrote to this effect, died in his eighty-fifth year, in the year of the City 605; so that no one is to suppose that he had not sufficient time to form his experience, either with reference to the duration of the republic, or the length of his own life. Well then-are we to conclude that he has stamped with condemnation a thing that in itself is most useful? Far from it, by Hercules! for he subjoins an account of the medical prescriptions, by the aid of which he had ensured to himself and to his wife a ripe old age; prescriptions upon which we are now about to enlarge. He asserts also that he has a book of recipes in his possession, by the aid of which he treats the maladies of his son, his servants, and his friends; a book from which we have extracted the various prescriptions according to the several maladies for which they are employed.

It was not the thing itself that the ancients condemned, but it was the art as then practised, and they were shocked, more particularly, that man should pay so dear for the enjoyment of life. For this reason it was, they say, that the Temple of Æsculapius, even after he was received as a divinity, was built without the City, and afterwards on an island; for this reason, too, it was, that when, long after the time of Cato, the Greeks were expelled from Italy, the physicians were not exempted from the decree. And here I will improve upon the foresight displayed by them. Medicine is the only one of the arts of Greece, that, lucrative as it is, the Roman gravity has hitherto refused to cultivate. It is but very few of our fellow-citizens that have even attempted it, and so soon as ever they have done so, they have become deserters to the Greeks forth with. Nay, even more than this, if they attempt to treat of it in any other language than Greek, they are sure to lose all credit, with the most ignorant even, and those who do not understand a word of Greek; there being all the less confidence felt by our people in that which so nearly concerns their welfare, if it happens to be intelligible to them. In fact, this is the only one of all the arts, by Hercules! in which the moment a man

declares himself to be an adept, he is at once believed, there being at the same time no imposture, the results of which are more fraught with peril. To all this, however, we give no attention, so seductive is the sweet influence of the hope entertained of his ultimate recovery by each.

And then besides, there is no law in existence whereby to punish the ignorance of physicians, no instance before us of capital punishment inflicted. It is at the expense of our perils that they learn, and they experimentalize by putting us to death, a physician being the only person that can kill another with sovereign impunity. Nay, even more than this, all the blame is thrown upon the sick man only; he is accused of disobedience forthwith, and it is the person who is dead and gone that is put upon his trial. It is the usage at Rome for the decuries to pass examination under the censorship of the emperor, and for inquisitions to be made at our party-walls even: persons who are to sit in judgment on our monetary matters are sent for to Gades and the very Pillars of Hercules; while a question of exile is never entertained without a panel of forty-five men selected for the purpose. But when it is the judge's own life that is at stake, who are the persons that are to hold council upon it, but those who the very next moment are about to take it!

And yet so it is, that we only meet with our deserts, no one of us feeling the least anxiety to know what is necessary for his own welfare. We walk with the feet of other people, we see with the eyes of other people, trusting to the memory of others we salute one another, and it is by the aid of others that we live. The most precious objects of existence, and the chief supports of life, are entirely lost to us, and we have nothing left but our pleasures to call our own. I will not leave Cato exposed to the hatred of a profession so ambitious as this, nor yet that senate which judged as he did, but at the same time I will pursue my object without wresting to my purpose the crimes practised by its adepts, as some might naturally expect. For what profession has there been more fruitful in poisonings, or from which there have emanated more frauds upon wills And then, too, what adulteries have been committed, in the very houses of our princes even! the intrigue of Eudemus, for example, with Livia, the wife of Drusus Cæsar, and that of Valens with the royal lady previously

mentioned. Let us not impute these evils, I say, to the art, but to the men who practise it; for Cato, I verily believe, as little apprehended such practices as these in the City, as he did the presence of royal ladies there.

I will not accuse the medical art of the avarice even of its professors, the rapacious bargains made with their patients while their fate is trembling in the balance, the tariffs framed upon their agonies, the monies taken as earnest for the dispatching of patients, or the mysterious secrets of the craft. I will not mention how that cataract must be couched only, in the eye, in preference to extracting it at once — practices, all of them, which have resulted in one very great advantage, by alluring hither such a multitude of adventurers; it being no moderation on their part, but the rivalry existing between such numbers of practitioners, that keeps their charges within moderation. It is a well-known fact that Charmis, the physician already mentioned, made a bargain with a patient of his in the provinces, that he should have two hundred thousand sesterces for the cure; that the Emperor Claudius extorted from Alcon, the surgeon, ten millions of sesterces by way of fine; and that the same man, after being recalled from his exile in Gaul, acquired a sum equally large in the course of a few years.

These are faults, however, which must be imputed to individuals only; and it is not my intention to waste reproof upon the dregs of the medical profession, or to call attention to the ignorance displayed by that crew, the violation of all regimen in their treatment of disease, the evasions practised in the use of warm baths, the strict diet they imperiously prescribe, the food that is crammed into these same patients, exhausted as they are, several times a day; together with a thousand other methods of showing how quick they are to change their mind, their precepts for the regulation of the kitchen, and their recipes for the composition of unguents, it being one grand object with them to lose sight of none of the usual incitements to sensuality. The importation of foreign merchandize, and the introduction of tariffs settled by foreigners, would have been highly displeasing to our ances- tors, I can readily imagine; but it was not these inconveniences that Cato had in view, when he spoke thus strongly in condemnation of the medical art.

"Theriace" is the name given to a preparation devised by luxury; a composition formed of six hundred different ingredients; and this while Nature has bestowed upon us such numbers of remedies, each of which would have fully answered the purpose employed by itself! The Mithridatic antidote is composed of four and fifty ingredients, none of which are used in exactly the same proportion, and the quantity prescribed is in some cases so small as the sixtieth part of one denarius! Which of the gods, pray, can have instructed man in such trickery as this, a height to which the mere subtlety of human invention could surely never have reached? It clearly must emanate from a vain ostentation of scientific skill, and must be set down as a monstrous system of puffing off the medical art.

And yet, after all, the physicians themselves do not understand this branch of their profession; and I have ascertained that it is a common thing for them to put mineral vermilion in their medicines, a rank poison, as I shall have occasion to show when I come to speak of the pigments, in place of Indian cinnabar, and all because they mistake the name of the one drug for that of the other! These, however, are errors which only concern the health of individuals, while it is the practices which Cato foresaw and dreaded, less dangerous in themselves and little regarded, practices, in fact, which the leading men in the art do not hesitate to avow, that have wrought the corruption of the manners of our empire.

The practices I allude to are those to which, while enjoying robust health, we submit: such, for instance, as rubbing the body with wax and oil, a preparation for a wrestling match, by rights, but which, these men pretend, was invented as a preservative of health; the use of hot baths, which are necessary, they have persuaded us, for the proper digestion of the food, baths which no one ever leaves without being all the weaker for it, and from which the more submissive of their patients are only carried to the tomb; potions taken fasting; vomits to clear the stomach, and then a series of fresh drenchings with drink; emasculation, self-inflicted by the use of pitch-plasters as depilatories; the public exposure, too, of even the most delicate parts of the female body for the prosecution of these practices. Most assuredly so it is, the contagion which has seized upon the public morals, has had no more fertile source than the medical art, and it

continues, day by day even, to justify the claims of Cato to be considered a prophet and an oracle of wisdom, in that assertion of his, that it is quite sufficient to dip into the records of Greek genius, without becoming thoroughly acquainted with them.

Such then is what may be said in justification of the senate and of the Roman people, during that period of six hundred years in which they manifested such repugnance to an art, by the most insidious terms of which, good men are made to lend their credit and authority to the very worst, and so strongly entered their protest against the silly persuasions entertained by those, who fancy that nothing can benefit them but what is coupled with high price.

I entertain no doubt, too, that there will be found some to express their disgust at the particulars which I am about to give, in relation to animals: and yet Virgil himself has not disdained — when, too, there was no necessity for his doing so-to speak of ants and weevils, “And nests by beetles made that shun the light.” Homer, too, amid his description of the battles of the gods, has not disdained to remark upon the voracity of the common fly; nor has Nature, she who engendered man, thought it beneath her to engender these insects as well. Let each then make it his care, not so much to regard the thing itself, as to rightly appreciate in each case the cause and its effects.

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CHAP. 9.

THIRTY-FIVE REMEDIES DEEIVED FROM WOOL.

I shall begin then with some remedies that are well known, those namely, which are derived from wool and from the eggs of birds, thus giving due honour to those substances which hold the principal place in the estimation of mankind; though at the same time I shall be necessitated to speak of some others out of their proper place, according as occasion may offer. I should not have been at a loss for high-flown language with which to grace my narrative, had I made it my design to regard anything else than what, as being strictly trustworthy, becomes my work: for among the very first remedies mentioned, we find those said to be derived from the ashes and nest of the phœnix, as though, forsooth, its existence were a well ascertained fact, and not altogether a fable. And then besides, it would be a mere mockery to describe remedies that can only return to us once in a thousand years.

(2.) The ancient Romans attributed to wool a degree of religious importance even, and it was in this spirit that they enjoined that the bride should touch the door-posts of her husband's house with wool. In addition to dress and protection from the cold, wool, in an unwashed state, used in combination with oil, and wine or vinegar, supplies us with numerous remedies, according as we stand in need of an emollient or an excitant, an astringent or a laxative. Wetted from time to time with these liquids, greasy wool is applied to sprained limbs, and to sinews that are suffering from pain. In the case of sprains, some persons are in the habit of adding salt, while others, again, apply pounded rue and grease, in wool: the same, too, in the case of contusions or tumours. Wool will improve the breath, it is said, if the teeth and gums are rubbed with it, mixed with honey; it is very good, too, for phrenitis, used as a fumigation. To arrest bleeding at the nose, wool is introduced into the nostrils with oil of roses; or it is used in another manner, the ears being well plugged with it. In the case of inveterate ulcers it is applied topically with honey: soaked in wine or vinegar, or in cold water and oil, and then squeezed out, it is

used for the cure of wounds.

Rams' wool, washed in cold water, and steeped in oil, is used for female complaints, and to allay inflammations of the uterus. Procidence of the uterus is reduced by using this wool in the form of a fumigation. Greasy wool, used as a plaster and as a pessary, brings away the dead fœtus, and arrests uterine discharges. Bites inflicted by a mad dog are plugged with unwashed wool, the application being removed at the end of seven days. Applied with cold water, it is a cure for agnails: steeped in a mixture of boiling nitre, sulphur, oil, vinegar, and tar, and applied twice a day, as warm as possible, it allays pains in the loins. By making ligatures with unwashed rams' wool about the extremities of the limbs, bleeding is effectually stopped.

In all cases, the wool most esteemed is that from the neck of the animal; the best kinds of wool being those of Galatia, Tarentum, Attica, and Miletus. For excoriations, blows, bruises, contusions, crushes, galls, falls, pains in the head and other parts, and for inflammation of the stomach, unwashed wool is applied, with a mixture of vinegar and oil of roses. Reduced to ashes, it is applied to contusions, wounds, and burns, and forms an ingredient in ophthalmic compositions. It is employed, also, for fistulas and suppurations of the ears. For this last purpose, some persons take the wool as it is shorn, while others pluck it from the fleece; they then cut off the ends of it, and after drying and carding it, lay it in pots of unbaked earth, steep it well in honey, and burn it. Others, again, arrange it in layers alternately with chips of torchpine, and, after sprinkling it with oil, set fire to it: they then rub the ashes into small vessels with the hands, and let them settle in water there. This operation is repeated and the water changed several times, until at last the ashes are found to be slightly astringent, without the slightest pungency; upon which, they are put by for use, being possessed of certain caustic properties, and extremely useful as a detergent for the eyelids.

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CHAP. 10.

THIRTY-TWO REMEDIES DERIVED FROM WOOL-GREASE.

And not only this, but the filthy excretions even of sheep, the sweat adhering to the wool of the flanks and of the axillary concavities — a substance known as "œsypum" — are applied to purposes almost innumerable; the grease produced by the sheep of Attica being the most highly esteemed. There are numerous ways of obtaining it, but the most approved method is to take the wool, fresh clipped from those parts of the body, or else the sweat and grease collected from any part of the fleece, and boil it gently in a copper vessel upon a slow fire: this done, it is left to cool, and the fat which floats upon the surface collected into an earthen vessel. The material originally used is then subjected to another boiling, and the two results are washed in cold water; after which, they are strained through a linen cloth and exposed to the sun till they become bleached and quite transparent, and are then put by in a pewter box for keeping.

The best proof of its genuineness is its retention of the strong smell of the original grease, and its not melting when rubbed with water upon the hand, but turning white, like white-lead in appearance. This substance is extremely useful for inflammations of the eyes and indurations of the eyelids. Some persons bake the wool in an earthen pot, until it has lost all its grease, and are of opinion that, prepared this way, it is a more useful remedy for excoriations and indurations of the eyelids, for eruptions at the corners of the eyes, and for watery eyes. And not only does this grease heal ulcerations of the eyes, but, mixed with goose-grease, of the ears and generative organs as well; in combination also with melilote and butter, it is a cure for inflammations of the uterus, and for excoriations of the rectum and condylomata. The other uses to which it is applied, we shall detail on a more appropriate occasion.

The grease, too, of the wool about the tail is made up into pills, unmixed with any substance: these pills are dried and pulverized, being an excellent application for the teeth, when loose even, and for the gums, when attacked by spreading ulcers of a cancerous nature.

Sheep's wool, too, cleaned, is applied by itself, or with the addition of sulphur, for dull, heavy pains, and the ashes of it, burnt, are used for diseases of the generative organs: indeed, this wool is possessed of such sovereign virtues, that it is used as a covering for medicinal applications even. It is also an especial remedy for the sheep itself, when it has lost its stomach, and refuses to feed; for, upon plucking some wool from the tail, and then tying the tail therewith, as tight as possible, the sheep will fall to feeding immediately. It is said, however, that the part of the tail which lies beyond the knot so made will quickly mortify and die.

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CHAP. 11. (3.)

TWENTY-TWO REMEDIES DERIVED FROM EGGS.

There is a considerable affinity also between wool and eggs, which are applied together as a frontal to the forehead by way of cure for defluxions of the eyes. Wool, however, is not required for this purpose to have been dressed with radicula, the only thing requisite to be combined with it being the white of an egg and powdered frankincense. The white of an egg, also applied by itself, arrests defluxions of the eyes, and has a cooling effect upon inflammations of those organs: some, however, prefer mixing saffron with it, and employ it as an ingredient in eye-salves, in place of water. For ophthalmia in infants there is hardly any remedy to be found, except white of egg mixed with fresh butter. Eggs beaten up with oil, are very soothing for erysipelas, beet leaves being laid on the liniment.

White of egg, mixed with pounded gum ammoniac, is used as a bandoline for arranging the hairs of the eyelids; and, in combination with pine-nuts and a little honey, it forms a liniment for the removal of pimples on the face. If the face is well rubbed with it, it will never be sun-burnt. If, the moment the flesh has been scalded, an egg is applied, no blisters will form: some persons, however, mix with it barley- meal and a little salt. In cases of ulceration formed by burns, there is nothing better than parched barley and hogs' lard, mixed with the white of an egg. The same mixture is also used as an application for diseases of the rectum, in infants even, and in cases, too, when there is procidence of those parts. For the cure of chaps upon the feet, white of eggs is boiled, with two denarii of white lead, an equal quantity of litharge, a little myrrh, and some wine. For the cure of erysipelas they use the whites of three eggs with amylum: it is said, too, that white of egg has the effect of knitting wounds and of expelling urinary calculi. The yolk of eggs boiled hard, applied in woman's milk with a little saffron and honey, has a soothing effect upon pains in the eyes. The yolk is applied also to the eyes in wool, mixed with honied wine and oil of roses; or else mixed with ground parsley-seed and polenta, and applied with honied wine. The yolk of

a single egg, swallowed raw by itself without being allowed to touch the teeth, is remarkably good for cough, defluxions of the chest, and irritations of the fauces. It is used, too, both internally and externally, in a raw state, as a sovereign cure for the sting of the hæmorrhoïs; and it is highly beneficial for the kidneys, for irritations and ulcerations of the bladder, and for bloody expectorations. For dysentery, the yolks of five eggs are taken raw in one semi-sextarius of wine, mixed with the ashes of the shells, poppy-juice, and wine.

For cœliac fluxes, it is recommended to take the yolks of eggs, with like proportions of pulpy raisins and pomegranate rind, in equal quantities, for three consecutive days; or else to follow another method, and take the yolks of three eggs, with three ounces of old bacon and honey, and three cyathi of old wine; the whole being beaten up to the consistency of honey, and taken in water, when needed, in pieces the size of a hazel nut. In some cases, too, the yolks of three eggs are fried in oil, the whole of the egg having been steeped a day previously in vinegar. It is in this way that eggs are used for the treatment of spleen diseases; but for spitting of blood, they should be taken with three cyathi of must. Yolk of egg is used, too, for the cure of bruises of long standing, in combination with bulbs and honey. Boiled and taken in wine, yolks of eggs arrest menstruation: applied raw with oil or wine, they dispel inflations of the uterus. Mixed with goose-grease and oil of roses, they are useful for crick in the neck; and they are hardened over the fire, and applied warm, for the cure of maladies of the rectum. For condylomata, eggs are used in combination with oil of roses; and for the treatment of burns, they are hardened in water, and set upon hot coals till the shells are burnt, the yellow being used as a liniment with oil of roses.

Eggs become entirely transformed into yolk, on being removed after the hen has sat upon them for three days; in which state they are known by the name of “sitista.” The chicks that are found within the shell are used for strengthen- ing a disordered stomach, being eaten with half a nut-gall, and no other food taken for the next two hours. They are given also for dysentery, boiled in the egg with one semisexta- rius of astringent wine, and an equal quantity of olive oil and polenta. The pellicle that lines the shell is used, either raw or boiled, for the cure of cracked lips; and the shell itself, reduced to

ashes, is taken in wine for discharges of blood: care must be taken, however, to burn it without the pellicle. In the same way, too, a dentifrice is prepared. The ashes of the shell, applied topically with myrrh, arrest menstruation when in excess. So remarkably strong is the shell of an egg, that if it is set upright, no force or weight can break it, unless a slight inclination be made to one side or other of the circumference. Eggs taken whole in wine, with rue, dill, and cum- min, facilitate parturition. Used with oil and cedar-resin, they remove itch and prurigo, and, applied in combination with cyclaminos, they are remedial for running ulcers of the head. For purulent expectorations and spitting of blood, a raw egg is taken, warmed with juice of cut-leek and an equal quantity of Greek honey. For coughs, eggs are administered, boiled and beaten up with honey, or else raw, with raisin wine and an equal quantity of olive oil. For diseases of the male organs, an injection is made, of an egg, three cyathi of raisin wine, and half an ounce of amylum, the mixture being used immediately after the bath. Where injuries have been inflicted by serpents, boiled eggs are used as a liniment, beaten up with nasturtium.

In what various ways eggs are used as food is well known to all, passing downwards, however swollen the throat may be, and warming the parts as they pass. Eggs, too, are the only diet which, while it affords nutriment in sickness, does not load the stomach, possessing at the same moment all the advantages both of food and drink. We have already stated, that the shell of an egg becomes soft when steeped in vinegar: it is by the aid of eggs thus prepared, and kneaded up with meal into bread, that patients suffering from the cœliac flux are often restored to strength. Some, however, think it a better plan to roast the eggs, when thus softened, in a shallow pan; a method, by the aid of which, they arrest not only looseness of the bowels, but excessive menstruation as well. In cases, again, where the discharges are greatly in excess, eggs are taken raw, with meal, in water. The yolks, too, are employed alone, boiled hard in vinegar and roasted with ground pepper, when wanted to arrest diarrhœa.

For dysentery, there is a sovereign remedy, prepared in the following manner: an egg is emptied into a new earthen vessel, which done, in order that all the proportions may be equal, fill the

shell, first with honey, then with oil, and then with vinegar; beat them up together, and thoroughly incorporate them: the better the quality of the several ingredients, the more efficacious the mixture will be. Others, again, instead of oil and vinegar, use the same proportions of red resin and wine. There is also another way of making up this prepara- tion: the proportion of oil, and of that only, remains the same, and to it they add two sixtieth parts of a denarius of the vegetable which we have spoken of under the name of "rhus," and five oboli of honey. All these ingredients are boiled down together, and no food is eaten by the patient till the end of four hours after taking the mixture. Many persons, too, have a cure for griping pains in the bowels, by beating up two eggs with four cloves of garlick, and administering them, warmed in one semi-sextarius of wine.

Not to omit anything in commendation of eggs, I would here add that glair of egg, mixed with quicklime, unites broken glass. Indeed, so great is the efficacy of the substance of an egg, that wood dipped in it will not take fire, and cloth with which it has come in contact will not ignite. On this occasion, however, it is only of the eggs of poultry that I have been speaking, though those of the various other birds as well are possessed of many useful properties, as I shall have to mention on the appropriate occasions.

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CHAP. 12.

SERPENTS' EGGS.

In addition to the above, there is another kind of egg, held in high renown by the people of the Gallic provinces, but totally omitted by the Greek writers. In summer time, numberless snakes become artificially entwined together, and form rings around their bodies with the viscous slime which exudes from their mouths, and with the foam secreted by them: the name given to this substance is "anguinum." The Druids tell us, that the serpents eject these eggs into the air by their hissing, and that a person must be ready to catch them in a cloak, so as not to let them touch the ground; they say also that he must instantly take to flight on horseback, as the serpents will be sure to pursue him, until some intervening river has placed a barrier between them. The test of its genuineness, they say, is its floating against the current of a stream, even though it be set in gold. But, as it is the way with magicians to be dexterous and cunning in casting a veil about their frauds, they pretend that these eggs can only be taken on a certain day of the moon; as though, forsooth, it depended entirely upon the human will to make the moon and the serpents accord as to the moment of this operation.

I myself, however, have seen one of these eggs: it was round, and about as large as an apple of moderate size; the shell of it was formed of a cartilaginous substance, and it was surrounded with numerous cupules, as it were, resembling those upon the arms of the polypus: it is held in high estimation among the Druids. The possession of it is marvellously vaunted as ensuring success in law-suits, and a favourable reception with princes; a notion which has been so far belied, that a Roman of equestrian rank, a native of the territory of the Vocontii, who, during a trial, had one of these eggs in his bosom, was slain by the late Emperor Tiberius, and for no other reason, that I know of, but because he was in possession of it. It is this entwining of serpents with one another, and the fruitful results of this unison, that seem to me to have given rise to the usage among foreign nations, of surrounding the caduceus with representations of

serpents, as so many symbols of peace-it must be remembered, too, that on the caduceus, serpents are never represented as having crests.

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CHAP. 13.

THE METHOD OF PREPARING COMMAGENUM. FOUR REMEDIES DERIVED FROM IT.

Having to make mention, in the present Book, of the eggs of the goose and the numerous uses to which they are applied, as also of the bird itself, it is our duty to award the honour to Commagene of a most celebrated preparation there made. This composition is prepared from goose-grease, a substance applied to many other well-known uses as well; but in the case of that which comes from Commagene, a part of Syria, the grease is first incorporated with cinnamon, cassia, white pepper, and the plant called "commagene," and then placed in vessels and buried in the snow. The mixture has an agreeable smell, and is found extremely useful for cold shiverings, convulsions, heavy or sudden pains, and all those affections, in fact, which are treated with the class of remedies known as "acopa;" being equally an unguent and a medicament.

There is another method, also, of preparing it in Syria: the fat of the bird is preserved in manner already described, and there is added to it erysisceptrum, xylobalsamum, palm elate, and calamus, each in the same proportion as the grease; the whole being gently boiled some two or three times in wine. This preparation is made in winter, as in summer it will never thicken, except with the addition of wax. There are numerous other remedies, also, derived from the goose, as well as from the raven; a thing I am much surprised at, seeing that both the goose and the raven are generally said to be in a diseased state at the end of summer and the beginning of autumn.

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CHAP. 14. (4.)

REMEDIES DERVED FROM THE DOO.

We have already spoken of the honours earned by the geese, when the Gauls were detected in their attempt to scale the Capitol. It is for a corresponding reason, also, that punishment is yearly inflicted upon the dogs, by crucifying them alive upon a gibbet of elder, between the Temple of Juventas and that of Summanus.

In reference to this last-mentioned animal, the usages of our forefathers compel us to enter into some further details. They considered the flesh of sucking whelps to be so pure a meat, that they were in the habit of using them as victims even in their expiatory sacrifices. A young whelp, too, is sacrificed to Genita Mana; and, at the repasts celebrated in honour of the gods, it is still the usage to set whelps' flesh on table; at the inaugural feasts, too, of the pontiffs, this dish was in common use, as we learn from the Comedies of Plautus. It is generally thought that for narcotic poisons there is nothing better than dogs' blood; and it would appear that it was this animal that first taught man the use of emetics. Other me- dicinal uses of the dog which are marvellously commended, I shall have occasion to refer to on the appropriate occasions.

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CHAP. 15.

REMEDIES CLASSIFIED ACCORDING TO THE DIFFERENT MALADIES. REMEDIES FOR INJURIES INFLICTED BY SERPENTS. REMEDIES DERIVED FROM MICE.

We will now resume the order originally proposed. For stings inflicted by serpents fresh sheeps'-dung, boiled in wine, is considered a very useful application: as also mice split asunder and applied to the wound. Indeed, these last animals are possessed of certain properties by no means to be despised, at the ascension of the planets more particularly, as already stated; the lobes increasing or decreasing in number, with the age of the moon, as the case may be. The magicians have a story that swine will follow any person who gives them a mouse's liver to eat, enclosed in a fig: they say, too, that it has a similar effect upon man, but that the spell may be destroyed by swallowing a cyathus of oil.

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CHAP. 16.

REMEDIES DERIVED FROM THE WEASEL.

There are two varieties of the weasel; the one, wild, larger than the other, and known to the Greeks as the “ictis:” its gall is said to be very efficacious as an antidote to the sting of the asp, but of a venomous nature in other respects. The other kind, which prowls about our houses, and is in the habit, Cicero tells us, of removing its young ones, and changing every day from place to place, is an enemy to serpents. The flesh of this last, preserved in salt, is given, in doses of one denarius, in three cyathi of drink to persons who have been stung by serpents: or else the maw of the animal is stuffed with coriander seed and dried, to be taken for the same purpose in wine. The young one of the weasel is still more efficacious for these purposes.

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CHAP. 17.

REMEDIES DERIVED FROM BUGS.

There are some things, of a most revolting nature, but which are recommended by authors with such a degree of assurance, that it would be improper to omit them, the more particularly as it is to the sympathy or antipathy of objects that remedies owe their existence. Thus the bug, for instance, a most filthy insect, and one the very name of which inspires us with loathing, is said to be a neutralizer of the venom of serpents, asps in particular, and to be a preservative against all kinds of poisons. As a proof of this, they tell us that the sting of an asp is never fatal to poultry, if they have eaten bugs that day; and that, if such is the case, their flesh is remarkably beneficial to persons who have been stung by serpents. Of the various recipes given in reference to these insects, the least revolting are the application of them externally to the wound, with the blood of a tortoise; the employment of them as a fumigation to make leeches loose their hold; and the administering of them to animals in drink when a leech has been accidentally swallowed. Some persons, however, go so far as to crush bugs with salt and woman's milk, and anoint the eyes with the mixture; in combination, too, with honey and oil of roses, they use them as an injection for the ears. Field-bugs, again, and those found upon the mallow, are burnt, and the ashes mixed with oil of roses as an injection for the ears.

As to the other remedial virtues attributed to bugs, for the cure of vomiting, quartan fevers, and other diseases, although we find recommendations given to swallow them in an egg, some wax, or in a bean, I look upon them as utterly unfounded, and not worthy of further notice. They are employed, however, for the treatment of lethargy, and with some fair reason, as they successfully neutralize the narcotic effects of the poison of the asp: for this purpose seven of them are administered in a cyathus of water, but in the case of children only four. In cases, too, of strangury, they have been injected into the urinary channel: so true it is that Nature, that universal parent, has engendered nothing without some powerful

reason or other. In addition to these particulars, a couple of bugs, it is said, attached to the left arm in some wool that has been stolen from the shepherds, will effectually cure nocturnal fevers; while those recurrent in the daytime may be treated with equal success by enclosing the bugs in a piece of russet-coloured cloth. The scolopendra, on the other hand, is a great enemy to these insects; used in the form of a fumigation, it kills them.

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CHAP. 18.

PARTICULARS RELATIVE TO THE ASP.

The sting of the asp takes deadly effect by causing torpor and drowsiness. Of all serpents, injuries inflicted by the asp are the most incurable; and their venom, if it comes in contact with the blood or a recent wound, produces instantaneous death. If, on the other hand, it touches an old sore, its fatal effects are not so immediate. Taken internally, in however large a quantity, the venom is not injurious, as it has no corrosive properties; for which reason it is that the flesh of animals killed by it may be eaten with impunity.

I should hesitate in giving circulation to a prescription for injuries inflicted by the asp, were it not that M. Varro, then in the eighty-third year of his age, has left a statement to the effect that it is a most efficient remedy for wounds inflicted by this reptile, for the person stung to drink his own urine.

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CHAP. 19.

REMEDIES DERIVED FROM THE BASILISK.

As to the basilisk, a creature which the very serpents fly from, which kills by its odour even, and which proves fatal to man by only looking upon him, its blood has been marvellously extolled by the magicians. This blood is thick and adhesive, like pitch, which it resembles also in colour: dissolved in water, they say, it becomes of a brighter red than that of cinnabar. They attribute to it also the property of ensuring success to petitions preferred to potentates, and to prayers even offered to the gods; and they regard it as a remedy for various diseases, and as an amulet preservative against all noxious spells. Some give it the name of “Saturn’s blood.”

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CHAP. 20.

REMEDIES DERIVED FROM THE DRAGON.

The dragon is a serpent destitute of venom. Its head, placed beneath the threshold of a door, the gods being duly propitiated by prayers, will ensure good fortune to the house, it is said. Its eyes, dried and beaten up with honey, form a liniment which is an effectual preservative against the terrors of spectres by night, in the case of the most timorous even. The fat adhering to the heart, attached to the arm with a deer's sinews in the skin of a gazelle, will ensure success in law-suits, it is said; and the first joint of the vertebræ will secure an easy access to persons high in office. The teeth, attached to the body with a deer's sinews in the skin of a roebuck, have the effect of rendering masters indulgent and potentates gracious, it is said.

But the most remarkable thing of all is a composition, by the aid of which the lying magicians profess to render persons invincible. They take the tail and head of a dragon, the hairs of a lion's forehead with the marrow of that animal, the foam of a horse that has won a race, and the claws of a dog's feet: these they tie up together in a deer's skin, and fasten them alternately with the sinews of a deer and a gazelle. It is, however, no better worth our while to refute such pretensions as these, than it would be to describe the alleged remedies for injuries inflicted by serpents, seeing that all these contrivances are so many evil devices to poison men's morals.

Dragon's fat will repel venomous creatures; an effect which is equally produced by burning the fat of the ichneumon. They will take to flight, also, at the approach of a person who has been rubbed with nettles bruised in vinegar.

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CHAP. 21.

REMEDIES DERIVED FROM THE VIPER.

The application of a viper's head, even if it be not the one that has inflicted the wound, is of infinite utility as a remedy. It is highly advantageous, too, to hold the viper that inflicted the injury on the end of a stick, over the steam of boiling water, for it will quite undo the mischief, they say. The ashes, also, of the viper, are considered very useful, employed as a liniment for the wound. According to what Nigidius tells us, serpents are compelled, by a sort of natural instinct, to return to the person who has been stung by them. The people of Scythia split the viper's head between the ears, in order to extract a small stone, which it swallows in its alarm, they say: others, again, use the head entire.

From the viper are prepared those tablets which are known as "theriaci" to the Greeks: for this purpose the animal is cut away three fingers' length from both the head and the tail, after which the intestines are removed and the livid vein adhering to the back-bone. The rest of the body is then boiled in a shallow pan, in water seasoned with dill, and the bones are taken out, and fine wheaten flour added; after which the preparation is made up into tablets, which are dried in the shade and are employed as an ingredient in numerous medicaments. I should remark, however, that this preparation, it would appear, can only be made from the viper. Some persons, after cleansing the viper in manner above described, boil down the fat, with one sextarius of olive oil, to one half. Of this preparation, when needed, three drops are added to some oil, with which mixture the body is rubbed, to repel the approach of all kinds of noxious animals.

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CHAP. 22.

REMEDIES DERIVED FROM THE OTHER SERPENTS.

In addition to these particulars, it is a well-known fact that for all injuries inflicted by serpents, and those even of an otherwise incurable nature, it is an excellent remedy to apply the entrails of the serpent itself to the wound; as also, that persons who have once swallowed a viper's liver, boiled, will never afterwards be attacked by serpents. The snake, too, is not venomous, except, indeed, upon certain days of the month when it is irritated by the action of the moon: it is a very useful plan to take it alive, and pound it in water, the wound inflicted by' it being fomented with the preparation. Indeed, it is generally supposed that this reptile is possessed of numerous other remedial properties, as we shall have occasion more fully to mention from time to time: hence it is that the snake is consecrated to Æsculapius. As for Democritus, he has given some monstrous preparations from snakes, by the aid of which the language of birds, he says, may be understood.

The Æsculapian snake was first brought to Rome from Epidaurus, but at the present day it is very commonly reared in our houses even; so much so, indeed, that if the breed were not kept down by the frequent conflagrations, it would be impossible to make head against the rapid increase of them. But the most beautiful of all the snakes are those which are of an amphibious nature. These snakes are known as "hydri," or water-snakes: in virulence their venom is inferior to that of no other class of serpents, and their liver is preserved as a remedy for the ill effects of their sting.

A pounded scorpion neutralizes the venom of the spotted lizard. From this last animal, too, there is a noxious preparation made; for it has been found that wine in which it has been drowned, covers the face of those who drink it with morphew. Hence it is that females, when jealous of a rival's beauty, are in the habit of stifling a spotted lizard in the unguents which they use. In such a case, the proper remedy is yolk of egg, honey, and nitre. The gall of a spotted lizard, beaten up in water, attracts weasels, they say.

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CHAP. 23.

REMEDIES DERIVED FROM THE SALAMANDER.

But of all venomous animals it is the salamander that is by far the most dangerous; for while other reptiles attack individuals only, and never kill many persons at a time-not to mention the fact that after stinging a human being they are said to die of remorse, and the earth refuses to harbour them — the salamander is able to destroy whole nations at once, unless they take the proper precautions against it. For if this reptile happens to crawl up a tree, it infects all the fruit with its poison, and kills those who eat thereof by the chilling properties of its venom, which in its effects is in no way different from aconite. Nay, even more than this, if it only touches with its foot the wood upon which bread is baked, or if it happens to fall into a well, the same fatal effects will be sure to ensue. The saliva, too, of this reptile, if it comes in contact with any part of the body, the sole of the foot even, will cause the hair to fall off from the whole of the body. And yet the salamander, highly venomous as it is, is eaten by certain animals, swine for example; owing, no doubt, to that antipathy which prevails in the natural world.

From what we find stated, it is most probable, that, next to the animals which eat it, the best neutralizers of the poison of this reptile, are, cantharides taken in drink, or a lizard eaten with the food; other antidotes we have already mentioned, or shall notice in the appropriate place. As to what the magicians say, that it is proof against fire, being, as they tell us, the only animal that has the property of extinguishing fire, if it had been true, it would have been made trial of at Rome long before this. Sextius says that the salamander, preserved in honey and taken with the food, after removing the intestines, head, and feet, acts as an aphrodisiac: he denies also that it has the property of extinguishing fire.

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CHAP. 24.

REMEDIES DERIVED FROM BIRDS FOR INJURIES IN- FLICTED BY SERPENTS. REMEDIES DERIVED FROM THE VULTURE.

Among the birds that afford us remedies against serpents, it is the vulture that occupies the highest rank; the black vulture, it has been remarked, being less efficacious than the others. The smell of their feathers, burnt, will repel serpents, they say; and it has been asserted that persons who carry the heart of this bird about them will be safe, not only from serpents, but from wild beasts as well, and will have nothing to fear from the attacks of robbers or from the wrath of kings.

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CHAP. 25.

REMEDIES DERIVED FROM POULTRY.

The flesh of cocks and capons, applied warm the moment it has been plucked from the bones, neutralizes the venom of serpents; and the brains, taken in wine, are productive of a similar effect. The people of Parthia, however, prefer applying a hen's brains to the wound. Poultry broth, too, is highly celebrated as a cure, and is found marvellously useful in many other cases. Panthers and lions will never touch persons who have been rubbed with it, more particularly if it has been flavoured with garlic. The broth that is made of an old cock is more relaxing to the bowels; it is very good also for chronic fevers, numbness of the limbs, cold shiverings and maladies of the joints, pains also in the head, defluxions of the eyes, flatulency, sickness at stomach, incipient tenesmus, liver complaints, diseases of the kidneys, affections of the bladder, indigestion, and asthma. Hence there are several recipes for preparing this broth; it being most efficacious when boiled up with sea-cabbage, salted tunny, capers, parsley, the plant mercurialis, polypodium, or dill. The best plan, however, is to boil the cock or capon with the plants above-mentioned in three congii of water, down to three semi-sextarii; after which it should be left to cool in the open air, and given at the proper moment, just after an emetic has been administered.

And here I must not omit to mention one marvellous fact, even though it bears no reference to medicine: if the flesh of poultry is mingled with gold in a state of fusion, it will absorb the metal and consume it, thus showing that it acts as a poison upon gold. If young twigs are made up into a collar and put round a cock's neck, it will never crow.

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CHAP. 26.

REMEDIES DERIVED FROM OTHER BIRDS.

The flesh of pigeons also, or of swallows, used fresh and minced, is a remedy for injuries inflicted by serpents: the same, too, with the feet of a horned owl, burnt with the plant plumbago. While mentioning this bird, too, I must not forget to cite another instance of the impositions practised by the magicians: among other prodigious lies of theirs, they pretend that the heart of a horned owl, applied to the left breast of a woman while asleep, will make her disclose all her secret thoughts. They say, also, in addition to this, that persons who have it about them in battle will be sure to display valour. They describe, too, certain remedies made from the egg of this bird for the hair. But who, pray, has ever had the opportunity of seeing the egg of a horned owl, considering that it is so highly ominous to see the bird itself? And then besides, who has ever thought proper to make the experiment, and upon his hair more particularly? In addition to all this, the magicians go so far as to engage to make the hair curl by using the blood of the young of the horned owl.

What they tell us, too, about the bat, appears to belong to pretty much the same class of stories: if one of these animals is carried alive, three times round a house, they say, and then nailed outside of the window with the head downwards, it will have all the effects of a countercharm: they assert, also, that the bat is a most excellent preservative for sheepfolds, being first carried three times round them, and then hung up by the foot over the lintel of the door. The blood of the bat is also recommended by them as a sovereign remedy, in combination with a thistle, for injuries inflicted by serpents.

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CHAP. 27.

REMEDIES FOR THE BITE OF THE PHALANGIUM. THE SEVERAL VARIETIES OF THAT INSECT, AND OF THE SPIDER.

Of the phalangium, an insect unknown to Italy, there are numerous kinds; one of which resembles the ant, but is much larger, with a red head, black as to the other parts of the body, and covered with white spots. Its sting is much more acute than that of the wasp, and it lives mostly in the vicinity of ovens and mills. The proper remedy is, to present before the eyes of the person stung another insect of the same description, a purpose for which they are preserved when found dead. Their husks also, found in a dry state, are beaten up and taken in drink for a similar purpose. The young of the weasel, too, as already stated, are possessed of a similar property. The Greeks give the name of "phalangion" also to a kind of spider, but they generally distinguish it by the surname of the "wolf." A third kind, also known as the "phalangium," is a spider with a hairy body, and a head of enormous size. When opened, there are found in it two small worms, they say: these, attached in a piece of deer's skin, before sunrise, to a woman's body, will prevent conception, according to what Cæcilius, in his Commentaries, says. This property lasts, however, for a year only; and, indeed, it is the only one of all the anti-conceptives that I feel myself at liberty to mention, in favour of some women whose fecundity, quite teeming with children, stands in need of some such respite.

There is another kind again, called "rhagion," similar to a black grape in appearance, with a very diminutive mouth, situate beneath the abdomen, and extremely short legs, which have all the appearance of not being fully developed. The bite of this last insect causes fully as much pain as the sting of the scorpion, and the urine of persons who are injured by it, presents filmy appearances like cobwebs. The asterion would be identical with it, were it not distinguished by white streaks upon the body: its bite causes failing in the knees. But worse than either of these last, is a blue spider, covered with black hair, and causing dimness of the sight and

vomiting of a matter like cobwebs in appearance. A still more dangerous kind is one which differs only from the hornet, in form, in being destitute of wings, and the bite of which causes a wasting away of the system. The myrmecion in the head resembles the ant, has a black body spotted with white, and causes by its bite a pain like that attendant upon the sting of the wasp. Of the tetragnathius there are two varieties, the more noxious of which has two white streaks crossing each other on the middle of the head; its bite causes the mouth to swell. The other one is of an ashy colour, whitish on the posterior part of the body, and not so ready to bite.

The least noxious of all is the spider that is seen extending its web along the walls, and lying in wait for flies; it is of the same ashy colour as the last.

For the bite of all spiders, the best remedies are: a cock's brains, taken in oxycrate with a little pepper; five ants, swallowed in drink; sheep's dung, applied in vinegar; and spiders of any kind, left to putrefy in oil. The bite of the shrewmouse is cured by taking lamb's rennet in wine; the ashes of a ram's foot with honey; or a young weasel, prepared in manner already mentioned by us when speaking of serpents. In cases where a shrewmouse has bitten beasts of burden, a mouse,. fresh caught, is applied to the wound with oil, or a bat's gall with vinegar. The shrew-mouse itself too, split asunder and applied to the wound, is a cure for its bite; indeed, if the animal is with young when the injury is inflicted, it will instantly burst asunder. The best plan is to apply the mouse itself which has inflicted the bite, but others are commonly kept for this purpose, either steeped in oil or coated with clay. Another remedy, again, for its bite is the earth taken from the rut made by a cart-wheel; for this animal, it is said, owing to a certain torpor which is natural to it, will never cross a rut made by a wheel.

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CHAP. 28.

REMEDIES DERIVED FROM THE STELLIO OR SPOTTED LIZARD.

The stellio, in its turn, is said to have the greatest antipathy to the scorpion; so much so indeed, that the very sight of it strikes terror in that reptile, and a torpor attended with cold sweats; hence it is that this lizard is left to putrefy in oil, as a liniment for injuries inflicted by the scorpion. Some persons boil down the oil with litharge, and make a sort of plaster of it to apply to the wound. The Greeks give the name of “colotes” to this lizard, as also “ascalabotes,” and “galeotes:” it is never found in Italy, and is covered with small spots, utters a shrill, piercing noise, and lives on food; characteristics, all of them, foreign to the stellio of Italy.

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CHAP. 29.

REMEDIES DERIVED FROM VARIOUS INSECTS.

Poultry dung, too, is good as an application for the sting of the scorpion; a dragon's liver also; a lizard or mouse split asunder; or else the scorpion itself, either applied to the wound, grilled and eaten, or taken in two cyathi of undiluted wine. One peculiarity of the scorpion is, that it never stings the palm of the hand, and never touches any parts of the body but those covered with hair. Any kind of pebble, applied to the wound on the side which has lain next to the ground, will alleviate the pain. A potsherd too, covered with earth on any part of it, and applied just as it is found, will effect a cure, it is said — the person, however, who applies it must not look behind him, and must be equally careful that the sun does not shine upon him. Earth-worms also, are pounded and applied to the wound; in addition to which, they form ingredients in numerous other medicaments, being kept in honey for the purpose.

For injuries inflicted by bees, wasps, hornets, and leeches, the owlet is considered a very useful remedy; persons, too, who carry about them the beak of the woodpecker of Mars are never injured by any of these creatures. The smaller kinds of locusts also, destitute of wings and known as "attelebi," are a good remedy for the sting of the scorpion.

There is a kind of venomous ant, by no means common in Italy; Cicero calls it "solipuga," and in Bætica it is known as "salpuga." The proper remedy for its venom and that of all kinds of ants is a bat's heart. We have already stated that cantharides are an antidote to the salamander.

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CHAP. 30.

REMEDIES DERIVED :FROM CANTHARIDES.

But with reference to cantharides, there has been considerable controversy on the subject, seeing that, taken internally, they are a poison, attended with excruciating pains in the bladder. Cossinus, a Roman of the Equestrian order, well known for his intimate friendship with the Emperor Nero, being attacked with lichen, that prince sent to Egypt for a physician to cure him; who recommending a potion prepared from cantharides, the patient was killed in consequence. There is no doubt, however, that applied externally they are useful, in combination with juice of Taminian grapes, and the suet of a sheep or she-goat. As to the part of the body in which the poison of the insect is situate, authors are by no means agreed. Some fancy that it exists in the feet and head, while others, again, deny it; indeed the only point that has been well ascertained is, that the wings are the only antidote to their venom, wherever it may be situate.

Cantharides are produced from a small grub, found more particularly in the spongy excrescences which grow on the stem of the dog-rose, and still more abundantly upon the ash. Other kinds, again, are found upon the white rose, but they are by no means so efficacious. The most active of all in their properties, are those which are spotted with yellow streaks running transversely across the wings, and are plump and well-filled. Those which are small, broad, and hairy, are not so powerful in their operation, and the least useful of all are those which are thin and shrivelled, and present one uniform colour. They are put in a small earthen pot, not coated with pitch, and stopped at the mouth with a linen cloth, a layer of full-blown roses being placed upon them; they are then suspended over vinegar boiled with salt, until the steam has penetrated the cloth and stifled them, after which they are put by for use. They have a caustic effect upon the skin, and cover the ulcerations with a crust; a property which belongs also to the pine-caterpillar found upon the pitch-tree, and to the buprestis, both of which are prepared in a

similar manner.

All these insects are extremely efficacious for the cure of leprosy and lichens. It is said, too, that they act as an emmenagogue and diuretic, for which last reason Hippocrates used to prescribe them for dropsy. Cato of Utica was reproached with selling poison, because, when disposing of a royal property by auction, he sold a quantity of cantharides, at the price of sixty thousand sesterces. (5.) We may here remark, too, that it was on the same occasion that some ostrich fat was sold, at the price of thirty thousand sesterces, a substance which is preferable to goose-grease in every respect.

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CHAP. 31.

VARIOUS COUNTER-POISONS.

We have already spoken of various kinds of poisonous honey: the antidote employed for it is honey in which the bees have been stifled. This honey, too, taken in wine, is a remedy for indispositions caused by eating fish.

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CHAP. 32.

REMEDIES FOR THE BITE OF THE MAD DOG.

When a person has been bitten by a mad dog, he may be preserved from hydrophobia by applying the ashes of a dog's head to the wound. All ashes of this description, we may here remark once for all, are prepared in the same method; the substance being placed in a new earthen vessel well covered with potter's clay, and put into a furnace. These ashes, too, are very good, taken in drink, and hence some recommend the head itself to be eaten in such cases. Others, again, attach to the body of the patient a maggot, taken from the carcase of a dead dog; or else place the menstruous blood of a bitch, in a linen cloth, beneath his cup, or insert in the wound ashes of hairs from the tail of the dog that inflicted the bite. Dogs will fly from any one who has a dog's heart about him, and they will never bark at a person who carries a dog's tongue in his shoe, beneath the great toe, or the tail of a weasel which has been set at liberty after being deprived of it. There is beneath the tongue of a mad dog a certain slimy spittle, which, taken in drink, is a preventive of hydrophobia: but much the most useful plan is, to take the liver of the dog that has inflicted the injury, and eat it raw, if possible; should that not be the case, it must be cooked in some way or other, or else a broth must be taken, prepared from the flesh.

There is a small worm in a dog's tongue, known as "lytta" to the Greeks: if this is removed from the animal while a pup, it will never become mad or lose its appetite. This worm, after being carried thrice round a fire, is given to persons who have been bitten by a mad dog, to prevent them from becoming mad. This madness, too, is prevented by eating a cock's brains; but the virtue of these brains lasts for one year only, and no more. They say, too, that a cock's comb, pounded, is highly efficacious as an application to the wound; as also, goose-grease, mixed with honey. The flesh also of a mad dog is sometimes salted, and taken with the food, as a remedy for this disease. In addition to this, young puppies of the same sex as the dog that has inflicted the injury, are drowned in water, and the person who has

been bitten eats their liver raw. The dung of poultry, provided it is of a red colour, is very useful, applied with vinegar; the ashes, too, of the tail of a shrew-mouse, if the animal has survived and been set at liberty; a clod from a swallow's nest, applied with vinegar; the young of a swallow, reduced to ashes; or the skin or old slough of a serpent that has been cast in spring, beaten up with a male crab in wine: this slough, I would remark, put away by itself in chests and drawers, destroys moths.

So virulent is the poison of the mad dog, that its very urine even, if trod upon, is injurious, more particularly if the person has any ulcerous sores about him. The proper remedy in such case is to apply horse-dung, sprinkled with vinegar, and warmed in a fig. These marvellous properties of the poison will occasion the less surprise, when we remember that, "a stone bitten by a dog" has become a proverbial expression for discord and variance. Whoever makes water where a dog has previously watered, will be sensible of numbness in the loins, they say.

The lizard known by some persons as the "seps," and by others as the "chalcidice," taken in wine, is a cure for its own bite.

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CHAP. 33.

REMEDIES FOR THE OTHER POISONS.

Where persons have been poisoned by noxious preparations from the wild weasel, the proper remedy is the broth of an old cock, taken in considerable quantities. This broth, too, is particularly good, taken as a counter-poison for aconite, in combination with a little salt. Poultry dung — but the white part only — boiled with hyssop, or with honied wine, is an excellent antidote to the poison of fungi and of mushrooms: it is a cure also for flatulency and suffocations; a thing the more to be wondered at, seeing that if any other living creature only tastes this dung, it is immediately attacked with griping pains and flatulency. Goose blood, taken with an equal quantity of olive oil, is an excellent neutralizer of the venom of the seahare: it is kept also as an antidote for all kinds of noxious drugs, made up into lozenges with red earth of Lemnos and juice of white-thorn, five drachmæ of the lozenges being taken in three cyathi of water. The same property belongs also to the young of the weasel, prepared in manner already mentioned.

Lambs' rennet is an excellent antidote to all noxious preparations; the blood, also, of ducks from Pontus; for which reason it is preserved in a dry state, and dissolved in wine when wanted, some persons being of opinion that the blood of the female bird is the most efficacious. In a similar manner, the crop of a stork acts as an universal counter-poison; and so does sheep's rennet. A broth made from ram's flesh is particularly good as a remedy for cantharides: sheep's milk also, taken warm; this last being very useful in cases where persons have drunk an infusion of aconite, or have swallowed the buprestis in drink. The dung of wood-pigeons is particularly good taken internally as an antidote to quicksilver; and for narcotic poisons the common weasel is kept dried, and taken internally, in doses of two drachmæ.

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CHAP. 34. (6.)

REMEDIES FOR ALOPECY.

Where the hair has been lost through alopecy, it is made to grow again by using ashes of burnt sheep's dung, with oil of cyprus and honey; or else the hoof of a mule of either sex, burnt to ashes and mixed with oil of myrtle. In addition to these substances, we find our own writer, Varro, mentioning mousedung, which he calls "muscerda," and the heads of flies, applied fresh, the part being first rubbed with a fig-leaf. Some recommend the blood of flies, while others, again, apply ashes of burnt flies for ten days, in the proportion of one part of the ashes to two of ashes of papyrus or of nuts. In other cases, again, we find ashes of burnt flies kneaded up with woman's milk and cabbage, or, in some instances, with honey only. It is generally believed that there is no creature less docile or less intelligent than the fly; a circumstance which makes it all the more marvellous that at the sacred games at Olympia, immediately after the immolation of the bull in honour of the god called "Myiodes," whole clouds of them take their departure from that territory. A mouse's head or tail, or, indeed, the whole of the body, reduced to ashes, is a cure for alopecy, more particularly when the loss of the hair has been the result of some noxious preparation. The ashes of a hedge-hog, mixed with honey, or of its skin, applied with tar, are productive of a similar effect. The head, too, of this last animal, reduced to ashes, restores the hair to scars upon the body; the place being first prepared, when this cure is made use of, with a razor and an application of mustard: some persons, however, prefer vinegar for the purpose. All the properties attributed to the hedge-hog are found in the porcupine in a still higher degree.

A lizard burnt, as already mentioned, with the fresh root of a reed, cut as fine as possible, to facilitate its being re- duced to ashes, and then mixed with oil of myrtle, will prevent the hair from coming off. For all these purposes green lizards are still more efficacious, and the remedy is rendered most effectual, when salt is added, bears' grease, and pounded onions. Some persons boil ten green lizards in ten

sextarii of oil, and content themselves with rubbing the place with the mixture once a month. Alopecy is also cured very speedily with the ashes of a viper's skin, or by an application of fresh poultry dung. A raven's egg, beaten up in a copper vessel and applied to the head, previously shaved, imparts a black colour to the hair; care must be taken, however, to keep some oil in the mouth till the application is quite dry, or else the teeth will turn black as well. The operation must be performed also in the shade, and the liniment must not be washed off before the end of three days. Some persons employ the blood and brains of a raven, in combination with red wine; while others, again, boil down the bird, and put it, at bedtime, in a vessel made of lead. With some it is the practice, for the cure of alopecy, to apply bruised cantharides with tar, the skin being first prepared with an application of nitre: — it should be remembered, however, that cantharides are possessed of caustic properties, and due care must be taken not to let them eat too deep into the skin. For the ulcerations thus produced, it is recommended to use applications made of the heads, gall, and dung of mice, mixed with hellebore and pepper.

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CHAP. 35.

REMEDIES FOR LICE AND FOR PORRIGO.

Nits are destroyed by using dogs' fat, eating serpents cooked like eels, or else taking their sloughs in drink. Porrigo is cured by applying sheep's gall with Cimolian chalk, and rubbing the head with the mixture till dry.

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CHAP. 36.

REMEDIES FOR HEAD-ACHE AND FOR WOUNDS ON THE HEAD.

A good remedy for head-ache are the heads taken from the snails which are found without shells, and in an imperfect state. In these heads there is found a hard stony substance, about as large as a common pebble: on being extracted from the snail, it is attached to the patient, the smaller snails being pounded and applied to the forehead. Wool-grease, too, is used for a similar purpose; the bones of a vulture's head, worn as an amulet; or the brains of that bird, mixed with oil and cedar resin, and applied to the head and introduced into the nostrils. The brains of a crow or owlet, are boiled and taken with the food: or a cock is put into a coop, and kept without food a day and a night, the patient submitting to a similar abstinence, and attaching to his head some feathers plucked from the neck or the comb of the fowl. The ashes, too, of a weasel are applied in the form of a liniment; a twig is taken from a kite's nest, and laid beneath the patient's pillow; or a mouse's skin is burnt, and the ashes applied with vinegar: sometimes, also, the small bone is extracted from the head of a snail that has been found between two cart ruts, and after being passed through a gold ring, with a piece of ivory, is attached to the patient in a piece of dog's skin; a remedy well known to most persons, and always used with success.

For fractures of the cranium, cobwebs are applied, with oil and vinegar; the application never coming away till a cure has been effected. Cobwebs are good, too, for stopping the bleeding of wounds made in shaving. Discharges of blood from the brain are arrested by applying the blood of a goose or duck, or the grease of those birds with oil of roses. The head of a snail cut off with a reed, while feeding in the morning, at full moon more particularly, is attached to the head in a linen cloth, with an old thrum, for the cure of headache; or else a liniment is made of it, and applied with white wax to the forehead. Dogs' hairs are worn also, attached to the forehead in a cloth.

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CHAP. 37.

REMEDIES FOR AFFECTIONS OF THE EYELIDS.

A crow's brains, taken with the food, they say, will make the eyelashes grow; or else wool-grease, applied with warmed myrrh, by the aid of a fine probe. A similar result is promised by using the following preparation: burnt flies and ashes of mouse-dung are mixed in equal quantities, to the amount of half a denarius in the whole; two sixths of a dena- rius of antimony are then added, and the mixture is applied with wool-grease. For the same purpose, also, the young ones of a mouse are beaten up, in old wine, to the consistency of the strengthening preparations known as "acopa." When eyelashes are plucked out that are productive of inconvenience, they are prevented from growing again by using a hedge-hog's gall; the liquid portion, also, of a spotted lizard's eggs; the ashes of a burnt salamander; the gall of a green lizard, mixed with white wine, and left to thicken to the consistency of honey in a copper vessel in the sun; the ashes of a swallow's young, mixed with the milky juice of tithymalos; or else the slime of snails.

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CHAP. 38.

REMEDIES FOR DISEASES OF THE EYES.

According to what the magicians say, glaucoma may be cured by using the brains of a puppy seven days old; the probe being inserted in the right side [of the eye], if it is the right eye that is being operated on, and in the left side, if it is the left. The fresh gall, too, of the asio is used, a bird belonging to the owlet tribe, with feathers standing erect like ears. Apollonius of Pitanæ used to prefer dog's gall, in combination with honey, to that of the hyæna, for the cure of cataract, as also of albugo. The heads and tails of mice, reduced to ashes and applied to the eyes, improve the sight, it is said; a result which is ensured with even greater certainty by using the ashes of a dormouse or wild mouse, or else the brains or gall of an eagle. The ashes and fat of a field-mouse, beaten up with Attic honey and antimony, are remarkably useful for watery eyes — what this antimony is, we shall have occasion to say when speaking of metals.

For the cure of cataract, the ashes of a weasel are used, as also the brains of a lizard or swallow. Weasels, boiled and pounded, and so applied to the forehead, allay defluxions of the eyes, either used alone, or else with fine flour or with frankincense. Employed in a similar manner, they are very good for sun-stroke, or in other words, for injuries inflicted by the sun. It is a remarkably good plan, too, to burn these animals alive, and to use their ashes, with Cretan honey, as a liniment for films upon the eyes. The cast-off slough of the asp, with the fat of that reptile, forms an excellent ointment for improving the sight in beasts of burden. To burn a viper alive in a new earthen vessel, with one cyathus of fennel juice, and a single grain of frankincense, and then to anoint the eyes with the mixture, is remarkably good for cataract and films upon the eyes; the preparation being generally known as "echeon." An eye-salve, too, is prepared, by leaving a viper to putrefy in an earthen pot, and bruising the maggots that breed in it with saffron. A viper, too, is burnt in a vessel with salt, and the preparation is applied to the tip of the tongue, to improve the eyesight, and to act generally as a corrective of the

stomach and other parts of the body. This salt is given also to sheep, to preserve them in health, and is used as an ingredient in antidotes to the venom of serpents.

Some persons, again, use vipers as an article of food: when this is done, it is recommended, the moment they are killed, to put some salt in the mouth and let it melt there; after which, the body must be cut away to the length of four fingers at each extremity, and, the intestines being first removed, the remainder boiled in a mixture of water, oil, salt, and dill. When thus prepared, they are either eaten at once, or else kneaded in a loaf, and taken from time to time as wanted. In addition to the above-mentioned properties, viper-broth cleanses all parts of the body of lice, and removes itching sensations as well upon the surface of the skin. The ashes, also, of a viper's head, used by themselves, are evidently productive of considerable effects; they are employed very advantageously in the form of a liniment for the eyes; and so, too, is viper's fat. I would not make so bold as to advise what is strongly recommended by some, the use, namely, of vipers' gall; for that, as already stated on a more appropriate occasion, is nothing else but the venom of the serpent. The fat of snakes, mixed with verdigrease, heals ruptures of the cuticle of the eyes; and the skin or slough that is cast off in spring, employed as a friction for the eyes, improves the sight. The gall of the boa is highly vaunted for the cure of albugo, cataract, and films upon the eyes, and the fat is thought to improve the sight.

The gall of the eagle, which tests its young, as already stated, by making them look upon the sun, forms, with Attic honey, an eye-salve which is very good for the cure of webs, films, and cataracts of the eye. A vulture's gall, too, mixed with leek-juice and a little honey, is possessed of similar properties; and the gall of a cock, dissolved in water, is employed for the cure of argema and albugo: the gall, too, of a white cock, in particular, is recommended for cataract. For shortsighted persons, the dung of poultry is recommended as a liniment, care being taken to use that of a reddish colour only. A hen's gall, too, is highly spoken of, and the fat in particular, for the cure of pustules upon the pupils, a purpose for which hens are expressly fattened. This last substance is marvellously useful for ruptures of the coats of the eyes, incorporated

with the stones known as schistos and hæmatites. Hens' dung, too, but only the white part of it, is kept with old oil in boxes made of horn, for the cure of white specks upon the pupil of the eye. While mentioning this subject, it is worthy of remark, that peacocks swallow their dung, it is said, as though they envied man the various uses of it. A hawk, boiled in oil of roses, is considered extremely efficacious as a liniment for all affections of the eyes, and so are the ashes of its dung, mixed with Attic honey. A kite's liver, too, is highly esteemed; and pigeons' dung, diluted with vinegar, is used as an application for fistulas of the eye, as also for albugo and marks upon that organ. Goose gall and duck's blood are very useful for contusions of the eyes, care being taken, immediately after the application, to anoint them with a mixture of woolgrease and honey. In similar cases, too, gall of partridges is used, with an equal quantity of honey; but where it is only wanted to improve the sight, the gall is used alone. It is generally thought, too, upon the authority of Hippocrates, that the gall to be used for these purposes should be kept in a silver box.

Partridges' eggs, boiled in a copper vessel, with honey, are curative of ulcers of the eyes, and of glaucoma. For the treatment of blood-shot eyes, the blood of pigeons, ring-doves, turtle-doves, and partridges is remarkably useful; but that of the male pigeon is generally looked upon as the most efficacious. For this purpose, a vein is opened beneath the wing, it being warmer than the rest of the blood, and consequently more beneficial. After it is applied, a compress, boiled in honey, should be laid upon it, and some greasy wool, boiled in oil and wine. Nyctalopy, too, is cured by using the blood of these birds, or the liver of a sheep — the most efficacious being that of a tawny sheep — as already stated by us when speaking of goats. A decoction, too, of the liver is recommended as a wash for the eyes, and, for pains and swellings in those organs, the marrow, used as a liniment. The eyes of a horned owl, it is strongly asserted, reduced to ashes and mixed in an eye-salve, will improve the sight. Albugo is made to disappear by using the dung of turtle-doves, snails burnt to ashes, and the dung of the cenchris, a kind of hawk, according to the Greeks. All the substances above mentioned, used in combination with honey, are curative of argema: honey, too, in

which the bees have died, is remarkably good for the eyes.

A person who has eaten the young of the stork will never suffer from ophthalmia for many years to come, it is said; and the same when a person carries about him the head of a dragon: it is stated, too, that the fat of this last-named animal, applied with honey and old oil, will disperse incipient films of the eyes. The young of the swallow are blinded at full moon, and the moment their sight is restored, their heads are burnt, and the ashes are employed, with honey, to improve the sight, and for the cure of pains, ophthalmia, and contusions of the eyes.

Lizards, also, are employed in numerous ways as a remedy for diseases of the eyes. Some persons enclose a green lizard in a new earthen vessel, together with nine of the small stones known as "cinædia," which are usually attached to the body for tumours in the groin. Upon each of these stones they make nine marks, and remove one from the vessel daily, taking care, when the ninth day is come, to let the lizard go, the stones being kept as a remedy for affections of the eyes. Others, again, blind a green lizard, and after putting some earth beneath it, enclose it in a glass vessel, with some small rings of solid iron or gold. When they find, by looking through the glass, that the lizard has recovered its sight, they set it at liberty, and keep the rings as a preservative against ophthalmia. Others employ the ashes of a lizard's head as a substitute for antimony, for the treatment of eruptions of the eyes. Some recommend the ashes of the green lizard with a long neck that is usually found in sandy soils, as an application for incipient defluxions of the eyes, and for glaucoma. They say, too, that if the eyes of a weasel are extracted with a pointed instrument, its sight will return; the same use being made of it as of the lizards and rings above mentioned. The right eye of a serpent, worn as an amulet, is very good, it is said, for defluxions of the eyes, due care being taken to set the serpent at liberty after extracting the eye. For continuous watering of the eyes, the ashes of a spotted lizard's head, applied with antimony, are remarkably efficacious.

The cobweb of the common fly-spider, that which lines its hole more particularly, applied to the forehead across the temples, in a compress of some kind or other, is said to be marvellously useful for

the cure of defluxions of the eyes: the web must be taken, however, and applied by the hands of a boy who has not arrived at the years of puberty; the boy, too, must not show himself to the patient for three days, and during those three days neither of them must touch the ground with his feet uncovered. The white spider with very elongated, thin, legs, beaten up in old oil, forms an ointment which is used for the cure of albugo. The spider, too, whose web, of remarkable thickness, is generally found adhering to the rafters of houses, applied in a piece of cloth, is said to be curative of defluxions of the eyes. The green scarabæus has the property of rendering the sight more piercing of those who gaze upon it: hence it is that the engravers of precious stones use these insects to steady their sight.

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CHAP. 39.

REMEDIES FOR PAINS AND DISEASES OF THE EARS.

A sheep's gall, mixed with honey, is a good detergent of the ears. Pains in those organs are allayed by injecting a bitch's milk; and hardness of hearing is removed by using dogs' fat, with wormwood and old oil, or else goose-grease. Some persons add juice of onions and of garlic, in equal proportions. The eggs, too, of ants are used, by themselves, for this purpose; these insects being possessed, in fact, of certain medicinal properties, and bears, it is well known, curing themselves when sick, by eating them as food. Goose-grease, and indeed that of all birds, is prepared by removing all the veins and leaving the fat, in a new, shallow, earthen vessel, well covered, to melt in the sun, some boiling water being placed beneath it; which done, it is passed through linen strainers, and is then put by in a cool spot, in a new earthen vessel, for keeping: with the addition of honey it is less liable to turn rancid. Ashes of burnt mice, injected with honey or boiled with oil of roses, allay pains in the ears. In cases where an insect has got into the ears, a most excellent remedy is found in an injection of mouse gall, diluted with vinegar; where, too, water has made its way into the passages of the ear, goose-grease is used, in combination with juice of onions. Some persons skin a dormouse, and after removing the intestines boil the body in a new vessel with honey. Medical men, however, prefer boiling it down to one-third with nard, and recommend it to be kept in that state, and to be warmed when wanted, and injected with a syringe. It is a well-known fact, that this preparation is an effectual remedy for the most desperate maladies of the ears the same, too, with an injection of earth-worms boiled with goose-grease. The red worms, also, that are found upon trees, beaten up with oil, are a most excellent remedy for ulcerations and ruptures of the ears. Lizards, which have been suspended for some time and dried, with salt in the mouth, are curative of contusions of the ears, and of injuries inflicted by blows: the most efficacious for this purpose are those which have ironcoloured spots upon the skin, and are streaked with lines along

the tail.

Millepedes, known also as “centipedes” or “multipedes,” are insects belonging to the earth-worm genus, hairy, with numerous feet, forming curves as they crawl, and contracting themselves when touched: the Greeks give to this insect the name of “oniscos,” others, again, that of “tylos.” Boiled with leek-juice in a pomegranate rind, it is highly efficacious, they say, for pains in the ears; oil of roses being added to the preparation, and the mixture injected into the ear opposite to the one affected. As for that kind which does not describe a curve when moving, the Greeks give it the name of “seps,” while others, again, call it “scolopendra;” it is smaller than the former one, and is injurious. The snails which are commonly used as food, are applied to the ears with myrrh or powdered frankincense; and those with a small, broad, shell are employed with honey as a liniment for fractured ears. Old sloughs of serpents, burnt in a heated potsherd and mixed with oil of roses, are used as an injection for the ears, which is considered highly efficacious for all affections of those organs, and for offensive odours arising there from in particular. In cases where there is suppuration of the ears, vinegar is used, and it is still better if goat’s gall, ox-gall, or that of the sea tortoise, is added. This slough, however, is good for nothing when more than a year old; the same, too, when it has been drenched with rain, as some think. The thick pulp of a spider’s body, mixed with oil of roses, is also used for the ears; or else the pulp applied by itself with saffron or in wool: a cricket, too, is dug up with some of its earth, and applied. Nigidius attributes great virtues to this insect, and the magicians still greater, and all because it walks backwards, pierces the earth, and chirrups by night! The mode of catching it is by throwing an ant, made fast with a hair, into its hole, the dust being first blown away to prevent it from concealing itself: the moment it seizes the ant, it is drawn out.

The dried craw of poultry, a part that is generally thrown away, is beaten up in wine, and injected warm, for suppurations of the ears; the same, too, with the grease of poultry.

On pulling off the head of a black beetle, it yields a sort of greasy substance, which, beaten up with rose oil, is marvellously good, they say, for affections of the ears: care must be taken, however, to

remove the wool very soon, or else this substance will be speedily transformed into an animal, in the shape of a small grub. Some writers assert that two or three of these insects, boiled in oil, are extremely efficacious for the ears; and that they are good, beaten up and applied in linen, for contusions of those organs.

This insect, also, is one of those that are of a disgusting character; but I am obliged, by the admiration which I feel for the operations of Nature, and for the careful researches. of the ancients, to enter somewhat more at large upon it on the present occasion. Their writers have described several varieties of it; the soft beetle, for instance, which, boiled in oil, has been found by experience to be a very useful liniment for warts. Another kind, to which they have given the name of "mylœcon," is generally found in the vicinity of mills: deprived of the head, it has been found to be curative of leprosy — at least Musa and Picton have cited instances to that effect. There is a third kind, again, odious for its abominable smell, and tapering at the posterior extremities. Used in combination with pisselæon, it is curative, they say, of ulcers of a desperate nature, and, if kept applied for one-and-twenty days, for scrofulous sores and inflamed tumours. The legs and wings being first removed, it is employed for the cure of bruises, contusions, cancerous sores, itch-scabs, and boils — remedies, all of them, quite disgusting even to hear of. And yet, by Hercules! Diodorus tells us that he has administered this remedy internally, with resin and honey, for jaundice and hardness of breathing; such unlimited power has the medical art to prescribe as a remedy whatever it thinks fit!

Physicians who keep more within bounds, recommend the ashes of these insects to be kept for these various purposes in a box made of horn; or else that they should be bruised and injected in a lavement for hardness of breathing and catarrhs. At all events, that, applied externally, they extract foreign substances adhering to the flesh, is a fact well known.

Honey, too, in which the bees have died, is remarkably useful for affections of the ears. Pigeons' dung, applied by itself, or with barley-meal or oat-meal, reduces imposthumes of the parotid glands; a result which is equally obtained by injecting into the ear an owlet's brains or liver, mixed with oil, or by applying the mixture to the

parotid glands; also, by applying millepedes with one-third part of resin; by using crickets in the form of a liniment; or by wearing crickets attached to the body as an amulet. The other kinds of maladies, and the several remedies for them, derived from the same animals or from others of the same class, we shall describe in the succeeding Book.

SUMMARY. — Remedies, narratives, and observations, six hundred and twenty-one.

ROMAN AUTHORS QUOTED. — M. Varro, L. Piso, Flaccus Verrius, Antias, Nigidius, Cassius Hemina, Cicero, Plautus, Celsus, Sextius Niger who wrote in Greek, Cæci- lius the physician, Metellus Scipio, the Poet Ovid, Licinius Macer.

FOREIGN AUTHORS QUOTED. — Homer, Aristotle, Orpheus, Palæphatus, Democritus, Anaxilaiis.

MEDICAL AUTHORS QUOTED. — Botrys, Apollodorus, Archi- demus, Aristogenes, XenocrDemo, Democrates, Diodorus, Chrysippus the philosopher, Horus, Nicander, Apollonius Of Pitanæ.

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BOOK XXX. REMEDIES DERIEVED FROM LIVING CREATURES.

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CHAP. 1. (1.)

THE ORIGIN OF THE MAGIC ART.

IN former parts of this work, I have had occasion more than. once, when the subject demanded it, to refute the impostures of the magic art, and it is now my intention to continue still further my exposure thereof. Indeed, there are few subjects on which more might be profitably said, were it only that, being, as it is, the most deceptive of all known arts, it has exercised the greatest influence in every country and in nearly every age. And no one can be surprised at the extent of its influence and authority, when he reflects that by its own energies it has embraced, and thoroughly amalgamated with itself; the three other sciences which hold the greatest sway upon the mind of man.

That it first originated in medicine, no one entertains a doubt; or that, under the plausible guise of promoting health, it insinuated itself among mankind, as a higher and more holy branch of the medical art. Then, in the next place, to promises the most seductive and the most flattering, it has added all the resources of religion, a subject upon which, at the present day, man is still entirely in the dark. Last of all, to complete its universal sway, it has incorporated with itself the astrological art; there being no man who is not desirous to know his future destiny, or who is not ready to believe that this knowledge may with the greatest certainty be obtained, by observing the face of the heavens. The senses of men being thus enthralled by a three-fold bond, the art of magic has attained an influence so mighty, that at the present day even, it holds sway throughout a great part of the world, and rules the kings of kings in the East.

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CHAP. 2.

WHEN AND WHERE THE ART OF MAGIC ORIGINATED: BY WHAT PERSONS IT WAS FIRST PRACTISED.

There is no doubt that this art originated in Persia, under Zoroaster, this being a point upon which authors are generally agreed; but whether there was only one Zoroaster, or whether in later times there was a second person of that name, is a matter which still remains undecided. Eudoxus, who has endeavoured to show that of all branches of philosophy the magic art is the most illustrious and the most beneficial, informs us that this Zoroaster existed six thousand years before the death of Plato, an assertion in which he is supported by Aristotle. Hermippus, again, an author who has written with the greatest exactness on all particulars connected with this art, and has commented upon the two millions of verses left by Zoroaster, besides completing indexes to his several works, has left a statement, that Agonaces was the name of the master from whom Zoroaster derived his doctrines, and that he lived five thousand years before the time of the Trojan War. The first thing, however, that must strike us with surprise, is the fact that this art, and the traditions connected with it, should have survived for so many ages, all written commentaries thereon having perished in the meanwhile; and this, too, when there was no continuous succession of adepts, no professors of note, to ensure their transmission.

For how few there are, in fact, who know anything, even by hearsay, about the only professors of this art whose names have come down to us, Apusorus and Zaratus of Media, Marmarus and Arabantiphocus of Babylonia, and Tarmoendas of Assyria, men who have left not the slightest memorials of their existence. But the most surprising thing of all is, that Homer should be totally silent upon this art in his account of the Trojan War, while in his story of the wanderings of Ulysses, so much of the work should be taken up with it, that we may justly conclude that the poem is based upon nothing else; if, indeed, we are willing to grant that his accounts of Proteus and of the songs of the Sirens are to be understood in this sense, and

that the stories of Circe and of the summoning up of the shades below, bear reference solely to the practices of sorcerers. And then, too, to come to more recent times, no one has told us how the art of sorcery reached Telmessus, a city devoted to all the services of religion, or at what period it came over and reached the matrons of Thessaly; whose name has long passed, in our part of the world, as the appellation of those who practise an art, originally introduced among themselves even, from foreign lands. For in the days of the Trojan War, Thessaly was still contented with such remedies as she owed to the skill of Chiron, and her only lightnings were the lightnings hurled by Mars. Indeed, for my own part, I am surprised that the imputation of magical practices should have so strongly attached to the people once under the sway of Achilles, that Menander even, a man unrivalled for perception in literary knowledge, has entitled one of his Comedies "The Thessalian Matron," and has therein described the devices practised by the females of that country in bringing down the moon from the heavens. I should have been inclined to think that Orpheus had been the first to introduce into a country so near his own, certain magical superstitions based upon the practice of medicine, were it not the fact that Thrace, his native land, was at that time totally a stranger to the magic art.

The first person, so far as I can ascertain, who wrote upon magic, and whose works are still in existence, was Osthanes, who accompanied Xerxes, the Persian king, in his expedition against Greece. It was he who first disseminated, as it were, the germs of this monstrous art, and tainted therewith all parts of the world through which the Persians passed. Authors who have made diligent enquiries into this subject, make mention of a second Zoroaster, a native of Proconnesus, as living a little before the time of Osthanes. That it was this same 'Osthanes, more particularly, that inspired the Greeks, not with a fondness only, but a rage, for the art of magic, is a fact beyond all doubt: though at the same time I would remark, that in the most ancient times, and indeed almost invariably, it was in this branch of science, that was sought the highest point of celebrity and of literary renown. At all events, Pythagoras, we find, Empedocles, Democritus, and Plato, crossed the seas, in order to attain a

knowledge thereof, submitting, to speak the truth, more to the evils of exile than to the mere inconveniences of travel. Returning home, it was upon the praises of this art that they expatiated — it was this that they held as one of their grandest mysteries. It was Democritus, too, who first drew attention to Apollobeches of Coptos, to Dardanus, and to Phœnix: the works of Dardanus he sought in the tomb of that personage, and his own were composed in accordance with the doctrines there found. That these doctrines should have been received by any portion of mankind, and transmitted to us by the aid of memory, is to me surprising beyond anything I can conceive. All the particulars there found are so utterly incredible, so utterly revolting, that those even who admire Democritus in other respects, are strong in their denial that these works were really written by him. Their denial, however, is in vain; for it was he, beyond all doubt, who had the greatest share in fascinating men's minds with these attractive chimeras.

There is also a marvellous coincidence, in the fact that the two arts — medicine, I mean, and magic — were developed simultaneously: medicine by the writings of Hippocrates, and magic by the works of Democritus, about the period of tile Peloponnesian War, which was waged in Greece in the year of the City of Rome 300.

There is another sect, also, of adepts in the magic art, who derive their origin from Moses, Jannes, and Lotapea, Jews by birth, but many thousand years posterior to Zoroaster: and as much more recent, again, is the branch of magic cultivated in Cyprus. In the time, too, of Alexander the Great, this profession received no small accession to its credit from the influence of a second Osthanes, who had the honour of accompanying that prince in his expeditions, and who, evidently, beyond all doubt, travelled over every part of the world.

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CHAP. 3.

WHETHER MAGIC WAS EVER PRACTISED IN ITALY. AT WHAT PERIOD THE SENATE FIRST FORBADE HUMAN SACRIFICES.

It is clear that there are early traces still existing of the introduction of magic into Italy; in our laws of the Twelve Tables for instance; besides other convincing proofs, which I have already noticed in a preceding Book. At last, in the year of the City 657, Cneius Cornelius Lentulus and P. Licinius Crassus being consuls, a decree forbidding human sacrifices was passed by the senate; from which period the celebration of these horrid rites ceased in public, and, for some time, altogether.

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CHAP. 4.

THE DRUIDS OF THE GALLIC PROVINCES.

The Gallic provinces, too, were pervaded by the magic art, and that even down to a period within memory; for it was the Emperor Tiberius that put down their Druids, and all that tribe of wizards and physicians. But why make further mention of these prohibitions, with reference to an art which has now crossed the very Ocean even, and has penetrated to the void recesses of Nature? At the present day, struck with fascination, Britannia still cultivates this art, and that, with ceremonials so august, that she might almost seem to have been the first to communicate them to the people of Persia. To such a degree are nations throughout the whole world, totally different as they are and quite unknown to one another, in accord upon this one point!

Such being the fact, then, we cannot too highly appreciate the obligation that is due to the Roman people, for having put an end to those monstrous rites, in accordance with which, to murder a man was to do an act of the greatest devoutness, and to eat his flesh was to secure the highest blessings of health.

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CHAP. 5. (2.)

THE VARIOUS BRANCHES OF MAGIC.

According to what Osthanes tells us, there are numerous sorts of magic. It is practised with water, for instance, with balls, by the aid of the air, of the stars, of lamps, basins, hatchets, and numerous other appliances; means by which it engages to grant a foreknowledge of things to come, as well as converse with ghosts and spirits of the dead. All these practices, however, have been proved by the Emperor Nero, in our own day, to be so many false and chimærical illusions; entertaining as he did a passion for the magic art, unsurpassed even by his enthusiastic love for the music of the lyre, and for the songs of tragedy; so strangely did his elevation to the highest point of human fortune act upon the deep-seated vices of his mind! It was his leading desire to command the gods of heaven, and no aspiration could he conceive more noble than this. Never did person lavish more favours upon any one of the arts; and for the attainment of this, his favourite object, nothing was wanting to him, neither riches, nor power, nor aptitude at learning, and what not besides, at the expense of a suffering world.

It is a boundless, an indubitable proof, I say, of the utter falsity of this art, that such a man as Nero abandoned it; and would to heaven that he had consulted the shades below, and any other spirits as well, in order to be certified in his suspicions, rather than commissioned the denizens of stews and brothels to make those inquisitions of his [with reference to the objects of his jealousy]. For assuredly there can be no superstition, however barbarous and ferocious the rites which it sanctions, that is not more tolerant than the imaginations which he conceived, and owing to which, by a series of bloodstained crimes, our abodes were peopled with ghosts.

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CHAP. 6.

THE SUBTERFUGES PRACTISED BY THE MAGICIANS.

The magicians, too, have certain modes of evasion, as, for instance, that the gods will not obey, or even appear to, persons who have freckles upon the skin. Was this perchance the obstacle in Nero's way? As for his limbs, there was nothing deficient in them. And then, besides, he was at liberty to make choice of the days prescribed by the magic ritual: it was an easy thing for him to make choice of sheep whose colour was no other than perfectly black: and as to sacrificing human beings, there was nothing in the world that gave him greater pleasure. The Magian Tiridates was at his court, having repaired thither, in token of our triumph over Armenia, accompanied by a train which cost dear to the provinces through which it passed. For the fact was, that he was unwilling to travel by water, it being a maxim with the adepts in this art that it is improper to spit into the sea or to profane that element by any other of the evacuations that are inseparable from the infirmities of human nature. He brought with him, too, several other Magi, and went so far as to initiate the emperor in the repasts of the craft; and yet the prince, for all he had bestowed a kingdom upon the stranger, found himself unable to receive at his hands, in return, this art.

We may rest fully persuaded then, that magic is a thing detestable in itself. Frivolous and lying as it is, it still bears, however, some shadow of truth upon it; though reflected, in reality, by the practices of those who study the arts of secret poisoning, and not the pursuits of magic. Let any one picture to himself the lies of the magicians of former days, when he learns what has been stated by the grammarian Apion, a person whom I remember seeing myself when young. He tells us that the plant cynocephalia, known in Egypt as "osiritis," is useful for divination, and is a preservative against all the malpractices of magic, but that if a person takes it out of the ground entire, he will die upon the spot. He asserts, also, that he himself had raised the spirits of the dead, in order to make enquiry of Homer in reference to his native country and his parents; but he does not dare,

he tells us, disclose the answer he received.

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CHAP. 7. (3.)

OPINIONS OF THE MAGICIANS RELATIVE TO THE MOLE. FIVE REMEDIES DERIVED FROM IT.

Let the following stand as a remarkable proof of the frivolous nature of the magic art. Of all animals it is the mole that the magicians admire most! a creature that has been stamped with condemnation by Nature in so many ways; doomed as it is to perpetual blindness, and adding to this darkness a life of gloom in the depths of the earth, and a state more nearly resembling that of the dead and buried. There is no animal in the entrails of which they put such implicit faith, no animal, they think, better suited for the rites of religion; so much so, indeed, that if a person swallows the heart of a mole, fresh from the body and still palpitating, he will receive the gift of divination, they assure us, and a foreknowledge of future events. Tooth-ache, they assert, may be cured by taking the tooth of a live mole, and attaching it to the body. As to other statements of theirs relative to this animal, we shall draw attention to them on the fitting occasions, and shall only add here that one of the most probable of all their assertions is, that the mole neutralizes the bite of the shrew-mouse; seeing that, as already stated, the very earth even that is found in the rut of a cart-wheel, acts as a remedy in such a case.

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CHAP. 8.

THE OTHER REMEDIES DERIVED FROM LIVING CREATURES. CLASSIFIED ACCORDING TO THE RESPECTIVE DISEASES. REMEDIES FOR TOOTH-ACHE.

But to proceed with the remedies for tooth-ache — the magicians tell us, that it may be cured by using the ashes of the head of a dog that has died in a state of madness. The head, however, must be burnt without the flesh, and the ashes injected with oil of cyprus into the ear on the side affected. For the same purpose also, the left eye-tooth of a dog is used. the gum of the affected tooth being lanced with it; one of the vertebræ also of a dragon or of an enhydris, which is a male white serpent. The eye-tooth, too, of this last, is used for scarifying the gums; and when the pain affects the teeth of the upper jaw, they attach to the patient two of the upper teeth of the serpent, and, similarly, two of the lower ones for tooth-ache in the lower jaw. Persons who go in pursuit of the crocodile, anoint themselves with the fat of this animal. The gums are also scarified with the frontal bones of a lizard, taken from it at full moon, and not allowed to touch the ground: or else the mouth is rinsed with a decoction of dogs' teeth in wine, boiled down to one half.

Ashes of dogs' teeth, mixed with honey, are useful for difficult dentition in children, and a dentifrice is similarly prepared from them. Hollow teeth are plugged with ashes of burnt mouse-dung, or with a lizard's liver, dried. To eat a snake's heart, or to wear it, attached to the body, is considered highly efficacious. There are some among the magicians, who recommend a mouse to be eaten twice a month, as a preventive of tooth-ache. Earth-worms, boiled in oil and injected into the ear on the side affected, afford considerable relief: ashes, too, of burnt earth-worms, introduced into carious teeth, make them come out easily; and, used as a friction, they allay pains in such of the teeth as are sound: the proper way of burning them is in an earthen potsherd. They are useful, too, boiled with root of the mulberry-tree in squill vinegar, and employed as a collutory for the teeth. The small worm that is found in the plant known as Venus'

bath, is remarkably useful, introduced into a hollow tooth; and as to the cabbage caterpillar, it will make hollow teeth come out, by the mere contact only. The bugs that are found upon mallows, are injected into the ears, beaten up with oil of roses.

The small grits of sand that are found in the horns of snails, introduced into hollow teeth, remove the pain instantaneously. Ashes of empty snail-shells, mixed with myrrh, are good for the gums; the ashes also of a serpent, burnt with salt in an earthen pot, and injected, with oil of roses, into the ear opposite to the side affected; or else the slough of a snake, warmed with oil and torch-pine resin, and injected into either ear. Some persons add frankincense and oil of roses, a preparation which, of itself, introduced into hollow teeth, makes them come out without pain. It is all a fiction, in my opinion, to say that white snakes cast this slough about the rising of the Dog-star; for such a thing has never been seen in Italy, and it is still more improbable that sloughing should take place at so late a period in the warmer climates. We find it stated also, that this slough, even when it has been kept for some time, mixed with wax, will extract a tooth very expeditiously, if applied thereto: a snake's tooth, also, attached to the body as an amulet, allays tooth-ache. Some persons think that it is a good remedy to catch a spider with the left hand, to beat it up with oil of roses, and then to inject it into the ear on the side affected.

The small bones of poultry, preserved in a hole in a wall, the medullary channel being left intact, will immediately cure tooth-ache, they say, if the tooth is touched or the gum scarified therewith, care being taken to throw away the bone the moment the operation is performed. A similar result is obtained by using raven's dung, wrapped in wool and attached to the body, or else sparrow's dung, warmed with oil and injected into the ear on the side affected. This last remedy, however, is productive of an intolerable itching, for which reason it is considered a better plan to rub the part with the ashes of young sparrows burnt upon twigs, mixed with vinegar for the purpose.

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CHAP. 9. (4.)

REMEDIES FOR OFFENSIVE ODOURS AND SORES OF THE MOUTH.

To impart sweetness to the breath, it is recommended to rub the teeth with ashes of burnt mouse-dung and honey: some persons are in the habit of mixing fennel root. To pick the teeth with a vulture' s feather, is productive of a sour breath; but to use a porcupine's quill for that purpose, greatly strengthens the teeth. Ulcers of the tongue and lips are cured by taking a decoction of swallows, boiled in honied wine; and chapped lips are healed by using goose-grease or poultry-grease, wool-grease mixed with nut-galls, white spiders' webs, or the fine cobwebs that are found adhering to the beams of roofs. If the inside of the mouth has been scalded with any hot substance, bitches' milk will afford an immediate cure.

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CHAP. 10.

REMEDIES FOR SPOTS UPON THE FACE.

Wool-grease, mixed with Corsican honey-which by the way is considered the most acrid honey of all-removes spots upon the face. Applied with oil of roses in wool, it causes scurf upon the face to disappear: some persons add butter to it. In cases of morphew, the spots are first pricked with a needle, and then rubbed with dog's gall. For livid spots and bruises on the face, the lights of a ram or sheep are cut fine and applied warm, or else pigeons' dung is used. Goose-grease or poultry-grease is a good preservative of the skin of the face. For lichens a liniment is used, made of mouse-dung in vinegar, or of the ashes of a hedge-hog mixed with oil: but, when these remedies are employed, it is recommended first to foment the face with nitre dissolved in vinegar. Maladies of the face are also removed by employing the ashes of the small, broad, snail that is so commonly found, mixed with honey. Indeed, the ashes of all snails are of an inspissative nature, and are possessed of certain calorific and detersive properties: hence it is that they form an ingredient in caustic applications, and are used in the form of a liniment for itch-scabs, leprous sores, and freckles on the face.

I find it stated that a certain kind of ant known by the name of "Herculanea," is beaten up, with the addition of a little salt, and used for the cure of these diseases. The buprestis is an insect but rarely found in Italy, and very similar to a scarabæus, with long legs. Concealed among the grass, it is very liable to be swallowed unobserved, by oxen in particular; and the moment it comes in contact with the gall, it causes such a degree of inflammation, that the animal bursts asunder; a circumstance to which the insect owes its name. Applied topically with he-goat suet, it removes lichens on the face, owing to its corrosive properties, as previously stated. A vulture's blood, beaten up with cedar resin and root of white chamæleon — a plant which we have already mentioned — and covered with a cabbage leaf, when applied, is good for the cure of leprosy; the same, too, with the legs of locusts, beaten up with he-

goat suet. Pimples are treated with poultry grease, beaten up and kneaded with onions. One very useful substance for the face is honey in which the bees have died; but a sovereign detergent for that part is swans' grease, which has also the property of effacing wrinkles. Brand-marks are removed by using pigeons' dung, diluted in vinegar.

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CHAP. 11.

REMEDIES FOR AFFECTIONS OF THE THROAT.

I find it stated that catarrhs oppressive to the head may be cured by the patient kissing a mule's nostrils. Affections of the uvula and pains in the fauces are alleviated by using the dung of lambs before they have begun to graze, dried in the shade. Diseases of the uvula are cured with the juices of a snail pierced with a needle; the snail, however, must be then hung up in the smoke. The same maladies are treated also with ashes of burnt swallows, mixed with honey; a preparation which is equally good for affections of the tonsillary glands. Sheep's milk, used as a gargle, alleviates diseases of the fauces and tonsillary glands. Millepedes, bruised with pigeons' dung, are taken as a gargle, with raisin wine; and they are applied, externally, with dried figs and nitre, for the purpose of soothing roughness of the fauces and catarrhs. For such cases, too, snails should be boiled unwashed, the earth only being removed, and then pounded and administered to the patient in raisin wine. Some persons are of opinion that for these pur- poses the snails of Astypalæa are the most efficacious, and they give the preference to the detersive preparation made from them. The parts affected are sometimes rubbed with a cricket, and affections of the tonsillary glands are alleviated by being rubbed with the hands of a person who has bruised a cricket.

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CHAP. 12.

REMEDIES FOR QUINZY AND SCROFULA.

For quinzy we have very expeditious remedies in goose-gall, mixed with elaterium and honey, an owlet's brains, or the ashes of a burnt swallow, taken in warm water; which last remedy we owe to the poet Ovid. But of all the remedies spoken of as furnished by the swallow, one of the most efficacious is that derived from the young of the wild swallow, a bird which may be easily recognized by the peculiar conformation of its nest. By far the most effectual, however, of them all, are the young of the bank-swallow, that being the name given to the kind which builds its nest in holes on the banks of rivers. Many persons recommend the young of any kind of swallow as a food, assuring us that the person who takes it need be in no apprehension of quinzy for the whole of the ensuing year. The young of this bird are sometimes stifled and then burnt in a vessel with the blood, the ashes being administered to the patient with bread or in the drink: some, however, mix with them the ashes of a burnt weasel, in equal proportion. The same remedies are recommended also for scrofula, and they are administered for epilepsy, once a day, in drink. Swallows preserved in salt are taken for quinzy, in (loses of one drachma, in drink: the nest, too, of the bird, taken internally, is said to be a cure for the same disease.

Millepedes, it is thought, used in the form of a liniment, are peculiarly efficacious for quinzy: some persons, also, administer eleven of them, bruised in one semi-sextarius of hydromel, through a reed, they being of no use whatever if once touched by the teeth. Other remedies mentioned are, the broth of a mouse boiled with vervain, a thong of dogskin passed three times round the back, and pigeons' dung mixed with wine and oil. For the cure of rigidity of the muscles of the neck, and of opisthotony, a twig of vitex, taken from a kite's nest, is attached to the body as an amulet.

(5.) For ulcerated scrofula, a weasel's blood is employed, or the animal itself, boiled in wine; but not in cases where the tumours have been opened with the knife. It is said, too, that a weasel, eaten with

the food, is productive of a similar effect; sometimes, also, it is burnt upon twigs, and the ashes are applied with axle-grease. In some instances, a green lizard is attached to the body of the patient, a fresh one being substituted at the end of thirty days. Some persons preserve the heart of this animal in a small silver vessel, as a cure for scrofula in females. Old snails, those found adhering to shrubs more particularly, are pounded with the shells on, and applied as a liniment. Asps, too, are similarly employed, reduced to ashes and mixed with bull suet; snakes' fat also, diluted with oil; and the ashes of a burnt snake, applied with oil or wax. It is a good plan also, in cases of scrofula, to eat the middle of a snake, the extremities being first removed, or to drink the ashes of the reptile, similarly prepared and burnt in a new earthen vessel: they will be found much more efficacious, however, when the snake has been killed between the ruts made by wheels. It is recommended also, to dig up a cricket with the earth about its hole, and to apply it in the form of a liniment; to use pigeons' dung, either by itself, or with barleymeal, or oatmeal and vinegar; or else to apply the ashes of a burnt mole, mixed with honey.

Some persons apply the liver of this last animal, crumbled in the hands, due care being taken not to wash it off for three days: it is said, too, that a mole's right foot is a remedy for scrofula. Others, again, cut off the head of a mole, and after kneading it with earth thrown up by those animals, divide it into tablets, and keep it in a pewter box, for the treatment of all kinds of tumours, diseases of the neck, and the affections known as "apostemes:" in all such cases the use of swine's flesh is forbidden to the patient. "Taurus" is the name usually given to an earth-beetle, very similar to a tick in appearance, and which it derives from the diminutive horns with which it is furnished: some persons call it the "earth-louse." From the earth thrown up by these insects a liniment is prepared for scrofula and similar diseases, and for gout, the application not being washed off till the end of three days. This last remedy is effectual for a whole year, and all those other properties are attributed to it which we have mentioned when speaking of crickets. There are some, again, who make a similar use of the earth thrown up by ants; while others attach to the patient as many earth-worms as there are scrofu- lous tumours,

the sores drying as the worms dry up.

Some persons cut off the head and tail of a viper, as already mentioned, about the rising of the Dog-star, which done, they

burn the middle, and give a pinch of the ashes in three fingers, for thrice seven days, in drink-such is the plan they use for

the cure of scrofula. Others, again, pass round the scrofulous tumours a linen thread, with which a viper has been suspended by the neck till dead. Millepedes are also used, with one fourth part of turpentine; a remedy which is equally recommended for the cure of all kinds of apostemes.

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CHAP. 13.

REMEDIES FOR DISEASES OF THE SHOULDERS.

The ashes of a burnt weasel, mixed with wax, are a cure for pains in the shoulders. To prevent the arm-pits of young persons from becoming hairy, they should be well rubbed with ants' eggs. Slave-dealers also, to impede the growth of the hair in young persons near puberty, employ the blood that flows from the testes of lambs when castrated. This blood, too, applied to the arm-pits, the hairs being first pulled out, is a preventive of the rank smell of those parts.

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CHAP. 14.

REMEDIES FOR PAINS IN THE VISCERA.

We give the one general name of “præcordia” to the human viscera; for pains in any part of which, a sucking whelp is applied, being pressed close to the part affected. The malady, it is said, will in such case pass into the animal; a fact which may be satisfactorily ascertained; for on disembowelling it, and sprinkling the entrails with wine, that part of the viscera will be found affected in which the patient himself was sensible of pain: to bury the animal in such a case is a point most religiously observed. The dogs, too, which we call “Melitæi,” applied to the stomach every now and then, allay pains in that region: the malady, it is supposed, passes into the animal’s body, as it gradually loses its health, and it mostly dies.

(6.) Affections of the lungs are cured by using mice, those of Africa more particularly, the animal being skinned and boiled in salt and oil, and then taken with the food. The same preparation is used also, for the cure of purulent or bloody expectorations.

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CHAP. 15.

REMEDIES FOR PAINS IN THE STOMACH.

One of the very best remedies for affections of the stomach, is to use a snail diet. They must first be left to simmer in water for some time, without touching the contents of the shell, after which, without any other addition, they must be grilled upon hot coals, and eaten with wine and garum; the snails of Africa being the best of all for the purpose. The efficacy of this remedy has been proved in numerous instances of late. Another point, too, to be observed, is to take an uneven number of them. Snails, however, have a juice, it should be remembered, which imparts to the breath an offensive smell. For patients troubled with spitting of blood, they are remarkably good, the shell being first removed, and the contents bruised and administered in water. The most esteemed kinds of all are those of Africa — those which come from Iol, in particular — of Astypalæa, and, after them, those of Ætna, in Sicily, those I mean of moderate size, for the large ones are hard, and destitute of juice. The Balearic snails, called "cavaticæ," from being found in caverns, are much esteemed; and so, too, are those from the islands of Capreæ. Those of Greece, on the other hand, are never used for food, either old or fresh.

River snails, and those with a white shell, have a strong, rank, juice, and forest snails are by no means good for the stomach, having a laxative effect upon the bowels; the same, too, with all kinds of small snails. Sea-snails, on the other hand, are more beneficial to the stomach; but it is for pains in that region that they are found the most efficacious: the best plan, it is said, is to eat them alive, of whatever kind they may happen to be, with vinegar. In addition to these, there are the snails called "ceratæ," with a broad shell, and found in numerous localities: of the uses to which they are put we shall speak further on the appropriate occasions. The craw of poultry, dried and sprinkled in the drink, or else used fresh and grilled, has a soothing effect upon pectoral catarrhs and coughs attended with phlegm. Snails, beaten up raw and taken in three cyathi of warm water, allay

cough. A piece of dog's skin, wrapped round any one of the fingers, affords relief to patients suffering from catarrh. A broth made of boiled partridges is strengthening for the stomach.

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CHAP. 16.

REMEDIES FOR PAINS IN THE LIVER, AND FOR SPITTING OF BLOOD.

For the cure of pains in the liver, a wild weasel is taken with the food, or the liver only of that animal; a ferret also, roasted like a sucking-pig. In cases of asthma, millepedes are used, thrice seven of them being soaked in Attic honey, and taken internally by the aid of a reed: for all vessels, it should be remembered, turn black on coming in contact with them. Some persons grill one sextarius of these insects on a flat pan, till they become white, and then mix them with honey. There are some authorities who call this insect a "centipede," and recommend it to be given in warm water. Snails are administered to persons subject to fainting fits, alienation of the senses, and vertigo: for which purposes, a snail is beaten up, shell and all, with three cyathi of raisin wine, and the mixture is administered warm with the drink, for nine days at most. Others, again, give one snail the first day, two the second, three the third, two the fourth, and one the fifth; a mode of treatment also adopted for the cure of asthma and of abscesses.

There is, according to some authorities, an insect resembling the locust in appearance, destitute of wings, and known by the Greek name of "troxallis," it being without a name in Latin: a considerable number of writers, however, consider it as identical with the insect known to us as "gryllus." Twenty of these insects, they say, should be grilled, and taken in honied wine, by patients troubled with hardness of breathing or spitting of blood. Some persons pour pure grape-juice, or sea-water, upon unwashed snails, and then boil and eat them for food; or else they bruise the snails, shells and all, and take them with this grape-juice. A similar method is also adopted for the cure of cough. Honey in which the bees have died, is particularly good for the cure of abscesses. For spitting of blood a vulture's lungs are used, burnt upon vine logs, and mixed with half the quantity of pomegranate blossoms, or with the same proportion of quince and lily blossom: the whole being taken morning and evening, in wine, if there is no fever; but where there are symptoms of fever, instead of

wine, water is used in which quinces have been boiled.

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CHAP. 17.

REMEDIES FOR AFFECTIONS OF THE SPLEEN.

According to the prescriptions given by the magicians, a fresh sheep's milt is the best application for pains in the spleen, the person who applies it uttering these words: "This I do for the cure of the spleen." This done, it is enjoined that the milt should be covered up with mortar in the wall of the patient's sleeping-room, and sealed with a ring, a charm being repeated thrice nine times. A dog's milt, removed from the animal while still alive, taken with the food, is a cure for diseases of the spleen: some, again, attach it fresh to that part of the patient's body. Others give the patient — without his knowing it — the milt of a puppy two days old, to eat, in squill vinegar; the milt, too, of a hedge-hog is similarly used. Ashes of burnt snails are employed, in combination with linseed, nettle-seed, and honey, the treatment being persisted in till the patient is thoroughly cured.

A green lizard has a remedial effect, suspended alive in an earthen vessel, at the entrance of the sleeping-room of the patient, who, every time he enters or leaves it, must take care to touch it with his hand: the head, too, of a horned owl, reduced to ashes and incorporated with an unguent; honey, also, in which the bees have died; and spiders, the one known as the "lycos" in particular.

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CHAP. 18.

REMEDIES FOR PAINS IN THE SIDE AND IN THE LOINS.

For pains in the side, the heart of a hoopoe is highly esteemed; ashes, too, of burnt snails, that have been boiled in a ptisan, snails being sometimes applied in the form of a liniment, alone. Potions employed for this purpose have a sprinkling in them of the ashes of a mad dog's skull. For the cure of lumbago, the spotted lizard from beyond seas is used: the head and intestines being first removed, the body is boiled in wine, with half a denarius of black poppy, and the decoction is taken in drink. Green lizards, also, are taken with the food, the feet and head being first removed; or else three snails are crushed, shells and all, and boiled with fifteen peppercorns in wine. The feet of an eagle are wrenched off in a contrary direction to the joint, and the right foot is attached to the right side, the left foot to the left, according as the pains are situate. The miilepede, which we have spoken of as being called the "oniscos," is a cure for these pains, taken, in doses of one denarius, in two cyathi of wine. The magicians recommend an earth-worm to be put in a wooden dish, which has been split and mended with iron wire; which done, some water must be taken up with the dish, the worm drenched with it and buried in the spot from which it was taken, and the water drunk from the dish. They assert, also, that this is a marvellously excellent cure for sciatica.

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CHAP. 19. (7.)

REMEDIES FOR DYSENTERY.

Dysentery is cured by taking the broth of a leg of mutton, boiled with linseed in water; by eating old ewe-milk cheese; or by taking mutton suet boiled in astringent wine. This last is good, too, for the iliac passion, and for inveterate coughs. Dysentery is removed also, by taking a spotted lizard from beyond seas, boiled down till the skin only is left, the head, feet, and intestines, being first removed. A couple of snails also, and an egg, are beaten up, shells and all, in both cases, and made lukewarm in a new vessel, with some salt, three cyathi of water, and two cyathi of raisin-wine or date-juice, the decoction being taken in drink. Ashes, too, of burnt snails, are very serviceable, taken in wine with a modicum of resin.

The snails without shells, which we have mentioned as being mostly found in Africa, are remarkably useful for dysentery, five of them being burnt with half a denarius of gum acacia, and taken, in doses of two spoonfuls, in myrtle wine or any other kind of astringent wine, with an equal quantity of warm water. Some persons employ all kinds of African snails indiscriminately in this manner; while others, again, make use of a similar number of African snails or broad-shelled snails, as an injection, in preference: in cases, too, where the flux is considerable, they add a piece of gum acacia, about the size of a bean. For dysentery and tenesmus, the cast-off slough of a snake is boiled in a pewter vessel with oil of roses: if prepared in any other kind of vessel, it is applied with an instru- ment made of pewter. Chicken-broth is also used as a remedy for these affections; but the broth of an old cock, strongly salted, acts more powerfully as a purgative upon the bowels. A pullet's craw, grilled and administered with salt and oil, has a soothing effect upon cœliac affections; but it is absolutely necessary that neither fowl nor patient should have eaten corn for some time before. Pigeons' dung, also, is grilled and taken in drink. The flesh of a ring-dove, boiled in vinegar, is curative of dysentery and cœliac affections: and for the cure of the former, a thrush is recommended, roasted with myrtleberries; a

blackbird, also; or honey, boiled, in which the bees have died.

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CHAP. 20.

REMEDES FOR THE ILIAC PASSION, AND FOR OTHER MALADIES OF THE BOWELS.

One of the most dangerous of maladies is that known by the name of "ileos:" it may be combatted, they say, by tearing a bat asunder, and taking the blood, or by rubbing the abdo. men with it. Diarrhœa is arrested more particularly by taking snails, prepared in manner already mentioned for cases of asthma; the ashes, also, of snails burnt alive, administered in astringent wine; the liver of poultry grilled; the dried craw of poultry, a part that is usually thrown away, mixed with poppy-juice — in some cases it is used fresh, grilled, and taken in wine — partridge broth; the craw of partridges beaten up by itself in red wine; a wild ringdove boiled in oxycrate; a sheep's milt, grilled and beaten up in wine; or else pigeons' dung, applied with honey. The crop of an ossifrage, dried and taken in drink, is remarkably useful for patients whose digestion is impaired-indeed, its good effects may be felt if they only hold it in the hand while eating. Hence it is that some persons wear it attached to the body as an amulet; a practice which must not be too long continued, it being apt to cause a wasting of the flesh. The blood, too, of a drake has an astringent effect.

Flatulency is dispelled by eating snails; and griping pains in the bowels, by taking a sheep's milt grilled, with wine; a wild ringdove boiled in oxycrate; the fat of an otis in wine; or the ashes of an ibis, burnt without the feathers, administered in drink. Another prescription mentioned for griping pains in the bowels is of a very marvellous nature: if a duck, they say, is applied to the abdomen, the malady will pass into the bird, and it will die. Gripings of the bowels are treated also with boiled honey in which the bees have died.

Colic is most effectually cured by taking a roasted lark with the food. Some recommend, however, that it should be burnt to ashes in a new vessel, feathers and all, and then pounded and taken for four consecutive days, in doses of three spoonfuls, in water. Some say that the heart of this bird should be attached to the thigh, and,

according to others, the heart should be swallowed fresh, quite warm, in fact. There is a family of consular dignity, known as the Asprenates, two brothers, members of which, were cured of colic; the one by eating a lark and wearing its heart in a golden bracelet; the other, by performing a certain sacrifice in a chapel built of raw bricks, in form of a furnace, and then blocking up the edifice the moment the sacrifice was concluded. The ossifrage has a single intestine only, which has the marvellous property of digesting all that the bird has swallowed: the extremity of this intestine, it is well known, worn as an amulet, is an excellent remedy for colic.

There are certain concealed maladies incident to the intestines, in relation to which there are some marvellous statements made. If to the stomach and chest, more particularly, blind puppies are applied, and suckled with milk from the patient's mouth, the virulence of the malady, it is said, will be transferred to them, and in the end they will die: on opening them, too, the causes of the malady will be sure to be discovered. In all such cases, however, the puppies must be allowed to die, and must be buried in the earth. According to what the magicians say, if the abdomen is touched with a bat's blood, the person will be proof against colic for a whole year: when a patient, too, is attacked with the pains of colic, if he can bring himself to drink the water in which he has washed his feet, he will experience a cure.

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CHAP. 21. (8.)

REMEDIES FOR URINARY CALCULI AND AFFECTIONS OF THE BLADDER.

For the cure of urinary calculi, it is a good plan to rub the abdomen with mouse-dung. The flesh of a hedge-hog is agreeable eating, they say, if killed with a single blow upon the head, before it has had time to discharge its urine upon its body: [persons who eat this flesh, it is said, will never by any possibility suffer from strangury.] The flesh of a hedgehog thus killed, is a cure for urinary obstructions of the bladder; and the same, too, with fumigations made therewith. If, on the other hand, the animal has discharged its urine upon its body, those who eat the flesh will be sure to be attacked by strangury, it is said. As a lithontriptic, earth-worms are recommended, taken in ordinary wine or raisin wine; or else boiled snails, prepared the same way as for the cure of asthma. For the cure of urinary obstructions, snails are taken from the shells, pounded, and administered in one cyathus of wine, three the first day, two the second, and one the third. For the expulsion of calculi, the empty shells are reduced to ashes and taken in drink: the liver also of a water-snake, and the ashes of burnt scorpions are similarly employed, or are taken with bread or eaten with a locust. For the same purpose, the small grits that are found in the gizzard of poultry or in the craw of the ringdove, are beaten up and sprinkled in the patient's drink; the craw, too, of poultry is taken, dried, or if fresh, grilled.

For urinary calculi and other obstructions of the bladder, dung of ring-doves is taken, with beans; ashes also of wild ring-doves' feathers, mixed with vinegar and honey; the intestines of those birds, reduced to ashes, and administered in doses of three spoonfuls; a small clod from a swallow's nest, dissolved in warm water; the dried crop of an ossifrage; the dung of a turtle-dove, boiled in honied wine; or the broth of a boiled turtle-dove.

It is very beneficial also for urinary affections to eat thrushes with myrtle-berries, or grasshoppers grilled on a shallow-pan; or else to take the millepedes, known as "onisci," in drink. For pains in the

bladder, a decoction of lambs' feet is used. Chicken-broth relaxes the bowels and mollifies acridities; swallows' dung, too, with honey, employed as a suppository, acts as a purgative.

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CHAP. 22.

REMEDIES FOR DISEASES OF THE FUNDAMENT AND OF THE GENERATIVE ORGANS.

The most efficacious remedies for diseases of the rectum are wool-grease — to which some add pompholix and oil of roses — a dog's head, reduced to ashes; or a serpent's slough, with vinegar. In cases where there are chaps and fissures of those parts, the ashes of the white portion of dogs' dung are used, mixed with oil of roses; a prescription due, they say, to Æsculapius, and remarkably efficacious also for the removal of warts. Ashes of burnt mouse-dung, swan's fat, and cow suet, are also used. Procidence of the rectum is reduced by an application of the juices discharged by snails when punctured. For the cure of excoriation of those parts, ashes of burnt woodmice are used, with honey; the gall of a hedge-hog, with a bat's brains and bitches' milk; goose-grease, with the brains of the bird, alum, and wool-grease; or else pigeons' dung, mixed with honey. A spider, the head and legs being first removed, is remarkably good as a friction for condylomata. To prevent the acridity of the humours from fretting the flesh, goosegrease is applied, with Punic wax, white lead, and oil of roses; swan's grease also, which is said to be a cure for piles.

A very good thing, they say, for sciatica, is, to pound raw snails in Aminean wine, and to take them with pepper; to eat a green lizard, the feet, head, and intestines being first removed; or to eat a spotted lizard, with the addition of three oboli of black poppy. Ruptures and convulsions are treated with sheep's gall, diluted with woman's milk. The gravy which escapes from a ram's lights roasted, is used for the cure of itching pimples and warts upon the generative organs: for other affections of those parts, the ashes of a ram's wool, unwashed even, are used, applied with water; the suet of a sheep's caul, and of the kidneys more particularly, mixed with ashes of pumice-stone and salt; greasy wool, applied with cold water; sheep's flesh, burnt to ashes, and applied with water; a mule's hoofs, burnt to ashes; or the powder of pounded horse teeth, sprinkled upon the parts. In cases of

decidence of either of the testes, an application of the slime discharged by snails is remedial, they say. For the treatment of sordid or running ulcers of those parts, the fresh ashes of a burnt dog's head are found highly useful; the small, broad kind of snail, beaten up in vinegar; a snake's slough, or the ashes of it, applied in vinegar; honey in which the bees have died, mixed with resin; or the kind of snail without a shell, that is found in Africa, as already mentioned, beaten up with powdered frankincense and white of eggs, the application being renewed at the end of thirty days; some persons, however, substitute a bulb for the frankincense.

For the cure of hydrocele, a spotted lizard, they say, is marvellously good, the head, feet, and intestines being first removed, and the rest of the body roasted and taken frequently with the food. For incontinence of urine dogs' fat is used, mixed with a piece of split alum the size of a bean; ashes, also, of African snails burnt with the shells, taken in drink; or else the tongues of three geese roasted and eaten with the food, a remedy which we owe to Anaxilaiis. Mutton-suet, mixed with parched salt, has an aperient effect upon inflammatory tumours, and mouse-dung, mixed with powdered frankincense and sandarach, acts upon them as a dispellent: the ashes, also, of a burnt lizard, or the lizard itself, split asunder and applied; or else bruised millepedes, mixed with one third part of turpentine. Some make use of earth of Sinope for this purpose, mixed with a bruised snail. Ashes of empty snail-shells burnt alone, mixed with wax, possess certain repercussive properties; the same, too, with pigeons' dung, employed by itself, or applied with oat-meal or barley-meal. Cantharides, mixed with lime, remove inflammatory tumours quite as effectually as the lancet; and small snails, applied topically with honey, have a soothing effect upon tumours in the groin.

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CHAP. 23. (9.)

REMEDIES FOR GOUT AND FOR DISEASES OF THE FEET.

To prevent varicose veins, the legs of children are rubbed with a lizard's blood: but both the party who operates and the patient must be fasting at the time. Wool-grease, mixed with woman's milk and white lead, has a soothing effect upon gout; the liquid dung also voided by sheep; a sheep's lights; a ram's gall, mixed with suet; mice, split asunder and applied; a weasel's blood, used as a liniment with plantago; the ashes of a weasel burnt alive, mixed with vinegar and oil of roses, and applied with a feather, or used in combination with wax and oil of roses; a dog's gall, due care being taken not to touch it with the hand, and to apply it with a feather; poultry dung; or else ashes of burnt earth-worms, applied with honey, and removed at the end of a couple of days. Some, however, prefer using this last with water, while others, again, apply the worms themselves, in the proportion of one acetabulum to three cyathi of honey, the feet of the patient being first anointed with oil of roses. The broad, flat, kind of snail, taken in drink, is used for the removal of pains in the feet and joints; two of them being pounded for the purpose and taken in wine. They are employed, also, in the form of a liniment, mixed with the juice of the plant helxine: some, however, are content to beat up the snails with vinegar. Some say that salt, burnt in a new earthen vessel with a viper, and taken repeatedly, is curative of gout, and that it is an excellent plan to rub the feet with viper's fat. It is asserted, too, that similar results are produced by keeping a kite till it is dry, and then powdering it and taking it in water, a pinch in three fingers at a time; by rubbing the feet with the blood of that bird mixed with nettles; or by bruising the first feathers of a ring-dove with nettles. The dung of ring-doves is used as a liniment for pains in the joints; the ashes also of a burnt weasel, or of burnt snails, mixed with amylum or gum tragacanth.

A very excellent cure for contusions of the joints is a spider's web; but there are persons who give the preference to ashes of burnt cobwebs or of burnt pigeons' dung, mixed with polenta and white

wine. For sprains of the joints a sovereign remedy is mutton suet, mixed with the ashes of a woman's hair; a good application, too, for chilblains is mutton suet, mixed with alum, or else ashes of a burnt dog's head or of burnt mouse-dung. Ulcers, free from discharge, are brought to cicatrize by using the above-named substances in combination with wax; ashes, also, of burnt dormice, mixed with oil; ashes of burnt wood-mice, mixed with honey; ashes of burnt earthworms, applied with old oil; or else ashes of the snails without a shell that are so commonly found. All ulcers on the feet are cured by the application of ashes of snails, burnt alive; and for excoriations of the feet, ashes of burnt poultry-dung are used, or ashes of burnt pigeons' dung, mixed with oil. When the feet have been galled by the shoes, the ashes of an old shoe- sole are used, or the lights of a lamb or ram. For gatherings beneath the nails, a horse's tooth, powdered, is a sovereign remedy. A light application of a green lizard's blood, will cure the feet of man or beast when galled beneath.

For the removal of corns upon the feet, the urine of a mule of either sex is applied, mixed with the mud which it has formed upon the ground; sheep's dung, also; the liver of a green lizard, or the blood of that animal, applied in wool; earth-worms, mixed with oil; the head of a spotted lizard, pounded with an equal quantity of vitex and mixed with oil; or pigeons' dung, boiled with vinegar. For the cure of all kinds of warts, dogs' urine is applied fresh, with the mud which it has formed upon the ground; dogs' dung, also, reduced to ashes and mixed with wax; sheep's dung; the blood of mice, applied fresh, or the body of a mouse, split asunder; the gall of a hedgehog; a lizard's head or blood, or the ashes of that animal, burnt entire; the cast-off slough of a snake; or else poultry dung, applied with oil and nitre. Cantharides, also, bruised with Taminian grapes, act corrosively upon warts: but when warts have been thus removed, the remedies should be employed which we have pointed out for ulcerations on the skin.

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CHAP. 24. (10.)

REMEDIES FOR EVILS WHICH ARE LIABLE TO AFFECT THE WHOLE BODY.

We will now turn our attention to those evils which are a cause of apprehension, as affecting the whole body. According to what the magicians say, the gall of a male black dog is a counter-charm for the whole of a house; and it will be quite sufficient to make fumigations with it, or to use it as a purification, to ensure its preservation against all noxious drugs and preparations. They say the same, too, with reference to a dog's blood, if the walls are sprinkled with it; and the genitals of that animal, if buried beneath the threshold. This will surprise persons the less who are aware how highly these same magicians extol that most abominable insect, the tick, and all because it is the only one that has no passage for the evacuations, its eating ending only in its death, and it living all the longer for fasting: in this latter state it has been known to live so long as seven days, they say, but when it gorges to satiety it will burst in a much shorter period. According to these authorities, a tick from a dog's left ear, worn as an amulet, will allay all kinds of pains. They presage, too, from it on matters of life and death; for if the patient, they say, gives an answer to a person who has a tick about him, and, standing at the foot of the bed, asks how he is, it is an infallible sign that he will survive; while, on the other hand, if he makes no answer, he will be sure to die. They add, also, that the dog from whose left ear the tick is taken, must be entirely black. Nigidius has stated in his writings that dogs will avoid the presence all day of a person who has taken a tick from off a hog.

The magicians likewise assure us that patients suffering from delirium will recover their reason on being sprinkled with a mole's blood; and that persons who are apt to be troubled by the gods of the night and by Fauni, will experience relief by rubbing themselves morning and evening with the tongue, eyes, gall, and intestines of a dragon, boiled in oil, and cooled in the open air at night.

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CHAP. 25.

REMEDIES FOR COLD SHIVERINGS.

A remedy for cold shiverings, according to Nicander, is a dead amphisbæna, or its skin only, attached to the body: in addition to which, he informs us that if one of these reptiles is attached to a tree that is being felled, the persons hewing it will never feel cold, and will fell it all the more easily. For so it is, that this is the only one among all the serpents that faces the cold, making its appearance the first of all, and even before the cuckoo's note is heard. There is another marvellous fact also mentioned, with reference to the cuckoo: if, upon the spot where a person hears this bird for the first time, he traces round the space occupied by his right foot and then digs up the earth, it will effectually prevent fleas from breeding, wherever it is thrown.

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CHAP. 26.

REMEDIES FOR PARALYSIS.

For persons apprehensive of paralysis the fat of dormice and of field-mice, they say, is very useful, boiled: and for patients threatened with phthisis, millepedes are good, taken in drink, in manner already mentioned for the cure of quinzy. The same, too, with a green lizard, boiled down to one cyathus in three sextarii of wine, and taken in doses of one spoonful daily, until the patient is perfectly cured; the ashes also of burnt snails, taken in wine.

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CHAP. 27.

REMEDIES FOR EPILEPSY.

For the cure of epilepsy wool-grease is used, with a modicum of myrrh, a piece about the size of a hazel-nut being dissolved and taken after the bath, in two cyathi of wine: a ram's testes, also, dried and pounded, and taken in doses of half a denarius, in water, or in a semi-sextarius of asses' milk; the patient being forbidden wine five days before and after using the remedy. Sheep's blood, too, is mightily praised, taken in drink; sheep's gall, also, and lambs' gall in particular, mixed with honey; the flesh of a sucking puppy, taken with wine and myrrh, the head and feet being first removed; the callosities from a mule's legs, taken in three cyathi of oxymel; the ashes of a spotted lizard from beyond seas, taken in vinegar; the thin coat of a spotted lizard, which it casts like a snake, taken in drink — indeed some persons recommend the lizard itself; gutted with a reed and dried and taken in drink; while others, again, are for roasting it on a wooden spit and taking it with the food.

It is worth while knowing how the winter slough of this lizard is obtained when it casts it off, before it has had the opportunity of devouring it; there being no creature, it is said, that resorts in its spite to more cunning devices for the deception of man; a circumstance owing to which, the name of "stellio" his been borrowed as a name of reproach. The place to which it retires in summer is carefully observed, being generally some spot beneath the projecting parts of doors or windows, or else in vaults or tombs. In the early days of spring, cages made of split reeds are placed before these spots; and the narrower the interstices the more delighted is the animal with them, it being all the better enabled thereby to disengage itself of the coat which adheres to its body and impedes its freedom of action: when, however, it has once quitted it, the construction of the cage prevents its return. There is nothing whatever preferred to this lizard as a remedy for epilepsy. The brains of a weasel are also considered very good, dried and taken in drink; the liver, too, of that animal, or the testes, uterus, or paunch, dried and taken with coriander, in

manner already mentioned; the ashes also of a burnt weasel; or a wild weasel, eaten whole with the food. All these properties are equally attributed to the ferret. A green lizard is some- times eaten, dressed with seasonings to stimulate the appetite, the feet and head being first removed; the ashes, too, of burnt snails are used, as an ointment, with linseed, nettle-seed, and honey.

The magicians think highly of a dragon's tail, attached to the body, with a deer's sinews, in the skin of a gazelle; as also the small grits found in the crops of young swallows, tied to the left arm of the patient; for swallows, it is said, give small stones to their young the moment they are hatched. If, at the commencement of the first paroxysm, an epileptic patient eats the first of a swallow's brood that has been hatched, he will experience a perfect cure: but at a later period the disease is treated by using swallow's blood with frankincense, or by eating the heart of the bird quite fresh. Nay, even more than this, a small stone taken from a swallow's nest will relieve the patient the moment it is applied, they say; worn, too, as an amulet, it will always act as a preservative against the malady. A kite's liver, too, eaten by the patient, is highly vaunted; the slough also of a serpent; a vulture's liver, beaten up with the blood of the bird, and taken thrice seven days in drink; or the heart of a young vulture, worn attached to the body.

And not only this, but the vulture itself is recommended as a food for the patient, and that, too, when it has been glutted with human flesh. Some recommend the breast of this bird to be taken in drink from a cup made of cerrus wood, or the testes of a dunghill cock to be taken in milk and water; the patient abstaining from wine the five preceding days, and the testes being dried for the purpose. There have been authorities found to recommend one-and-twenty red flies- and those found dead, too!-taken in drink, the number being reduced where the patient is of a feeble habit.

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CHAP. 28. (11.)

REMEDIES FOR JAUNDICE.

Jaundice is combated by administering ear-wax to the patient, or else the filth that adheres to the udders of sheep, in doses of one denarius, with a modicum of myrrh, in two cyathi of wine; the ashes, also, of a dog's head, mixed with honied wine; a millepede, in one semi-sextarius of wine; earth- worms, in hydromel with myrrh; wine in which a hen's feet have been washed, after being first cleansed with water — the hen must be one with yellow feet — the brains of a partridge or of an eagle, in three cyathi of wine; the ashes of a ring-dove's feathers or intestines, in honied wine, in doses of three spoonfuls; or ashes of sparrows burnt upon twigs, in doses of two spoonfuls, in hydromel.

There is a bird, known as the "icterus," from its peculiar colour: if the patient looks at it, he will be cured of jaun- dice, they say, and the bird will die. In my opinion this is the same bird that is known in Latin by the name of "galgulus."

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CHAP. 29.

REMEDIES FOR PHRENITIS.

In cases of phrenitis a sheep's lights, attached warm round the patient's head, would appear to be advantageous. But as to giving a man suffering from delirium a mouse's brains in water to drink, the ashes of a burnt weasel, or the dried flesh even of a hedgehog, who could possibly do it, supposing even the effects of the remedy were certain? I should be inclined, too, to rank the ashes of the eyes of a horned owl in the number of those monstrous prescriptions with which the adepts in the magic art abuse the credulity of mankind.

It is in cases, too, of fever, more particularly, that the acknowledged rules of medicine run counter to the prescriptions of these men: for they have classified the various modes of treating the disease in accordance with the twelve signs of the Zodiac, and relatively to the revolutions of the sun and moon, a system which deserves to be utterly repudiated, as I shall prove by a few instances selected from many. They recommend, for example, when the sun is passing through Gemini, that the patient should be rubbed with ashes of the burnt combs, ears, and claws of cocks, beaten up and mixed with oil. If, again, it is the moon that is passing through that sign, it is the spurs and wattles of cocks that must be similarly employed. When either of these luminaries is passing through Virgo, grains of barley must be used; and when through Sagittarius, a bat's wings. When the moon is passing through Leo, it is leaves of tamarisk that must be employed, and of the cultivated tamarisk, they add: if, again, the sign is Aquarius, the patient must use an application of box-wood charcoal, pounded.

Of the remedies, however, that we find recommended by them, I shall be careful to insert those only the efficacy of which has been admitted, or, at least, is probable in any degree; such, for instance, as the use of powerful odours, as an excitant for patients suffering from lethargy; among which, perhaps, may be reckoned the dried testes of a weasel, or the liver of that animal, burnt. They consider it a good plan, too, to attach a sheep's lights, made warm, round the head of

the patient.

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CHAP. 30.

REMEDIES FOR FEVERS.

In the treatment of quartan fevers, clinical medicine is, so to say, pretty nearly powerless; for which reason we shall insert a considerable number of remedies recommended by professors of the magic art, and, first of all, those prescribed to be worn as amulets: the dust, for instance, in which a hawk has bathed itself, tied up in a linen cloth, with a red string, and attached to the body; the longest tooth of a black dog; or the wasp known by the name of "pseudosphex," which is always to be seen flying alone, caught with the left hand and attached beneath the patient's chin. Some use for this purpose the first wasp that a person sees in the current year. Other amulets are, a viper's head, severed from the body and wrapped in a linen cloth; a viper's heart, removed from the reptile while still alive; the muzzle of a mouse and the tips of its ears, wrapped in red cloth, the animal being set at liberty after they are removed; the right eye plucked from a living lizard, and enclosed with the head, seperated from the body, in goat's skin; the scarabænus also that forms pellets and rolls them along.

It is on account of this kind of scarabæus that the people of a great part of Egypt worship those insects as divinities; an usage for which Apion gives a curious reason, asserting, as he does, by way of justifying the rites of his nation, that the, insect in its operations pictures the revolution of the sun. There is also another kind of scarabæus, which the magicians recom- mend to be worn as an amulet — the one that has small horns thrown backwards; it must be taken up, when used for this purpose, with the left hand. A third kind also, known by the name of "fullo," and covered with white spots, they recom- mend to be cut asunder and attached to either arm, the other kinds being worn upon the left arm. Other amulets recommended by them, are, the heart of a snake taken from the living animal with the left hand; or four joints of a scorpion's tail. together with the sting,, attached to the body in a piece of black cloth; due care being taken that the patient does not see the scorpion, which is

set at liberty after the operation, or the person who has attached the amulet, for the space of three days: after the recurrence, too, of the third paroxysm, he must bury the whole in the ground. Some enclose a caterpillar in a piece of linen with a thread passed three times round it, and tie as many knots, repeating at each knot why it is that the patient performs that operation. A slug is sometimes wrapped in a piece of skin, or the heads of four slugs, cut from the body with a reed: a millepede is rolled up in wool: the small grubs that produce the gadfly, are used before the wings of the insect are developed; or any other kind of hairy grub is employed that is found adhering to prickly shrubs. Some persons attach to the body four of these grubs, enclosed in an empty walnut shell, or else some of the snails that are found without a shell.

In other cases, again, it is the practice to enclose a spotted lizard in a little box, and to place it beneath the pillow, of the patient, taking care to set it at liberty when the fever abates. It is recommended also, that the patient should swallow the heart of a sea-diver, removed from the bird without the aid of iron, it being first dried and then bruised and taken in warm water. The heart of a swallow is also recommended, with honey; and there are persons who say that, just before the paroxysms come on, the patient should take one drachma of swallow's dung in three cyathi of goats' milk or ewes' milk, or of raisin wine: others, again, are of opinion that the birds themselves should be taken, whole. The nations of Parthia, as a remedy for quartan fevers, take the skin of the asp, in doses of one sixth of a denarius, with an equal quantity of pepper. The philosopher Chrysippus has left a statement to the effect, that the phryganion, worn as an amulet, is a remedy for quartan fevers; but what kind of animal this is he has nowhere informed us, nor have I been able to meet with any one who knows. Still, however, I felt myself bound to notice a remedy that was mentioned by an author of such high repute, in case any other person should happen to be more successful in his researches. To eat the flesh of a crow, and to use nitre in the form of a liniment, is considered highly efficacious for the treatment of chronic diseases.

In cases of tertian fever — so true it is that suffering takes delight in prolonging hope by trying every remedy — it may be worth while

to make trial whether the web of the spider called “lycos” is of any use, applied, with the insect itself, to the temples and forehead in a compress covered with resin and wax; or the insect itself, attached to the body in a reed, a form in which it is said to be highly beneficial for other fevers. Trial may be made also of a green lizard, enclosed alive in a vessel just large enough to receive it, and worn as an amulet; a method, it is said, by which recurrent fevers are often dispelled.

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CHAP. 31.

REMEDIES FOR DROPSY.

For the cure of dropsy, wool-grease, a piece about the size of a hazel-nut, is given in wine, with the addition of a little myrrh: some add goose-grease, steeped in myrtle wine. The filth that adheres to the udders of sheep is productive of a similar effect, as also the dried flesh of a hedge-hog, taken with the food. Matter vomited by a dog, we are assured, applied to the abdomen, will draw off the water that has accumulated there.

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CHAP. 32. (12).

REMEDIES FOR ERYSIPELAS.

For the cure of erysipelas, wool-grease is used, with pomnpholix and oil of roses; the blood also extracted from a tick; earth worms, applied in vinegar; or else a cricket crushed between the hands — the good effect of this last being that the person who uses this precaution before the malady has made its appearance, will be preserved therefrom for a whole year. Care must be taken also that iron is used for the removal of the cricket, with some of the earth about its hole. Goose-grease is also employed for this purpose; a viper's head, dried and burnt, and applied with vinegar; or a serpent's slough, applied to the body, immediately after the bath, with bitumen and lamb suet.

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CHAP. 33.

REMEDIES FOR CARBUNCLES.

Carbuncles are removed by an application of pigeons' dung, either alone or in combination with linseed and oxymel; or of bees that have died in the honey. A sprinkling of polenta upon the sores is also used. For carbuncles and other sores of the generative organs, wool-grease is used as a remedy, with refuse of lead; and for incipient carbuncles, sheep's dung is employed.. Tumours and all other affections that stand in need of emollients are treated most effectually with goose-grease; that of cranes, too, is equally efficacious.

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CHAP. 34.

REMEDIES FOR BOILS.

For boils the following remedies are prescribed; a spider, applied before mentioning the insect by name, care being taken to remove it at the end of two days; a shrew-mouse, suspended by the neck till it is dead, care being taken not to let it touch the earth when dead, and to pass it three times around the boil, both operator and patient spitting on the floor each time; poultry-dung, that of a red colour in particular, applied fresh with vinegar; the crop of a stork, boiled in wine; flies, an uneven number of them, rubbed upon the patient with the ring finger; the filth from sheep's ears; stale mutton suet, with ashes of women's hair; ram suet also, with ashes of' burnt pumice and an equal quantity of salt.

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CHAP. 35.

REMEDIES FOR BURNS.

For burns, the ashes of a dog's head are used; ashes of burnt dormice, with oil; sheep's dung, with wax; ashes also of burnt snails, an application so effectual, as not to leave a scar even. Viper's fat, too, is used, and ashes of burnt pigeons' dung, applied with oil.

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CHAP. 36.

REMEDIES FOR AFFECTIONS OF THE SINEWS.

For nodosities in the sinews, the ashes of a viper's head are applied, with oil of cyprus; or else earth-worms, with honey. Pains in the sinews should be treated with an application of grease; the body of a dead amphisbæna, worn as an amulet; vulture's grease, dried with the crop of the bird and beaten up with stale hog's lard; or else ashes of the head of a horned owl, taken in honied wine with a lily root-that is, if we believe what the magicians tell us. For contractions of the sinews, the flesh of ring-doves is very good, dried and taken with the food: and for spasmodic affections, the ashes of a hedge-hog or weasel are used. A serpent's slough, attached to the patient's body in a piece of bull's hide, is a preventive of spasms: and the dried liver of a kite, taken in doses of three oboli, in three cyathi of hydromel, is a preservative against opisthotony.

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CHAP. 37.

REMEDIES FOR MALADIES OF THE NAILS AND FINGERS.

Agnails and hangnails upon the fingers are removed by using the ashes of a burnt dog's head, or the uterus of a bitch boiled in oil, the fingers being first rubbed with a liniment of ewe-milk butter, mixed with honey. The gall-bladder, too, of any animal is very useful for this purpose. Malformed nails are healed with an application of canthlarides and pitch, which is removed at the end of two days; or else with locusts friel with he-goat suet; or with an application of mutton suet. Some mix mistletoe and purslain with these ingredients; while others, again, use verligrease and mistletoe, removing the application at the end of two days.

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CHAP. 38. (13.)

METHODS FOR ARRESTING HÆMORRHAGE.

Bleeding at the nostrils is arrested by mutton suet taken from the caul, introduced into the nostrils; by draing up rennet, lamb's rennet in particular, mixed with water, into the nostrils, or by using it as an injection, a remedy which succeeds even where other remedies; have failed: by making up goosegrease into a bolus with an equall quantity of butter, and plugging the nostrils with it; or by using the earth that adheres to snails, or else the snails themselves, extracted from the shell. Excessive discharges from the nostrils are arrested also by applying crushed snails, or cobwebs, to the forehead. For issues of blood from the brain, the blood or brains of poultry are used, as also pigeons' dung, thickened and kept for the purpose. In cases where there is and immoderate flow of blood from a wound, an application of horse-dung, burnt with egg-shells, is marvellously good for stopping it.

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CHAP. 39.

REMEDIES FOR ULCEROUS SORES AND WOUNDS.

For the cure of ulcers, wool-grease is used, with ashes of burnt barley and verdigrease, in equal quantities; a preparation which is good, too, for carcinomata and spreading sores. It cauterizes the flesh also around the margins of ulcers, and reduces and makes level fungous excrescences formed by sores. Ashes, too, of burnt sheep's dung, mixed with nitre, are of great efficacy for the cure of carcinomata; as also those of lambs' thigh-bones, in cases more particularly where ulcers refuse to cicatrize. Very considerable, too, is the efficacy of lights, ram's lights in particular, which are of the greatest utility for reducing and making level the fleshy excrescences formed by ulcerous sores. With sheep's dung, warmed beneath an earthen pan and kneaded, the swellings attendant upon wounds are reduced, and fistulous sores and epinyctis are cleansed and made to heal.

But it is in the ashes of a burnt dog's head that the greatest efficacy is found; as it quite equals spodium in its property of cauterizing all kinds of fleshy excrescences, and causing sores to heal. Mouse-dung, too, is used as a cautery, and weasels' dung, burnt to ashes. Pounded millepedes, mixed with turpentine and earth of Sinope, are used for penetrating carcinomata and fleshy indurations in deep- seated sores; and the same substances are remarkably useful for the treatment of ulcers threatened with maggots.

Indeed the several varieties of worms themselves are possessed of marvellously useful properties. The worms, for instance, that breed in wood are curative of all kinds of ulcers: reduced to ashes, with an equal quantity of anise, and applied with oil, they heal cancerous sores. Earthworms are so remark- ably healing for wounds recently inflicted, that it is a very general belief that by the end of seven days they will unite sinews even that have been cut as under: hence it is that it is re- commended to keep them preserved in honey. Ashes of burnt earth-worms, in combination with tar or Simblian honey, cauterize the indurated margins of ulcerous sores. Some persons dry earthworms in the sun, and apply them to wounds with vinegar, the

application not being removed till the end of acouple of days. The earth also that adheres to snails is useful, similarly em- ployed; snails, too, taken whole from the shell, are pounded and applied to fresh wounds, to heal them, and they arrest the progress of cancerous sores.

There is an insect called “herpes” by the Greeks, which is particularly useful for the cure of all kinds of serpiginous sores. Snails, beaten up, shells and all, are very good for this purpose; and it is said that, with myrrh and frankincense, they will unite the sinews even when cut asunder. The fat, too, of a dragon, dried in the sun, is remarkably usefull, and so are the brains of a cock or capon for recent wounds. By taking with the food salt in which vipers have been preserved, ulcers are rendered more easy of treatment, it is said, and are made to heal all the sooner. Antonius the physician, after operating in vain upon ulcers, that were incurable with the knife, used to prescribe viper’s flesh to be eaten by the patient, whereby a marvellously speedy cure was effected.

The locust called “troxallis,” reduced to ashes and applied with honey, removes the indurated margins of ulcerous sores: ashes, also, of burnt pigeons’ dung, with arsenic and honey, are very effectual in all cases where a cautery is required. The brains of a horned owl, applied with goose-grease, are marvellously efficacious for uniting wounds, it is said. For the malignant ulcer known as “cacoëthes,” the ashes of a ram’s thigh-bones are used, mixed with woman’s milk, the sores being washed with linen cloths well rinsed. For the same purpose, the bird known as the screech-owl is boiled in oil, ewe-milk butter and honey being added to the preparation, when properly dissolved. An application of bees that have died in the honey, acts emolliently upon the indurated margins of ulcerous sores; and for the cure of elephantiasis, the blood and ashes of a weasel are employed. Wounds and weals pro- duced by blows are effaced by an application of sheep-skins fresh from the body.

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CHAP. 40.

REMEDIES FOR BROKEN BONES.

For fractures of the joints, ashes of sheep's thigh-bones are particularly useful, applied in combination with wax; and the remedy is all the more efficacious, if a sheep's jaw-bones are burnt with the other ingredients, together with a deer's antler, and some wax dissolved in oil of roses. For broken bones, a dog's brains are used, spread upon a linen cloth, with wool laid upon the surface and moistened every now and then. The fractured bone will mostly unite in the course of fourteen days; and a cure equally expeditious may be effected by using the ashes of burnt field-mice, with honey, or of burnt earthworms; a substance which is extremely useful for the extraction of splintered bones.

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CHAP. 41.

APPLICATIONS FOR CICATRIZATIONS, AND FOR, THE CURE OF MORPHEW.

Cicatrizations are restored to their original colour by applying sheep's lights, those of a ram in particular; mutton-suet, mixed with nitre; the ashes of a green lizard; a snake's slough, boiled in wine; or else pigeons' dung, mixed with honey; a preparation which, in combination with wine, is good for the removal of white morphew. For the cure, also, of mor- phew, cantharides are used, with two-thirds of rue-leaves; a preparation which the patient must keep applied, in the sun, till the skin itches and rises in blisters; after which it must be fomented and well rubbed with oil, and the application repeated. This must be done for several days in succession, due precautions being taken that the ulcerations do not penetrate too deep.

For the cure, too, of morphew, a liniment is recommended, made of flies and root of agrimony; the white part also of poultry dung, kept in a horn box with stale oil; a bat's blood; or else the gall of a hedge-hog applied with water. Itch-scab is cured by using the brains of a horned owl, incorporated with saltpetre; but dog's blood is the best thing to keep it in check. The small, broad, snail that is found, crushed and ap- plied topically, is an effectual cure for itching sensations.

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CHAP. 42.

METHODS OF EXTRICTXING FOREIGN SUBSTANCES FROM THE BODY.

Arrows, pointed weapons, and other foreign substances that require to be extracted from the body, are removed by the application of a mouse split asunder, or of a lizard more particularly, similarly divided, or else the head only of the animal, pounded with salt. The snails, too, that are found in clusters upon leaves, are pounded and applied with their shells on; as also those that are used as food, the shells being first removed, applied with hare's rennet in particular. The bones of a snake, applied with the rennet of any four-footed animal, will produce a similar effect before the end of two days: cantha- rides, also, bruised applied with barley-meal, are highly extolled.

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CHAP. 43. (14.)

REMEDIES FOR FEMALE COMPLAINTS.

For diseases incident to females, a ewe's placenta is very useful, as already mentioned by us, when speaking of goats: sheep's dung, too, is equally good. A fumigation of' burnt locusts, applied to the lower parts, affords relief to strangury, in females more particularly. It; immediately after conception, a woman eats a cock's testes every now and then, the child of which she is pregnant will become a male, it is said. The ashes of a burnt poricupinel taken in drink, are a preventive of abortion: bitches' milk facilitates delivery: and the after- birth of a bitch, provided it has not touched the ground, will act as an expellent of the fœtus. Milk, taken as a drink, strengthens the loins of women when in travail. Mouse-dung, diluted with rain water, reduces the breasts of females, when swollen after delivery. The ashes of a burnt hedge-hog, applied with oil, act as a preventive of abortion. Delivery is facilitated, in cases where the patient has taken, either goose- dung in two cyathi of water, or the liquid that escapes from the uterus of a weasel by its genitals.

Earth-wormrs, applied topically, effectually prevent pains in the sinews of the neck and shoulders; taken in raisin wine, they expel the after-birth, when retarded. Applied by themselves, earthworms ripen abscesses of the breasts, open them, draw the humours, and make them cicatrize: taken in honied wine, they promote the secretion of the milk. In hay-grass there are small worms found, which, attached to the neck, act as a preventive of premature delivery; they are removed, however, at the moment of childbirth, as otherwise they would have the effect of impeding delivery; care must be taken, also, not to put them on the ground. To promote conception, five or seven of them are administered in drink. Snails, taken with the food, accelerate delivery; and, applied with saffron, they promote conception. Used in the form of a liniment, with amylum and gum tragacanth, they arrest uterine discharges. Taken with the food, they promote menstruation; and, mixed with deer's marrow, in the proportion of one denarius and the same quantity of cyprus to each

snail, they reduce the uterus when displaced. Taken from the shell, and beaten up with oil of roses, they dispel inflations of the uterus; the snails of Astypalæa being those that are mostly chosen for these purposes.

Those of Africa, again, are employed in a different manner, two of them being beaten up with a pinch of fenulgreek in three fingers, and four spoonfuls of honey, and the preparation applied to the abdomen, after it has been rubbed with juice of iris. There is a kind of small, white, elongated snail, that is found straying here and there: dried upon tiles in the sun, and reduced to powder, these snails are mixed with bean-meal, in equal proportions, forming a cosmetic which whitens and softens the skin. The small, broad, kind of snail, mixed with polenta, is good for the removal of a tendency to scratch and rub the skin.

If a pregnant woman steps over a viper, she will be sure to miscarry; the same, too, in the case of the anphisbæna, but only when it is dead. If, however, a woman carries about her a live amphlisbæna in a box, she may step over one with impunity, even though it be dead. An amphisbæna, preserved for the purpose, will ensure an easy delivery, even though it be dead. It is a truly marvellous fact, but if a pregnant woman steps over one of these serpents that has not been preserved, it will be perfectly harmless, provided she immediately steps over another that has been preserved. A fumigation made with a dried snake, acts powerfully as an emmenagogue.

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CHAP. 44.

METHODS OF FACILITATING DELIVERY.

The cast-off slough of a snake, attached to the loins, facili- tates delivery: care must be taken, however, to remove it immediately after. It is administered, too, in wine, mixed with frankincense: taken in any other form, it is productive of abortion. A staff, by the aid of which a person has parted a frog from a snake, will accelerate parturition. Ashes of the troxallis, applied with honey, act as an emmenagogue; the same, too, with the spider that descends as it spins its thread from aloft; it must be taken, however, in the hollow of the hand, crushed, and applied accordingly: if, on the contrary, the spider is taken while ascending, it will arrest menstruation.

The stone aëtites, that is found in the eagle's nest, preserves the fœtus against all insidious attempts at producing abortion. A vulture's feather, placed beneath the feet of the woman, accelerates parturition. It is a well-known fact, that pregnant women must be on their guard against ravens' eggs, for if a female in that state should happen to step over one, she will be sure to miscarry by the mouth. A hawk's dung, taken in honied: wine, would appear to render females fruitful. Goose- grease, or that of the swan, acts emolliently upon indurations and abscesses of the uterus.

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CHAP. 45.

METHODS OF PRESERVING THE BREASTS FROM INJURY.

Goose-grease, mixed up with oil of roses and a spider, protects the breasts after delivery. The people of Phrygia and Lycaonia have made the discovery, that the grease of the otis is good for affections of the breasts, resulting from recent de- livery: for females affected with suffocations of the uterus, they employ a liniment made of beetles. The shells of par- tridges' eggs, burnt to ashes and mixed with cadmia and wax, preserve the firmness of the breasts. It is generally thought, that if the egg of a partridge or * * * * is passed three times round a woman's breasts, they will never become flaccid; and that, if these eggs are swallowed, they will be productive of fruitfulness, and promote the plentiful secretion of the milk. It is believed, too, that by anointing a woman's breasts with goose-grease, pains therein may be allayed; that moles formed in the uterus may be dispersed thereby; and that itch of the uterus may be dispelled by the application of a liniment made of crushed bugs.

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CHAP. 46.

VARIOUS KINDS OF DEPILATORIES.

Bats' blood has all the virtues of a depilatory: but if applied to the cheeks of youths, it will not be found sufficiently efficacious, unless it is immediately followed up by an application of verdigrease or hemlock-seed; this method having the effect of entirely removing the hair, or at least reducing it to the state of a fine down. It is generally thought, too, that bats' brains are productive of a similar effect; there being two kinds of these brains, the red and the white. Some persons mix with the brains the blood and liver of the same animal: others, again, boil down a viper in three semisextarii of oil, and, after boning it, use it as a depilatory, first pulling out the hairs that are wanted not to grow. The gall of a hedgehog is a depilatory, more particularly if mixed with bats' brains and goats' milk: the ashes, too, of a burnt hedgehog are used for a similar purpose. If, after plucking out the hairs that arc wanted not to grow, or if, before they make their appearance, the parts are well rubbed with the milk of a bitch with her first litter, no hairs will grow there. The same result is ensured, it is said, by using the blood of a tick taken from off a dog, or else the blood or gall of a swallow.

(15.) Ants' eggs, they say, beaten up with flies, impart a black colour to the eyebrows. If it is considered desirable that the colour of the infant's eyes should be black, the preg- nant woman must eat a rat. Ashes of burnt earth-worms, applied with oil, prevent the hair from turning white.

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CHAP. 47.

REMEDIES FOR THE DISEASES OF INFANTS.

For infants that are troubled with coagulation of the milk, a grand preservative is lamb's rennet, taken in water; and in cases where the milk has so coagulated, it may be remedied by administering rennet in vinegar. For the pains incident to dentition, sheep's brains are a very useful remedy. The inflammation called "siriasis," to which infants are liable, is cured by attaching to them the bones that are found in the dung of dogs. Hernia in infants is cured by letting a green lizard bite the child's body while asleep, after which the lizard is attached to a reed, and hung up in the smoke; by the time the animal dies, the child will be perfectly cured, it is said. The slime of snails, applied to the eyes of children, straightens the eyelashes, and makes them grow. Ashes of burnt snails, applied with frankincense and juice of white grapes, are a cure for hernia [in infants], if applied for thirty days consecutively. Within the horns of snails, there are certain hard substances found, like grits of sand: attached to infants, they facilitate dentition.

Ashes of empty snail-shells, mixed with wax, are a preventive of procidence of the rectum; but they must be used in combination with the matter that exudes from a viper's brains, on the head being pricked. Vipers' brains, attached to the infant's body in a piece of skin, facilitate dentition, a similar effect being produced by using the larger teeth of serpents. Ravens' dung, attached to an infant with wool, is curative of cough.

It is hardly possible to preserve one's seriousness in describing some of these remedies, but as they have been transmitted to us, I must not pass them in silence. For the treatment of hernia in infants, a lizard is recommended; but it must be a male lizard, a thing that may be ascertained by its having but one orifice beneath the tail. The method of proceeding, is for the lizard to bite the part affected through cloth of gold, cloth of silver, and cloth dyed purple; after which it is tied fast in a cup that has never been used, and smoked. Incontinence of urine in infants is checked by giving them boiled

mice with their food. The large indented horns of the scarabmus, attached to the bodies of infants, have all the virtues of an amulet. In the head of the boa; there is a small stone, they say, which the serpent spits out, when it is in fear of death: if the reptile is taken by surprise, and the head cut off, and this stone ex- tracted, it will aid dentition to a marvellous degree, attached to the neck of infants. The brains, too, of the same serpent are recommended to be attached to the body for a similar purpose, as also the small stone or bone that is found in the back of the slug.

An admirable promoter of dentition is found in sheep's brains, applied to the gums; and equally good for diseases of the ears, is an application of goose-grease, with juice of ocimum. Upon prickly plants there is found a kind of rough, hairy, grub: attached to the neck of infants, these insects give instant relief, it is said, when any of the food has stuck in the throat.

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CHAP. 48.

PROVOCATIYES OF SLEEP.

As a soporific, wool-grease is employed, diluted in two cyathi of wine with a modicum of myrrh, or else mixed with goose-grease and myrtle wine. For a similar purpose also, a cuckoo is attached to the body in a hare's skin, or a young heron's bill to the forehead in an ass's skin: it is thought, too, that the beak alone, steeped in wine, is equally efficacious. On the other hand, a bat's head, dried and worn as an amulet, acts as a preventive of sleep.

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CHAP. 49.

APHRODISIACS AND ANTAPHRODISIACS.

A lizard drowned in a man's urine has the effect of an antaphrodisiac upon the person whose urine it is; for this animal is to be reckoned among the philtres, the magicians say. The same property is attributed to the excrements of snails, and to pigeons' dung, taken with oil and wine. The right lobe of a vulture's lungs, attached to the body in the skin of a crane, acts powerfully as a stimulant upon males: an effect equally produced by taking the yolks of five pigeons' eggs, in honey, mixed with one denarius of hog's lard; sparrows, or eggs of sparrows, with the food; or by wearing the right testicle of a cock, attached to the body in a ram's skin. The ashes of a burnt ibis, it is said, employed as a friction with goose-grease and oil of iris, will prevent abortion when a female has once, conceived; while the testes of a game-cock, on the other hand, rubbed with goose-grease and attached to the body in a ram's skin, have all the effect of an antaphrodisiac: the same, too, with the testes of any kind of dunghill cock, placed, together with the blood of a cock, beneath the bed. Hairs taken from the tail of a she-mule while being covered by the stallion, will make a woman conceive, against her will even, if knotted together at the moment of the sexual congress. If a man makes water upon a dog's urine, he will become disinclined to copulation, they say.

A singular thing, too, is what is told about the ashes of a spotted lizard — if indeed it is true — to the effect that, wrapped in linen and held in the left hand, they act as an aphrodisiac, while, on the contrary, if they are transferred to the right, they will take effect as an antaphrodisiac. A bat's blood, too, they say, received on a flock of wool and placed beneath a woman's head, will promote sexual desire; the same being the case also with a goose's tongue, taken with the food or drink.

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CHAP. 50.

REMEDIES FOR PHTHIRIASIS, AND FOR VARIOUS OTHER AFFECTIONS.

In phthiriasis, all the vermin upon the body may be killed in the course of three days, by taking the cast-off slough of a serpent, in drink, or else whey of milk after the cheese is removed, with a little salt, Cheese, it is said, will never become rotten with age or be touched by mice, if a weasel's brains have been mixed with the rennet. It is asserted, too, that if the ashes, of a burnt weasel are mixed with the cramming for chickens or young pigeons, they will be safe from the attacks of weasels. Beasts of burden, when troubled with pains in staling, find immediate relief, if a bat is attached to the body; and they are effectually cured of bots by passing a ring-dove three times round their generative parts — a truly marvellous thing to relate, the ring-dove, on being set at liberty, dies, and the beast is instantly relieved from pain.

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CHAP. 51.

REMEDIES FOR INTOXICATION.

The eggs of an owlet, administered to drunkards three days in wine, are productive of a distaste for that liquor. A sheep's lights roasted, eaten before drinking, act as a preventive of inebriety. The ashes of a swallow's beak, bruised with myrrh and sprinkled in the wine, act as a preservative against intoxica- tion: Horus, king of Assyria, was the first to discover this.

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CHAP. 52.

PECULIARITIES RELATIVE TO CERTAIN ANIMALS.

In addition to these, there are some other peculiar properties attributed to certain animals, which require to be mentioned in the present Book. Some authors state that there is a bird in Sardinia, resembling the crane and called the “gromphena;” but it is no longer known even by the people of that country, in my opinion. In the same province, too, there is the ophion, an animal which resembles the deer in the hair only, and to be found nowhere else. The same authors have spoken also of the “subjugus,” but have omitted to state what animal it is, or where it is to be found. That it did formerly exist, however, I have no doubt, as certain remedies are described as being derived from it. M. Cicero speaks of animals called “biuri,” which gnaw the vines in Campania.

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CHAP. 53. (16.)

OTHER MARVELLOUS FACTS CONNECTED WITH ANIMALS.

There are still some other marvellous facts related, with reference to the animals which we have mentioned. A dog will not bark at a person who has any part of the secundines of a bitch about him, or a hare's dung or fur. The kind of gnats called "muliones," do not live more than a single day. Persons when taking honey from the hives, will never be touched by the bees if they carry the beak of a woodpecker about them. Swine will be sure to follow the person who has given them a raven's brains, made up into a bolus. The dust in which a she-mule has wallowed, sprinkled upon the body, will allay the flames of desire. Rats may be put to flight by castrating a male rat, and setting it at liberty. If a snake's slough is beaten up with some spelt, salt, and wild thyme, and introduced into the throat of oxen, with wine, at the time that grapes are ripening, they will be in perfect health for a whole year to come: the same, too, if three young swallows are given to them, made up into three boluses. The dust gathered from the track of a snake, sprinkled among bees, will make them return to the hive. If the right testicle of a ram is tied up, he will generate females only. Persons who have about them the sinews taken from the wings or legs of a crane, will never be fatigued with any kind of laborious exertion. Mules will never kick when they have drunk wine.

Of all known substances, it is a mule's hoofs only that are not corroded by the poisonous waters of the fountain Styx: a memorable discovery made by Aristotle, to his great infamy, on the occasion when Antipater sent some of this water to Alexander the Great, for the purpose of poisoning him.

We will now pass on to the aquatic productions.

SUMMARY. — Remedies, narratives, and observations, eight hundred and fifty-four.

ROMAN AUTHORS QUOTED. — M. Varro, Nigidius, M. Cicero, Sextius Niger who wrote in Greek, Licinius Macer.

FOREIGN AUTHORS QUOTED. — Eudoxus, Aristotle,

Hermippus, Homer, Apion, Orpheus, Democritus, Anaxilaiis.

MEDICAL AUTHORS QUOTED. — Botrys, Horus, Apollodorus, Menander, Archidemus, Aristogenes, Xenocrates, Diodorus, Chrysippus, Nicander, Apollonius of Pitanæ.

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BOOK XXXI. REMEDIES DERIVED FROM THE AQUATIC PRODUCTION

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CHAP. 1. (1.)

REMARKABLE FACTS CONNECTED WITH WATER.

WE have now to speak of the benefits derived, in a medicinal point of view, from the aquatic productions; for not here even has all-bounteous Nature reposed from her work. Amid waves and billows, and tides of rivers for ever on the ebb and flow, she still unceasingly exerts her powers; and nowhere, if we must confess the truth, does she display herself in greater might, for it is this among the elements that holds sway over all the rest. It is water that swallows up dry land, that extinguishes flame, that ascends aloft, and challenges possession of the very heavens: it is water that, spreading clouds as it does, far and wide, intercepts the vital air we breathe; and, through their collision, gives rise to thunders and lightnings, as the elements of the universe meet in conflict.

What can there be more marvellous than waters suspended aloft in the heavens? And yet, as though it were not enough to reach so high an elevation as this, they sweep along with them whole shoals of fishes, and often stones as well, thus lading themselves with ponderous masses which belong to other elements, and bearing them on high. Falling upon the earth, these waters become the prime cause of all that is there produced; a truly wondrous provision of Nature, if we only consider, that in order to give birth to grain and life to trees and to shrubs, water must first leave the earth for the heavens, and thence bring down to vegetation the breath of life! The admission must be surely extorted from us, that for all our resources the earth is indebted to the bounteousness of water. It will be only proper, therefore, in the first place to set forth some instances of the powerful properties displayed by this element; for as to the whole of them, what living mortal could describe them?

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CHAP. 2. (2.)

THE DIFFERENT PROPERTIES OF WATERS.

On all sides, and in a thousand countries, there are waters bounteously springing forth from the earth, some of them cold, some hot, and some possessed of these properties united: those in the territory of the Tarbelli, for instance, a people of Aquitania, and those among the Pyrencæan Mountains, where hot and cold springs are separated by only the very smallest distance. Then, again, there are others that are tepid only, or lukewarm, announcing thereby the resources they afford for the treatment of diseases, and bursting forth, for the benefit of man alone, out of so many animated beings.

Under various names, too, they augment the number of the divinities, and give birth to cities; Puteoli, for example, in Campania, Statyellæ in Liguria, and Sextiæ in the province of Gallia Narbonensis. But nowhere do they abound in greater number, or offer a greater variety of medicinal properties than in the Gulf of Baiæ; some being impregnated with sulphur, some with alum, some with salt, some with nitre, and some with bitumen, while others are of a mixed quality, partly acid and partly salt. In other cases, again, it is by their vapours that waters are so beneficial to man, being so intensely hot as to heat our baths even, and to make cold water boil in our sitting-baths; such, for instance, as the springs at Baiæ, now known as “Posidian,” after the name of a freedman of the Emperor Claudius; waters which are so hot as to cook articles of food even. There are others, too, — those, for example, formerly the property of Licinius Crassus — which send forth their vapours in the sea even, thus providing resources for the health of man in the very midst of the waves!

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CHAP. 3.

REMEDIES DERIVED FROM WATER.

According to their respective kinds, these waters are beneficial for diseases of the sinews, feet, or hips, for sprains or for fractures; they act, also, as purgatives upon the bowels, heal wounds, and are singularly useful for affections of the head and ears: indeed, the waters of Cicero are good for the eyes. The country-seat where these last are found is worthy of some further mention: travelling from Lake Avernus towards Puteoli, it is to be seen on the sea-shore, renowned for its fine portico and its grove. Cicero gave it the name of Academia, after the place so called at Athens: it was here that he composed those treatises of his that were called after it; it was here, too, that he raised those monuments to himself; as though, indeed, he had not already done so throughout the length and breadth of the known world.

Shortly after the death of Cicero, and when it had come into the possession of Antistius Vetus, certain hot springs burst forth at the very portals of this house, which were found to be remarkably beneficial for diseases of the eyes, and have been celebrated in verse by Laurea Tullius, one of the freedmen of Cicero; a fact which proves to demonstration that his servants even had received inspiration from that majestic and all-powerful genius of his. I will give the lines, as they deserve to be read, not there only, but everywhere: Great prince of Roman eloquence, thy grove,
Where erst thou bad'st it rise, is verdant now;
Thy villa, from fair Academia nam'd,
From Vetus now its finish'd graces takes.
Here, too, fair streams burst forth, unknown before,
Which with their spray the languid eves relieve.
The land, I ween, these bounteous springs reveal'd,
To honour Cicero, its ancient lord.
Throughout the world his works by eyes are scann'd;
May eyes unnunber'd by these streams be heal'd.

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CHAP. 4.

WATERS PRODUCTIVE OF FECUNDITY. WATERS CURATIVE OF INSANITY.

In Campania, too, are the waters of Sinuessa, remedial, it is said, for sterility in females, and curative of insanity in men.

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CHAP. 5.

WATERS REMEDIAL FOR URINARY CALCULI.

The waters of the island of Ænaria are curative of urinary calculi, it is said; and the same is the case with the cold spring of Acidula, four miles distant from Teanum Sidici- num, the waters at Stabiæ, known as the Dimidiæ, and those in the territory of Venafrum, which take their rise in the spring of Acidula. Patients suffering from these complaints may be cured also by drinking the waters of Lake Velia; the same effects being produced by those of a spring in Syria, near Mount Taurus, M. Varro says, and by those of the river Gallus in Phrygia, as we learn from Callimachus. In taking the waters, however, of this last, the greatest moderation is necessary, as they are apt to cause delirium; an effect equally produced, Ctesias tells us, by the waters of the Red Fountain in Æthiopia.

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CHAP. 6.

WATERS CURATIVE OF WOUNDS.

The tepid waters of Albula, near Rome, have a healing effect upon wounds. Those of Cutilia, again, in the Sabine territory, are intensely cold, and by a kind of suction penetrate the body to such a degree as to have the effect of a mordent almost. They are remarkably beneficial for affections of the stomach, sinews, and all parts of the body, in fact.

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CHAP. 7.

WATERS PREVENTIVE OF ABORTION.

The waters of Thespiæ ensure conception to females; the same, too, with those of the river Elatus in Arcadia. The spring Linus, also in Arcadia, acts as a preservative of the fœtus, and effectually prevents abortion. The waters of the river Aphrodisius, on the other hand, in the territory of Pyrrhsæa, are productive of sterility.

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CHAP. 8.

WATERS WHICH REMOVE MORPHEW.

The waters of Lake Alphius remove white morphew, Varro tells us; who also mentions the fact that one Titius, a personage who had held the prætorship, had a face to all appearance like that of a marble statue, in consequence of this disease. The waters of the river Cydnus, in Cilicia, are curative of gout, as would appear from a letter addressed by Cassius of Parma to Marcus Antonius. At Trœzen, on the contrary, all the inhabitants are subject to diseases of the feet, owing to the bad quality of the water there. The state of the Tungri, in Gaul, has a spring of great renown, which sparkles as it bursts forth with bubbles innumerable, and has a certain ferruginous taste, only to be perceived after it has been drunk. This water is strongly purgative, is curative of tertian fevers, and disperses urinary calculi: upon the application of fire it assumes a turbid appearance, and finally turns red. The springs of Leucogæa, between Puteoli and Neapolis, are curative of eye diseases and of wounds. Cicero, in his work entitled "Admiranda," has remarked that it is only by the waters of the marshes of Reate that the hoofs of beasts of burden are hardened.

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CHAP. 9.

WATERS WITCH COLOUR THE HAIR.

Eudicus informs us that in Hestiæotis there are two springs; one of which, Cerona, renders sheep black that drink of it, while the other, called Neleus, turns them white: if, again, a sheep should happen to drink their waters mixed, its fleece will be mottled. According to Theophrastus, the water of the Crathis, a river of Thurii, makes sheep and cattle white, while that of the river Sybaris turns them black.

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CHAP. 10.

WATERS WHICH COLOUR THE HUMAN BODY.

And not only this, but human beings even, Theophrastus tells us, are sensible of this difference: for persons who drink the water of the Sybaris, he says, become more swarthy and more hardy, the hair inclining to curl: while those, again, who drink of the Crathis become fair and more soft-skinned, with the hair growing straight and long. So, too, in Macedonia, persons who wish the produce to be white, drive their cattle to the river Haliacmon, while those who desire a black or tawny colour, take them to water at the Axius. Upon the same authority, too, we learn that in certain localities, as in the country of the Messapii, for instance, all the productions, the cereals even, grow of a tawny colour; and that at Lusi, in Arcadia, there is a certain fountain in which land-mice live and dwell. The river Aleos, which passes through Erythræ, promotes the growth of hair upon the body.

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CHAP. 11.

WATERS WHICH AID THE MEMORY, OR ARE PRODUCTIVE OF FORGETFULNESS.

At the Temple of the god Trophonius, in Bœotia, near the river Hercynnus, there are two fountains, one of which aids the memory, while the other is productive of forgetfulness: hence the names which they respectively bear.

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CHAP. 12.

WATERS WHICH SHARPEN OR DULL THE SENSES. WATERS WHICH IMPROVE THE VOICE.

Near the town of Cescum, in Cilicia, runs the river Nus, the waters of which, according to Varro, sharpen the intellect; while those of a certain spring in the island of Cea dull the senses. At Zama, in Africa, there is a spring, the waters of which render the voice more musical.

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CHAP. 13.

WATERS WHICH CAUSE A DISTASTE FOR WINE. WATERS WHICH PRODUCE INEBRIETY.

Eudoxus says that persons who drink the water of Lake Clitorius take a distaste for wine, and Theopompus asserts that the waters of the springs already named are productive of inebriety. According to Mucianus, there is a fountain at Andros, consecrated to Father Liber, from which wine flows during the seven days appointed for the yearly festival of that god, the taste of which becomes like that of water the moment it is taken out of sight of the temple.

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CHAP. 14.

WATERS WHICH SERVE AS A SUBSTITUTE FOR OIL.

Polyclitus says, that the water of the river Liparis, near Soli, in Cilicia, is used as a substitute for oil, and Theophrastus mentions a spring of that name in Æthiopia, which is possessed of similar properties. Lycus says, that at Tasitia there is a fountain of it, the water of which emits light: the same is asserted, too, of a spring at Eebatana. According to Theopompus, there is a lake at Scotussa, the waters of which heal wounds.

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CHAP. 15.

SALT AND BITTER WATERS.

Juba says, that in the country of the Troglodytæ there is a lake, called the “Lake of Insanity,” from its highly noxious properties: thrice a day it becomes salt and bitter, and then again fresh, the same taking place as many times during the night. It is full, he says, of white serpents, twenty cubits long. He mentions, also, a certain spring in Arabia, which rises from the ground with such remarkable force, as to throw back any object pressed down upon it, however weighty.

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CHAP. 16.

WATERS WHICH THROW UP STONES. WATERS WHICH CAUSE LAUGHTER AND WEEPING. WATERS WHICH ARE SAID TO BF CURATIVE OF LOVE.

Theophrastus makes mention of the fountain of Marsyas, near the city of Cellenæ, in Phrygia, which throws up masses of stone. Not far from it are two other springs, called Clæon and Gelon by the Greeks, from the effects which they respectively produce. At Cyzicus is a fountain known as that of Cupido, the waters of which, Mucianus believes, cure those who drink thereof of love.

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CHAP. 17.

WATERS WHICH PRESERVE THEIR WARMTH FOR THREE DAYS.

At Crannon there are certain hot springs, though not at boiling heat, the water of which, mixed with wine, preserves it warm in the vessels for a period of three days. The same is the case, too, with the springs of Mattiacum in Germany, beyond the river Rhenus, the water of which retains its boiling heat three days. The margin of these springs is covered with pumice, formed by the action of the water.

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CHAP. 18.

OTHER MARVELLOUS FACTS CONNECTED WITH WATER. WATERS IN WHICH EVERYTHING WILL SINK. WATERS IN WHICH NOTHING WILL SINK.

If any of the above-mentioned facts have the appearance of being incredible to a person, I would have him know that there is no department of Nature which presents greater marvels than this, independently of the numerous peculiarities which have been already mentioned in an earlier part of this work. Ctesias informs us that, in India, there is a lake of standing water, upon which nothing will float, every object instantly sinking to the bottom. Cælius says that in the waters of Lake Avernus, in our own part of the world, the very leaves of the trees even will sink; and, according to Varro, these waters are fatal to such birds as fly towards them.

On the other hand, again, in the waters of Lake Apuscidamus, in Africa, nothing will sink; the same, too, Apion tells us, with the fountain of Plinthia in Sicily, as also a certain lake in Media, and the well of Saturn. The spring of Limyra not unfrequently makes its way through the neighbouring localities, and when it does so, is always portentous of some coming event. It is a singular thing too, that the fish always accompany its waters on these occasions; the inhabitants of the adjoining districts being in the habit of consulting them by offering them food. When the fishes seize it with avidity, the answer is supposed to be favourable; but if, on the other hand, they reject the food, by flapping it with their tails, the response is considered to be unfavourable. The river Holcas, in Bithynia, runs close to Bryazus, the name of a temple and of a divinity there worshipped; persons guilty of perjury, it is said, cannot endure contact with its waters, which burn like flame.

The sources, too, of the Tamaricus, a river of Cantabria, are considered to possess certain powers of presaging future events: they are three in number, and, separated solely by an interval of eight feet, unite in one channel, and so form a mighty stream. These springs are often dry a dozen times in the day, sometimes as many as twenty,

without there being the slightest trace of water there: while, on the other hand, a spring close at hand is flowing abundantly and without intermission. It is considered an evil presage when persons who wish to see these springs find them dry: a circumstance which happened very recently, for example, to Lartius Licinius, who held the office of legatus after his prætorship; for at the end of seven days after his visit he died.

In Judæa there is a river that is dry every Sabbath day.

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CHAP. 19.

DEADLY WATERS. POISONOUS FISHES.

There are other marvels again, connected with water, but of a more fatal nature. Ctesias states in his writings, that there is a spring in Armenia, the fishes in which are black, and, if used as food, productive of instantaneous death. I have heard the same, too, with reference to the waters near the sources of the river Danuvius, until a spring is reached which is near its main channel, and beyond which this poisonous kind of fish is not to be found. Hence it is that this spot is generally looked upon as the source of the river. The same, too, is reported of the Lake of the Nymphs, in Lydia. Near the river Pheneus, in Achaia, there flows from the rocks a spring known as the Styx, the waters of which, as already stated, are instantly fatal. And not only this, but there are also small fish in it, Theophrastus says, which are as deadly as the water, a thing that is not the case with the fish of any other poisonous springs. Theopompus says, that at the town of Cychri, in Thrace, the waters are deadly; and Lycus states, that at Leontium there is a spring, the waters of which are fatal at the end of a couple of days to those who drink thereof. Varro speaks also of a spring upon Mount Soracte, some four feet in breadth, the waters of which bubble forth at sunrise, as though they were boiling; birds, he says, which only taste thereof, fall dead close by.

And then, besides, we meet with this insidious circumstance, that in some cases, waters of this nature are inviting even in their appearance; those at Nonacris, in Arcadia, for example, the water of which fountain possesses no apparent quality to excite mistrust, though, owing to its intense coldness, it is generally looked upon as highly injurious, seeing that it petrifies as it flows. It is otherwise with the waters of Tempe, in Thessaly, their baneful properties inspiring universal terror, and possessing the property of corroding copper even and iron, it is said. This stream runs a short distance only, as already stated; and it is truly marvellous that, according to general report, the banks of its source are surrounded with the roots of a wild carob, always covered with purple flowers, while the

margin is clothed with a green herbaceous plant of a peculiar species. In Macedonia, not far from the tomb of the Poet Euripides, is the confluence of two streams, the water of one of which is extremely wholesome, that of the other fatal.

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CHAP. 20.

WATERS WHICH PETRIFY, THEMSELVES, OR CAUSE OTHER OBJECTS TO PETRIFY.

At Perperena, there is a spring which petrifies the ground wherever it flows, the same being the case also, with the hot waters at Ædepsus, in Eubœa; for there, wherever the stream falls, the rocks are continually increasing in height. At Eury- mente, chaplets, when thrown into the waters of a certain fountain there, are turned to stone. At Colossæ there is a river, into the water of which if bricks are thrown, when taken out they are found changed into stone. In the mines of Scyros, the trees petrify that are watered by the river, branches and all. In the caverns of Mount Corycus, the drops of water that trickle down the rocks become hard in the form of a stone. At Mieza, too, in Macedonia, the water petrifies as it hangs from the vaulted roofs of the rocks; but at Corycus it is only when it has fallen that it becomes hard.

In other caverns, again, the water petrifies both ways, and so forms columns; as we find the case in a vast grotto at Phlan- sia, a town of the Chersonesus of the Rhodians, the columns of which are tinted with various colours. These instances will suffice for the present.

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CHAP. 21. (3.)

THE WHOLESOMIENESS OF WATERS.

It is a subject of enquiry among medical men, which kind of water is the most beneficial. They condemn, and with justice, all stagnant, sluggish, waters, and are of opinion that running water is the best, being rendered lighter and more salubrious by its current and its continuous agitation. Hence it is that I am much surprised that persons should be found to set so high a value as they do, upon cistern water. These last give as their reason, however, that rain-water must be the lightest water of all, seeing that it has been able to rise aloft and remain suspended in the air. Hence it is, too, that they prefer snow-water to rain-water, and ice, again, to snow, as being water subtilized to the highest possible degree; on the ground that snow-water and ice-water must be lighter thin ordinary water, and ice, of necessity, considerably lighter. It is for the general interest, however, of mankind, that these notions should be refuted. For, in the first place, this comparative lightness which they speak of, could hardly be ascertained in any other way than by the sensation, there being pretty nearly no difference at all in weight between the kinds of water. Nor yet, in the case of rain-water, is it any proof of its lightness that it has made its way upwards into the air, seeing that stones, it is quite evident, do the same: and then. besides, this water, while falling, must of necessity become tainted with the vapours which rise from the earth; a circumstance owing to which it is, that such numerous impurities are to be detected in rain-water, and that it ferments with such extreme rapidity.

I am, surprised, too, that snow and ice should be regarded as the most subtilized states of this element, in juxtaposition with the proofs supplied us by hail, the water of which, it is generally agreed, is the most pernicious of all to drink. And then, besides, there are not a few among the medical men themselves, who assert that the use of ice-water and snow-water is highly injurious, from the circumstance that all the more refined parts thereof have been expelled by congelation. At all events, it is a well-ascertained fact that the volume of every

liquid is diminished by congelation; as also that exces- sive dews a reproductive of blight in corn, and that hoar- trosts result in blast; of a kindred nature, both of them, to snow. It is generally agreed, too, that rain-water putrefies with the greatest rapidity, and that it keeps but very badly on a voyage. Epigenes, however, assures us that water which has putrefied seven times and as often purified itself, will no longer be liable to putrefaction. As to cistern-water, medical men assure us that, owing to its harshness, it is bad for the bowels and throat: and it is generally admitted by them that ,there is no kind of water that contains more slime or more numerous insects of a disgusting nature. But it does not, therefore, follow that river water is the best of all, or that, in fact, of any running stream, the water of many lakes being found to be wholesome in the very highest degree.

What water, then, out of all these various kinds, are we to look upon as best adapted for the human constitution? Different kinds in different localities, is my answer. The kings of Parthia drink no water but that of the Choaspes or of the Eulæus, and, however long their journies, they always have this water carried in their suite. And yet it is very evident that it is not merely because this water is river-water that it is thus pleasing to them, seeing that they decline to drink the water of the Tigris, Euphrates, and so many other streams.

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CHAP. 22.

THE IMPURITIES OF WATER.

Slime is one great impurity of water: still, however, if a river of this description is full of eels, it is generally looked upon as a proof of the salubrity of its water; just as it is regarded as a sign of its freshness when long worms breed in the water of a spring. But it is bitter water, more particu- larly, that is held in disesteem, as also the water which swells the stomach the moment it is drunk, a property which belongs to the water at Trœzen. As to the nitrous and salso-acid waters which are found in the deserts, persons travelling across towards the Red Sea render them potable in a couple of hours by the addition of polenta, which they use also as food. Those springs are more particularly condemned which secrete mud, or which give a bad complexion to persons who drink thereof. It is a good plan, too, to observe if water leaves stains upon copper vessels; if leguminous vegetables boil with difficulty in it; if, when gently decanted, it leaves an earthy deposit; or if, when boiled, it covers the vessel with a thick crust.

It is a fault also in water but to have any flavour not only to have a bad smell, at all, even though it be a flavour pleasant and agreeable in itself, or closely approaching, as we often find the case, the taste of milk. Water, to be truly wholesome, ought to resemble air as much as possible. There is only one spring of water in the whole universe, it is said, that has an agreeable smell, that of Chabura, namely, in Mesopotamia: the people give a fabulous reason for it, and say that it is because Juno bathed there. Speaking in general terms, water, to be wholesome, should have neither taste nor smell.

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CHAP. 23.

THE MODES OF TESTING WATER.

Some persons judge of the wholesomeness of water through the agency of a balance: their pains, however, are expended to little purpose, it being but very rarely that one water is lighter than another. There is, however, a more certain mode of ascertaining the difference in quality, that water being the better of the two which becomes hot and cold with the greatest rapidity: in addition to which, not to keep poising a balance, after water has been drawn up in vessels, if it is good, it should gradually become warmer, they say, when placed upon the ground. Which water, then, of the several kinds will be most likely to be good and wholesome? Well-water, no doubt, if we are to judge from the general use made of it in cities: but only in the case of wells in which it is kept in continual agitation by repeated drawing, and is refined by the earth acting as a filter. These conditions are sufficient to ensure salubrity in water: in regard to coolness, the well must be in a shaded spot, and the water kept exposed to the air. There is, however, one thing above all to be observed, a point, too, of considerable importance with reference to the continuance of the flow — the spring must issue from the bed of the well, and not from the sides. To make water cold to the touch may be effected artificially even, either by forcing it to rise aloft or by making it fall from a height, and so come in collision with the air, and be- come incorporated therewith: for in swimming, we find, when we hold our breath, the water is felt to be all the colder.

It was the Emperor Nero's invention to boil water, and then enclose it in glass vessels and cool it in snow; a method which ensures all the enjoyment of a cold beverage, without any of the inconveniences resulting from the use of snow. Indeed, it is generally admitted that all water is more wholesome when it has been boiled; as also, that water when it has once been heated, will become more intensely cold than before — a most ingenious discovery. The best corrective of unwholesome water is to boil it down to one half. Cold water, taken internally, arrests hæmorrhage. By keeping cold water

in his mouth, a person may render himself proof against the intense heat of the bath. Many a person knows by his own every-day experience, that water which is the coldest to drink is not of necessity the coldest to the touch, this delightful property being subject to considerable fluctuations.

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CHAP. 24.

THE MARCIAN WATERS.

The most celebrated water throughout the whole world, and the one to which our city gives the palm for coolness and salu- brity, is that of the Marcian Spring, accorded to Rome among the other bounties of the gods: the name formerly given to the stream was the "Aufeian," the spring itself being known as "Pitonia." It rises at the extremity of the mountains of the Peligni, passes through the territory of the Marsi and through Lake Fucinus, and then, without deviating, makes directly for Rome: shortly after this, it loses itself in certain caverns, and only reappears in the territory of Tibur, from which it is brought to the City by an arched aqueduct nine miles in length. Ancus Marcius, one of the Roman kings, was the first who thought of introducing this water into the City. At a later period, the works were repaired by Quintus Mar- cius Rex: and, more recently, in his prætorship, by M. Agrippa.

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CHAP. 25.

THE VIRGIN WATERS.

It was he, too, who brought the Virgin Waters from the bye-road situate at the eighth milestone from the City, which runs for two miles along the Prænestine Way. Near these waters is the stream of Hercules, which the former shun, to all appearance, and have thence obtained the name of "Virgin Waters." On instituting a comparison between the waters of these streams, the difference above-mentioned may be immediately detected, the Virgin water being as much cooler to the touch, as the Marcian water is in taste. And yet, for this long time past, the pleasure of drinking these waters has been lost to the City, owing to the ambition and avarice of certain persons who have turned them out of their course for the supply of their country-seats and of various places in the suburbs, to the great detriment of the public health.

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CHAP. 26.

TE METHOD OF SEARCHING FOR WATER.

It will not be out of place to append here an account of the method employed in searching for water. Water is mostly to be found in valleys, whether formed by the intersection of declivities or lying at the lower part of mountains. Many persons have been of opinion that all places with a northern aspect are naturally provided with water: a point upon which it will not be amiss to explain the diversities presented to us by Nature. On the south side of the mountains of Hyrcania it never rains; and hence it is that it is only on the northeast side that they are wooded. As for Olympus, Ossa, Parnassus, the Apennines, and the Alps, they are covered with wood on every side, and abundantly watered with streams. Some mountains, again, are wooded on the south side, the White Mountains in Crete, for example. On this point, therefore, we may come to the conclusion that there is no rule which in all cases holds good.

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CHAP. 27.

SIGNS INDICATIVE OF THE PRESENCE OF WATER.

The following are indications of the presence of water: — rushes, reeds, the plant mentioned with reference to this point already, or frogs sitting squatted on a spot for a long time together. As to the wild willow, alder, vitex, reed, and ivy, all of which grow spontaneously on low grounds in which there is a settling of rain water from higher localities, considered as indications of the presence of water, they are all of them of a deceptive nature. A sign much more to be depended upon, is a certain misty exhalation, visible from a distance before sunrise. The better to observe this, some persons ascend an eminence, and lie flat at full length upon the ground, with the chin touching the earth. There is also another peculiar method of judging upon this point, known only to men of experience in these matters: in the very middle of the heats of summer they select the hottest hours of the day, and observe how the sun's rays are reflected in each spot; and if, notwithstanding the general dryness of the earth, a locality is observed to present a moist appearance, they make no doubt of finding water there.

But so intense is the stress upon the eyes in doing this, that it is very apt to make them ache; to avoid which inconvenience, they have recourse to other modes of testing. They dig a hole, for instance, some five feet in depth, and cover it with vessels of unbaked pottery, or with a copper basin well-oiled; they then place a burning lamp on the spot, with an arch-work over it of leaves, and covered with earth on the top. If, after a time, they find the pots wet or broken, the copper covered with moisture, or the lamp extinguished, but not from want of oil, or if a lock of wool that has been left there is found to be moist, it is a sign of the presence of water, beyond all doubt. With some persons it is the practice to light a fire on the spot before they dig the hole, a method which renders the experiment with the vessels still more conclusive.

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CHAP. 28.

DIFFERENCES IN WATERS, ACCORDING TO THE NATURE OF THE SOIL.

The soil itself, too, gives indications of the presence of water, by presenting white spots, or an uniformly green appearance: for where the stratum is black the springs are mostly not of a permanent nature. The presence of potter's clay always puts an end to all hopes of finding water, and the excavation is immediately abandoned; an eye being carefully kept to the strata of the earth, to see whether, beginning with black mould, it successively presents the appearances above-mentioned. The water is always fresh that is found in argillaceous soils, but in a stratum of tufa it is colder than elsewhere; this, indeed, being a soil which is highly approved of, as having a tendency to make the water pure and extremely light to the stomach, and, by its action as a filter, to withhold all impurities. The presence of sand gives indications of springs of but limited extent, and of water impregnated with slime; while that of gravel announces the presence of water of excellent flavour, but not to be depended upon for permanence. Male: sand, fine sea-sand, and charcoal earth, yield a constant supply of water of a highly wholesome quality; but it is the presence of red stones that is the most to be depended upon, and the water found there is of the very finest quality. Craggy localities at the foot of mountains, and silicious soils, are equally good; in addition to which, the water found there is cooler than elsewhere.

In boring for water, the soil should always become more and more humid, and, the deeper the descent, with the greater facility the implements should penetrate. In deep-sunk wells, the presence of sulphureous or aluminous substances is fatal to the sinkers; a danger that may be guarded against by letting down a lighted lamp, and ascertaining whether the flame is extinguished. When such is found to be the case, it is the practice to sink vent-holes on each side of the well, both right and left, in order to receive and carry off the noxious exhalations. Independently of these evils, the air becomes heavier, from the great depth merely of the excavation, an inconvenience which is remedied by keeping up a continual circulation with

ventilators of linen cloth. As soon as water is reached, walls are constructed at the bottom, but without cement, in order that the springs may not be intercepted.

Some waters, the sources of which do not lie on elevated ground, are coldest at the beginning of spring, being maintained by the winter rains in fact. Others, again, are coldest at the rising of the Dog-star — peculiarities, both of them, to be witnessed at Pella in Macedonia; for in front of that city there is a marsh-spring, which at the beginning of summer is cold, while in the more elevated parts of the city the water is ice-cold in the hottest days of summer. The same is the case, too, at Chios, the water-supply of the harbour and of the city occupying the same relative positions. At Athens, the water of the Fountain Enneacrunos is colder in a cloudy summer than the well there in the garden of Jupiter; while on the other hand, this last is ice-cold during the drought of a hot summer. For the most part, however, wells are coldest about the rising of Arcturus.

(4.) The water-supply of wells never fails in summer, but in all cases it falls low during four days at the rising of the constellation above-mentioned. Throughout the whole winter, on the other hand, many wells entirely fail; as in the neighbourhood of Olynthus, for example, where the water returns in the early days of spring. In Sicily too, in the vicinity of Messana and Mylæ, the springs are entirely dry throughout the winter, while in summer they overflow and form quite a river. At Apollonia in Pontus there is to be seen, near the sea-shore, a fountain which overflows in summer only, and mostly about the rising of the Dog-star; should the summer, however, not be so hot as usual, its water is less abundant. Certain soils become drier in consequence of rain, that in the territory of Narnia for example: a fact which M. Cicero has mentioned in his “Admiranda,” with a statement that drought is there productive of mud, and rain of dust.

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CHAP. 29.

THE QUALITIES OF WATER AT THE DIFFERENT SEASONS OF THE YEAR.

Every kind of water is freshest in winter, not so fresh in summer, still less so in autumn, and least of all in times of drought. River-water, too, is by no means always the same in taste, the state of the bed over which it runs making a considerable difference. For the quality of water, in fact, depends upon the nature of the soil through which it flows, and the juices of the vegetation watered by it; hence it is that the water of the same river is found in some spots to be comparatively unwholesome. The confluents, too, of rivers, are apt to change the flavour of the water, impregnating the stream in which they are lost and absorbed; as in the case of the Borysthenes, for example. In some instances, again, the taste of river-water is changed by the fall of heavy rains. It has happened three times in the Bosporus that there has been a fall of salt rain, a phænomenon which proved fatal to the crops. On three occasions, also, the rains have imparted a bitterness to the overflowing streams of the Nilus, which was productive of great pestilence throughout Egypt.

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CHAP. 30.

HISTORICAL OBSERVATIONS UPON WATERS WHICH HAVE SUDDENLY MADE THEIR APPEARANCE OR SUDDENLY CEASED.

It frequently happens that in spots where forests have been felled, springs of water make their appearance, the supply of which was previously expended in the nutriment of the trees. This was the case upon Mount Hæmus for example, when, during the siege by Cassander, the Gauls cut down a forest for the purpose of making a rampart. Very often too, after removing the wood which has covered an elevated spot and so served to attract and consume the rains, devastating torrents are formed by the concentration of the waters. It is very important also, for the maintenance of a constant supply of water, to till the ground and keep it constantly in motion, taking care to break and loosen the callosities of the surface crust: at all events, we find it stated, that upon a city of Crete, Arcadia by name, being razed to the ground, the springs and water-courses, which before were very numerous in that locality, all at once dried up; but that, six years after, when the city was rebuilt, the water again made its appearance, just as each spot was again brought into cultivation.

(5.) Earthquakes also are apt to discover or swallow up springs of water; a thing that has happened, it is well known, on five different occasions in the vicinity of Pheneus, a town of Arcadia. So too, upon Mount Corycus, a river burst forth; after which, the soil was subjected to cultivation. These changes are very surprising where there is no apparent cause for them; such as the occurrence at Magnesia, for instance, where the warm waters became cold, but without losing their brackish flavour; and at the Temple of Neptune in Caria, where the water of the river, from being fresh, became salt. Here, too, is another fact, replete with the marvellous — the fountain of Arethusa at Syracuse has a smell of dung, they say, during the celebration of the games at Olympia, a thing that is rendered not improbable by the circumstance, that the river Alpheus makes its way to that island beneath the bed of the se-a. There is a spring in the Chersonesus of the Rhodians which discharges its accumulated

impurities every nine years.

Waters, too, sometimes change their colour; as at Babylon, for example, where the water of a certain lake for eleven days in summer is red. In the summer season, too, the current of the Borysthenes is blue, it is said, and this, although its waters are the most rarefied in existence, and hence float upon the surface of those of the Hypanis; — though at the same time there is this marvellous fact, that when south winds prevail, the waters of the Hypanis assume the upper place. Another proof, too, of the surpassing lightness of the water of the Borysthenes, is the fact that it emits no exhalations, nor, indeed, the slightest vapour even. Authors that would have the credit of diligent research in these enquiries, assure us that water becomes heavier after the winter-solstice.

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CHAP. 31. (6.)

THE METHOD OF CONVEYING WATER.

The most convenient method of making a watercourse from the spring is by employing earthen pipes, two fingers in thick- ness, inserted in one another at the points of junction — the one that has the higher inclination fitting into the lower one — and coated with quick-lime macerated in oil. The inclination, to ensure the free flow of the water, ought to be at least one-fourth of an inch to every hundred feet; and if the water is conveyed through a subterraneous passage, there should be air-holes let in at intervals of every two actus. Where the water is wanted to ascend aloft, it should be conveyed in pipes of lead: water, it should be remembered, always rises to the level of its source. If, again, it is conveyed from a considerable distance, it should be made to rise and fall every now and then, so as not to lose its motive power. The proper length for each leaden pipe is ten feet; and if the pipe is five fingers in circumference its weight should be sixty pounds; if eight feet, one hundred; if ten, one hundred and twenty; and so on in the same proportion.

A pipe is called “a ten-finger” pipe when the sheet of metal is ten fingers in breadth before it is rolled up; a sheet one half that breadth giving a pipe “of five fingers.” In all sudden changes of inclination in elevated localities, pipes of five fingers should be employed, in order to break the impetu- osity of the fall: reservoirs, too, for branches should be made as circumstances may demand.

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CHAP. 32

HOW MINERAL WATERS SHOULD BE USED.

I am surprised that Homer has made no mention of hot springs, when, on the other hand, he has so frequently intro- duced the mention of warm baths: a circumstance from which we may safely conclude that recourse was not had in his time to mineral waters for their medicinal properties, a thing so universally the case at the present day. Waters impregnated with sulphur are good for the sinews, and aluminous waters are useful for paralysis and similar relaxations of the system. Those, again, which are impregnated with bitumen or nitre, the waters of Cutilia, for example, are drunk as a purgative.

Many persons quite pride themselves on enduring the heat of mineral waters for many hours together; a most pernicious practice, however, as they should be used but very little longer than the ordinary bath, after which the bather should be shampooed with cold water, and not leave the bath without being rubbed with oil. This last operation, however, is commonly regarded as altogether foreign to the use of mineral baths; and hence it is, that there is no situation in which men's bodies are more exposed to the chances of disease, the head becoming saturated with the intensity of the odours exhaled, and left exposed, perspiring as it is, to the coldness of the atmosphere, while all the rest of the body is immersed in the water.

There is another mistake, also, of a similar description, made by those who pride themselves upon drinking enormous quantities of these waters; and I myself have seen persons, before now, so swollen with drinking it that the very rings on their fingers were entirely concealed by the skin, owing to their inability to discharge the vast quantities of water which they had swallowed. It is for this reason, too, that these waters should never be drunk without taking a taste of salt every now and then. The very mud, too, of mineral springs may be employed to good purpose; but, to be effectual, after being applied to the body, it must be left to dry in the sun.

It must not be supposed, however, that all hot waters are of

necessity medicated, those of Segesta in Sicily, for example, of Larissa, Troas, Magnesia, Melos, and Lipara. Nor is the very general supposition a correct one, that waters, to be medicinal, must of necessity discolour copper or silver; no such effect being produced by those of Patavium, or there being the slightest difference perceptible in the smell.

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CHAP. 33.

THE USES OF SEA-WATER. THE ADVANTAGES OF A SEA-VOYAGE.

Sea-water also is employed in a similar manner for the cure of diseases. It is used, made hot, for the cure of pains in the sinews, for reuniting fractured bones, and for its desiccative action upon the body: for which last purpose, it is also used cold. There are numerous other medicinal resources derived from the sea; the benefit of a sea-voyage, more particularly, in cases of phthisis, as already mentioned, and where patients are suffering from hæmoptosis, as lately experienced, in our own memory, by Annæus Gallio, at the close of his consulship: for it is not for the purpose of visiting the country, that people so often travel to Egypt, but in order to secure the beneficial results arising from a long sea-voyage. Indeed, the very sea-sickness that is caused by the rocking of the vessel to and fro, is good for many affections of the head, eyes, and chest, all those cases, in fact, in which the patient is recommended to drink an infusion of hellebore. Medical men con- sider sea-water, employed by itself,' highly efficacious for the dispersion of tumours, and, boiled with barley-meal, for the successful treatment of imposthumes of the parotid glands: it is used also as an ingredient in plasters, white plasters more particularly, and for emollient poultices. Sea-water is very good, too, employed as a shower-bath; and it is taken internally, though not without injury to the stomach, both as a purgative and as an expellent, by vomit and by alvine evacuation, of black bile or coagulated blood, as the case may be.

Some authorities prescribe it, taken internally, for quartan fevers, as also for tenesmus and diseases of the joints; purposes for which it is kept a considerable time, to mellow with age, and so lose its noxious properties. Some, again, are for boiling it, but in all cases it is recommended to be taken from out at sea, and untainted with the mixture of fresh water, an emetic also being taken before using it. When used in this manner, vinegar or wine is generally mixed with the water. Those who give it unmixed, recommend radishes with oxymel to be eaten upon it, in order to provoke vomiting. Sea-water,

made hot, is used also as an injection; and there is nothing in existence preferred to it as a fomentation for swellings of the testes, or for chilblains before they ulcerate. It is similarly employed, also, for the cure of prurigo, itch-scab, and lichens. Lice and other foul vermin of the head, are removed by the application of sea-water, and lividities of the skin are restored to their natural colour; it being a remarkably good plan, in such cases, after applying the sea-water, to foment the parts with hot vinegar.

It is generally considered, too, that sea-water is highly effcacious for the stings of venomous insects, those of the pha- langium and scorpion, for example, and as an antidote to the poisonous secretions of the asp, known as the "ptyas;" in all which cases it is employed hot. Fumigations are also made of it, with vinegar, for the cure of head-ache; and, used warm as at injection, it allays griping pains in the bowels and cholera. Things that have been heated in sea-water are longer than ordinary in cooling. A sea-water bath is an excellent corrective for swelling of the bosoms in females, affections of the thoracic organs, and ermaciation of the body. The steam also of sea-water boiled with vinegar, is used for the removal of hardness of hearing and head-ache. An application of sea-water very expeditiously removes rust upon iron; it is curative also of scab in sheep, and imparts additional softness to the wool.

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CHAP. 34.

HOW ARTIFICIAL SEA-WATER MAY BE MADE IN PLACES AT A DISTANCE FROM THE SEA.

I am by no means unaware that these details may very possibly appear superfluous to persons who live at a distance from the sea; but scientific research has made provision against this objection, by discovering a method of enabling every one to make sea-water for himself. It is a singular fact in connexion with this discovery, that if more than one sextarius of salt is put into four sextarii of water, the liquefying properties of the water will be overpowered, and the salt will no longer melt. On the other hand, again, a mixture of one sextarius of salt with four sextarii of water, acts as a good substitute for the efficacy and properties of the very saltest sea-water. The most reasonable proportion, however, is generally thought to be eight cyathi of salt, diluted in the quantity of water above mentioned; a preparation which has been found to have a warming effect upon the sinews, without in any degree chafing the body.

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CHAP. 35.

HOW THALASSOMELI IS MADE.

There is also a composition made to ripen for use, known as “thalassomeli,” and prepared with equal parts of sea-water, honey, and rain-water. For this purpose, also, the water is brought from out at sea, and the preparation is kept in an earthen vessel well pitched. It acts most efficiently as a purgative, and without in the least fatiguing the stomach; the taste, too, and smell of it, are very agreeable.

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CHAP. 36.

How HYDROMELI IS MADE.

Hydromeli, also, was a mixture formerly made with pure rain-water and honey, and was prescribed for patients who, were anxious for wine, as being a more harmless drink. For these many years past, however, it has been condemned, as having in reality all the inconveniences of wine, without the advantages.

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CHAP. 37.

METHODS OF PROVIDING AGAINST THE INCONVENIENCE OF DRINKING SUSPECTED WATER.

As persons out at sea often suffer great inconvenience from the want of fresh water, we will here describe some methods of obviating it. Fleeces are spread round the ship, and on becoming moistened with the exhalations arising from the sea, the water is wrung from them, and found to be quite fresh. Hollow balls of wax, also, or empty vessels sealed at the mouth, upon being let down into the sea in a net, become filled with water that is fresh and potable. On shore, too, sea-water may be made fresh, by filtering it through argillaceous earth.

By swimming in water of any kind, sprains of the limbs in man or beast are reduced with the greatest facility. Persons when travelling, are sometimes apprehensive that the use of water, the quality of which is unknown to them, may prove injurious to their health: as a precaution against this, they should drink the suspected water cold, immediately after leaving tie bath.

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CHAP. 38.

SIX REMEDIES DERIVED FROM MOSS. REMEDIES DERIVED FROM SAND.

Moss which has grown in water is excellent as a topical application for gout; and, in combination with oil, it is good for pains and swellings in the ankles. The foam that floats upon the surface of the water, used as a friction, causes warts to disappear. The sand, too, of the sea-shore, that more particularly which is very fine and burnt white by the heat of the sun, is used remedially for its desiccative properties, the bodies of dropsical or rheumatic patients being entirely covered with it.

Thus much with reference to water itself; we will now turn to the aquatic productions, beginning, as in all other instances, with the principal of them, namely, salt and sponge.

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CHAP. 39. (7.)

THE VARIOUS KINDS OF SALT; THE METHODS OF PREPARING IT, AND THE REMEDIES DERIVED FROM IT. TWO HUNDRED AND FOUR OBSERVATIONS THERE UPON.

All salt is either native or artificial; both kinds being formed in various ways, but produced from one of these two causes, the condensation or the desiccation, of a liquid. The Lake of Tarentum is dried up by the heat of the summer sun, and the whole of its waters, which are at no time very deep, not higher than the knee in fact, are changed into once mass of salt. The same, too, with a lake in Sicily, Cocanicus by name, and another in the vicinity of Gela. But in the case of these two last, it is only the sides that are thus dried up: whereas in Phrygia, in Cappadocia, and at Aspendus, where the same phænomena are observable, the water is dried up to a much larger extent, to the very middle of the lake, in fact. There is also another marvellous circumstance connected with this last — however much salt is taken out of it in the day, its place is supplied again during the night. Every kind of lake- salt is found in grains, and not in the form of blocks.

Sea-water, again, spontaneously produces another kind of salt, from the foam which it leaves on shore at high-water n-ark, or adhering to rocks; this being, in all cases, condensed by the action of the sun, and that salt being the most pun- gent of the two which is found upon the rocks.

There are also three different kinds of native salt. In Bac- triana there arc two vast lakes; one of them situate on the side of Scythia, the other on that of Ariana, both of which throw up vast quantities of salt. So, too, at Citium, in Cyprus; and, in the vicinity of Memphis, they extract salt from the lake and dry it in the sun. The surface-waters of some rivers, also, condense in the form of salt, the rest of the stream flowing beneath, as though under a crust of ice; such as the running waters near the Caspian Gates for instance, which are known as the “Rivers of Salt.” The same is the case, too, in the vicinity of the Mardi and of the people of Armenia. In Bactriana,

also, the rivers Ochus and Oxus carry down from the mountains on their banks, fragments of salt. There are also in Africa some lakes, the waters of which are turbid, that are productive of salt. Some hot springs, too, produce salt-those at Pagasæ for example. Such, then, are the various kinds of salt produced spontaneously by water.

There are certain mountains, also, formed of native salt; that of Oromenus, in India, for example, where it is cut out like blocks from a quarry, and is continually reproduced, bringing in a larger revenue to the sovereigns of those countries than that arising from their gold and pearls. In some instances it is dug out of the earth, being formed there, evidently, by the condensation of the moisture, as in Cappadocia for example, where it is cut in sheets, like those of mirror-stone. The blocks of it are very heavy, the name commonly given to them being "mica." At Gerrhæ, a city of Arabia, the ramparts and houses are constructed of blocks of salt, which are soldered together by being moistened with water. King Ptole- mæs discovered salt also in the vicinity of Pelusium, when he encamped there; a circumstance which induced other persons to seek and discover it in the scorched tracts that lie between Egypt and Arabia, beneath the sand. In the same manner, too, it has been found in the thirsting deserts of Africa, as far as the oracle of Hammon, a locality in which the salt increases at night with the increase of the moon.

The districts of Cyrenaica are ennobled, too, by the production of hammoniacum, a salt so called from the fact of its being found beneath the sands there. It is similar in colour to the alum known as "schiston," and consists of long pieces, by no means transparent, and of an unpleasant flavour, but highly useful in medicine; that being held in the highest esteem, which is the clearest and divides into straight flakes. There is one remarkable fact mentioned in connexion with it: so long as it lies under ground in its bed it is extremely light, but the moment it is exposed to the light, it is hardly credible to what an extent its weight is increased. The reason for this is evident: the humid vapours of the excavations bear the masses upwards, as water does, and so aid the workmen. It is adulterated with the Sicilian salt which we have mentioned as being found in Lake Cocanicus, as also with that of Cyprus, which is marvellously like it. At Egelasta, in Nearer Spain, there is a salt, hewn from the bed in almost transparent

blocks, and to which for this long time past most medical men, it is said, have given the preference over all other salt. Every spot in which salt is found is naturally barren, and produces nothing. Such are the particulars, in general, which have been ascertained with reference to native salt.

Of artificial salt there are several kinds; the common salt, and the most abundant, being made from sea-water drained into salt-pans, and accompanied with streams of fresh water; but it is rain more particularly, and, above all things, the sun, that aids in its formation; indeed without this last it would never dry. In the neighbourhood of Utica, in Africa, they build up masses of salt, like hills in appearance; and when these have been hardened by the action of the sun and moon, no moisture will ever melt them, and iron can hardly divide them. In Crete, however, salt is made without the aid of fresh water, and merely by introducing sea-water into the salt-pans. On the shores of Egypt, salt is formed by the overflow of the sea upon the land, already prepared for its reception, in my opinion, by the emanations of the river Nilus. It is made here, also, from the water of certain wells, discharged into salt-pans. At Babylon, the result of the first condensation is a bituminous liquid, like oil, which is used for burning in lamps; when this is skimmed off, the salt is found beneath. In Cappadocia, also, both well and spring-water are introduced into the saltpans. In Chaonia there is a spring, from the water of which, when boiled and left to cool, there is an inert salt obtained, not so white as ordinary salt. In the Gallic provinces and in Germany, it is the practice to pour salt-water upon burning wood.

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CHAP. 40.

MURIA.

In one part of Spain, they draw a brine for this purpose from deep — sunk pits, to which they give the name of “muria;” being of opinion, also, that it makes a considerable difference upon what kind of wood it is poured. That of the quercus they look upon as the best, as the ashes of it, unmixed, have the pungency of salt. In other places, again, the wood of the hazel is held in high esteem; and thus, we see, by pouring brine upon it, charcoal even is converted into salt. All salt that is thus prepared with burning wood is black. I find it stated by Theophrastus, that the Umbri are in the habit of boiling ashes of reeds and bulrushes in water, till there remains but little moisture unconsumed. The brine, too, of salted provisions is sometimes boiled over again, and, as soon as all the moisture has evaporated, the salt resumes its original form. That prepared from the pickle of the mæna has the finest flavour.

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CHAP. 41.

THE VARIOUS PROPERTIES OF SALT: ONE HUNDRED AND TWENTY HISTORICAL REMARKS RELATIVE THERETO.

Of the various kinds of sea-salt, the most esteemed is that of Salamis, in Cyprus; and of the lake-salts, that of Tarentum, and the salt known as Tattæan salt, which comes from Phrygia: these last two are also good for the eyes. That of Capadocia, which is imported in small cubes, imparts a fine colour, it is said, to the skin; but, for effacing wrinkles, that which we have already spoken of as the salt of Citium is the best: hence it is that, in combination with gith, it is used by females as a liniment for the abdomen after childbirth. The drier the salt, the stronger it is in taste; but the most agreeable of all, and the whitest known, is that of Tarentun. In addition to these particulars, we would remark also, that the whiter salt is, the more friable it is. Rain-water deadens every kind of salt, but dew-water makes it more deicate in flavour. North-easterly winds render the formation of salt more abundant, but, while south winds prevail, it never increases. It is only while north-easterly winds prevail, that flower of salt is formed. Neither the salt of Trgasa, nor the Acanthian salt — so called from the town where it is found — will decrepitate or crackle in the fire; nor will the froth of salt do so, or the outside scrapings, or refined salt. The salt of Agrigentum resists fire, but decrepitates in water.

There are differences, too, in the colour of salt: at Memphis it is deep red, russet-coloured in the vicinity of the Oxus, purple at Centuripa, and so remarkably bright at Gela, situate also in Sicily, as to reflect the image of objects. In Cappadocia there is a saffron-coloured fossil salt, transparent and remarkably odoriferous. For medicinal purposes, the ancients esteemed the salt of Tarentum in particular, and next to that all the marine salts, those collected from sea-foam more especially. For maladies of the eyes in cattle and beasts of burden, the salt of Tragasa and that of Bætica are employed. For made dishes and ordinary food, the more easily a salt liquefies and the moister it is, the more highly it is esteemed; there

being less bitterness in salt of this description, that of Attica and of Eubœa, for example. For keeping meat, a pungent, dry, salt, like that of Megara, is best. A conserve of salt is also made, with the addition of various odoriferous substances, which answers all the purpose of a choice sauce, sharpening the appetite, and imparting a relish to all kinds of food: indeed, among the innumerable condiments which we use, the flavour of salt is always distinctly perceptible; and when we take garum with our food, it is its salt flavour that is considered so exquisite. And not only this, but sheep even, cattle, and beasts of burden, are induced to graze all the better by giving them salt; it having the effect, also, of considerably augmenting the milk, and imparting a superior flavour to the cheese.

We may conclude, then, by Hercules! that the higher enjoyments of life could not exist without the use of salt: indeed, so highly necessary is this substance to mankind, that the pleasures of the mind, even, can be expressed by no better term than the word "salt," such being the name given to all effusions of wit. All the amenities, in fact, of life, supreme hilarity, and relaxation from toil, can find no word in our language to characterize them better than this. Even in the very honours, too, that are bestowed upon successful warfare, salt plays its part, and from it, our word "salarium" is derived. That salt was held in high esteem by the ancients, is evident from the Salarian Way, so named from the fact that, by agreement, the Sabini carried all their salt by that road. King Ancus Martius gave six hundred modii of salt as a largess to the people, and was the first to establish salt-works. Varro also informs us, that the ancients used salt by way of a relishing sauce; and we know, from an old proverb, that it was the practice with them to eat salt with their bread. But it is in our sacred rites more particularly, that its high importance is to be recognized, no offering ever being made unaccompanied by the salted cake.

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CHAP. 42.

FLOWER OF SALT: TWENTY REMEDIES. SALSUGO: TWO REMEDIES.

That which mainly distinguishes the produce of salt-works, in respect of its purity, is a sort of efflorescence, which forms the lightest and whitest part of salt. The name "flower of salt" is given, also, to a substance of an entirely different character, more humid by nature, and of a red or saffron colour; a kind of "rust of salt," as it were, with an unpleasant smell like that of garum, and differing therein not only from froth of salt, but from salt itself. This substance is found in Egypt, and, as it would appear, is conveyed thither by the waters of the Nilus; though it is to be found floating upon the surface of certain springs as well. The best kind is that which yields a certain fatty substance, like oil — for salt even, a thing that is quite marvellous to think of, is not without a degree of unctuousness.

This substance is sophisticated, and coloured with red earth, or, in most instances, with powdered potsherds; an adulteration to be detected by the agency of water, which washes off the fictitious colour, the natural colour being only removable by the agency of oil. Indeed, it is for its colour that perfumers more particularly make such extensive use of this drug. When seen in the vessels, the surface of it is white, but that which lies in the middle is moister, as already stated. It is of an acrid nature, calorific, and bad for the stomach. It acts also as a sudorific, and, taken with wine and water, has a purgative effect upon the bowels. It is very useful, also, as an ingredient in acopa and in detersive compositions, and is remarkably efficacious for the removal of hairs from the eye-lids. It is the practice to shake up the sediment, in order to renovate the saffron colour of the drug.

In addition to these substances, there is another, known in the salt-works by the name of "salsugo," or "salsilago:" it is quite liquid, salter in taste than sea-water, but inferior to it in its properties.

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CHAP. 43.

GARUM: FIFTEEN REMEDIES.

Another liquid, too, of a very exquisite nature, is that known as "garuim:" it is prepared from the intestines of fish and various parts which would otherwise be thrown away, macerated in salt; so that it is, in fact, the result of their putrefaction. Garum was formerly prepared from a fish, called "garos" by the Greeks; who assert, also, that a fumigation made with its head has the effect of bringing away the afterbirth.

(8.) At the present day, however, the most esteemed kind of garum is that prepared from the scomber, in the fisheries of Carthago Spartaria: it is known as "garumn of the allies," and for a couple of congii we have to pay but little less than one thousand sesterces. Indeed, there is no liquid hardly, with the exception of the unguents, that has sold at higher prices of late; so much so, that the nations which produce it have become quite ennobled thereby. There are fisheries, too, of the scomber on the coasts of Mauretania and at Carteia in Bætica, near the Straits which lie at the entrance to the Ocean; this being the only use that is made of the fish. For the production of garum, Clazomenæ is also famed, Pompeii, too, and Leptis; while for their muria, Antipolis, Thurii, and of late, Dalmatia, enjoy a high reputation.

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CHAP. 44.

ALEX: EIGHT REMEDIES.

Alex, which is the refuse of garum, properly consists of the dregs of it, when imperfectly strained: but of late they have begun to prepare it separately, from a small fish that is otherwise good for nothing, the apua of the Latins, or aphua of the Greeks, so called from the fact of its being engendered from rain. The people of Forum Julii make their garum from a fish to which they give the name of "lupus." In process of time, alex has become quite an object of luxury, and the various kinds that are now made are infinite in number. The same, too, with garum, which is now prepared in imitation of the colour of old honied wine, and so pleasantly flavoured as to admit of being taken as a drink. Another kind, again, is dedicated to those superstitious observances which enjoin strict chastity, and that prepared from fish without scales, to the sacred rites of the Jews. In the same way, too, alex has come to be manufactured from oysters, sea-urchins, sea-nettles, cammari, and the liver of the surmullet; and a thousand different methods have been devised of late for ensuring the putrefaction of salt in such a way as to secure the flavours most relished by the palate.

Thus much, by the way, with reference to the tastes of the present day; though at the same time, it must be remembered, these substances are by no means without their uses in medicine. Alex, for instance, is curative of scab in sheep, incisions being made in the skin, and the liquor poured therein. It is useful, also, for the cure of wounds inflicted by dogs or by the sea-dragon, the application being made with lint. Recent burns, too, are healed by the agency of garum, due care being taken to apply it without mentioning it by name. It is useful, too, for bites inflicted by dogs, and for that of the crocodile in particular; as also for the treatment of serpiginous or sordid ulcers. For ulcerations, and painful affections of the mouth and ears, it is a marvellously useful remedy.

Muria, also, as well as the salsugo which we have mentioned, has certain astringent, mordent, and discussive properties, and is highly

useful for the cure of dysentery, even when ulceration has attacked the intestines. Injections are also made of it for sciatica, and for cœliac fluxes of an inveterate nature. In spots which lie at a distance in the interior, it is used as a fo- mentation, by way of substitute for sea-water.

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CHAP. 45. (9.)

THE NATURE OF SALT.

Salt, regarded by itself, is naturally igneous, and yet it manifests an antipathy to fire, and flies from it. It consumers everything, and yet upon living bodies it has an astringent, desiccative, and binding effect, while the dead it preserves from putrefaction, and makes them last for ages even. In respect, however, of its medicinal properties, it is of a mordent, burning, detergent, attenuating, and resolvent nature; it is, however, injurious to the stomach, except that it acts as a stimulant to the appetite, For the cure of injuries inflicted by serpents, it is used with origanum, honey, and hyssop; and for the sting of the cerastes, with origanum, cedar-resin, pitch, or honey. Taken internally with vinegar, it is good for injuries caused by the scolopendra; and, applied topically, with an equal proportion of linseed, in oil or vinegar, for stings inflicted by scorpions. For stings of hornets, wasps, and insects of a similar description, it is applied with vinegar; and, for the cure of hemicrania, ulcers on the head, blisters, pimples, and incipient warts, with veal-suet. It is used also among the remedies for the eyes, and for the removal of fleshy exrescences upon those organs, as also of hangnails upon the fingers or toes. For webs that form upon the eyes it is peculiarly useful, and hence it is that it is so commonly employed as an ingredient in eye-salves, as well as plasters. For all these last-mentioned purposes, the salt of Tatta or of Caunus is more particularly in request.

In cases where there is ecchymosis of the eyes, or a bruise from the effects of a blow, salt is applied, with an equal quantity of myrrh and honey, or with hyssop in warm water, the eyes being also fomented with salsugo. For this last-mentioned purpose, the Spanish salt is preferred; and when wanted for the treatment of cataract, it is ground upon small whet- stones, with milk. For bruises it is particularly useful, wrapped in a linen pledget and renewed from time to time, being first dipped in boiling water. For the cure of running ulcers of the mouth, it is applied with lint; gum-boils are also rubbed with it; and, broken to pieces and powdered fine, it removes

granulations on the tongue. The teeth, it is said, will never become carious or corroded, if a person every morin- ing puts some salt beneath his tongue, fasting, and leaves it there till it has melted. Salt effects the cure also of leprosy, boils, lichens, and itch-scabs; for all which purposes it is ap- plied with raisins — the stones being first removed — beef-suet, origanum, and leaven, or else bread. In such cases it is the salt from Thebaïs that is mostly used; the same salt being considered preferable for the treatment of prurigo, and being highly esteemed for affections of the uvula and tonsillary glands, in combination with honey.

Every kind of salt is useful for the cure of quinzy; but, in addition to this, it is necessary to make external applications simultaneously with oil, vinegar, and tar. Mixed with wine, it is a gentle aperient to the bowels, and, taken in a similar manner, it acts as an expellent of all kinds of intestinal worms. Placed beneath the tongue, it enables convalescents to support the heat of the bath. Burnt more than once upon a plate at a white heat, and then enclosed in a bag, it alleviates pains in the sinews, about the shoulders and kidneys more particularly. Taken internally, and similarly burnt at a white heat and applied in bags, it is curative of colic, griping pains in the bowels, and sciatica. Beaten up in wine and honey, with meal, it is a remedy for gout; a malady for the especial behoof of which the observation should be borne in mind, that there is nothing better for all parts of the body than sun and salt: hence it is that we see the bodies of fishermen as hard as horn — gout, however, is the principal disease for the benefit of which this maxim should be remembered.

Salt is useful for the removal of corns upon the feet, and of chilblains: for the cure of burns also, it is applied with oil, or else chewed. It acts as a check also upon blisters, and, in cases of erysipelas and serpiginous ulcers, it is applied topically with vinegar or with hyssop. For the cure of carcinoma it is employed in combination with Taminian grapes; and for phagedænic ulcers it is used parched with barley-meal, a linen pledget steeped in wine being laid upon it. In cases of jaundice, it is employed as a friction before the fire, with oil and vinegar, till the patient is made to perspire, for the purpose of preventing the itching sensations attendant upon that dis- ease. When persons are exhausted with fatigue, it is usual to rub

them with salt and oil. Many have treated dropsy with salt, have used external applications of salt and oil for the burning heats of fever, and have cured chronic coughs by laying salt upon the patient's tongue. Salt has been used, also, as an injection for sciatica, and has been applied to ulcers of a fungous or putrid nature.

To bites inflicted by the crocodile, salt is applied, the sores being tightly bandaged with linen cloths, first dipped in vinegar. It is taken internally, with hydromel, to neutralize the effects of opium, and is applied topically, with meal and honey, to sprains and fleshy excrescences. In cases of toothache, it is used as a collutory with vinegar, and is very useful, applied externally, with resin. For all these purposes, however, froth of salt is found to be more agreeable and still more efficacious. Still, however, every kind of salt is good as an ingredient in acopa, when warming properties are required: the same, too, in the case of detersive applications, when required for plumping out and giving a smooth surface to the skin. Employed topically, salt is curative of itch-scab in sheep and cattle, for which disease it is given them to lick. It is injected, also, with the spittle, into the eyes of beasts of burden. Thus much with reference to salt.

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CHAP. 46. (10.)

THE VARIOUS KINDS OF NITRUM, THE METHODS OF PREPARING IT, AND THE REMEDIES DERIVED FROM IT: TWO HUNDRED AND TWENTY-ONE OBSERVATIONS THEREON.

And here we must no longer defer giving an account of nitrum; which in its properties does not greatly differ from salt, and deserves all the more to be attentively considered, from the evident fact that the medical men who have written upon it were ignorant of its nature; of all which authors Theophrastus is the one that has given the greatest attention to the point. It is found in small quantities in Media, in certain valleys there that are white with heat and drought; the name given to it being "halmyrax." In Thracia, too, near Philipli, it is found, but in smaller quantities, and deteriorated with earthy substances, being known there as "agrion." As to that prepared from the burnt wood of the quercus, it never was made to any very great extent, and the manufacture of it has been long since totally abandoned. Nitrous waters are also found in numerous places, but not sufficiently impregnated to admit of condensation.

The best and most abundant supply is found at Litæ, in Macedonia, where it is known as "Chalastricum:" it is white and pure, and closely resembles salt. In the middle of a certain nitrous lake there, a spring of fresh water issues forth. In this lake the nitrum forms for nine days, about the rising of the Dog-star, and then ceases for the same period, after which it again floats upon the surface, and then again ceases: facts which abundantly prove that it is the peculiar nature of the soil which generates the nitrum, it being very evident that, when the formation is there interrupted, neither the heat of the sun nor the fall of rain is productive of the slightest effect. It is also a truly marvellous fact, that though the spring of fresh water is always uninterruptedly flowing, the waters of the lake never increase or overflow. If it happens to rain on the days during which the nitrum is forming, the result is, that it is rendered additionally salt thereby: the prevalence of northeast winds, too, still more deteriorates its quality, as they have a tendency to stir up the mud at the bottom. Such is the

formation of native nitrum.

In Egypt, again, it is made artificially, and in much greater abundance, but of inferior quality, being tawny and full of stones. It is prepared in pretty nearly the same manner as salt, except that in the salt-pans it is sea-water that is introduced, whereas in the nitre-beds it is the water of the river Nilus; a water which, upon the subsidence of the river, is impregnated with nitrum for forty days together, and not, as in Macedonia, at intermittent periods only. On occasions when there has been a fall of rain, a smaller proportion of river water is employed. As soon, too, as any quantity of nitrum has formed, it is immediately removed, in order that it may not melt in the beds. This substance, also, contains a certain proportion of oil, which is very useful for the cure of scab in animals. Piled up in large heaps, it keeps for a very considerable time. It is a marvellous fact, that, in Lake Ascanius and in certain springs in the vicinity of Chalcis, the water is fresh and potable on the surface, and nitrous below. The lightest part of nitrum is always considered the best, and hence it is that the froth of it is so much preferred. Still, however, when in an impure state, it is very useful for some purposes, colouring purple cloth, for instance, and, indeed, all kinds of dyeing. It is employed, also, very extensively in the manufacture of glass, as we shall more fully mention on the appropriate occasion.

The only nitre-works in Egypt were formerly those in the vicinity of Naucratis and Memphis; those near Memphis being inferior to the others, the piles of nitrum there prepared being as hard as stone, and many of the heaps having become changed into rocks. When in this state, vessels are made of it, and very frequently they melt it with sulphur on a charcoal fire. When substances are wanted to keep, they employ this last kind of nitrum. In Egypt there are also nitre-beds, the produce of which is red, owing to the colour of the earth in the same locality. Froth of nitrum, a substance held in very high esteem, could only be made, according to the ancients, when dews had fallen; the pits being at the moment saturated with nitrum, but not having arrived at the point of yielding it. On the other hand, again, when the pits were in fall activity, no froth would form, it was said, even though dews should fall. Others, again, have attributed the formation of this last substance to the fermentation of the heaps of nitrum. In a

succeeding age, the medical men, speaking of it under the name of "aphronitrum," have stated that it was collected in Asia, where it was to be found oozing from the soft sides of certain mines — the name given to which was "colyces" — and that it was then dried in the sun. The very best is thought to be that which comes from Lydia; the test of its genuineness being its extreme lightness, its friability, and its colour, which should be almost a full purple. This last is imported in tablets, while that of Egypt comes enclosed in vessels pitched within, to prevent its melting, the vessels being previously prepared by being thoroughly dried in the sun.

To be good, nitrum should be very fine, and extremely spongy and porous. In Egypt, it is sophisticated with lime, an adulteration easily detected by tasting it; for when pure, it liquefies immediately, while that which has been adulterated, remains undissolved sufficiently long to leave a pungent taste in the mouth. It is burnt in a close earthen vessel, as otherwise it would decrepitate: except in this last case, however, the action of fire does not cause it to decrepitate. This substance neither produces nor nourishes anything; while, in the salt-pans, on the other hand, we see plants growing, and the sea, we know, produces immense numbers of animated beings, though, as to plants, sea-weed only. It is evident, too, that the acridity of nitrum must be much greater than that of salt, not only from the fact last mentioned, but from the circumstance also, that at the nitre-beds the shoes wear out with the greatest rapidity; localities which are otherwise very healthy, and remarkably beneficial for the eye-sight. At the nitre-works ophthalmia is a thing unknown: persons, too, that come there with ulcers upon them experience a rapid cure; though ulcerations formed upon the spot are but slow in healing. Used as a friction with oil, nitrum is a sudorific, and acts emolliently upon the body. That of Chalastra is used as a substitute for salt, in making bread, and the Egyp- tian nitrum is eaten with radishes, it having the effect of making them more tender; though as to other edibles it turns them white and spoils them. To vegetables it imparts an additional greenness.

Viewed medicinally, nitrum is calorific, attenuant, mordent, astringent, desiccative, and ulcerating: it is good, too, in all cases where certain humours require to be drawn out or dispersed, or

where gentle mordents or attenuants are required, as in the case of pustules and pimples, for example. Some persons ignite it for this purpose, and, after quenching it in astringent wine, bruise and use it, without oil, at the bath. Applied with dried iris powdered, and green olive oil, it checks immoderate perspiration. Applied topically with a fig, or boiled down to one half in raisin wine, it removes marks upon the eyes and granulations of the eyelids. It is used, also, for the removal of argema, boiled in a pomegranate rind with raisin wine. Used as an ointment, in combination with honey, it improves the eye-sight. It is very useful, also, for tooth-ache, taken as a collutory with wine and pepper, or boiled with a leek. Burnt, and employed as a dentifrice, it restores teeth to their original colour that have turned black; and an application of it, with Samian earth and oil, kills nits and other vermin of the head. Dissolved in wine, it is used as an injection for suppurations of the ears, and, applied with vinegar, it consumes filth that has accumulated there. Introduced dry into the ears, it disperses singings and tinglings in those organs. Applied topically, in the sun, with an equal quantity of Cimolian chalk dissolved in vinegar, it removes white morphew; and a mixture of it with resin, or with white raisins — the stones being beaten up as well — is an excellent cure for boils. It is useful, also, for inflammations of the testes; and, in combination with axle-grease, for pituitous eruptions on all parts of the body. For the cure of bites inflicted by dogs, it is used with resin, the application being made at first with vinegar. With lime and vinegar, it is used as a liniment for stings inflicted by serpents, as, also, for ulcerations, whether phagedenic, putrid, or serpiginous; in cases, too, of dropsy, it is employed both internally and externally, beaten up with figs. Taken internally as a decoction, in doses of one drachma, with rue, dill, or cummin, it effectually removes griping pains in the bowels. An external application of it, with oil and vinegar, is highly refreshing to persons exhausted with fatigue; and it is equally beneficial for shudderings and cold shiverings, the feet and hands of the patient being well rubbed with it, mixed with oil. It allays the itching sensations attendant upon jaundice, more particularly when it is administered to the patient while perspiring, with vinegar. Taken internally in oxycrate, it is an antidote to the poison of fungi; and, taken with

water, it acts beneficially, as an emetic, in cases where the buprestis has been swallowed.

To persons who have taken bull's blood, nitrum is admi- nistered, in combination with laser. Mixed with honey and cow's milk, it is curative of ulcers upon the face. For the cure of burns, it is applied pounded, being first parched till it turns black. For pains in the bowels and kidneys, and for rigidities of the limbs and pains in the sinews, it is used in the form of an injection. For the cure of paralysis of the tongue, it is applied to that organ with bread, and to asthmatic patients it is administered in a ptisan. Flower of nitrum, used in combination with equal proportions of galbanum and turpentine respectively, is curative of chronic coughs; the mixture being taken in pieces the size of a bean. Nitrum itself, boiled and melted with tar, is given to patients to swallow, for quinzy.

Flower of nitrum, mixed with oil of cyprus, and applied in the sun, is a soothing liniment for pains in the joints. Taken internally with wine, it is curative of jaundice. It acts as a carminative also; and it arrests bleeding at the nose, the vapour of it in boiling water being inhaled by the patient. Mixed with alum, it removes porrigo; and, used daily with water, as a fomentation,. it removes offensive odours of the armpits. Used in combination with wax, it heals ulcers produced by pituitous secretions, and, similarly employed, it is very useful for affections of the sinews. For the cure of the cœliac flux, it is used in the form of an injection. Many authorities recommend the use of it, with oil, as a friction when cold shiverings are just coming on; as also, for the removal of leprous spots and freckles. It is a good plan also, to use a sitting-bath made with an infusion of nitrum, for the cure of gout, atrophy, opisthotony, and tetanus.

Both salt and nitre, boiled with sulphur, become petrified.

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CHAP. 47. (11.)

SPONGES, AND THE REMEDIES DERIVED FROM THEM: NINETY-TWO OBSERVATIONS THEREON.

We have already, when speaking of the marine productions, described the various kinds of sponge. Some authorities make the following distinctions: they regard as males those sponges which are pierced with more diminutive holes, are more compact in form and more ready to imbibe, and are stained, to satisfy luxurious tastes, in various colours, sometimes purple even: those, on the other hand, which have holes, larger and running into one another, they consider to be females. Among the male sponges, too, there is one kind, harder than the others, the name given to which is "tragi," and the holes of which are extremely small and numerous. Sponges are made white artificially; the softest being chosen for the purpose, and after they have been steeped the whole summer through with the foam of the sea. They are then exposed to the action of the moon and hoar-frosts, being turned upside down, or, in other words, with that part upwards by which they formerly adhered to the rocks, the object being that they may become white throughout.

That sponges are animated beings, we have already stated; and not only this, but they have a coat of blood even, adhering to them. Some say that they regulate their movements by the sense of hearing, and that at the slightest noise they contract themselves, and emit an abundant moisture: when such is the case, it is said, it is impossible to tear them away from the rocks, and consequently they must be cut, an operation during which they emit a sanious secretion. Those sponges, too, are preferred to all others, which are grown on spots with a north-east aspect, the physicians assuring us that these retain the breath of life the longest of all; a circumstance which renders them additionally useful to the human body, from the union which is thereby effected of their vital principle with our own. It is for this reason, too, that they are preferred as fresh as possible, and in a moist state rather than dry. They are not so useful, however, if applied with hot water, and still less so if they are oiled, or applied to the body

when just anointed. The compact sponges, it is thought, have less adhesive power than the others.

The softest kind of sponge are those employed for tents. Applied with honied wine, sponges reduce swellings of the eyes, and are extremely useful for the removal of rheum from those organs, the very finest and softest being of necessity selected for the purpose. Sponges are applied, also, with oxycrate, to defluxions of the eyes, and, with warm vinegar, for head-ache. In addition to these properties, fresh sponges are resolvent, emollient, and soothing; but when old, they lose their healing properties for wounds. They are employed, also, in medicine, for cleansing sores, and for either fomenting or cover — ing the parts fomented, till some other application is made. Applied topically, they have a healing effect upon running ulcers, and upon sores on the bodies of aged persons. Fractures, too, and wounds are most effectually fomented with sponge; and when surgical operations are performed, it instantly absorbs the blood, so as to allow the incision to be seen. Sponges are applied, also, as a bandage, to inflamed wounds, sometimes dry, and, in some cases, moistened with vinegar, wine, or cold water. Soaked in rain-water, and applied to the incision, they prevent cuts recently inflicted from swelling. They are used as an application for such parts of the body, though apparently uninjured, as are threatened with occult humours which require to be dispersed; as also for reducing the tumours known to us as "apostemes," the parts being first fomented with a decoction of honey. Sponges are employed, also, for affections of the joints, steeped in vinegar and salt, or in oxycrate: in cases, however, where the attack is attended with fever, water alone is used with the sponge. Soaked in salt and water, sponges are applied to callosities; and, with vinegar, they are used for stings inflicted by scorpions.

In the treatment of wounds, sponges are sometimes used as a substitute for greasy wool, either with wine and oil, or with salt and water; the only difference being, that wool acts emolliently upon sores, whereas sponge has an astringent action, and absorbs the vitiated humours. To dropsical patients, bandages of sponge are applied, either dry or steeped in warm water or oxycrate, according as there is a necessity for soothing the skin, or for covering it up and

drying it. Sponges are applied, also, in all those diseases where warmth is required, being first soaked in boiling water and then squeezed out between a couple of boards. Employed in this manner, too, they are very useful for affections of the stomach and for the excessive heats attendant upon fever. Steeped in oxycrate, they are good for diseases of the spleen, and in vinegar for erysipelas; nothing, in fact, being equally efficacious. Sponge, when thus used, should ways be so applied as amply to cover the adjacent parts that are not affected.

Employed with vinegar or cold water, sponge arrests hæmorrhage; soaked in warm salt and water, and frequently renewed, it removes the lividity which results from a recent blow. Used with oxycrate, it disperses pains and swellings in the testes. To bites inflicted by dogs, it is a good plan to apply sponge, from time to time, cut fine, and moistened with vinegar, cold water, or honey. Ashes of African sponge, with juice of cut-leek and a mixture of salt and cold water, are good, taken internally, for patients suffering from discharges of blood: applied topically to the forehead, with oil or vinegar, they are curative of tertian fevers. The sponge of Africa, more particularly, soaked in oxycrate, disperses tu- mours. Ashes of any kind of sponge burnt with pitch, arrest the discharge of blood from wounds; though some recommend, for this purpose, the sponge with large pores only, burnt with pitch. For affections of the eyes, sponge is burnt in vessels of unbaked earthenware; the ashes being found highly efficacious for granulations of the eyelids, fleshy excrescences, and all diseases of those parts which require detergents, astringents, or expletives. For all these purposes, however, it is the best plan first to rinse the ashes. When the body is in a diseased state, sponge acts as a substitute for body-scrapers and linen towels, and it protects the head most efficiently against the action of the sun.

Medical men, in their ignorance, comprehend all sponges under two names; African sponge, the substance of which is tougher and firmer; and Rhodian sponge, which is softer and better adapted for fomentations. At the present day, however, the softest sponges of all are those found about the walls of the city of Antiphellos. Trogus informs us that the softest tent sponges are found out at sea, off the coast of Lycia, upon spots from which the sponge has been

previously removed: we learn, too, from Polybius, that these fine sponges, suspended over a patient's bed, will ensure him additional repose at right.

We will now turn to the remedies derived from the marine and aquatic animals.

SUMMARY. — Remedies, narratives, and observations, nine hundred and twenty-four.

ROMAN AUTHORS QUOTED. — M. Varro, Cassius of Parma, Cicero, Mucianus, Cælius, Celsus, Trogus, Ovid, Polybius, Sornatius.

FOREIGN AUTHORS QUOTED. — Callimachus, Ctesias, Eudicus, Theophrastus, Eudoxus, Theopompus, Polycritus, Juba, Lycus, Apion, Epigenes, Pelops, Apelles, De- mocritus, Thrasyllus, Nicander, Menander the Comic writer, Attalus, Sallustius Dionysius, Andreas, Niceratus, Hippocrates, Anaxilaüs.

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BOOK XXXII. REMEDIES DERIVED FROM AQUATIC ANIMALS.

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CHAP. 1. (1.)

THE POWER OF NATURE AS MANIFESTED IN ANTIPATHIES. THE ECHENEÏS: TWO REMEDIES.

FOLLOWING the proper order of things, we have now arrived at the culminating point of the wonders manifested to us by the operations of Nature. And even at the very outset, we find spontaneously presented to us an incomparable illustration of her mysterious powers: so much so, in fact, that beyond it we feel ourselves bound to forbear extending our enquiries, there being nothing to be found either equal or analogous to an element in which Nature quite triumphs over herself, and that, too, in such numberless ways. For what is there more unruly than the sea, with its winds, its tornadoes, and its tempests? And yet in what department of her works has Nature been more seconded by the ingenuity of man, than in this, by his inventions of sails and of oars? In addition to this, we are struck with the ineffable might displayed by the Ocean's tides, as they constantly ebb and flow, and so regulate the currents of the sea as though they were the waters of one vast river.

And yet all these forces, though acting in unison, and impelling in the same direction, a single fish, and that of a very diminutive size — the fish known as the "echeneïs" — possesses the power of counteracting. Winds may blow and storms may rage, and yet the echeneïs controls their fury, restrains their mighty force, and bids ships stand still in their career; a result which no cables, no anchors, from their ponderousness quite incapable of being weighed, could ever have produced! A fish bridles the impetuous violence of the deep, and subdues the frantic rage of the universe — and all this by no effort of its own, no act of resistance on its part, no act at all, in fact, but that of adhering to the bark! Trifling as this object would appear, it suffices to counteract all these forces combined, and to forbid the ship to pass onward in its way! Fleets, armed for war, pile up towers and bulwarks on their decks, in order that, upon the deep even, men may fight from behind ramparts as it were. But alas for human vanity! — when their prows, beaked as they are with brass

and with iron, and armed for the onset, can thus be arrested and rivetted to the spot by a little fish, no more than some half foot in length!

At the battle of Actium, it is said, a fish of this kind stopped the prætorian ship of Antonius in its course, at the moment that he was hastening from ship to ship to encourage and exhort his men, and so compelled him to leave it and go on board another. Hence it was, that the fleet of Cæsar gained the advantage in the onset, and charged with a redoubled impetuosity. In our own time, too, one of these fish arrested the ship of the Emperor Caius in its course, when he was returning from Astura to Antium: and thus, as the result proved, did an insignificant fish give presage of great events; for no sooner had the emperor returned to Rome than he was pierced by the weapons of his own soldiers. Nor did this sudden stoppage of the ship long remain a mystery, the cause being perceived upon finding that, out of the whole fleet, the emperor's five-banked galley was the only one that was making no way. The moment this was discovered, some of the sailors plunged into the sea, and, on making search about the ship's sides, they found an echeneïs adhering to the rudder. Upon its being shown to the emperor, he strongly expressed his indignation that such an obstacle as this should have impeded his progress, and have rendered powerless the hearty endeavours of some four hundred men. One thing, too, it is well known, more particularly surprised him, how it was possible that the fish, while adhering to the ship, should arrest its progress, and yet should have no such power when brought on board.

According to the persons who examined it on that occasion, and who have seen it since, the echeneïs bears a strong resemblance to a large slug. The various opinions entertained respecting it we have already noticed, when speaking of it in the Natural History of Fishes. There is no doubt, too, that all fish of this kind are possessed of a similar power; witness, for example, the well-known instance of the shells which are still preserved and consecrated in the Temple of Venus at Cnidos, and which, we are bound to believe, once gave such striking evidence of the possession of similar properties. Some of our own authors have given this fish the Latin name of "mora." It is a singular thing, but among the Greeks we find writers who state

that, worn as an amulet, the echeneïs has the property, as already mentioned, of preventing miscarriage, and of reducing procidence of the uterus, and so permitting the fœtus to reach maturity: while others, again, assert that, if it is preserved in salt and worn as an amulet, it will facilitate parturition; a fact to which it is indebted for another name which it bears, "odinolytes." Be all this as it may, considering this most remarkable fact of a ship being thus stopped in its course, who can entertain a doubt as to the possibility of any manifestation of her power by Nature, or as to the effectual operation of the remedies which she has centred in her spontaneous productions?

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CHAP. 2.

THE TORPEDO: NINE REMEDIES.

And then, besides, even if we had not this illustration by the agency of the echeneïs, would it not have been quite sufficient only to cite the instance of the torpedo, another inhabitant also of the sea, as a manifestation of the mighty powers of Nature? From a considerable distance even, and if only touched with the end of a spear or staff, this fish has the property of benumbing even the most vigorous arm, and of rivetting the feet of the runner, however swift he may be in the race. If, upon considering this fresh illustration, we find ourselves compelled to admit that there is in existence a certain power which, by the very exhalations and, as it were, emanations therefrom, is enabled to affect the members of the human body, what are we not to hope for from the remedial influences which Nature has centred in all animated beings?

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CHAP. 3.

THE SEA HARE: FIVE REMEDIES.

No less wonderful, too, are the particulars which we find stated relative to the sea-hare. Taken with the food or drink, it is a poison to some persons; while to others, again, the very sight of it is venomous. Indeed, if a woman in a state of pregnancy so much as looks upon one of these fishes, she is immediately seized with nausea and vomiting — a proof that the injury has reached the stomach — and abortion is the ultimate result. The proper preservative against these baneful effects is the male fish, which is kept dried for the purpose in salt, and worn in a bracelet upon the arm. And yet this same fish, while in the sea, is not injurious, by its contact even. The only animal that eats it without fatal consequences, is the mullet; the sole perceptible result being that its flesh is rendered more tender thereby, but deteriorated in flavour, and consequently not so highly esteemed.

Persons when poisoned by the sea-hare smell strongly of the fish — the first sign, indeed, by which the fact of their having been so poisoned is detected. Death also ensues at the end of as many days as the fish has lived: hence it is that, as Licinius Macer informs us, this is one of those poisons which have no definite time for their operation. In India, we are assured, the sea-hare is never taken alive; and, we are told that, in those parts of the world, man, in his turn, acts as a poison upon the fish, which dies instantly in the sea, if it is only touched with the human finger. There, like the rest of the animals, it attains a much larger size than it does with us.

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CHAP. 4.

MARVELS OF THE RED SEA.

Juba, in those books descriptive of Arabia, which he has dedicated to Caius Cæsar, the son of Augustus, informs us that there are mussels on those coasts, the shells of which are capable of holding three semisextarii; and that, on one occasion, a whale, six hundred feet in length and three hundred and sixty feet broad, made its way up a river of Arabia, the blubber of which was bought up by the merchants there. He tells us, too, that in those parts they anoint their camels with the grease of all kinds of fish, for the purpose of keeping off the gad-flies by the smell.

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CHAP. 5. (2.)

THE INSTINCTS OF FISHES.

The statements which Ovid has made as to the instincts of fish, in the work of his known as the "Halieuticon," appear to me truly marvellous. The scarus, for instance, when enclosed in the wicker kype, makes no effort to escape with its head, nor does it attempt to thrust its muzzle between the oziers; but turning its tail towards them, it enlarges the orifices with repeated blows therefrom, and so makes its escape backwards. Should, too, another scarus, from without, chance to see it thus struggling within the kype, it will take the tail of the other in its mouth, and so aid it in its efforts to escape. The lupus, again, when surrounded with the net, furrows the sand with its tail, and so conceals itself, until the net has passed over it. The muræna, trusting in the slippery smoothness of its rounded back, boldly faces the meshes of the net, and by repeatedly wriggling its body, makes its escape. The polyp makes for the hooks, and, without swallowing the bait, clasps it with its feelers; nor does it quit its hold until it has eaten off the bait, or perceives itself being drawn out of the water by the rod.

The mullet, too, is aware that within the bait there is a hook concealed, and is on its guard against the ambush; still however, so great is its voracity, that it beats the hook with its tail, and strikes away from it the bait. The lupus, again, shows less foresight and address, but repentance at its imprudence arms it with mighty strength; for, when caught by the hook, it flounders from side to side, and so widens the wound, till at last the insidious hook falls from its mouth. The muræna not only swallows the hook, but catches at the line with its teeth, and so gnaws it asunder. The anthias, Ovid says, the moment it finds itself caught by the hook, turns its body with its back downwards, upon which there is a sharp knife-like fin, and so cuts the line asunder.

According to Licinius Macer, the muræna is of the female sex only, and is impregnated by serpents, as already mentioned; and hence it is that the fishermen, to entice it from its retreat, and catch it,

make a hissing noise in imitation of the hissing of a serpent. He states, also, that by frequently beating the water it is made to grow fat, that a blow with a stout stick will not kill it, but that a touch with a stalk of fennel- giant is instantly fatal. That in the case of this animal, the life is centred in the tail, there can be no doubt, as also that it dies immediately on that part of the body being struck; while, on the other hand, there is considerable difficulty in killing it with a blow upon the head. Persons who have come in contact with the razor-fish smell of iron. The hardest of all fishes, beyond a doubt, is that known as the “orbis:” it is spherical, destitute of scales, and all head.

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CHAP. 6.

MARVELLOUS PROPERTIES BELONGING TO CERTAIN FISHES.

Trebius Niger informs us that whenever the loligo is seen darting above the surface of the water, it portends a change of weather: that the xiphias, or, in other words, the swordfish, has a sharp-pointed muzzle, with which it is able to pierce the sides of a ship and send it to the bottom: instances of which have been known near a place in Mauritania, known as Cotte, not far from the river Lixus. He says, too, that the loligo sometimes darts above the surface, in such vast numbers, as to sink the ships upon which they fall.

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CHAP. 7.

PLACES WHERE FISH EAT FROM THE HAND.

At many of the country-seats belonging to the Emperor the fish eat from the hand: but the stories of this nature, told with such admiration by the ancients, bear reference to lakes formed by Nature, and not to fish-preserves; that at Elorus, a fortified place in Sicily, for instance, not far from Syracuse. In the fountain, too, of Jupiter, at Labranda, there are eels which eat from the hand, and wear ear-rings, it is said. The same, too, at Chios, near the Old Men's Temple there; and at the Fountain of Chabura in Mesopotamia, already mentioned.

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CHAP. 8.

PLACES WHERE FISH RECOGNIZE THE HUMAN VOICE. ORACULAR RESPONSES GIVEN BY FISH.

At Myra, too, in Lycia, the fish in the Fountain of Apollo, known as Surium, appear and give oracular presages, when thrice summoned by the sound of a flute. If they seize the flesh thrown to them with avidity, it is a good omen for the person who consults them; but if, on the other hand, they flap at it with their tails, it is considered an evil presage. At Hierapolis in Syria, the fish in the Lake of Venus there obey the voice of the officers of the temple: bedecked with ornaments of gold, they come at their call, fawn upon them while they are scratched, and open their mouths so wide as to admit of the insertion of the hands.

Off the Rock of Hercules, in the territory of Stabiæ in Campania, the melanuri seize with avidity bread that is thrown to them in the sea, but they will never approach any bait in which there is a hook concealed.

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CHAP. 9.

PLACES WHERE BITTER FISH ARE FOUND, SALT, OR SWEET.

Nor is it by any means the least surprising fact, that off the island of Pele, the town of Clazomenæ, the rock [of Scylla] in Sicily, and in the vicinity of Leptis in Africa, Eubœa, and Dyrrhachium, the fish are bitter. In the neighbourhood of Cephallenia, Ampelos, Paros, and the rocks of Delos, the fish are so salt by nature that they might easily be taken to have been pickled in brine. In the harbour, again, of the last-mentioned island, the fish are sweet: differences, all of them, resulting, no doubt, from the diversity of their food.

Apion says that the largest among the fishes is the seapig, known to the Lacedæmonians as the "orthagoriscos;" he states also that it grunts like a hog when taken. These accidental varieties in the natural flavour of fish — a thing that is still more surprising — may, in some cases, be owing to the nature of the locality; an apposite illustration of which is, the well-known fact that, at Beneventum in Italy, salted provisions of all kinds require to be salted over again.

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CHAP. 10.

WHEN SEA-FISH WERE FIRST EATEN BY THE PEOPLE OF ROME. THE ORDINANCE OF KING NUMA AS TO FISH.

Cassius Hemina informs us that sea-fish have been in use at Rome from the time of its foundation. I will give his own words, however, upon the subject:— “Numa ordained that fish without scales should not be served up at the Festivals of the Gods; a piece of frugality, the intention of which was, that the banquets, both public and private, as well as the repasts laid before the couches of the gods, might be provided at a smaller expense than formerly: it being also his wish to preclude the risk that the caterers for the sacred banquets would spare no expense in buying provisions, and so forestall the market.”

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CHAP. 11.

CORAL: FORTY-THREE REMEDIES AND OBSERVATIONS.

In the same degree that people in our part of the world set a value upon the pearls of India — a subject on which we have already spoken on the appropriate occasion at sufficient length — do the people of India prize coral: it being the prevailing taste in each nation respectively that constitutes the value of things. Coral is produced in the Red Sea also, but of a more swarthy hue than ours. It is to be found also in the Persian Gulf, where it is known by the name of "iace." But the most highly-esteemed of all, is that produced in the vicinity of the islands called Stœchades, in the Gallic Gulf, and near the Æolian Islands and the town of Drepana in the Sea of Sicily. Coral is to be found growing, too, at Graviscæ, and off the coast of Neapolis in Campania: as also at Erythræ, where it is intensely red, but soft, and consequently little valued.

Its form is that of a shrub, and its colour green: its berries are white and soft while under water, but the moment they are removed from it, they become hard and red, resembling the berries of cultivated cornel in size and appearance. They say that, while alive, if it is only touched by a person, it will immediately become as hard as stone; and hence it is that the greatest pains are taken to prevent this, by tearing it up from the bottom with nets, or else cutting it short with a sharp-edged instrument of iron: from which last circumstance it is generally supposed to have received its name of "curalium." The reddest coral and the most branchy is held in the highest esteem; but, at the same time, it must not be rough or hard like stone; nor yet, on the other hand, should it be full of holes or hollow.

The berries of coral are no less esteemed by the men in India than are the pearls of that country by the females among us: their soothsayers, too, and diviners look upon coral as an amulet endowed with sacred properties, and a sure preservative against all dangers: hence it is that they equally value it as an ornament and as an object of devotion. Before it was known in what estimation coral was held

by the people of India, the Gauls were in the habit of adorning their swords, shields, and helmets with it; but at the present day, owing to the value set upon it as an article of exportation, it has become so extremely rare, that it is seldom to be seen even in the regions that produce it. Branches of coral, hung at the neck of infants, are thought to act as a preservative against danger. Calcined, pulverized, and taken in water, coral gives relief to patients suffering from griping pains in the bowels, affections of the bladder, and urinary calculi. Similarly taken in wine, or, if there are symptoms of fever, in water, it acts as a soporific. It resists the action of fire a considerable time before it is calcined.

There is also a statement made that if this medicament is frequently taken internally, the spleen will be gradually consumed. Powdered coral, too, is an excellent remedy for patients who bring up or spit blood. Calcined coral is used as an ingredient in compositions for the eyes, being productive of certain astringent and cooling effects: it makes flesh, also, in the cavities left by ulcers, and effaces scars upon the skin.

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CHAP. 12.

THE ANTIPATHIES AND SYMPATHIES WHICH EXIST BETWEEN CERTAIN OBJECTS. THE HATREDS MANIFESTED BY CERTAIN AQUATIC ANIMALS. THE PASTINACA: EIGHT REMEDIES. THE GALEOS: FIFTEEN REMEDIES. THE SUR-MULLET: FIFTEEN REMEDIES.

In reference to that repugnance which exists between certain things, known to the Greeks as “antipathia,” there is nothing more venomous than the pastinaca, a sea-fish which kills trees even with its sting, as already stated. And yet, poisonous as it is, the galeos pursues it; a fish which, though it attacks other marine animals as well, manifests an enmity to the pastinaca in particular, just as on dry land the weasel does to serpents; with such avidity does it go in pursuit of what is poisonous even! Persons stung by the pastinaca find a remedy in the flesh of the galeos, as also in that of the sur-mullet and the vegetable production known as laser.

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CHAP. 13. (3).

AMPHIBIOUS ANIMALS. CASTOREUM: SIXTY-SIX REMEDIES AND OBSERVATIONS.

The might of Nature, too, is equally conspicuous in the animals which live upon dry land as well; the beaver, for instance, more generally known as "castor," and the testes of which are called in medicine "castorea." Sextius, a most careful enquirer into the nature and history of medicinal substances, assures us that it is not the truth that this animal, when on the point of being taken, bites off its testes: he informs us, also, that these substances are small, tightly knit, and attached to the back-bone, and that it is impossible to remove them without taking the animal's life. We learn from him that there is a mode of adulterating them by substituting the kidneys of the beaver, which are of considerable size, whereas the genuine testes are found to be extremely diminutive: in addition to which, he says that they must not be taken to be bladders, as they are two in number, a provision not to be found in any animal. Within these pouches, he says, there is a liquid found, which is preserved by being put in salt; the genuine castoreum being easily known from the false, by the fact of its being contained in two pouches, attached by a single ligament. The genuine article, he says, is sometimes fraudulently sophisticated by the admixture of gum and blood, or else hammoniacum: as the pouches, in fact, ought to be of the same colour as this last, covered with thin coats full of a liquid of the consistency of honey mixed with wax, possessed of a fetid smell, of a bitter, acrid taste, and friable to the touch.

The most efficacious castoreum is that which comes from Pontus and Galatia, the next best being the produce of Africa. When inhaled, it acts as a sternutatory. Mixed with oil of roses and peucedanum, and applied to the head, it is productive of narcotic effects — a result which is equally produced by taking it in water; for which reason it is employed in the treatment of phrenitis. Used as a fumigation, it acts as an excitant upon patients suffering from lethargy: and similarly employed, or used in the form of a suppository, it dispels hysterical

suffocations. It acts also as an emmenagogue and as an expellent of the afterbirth, being taken by the patient, in doses of two drachmæ, with pennyroyal, in water. It is employed also for the cure of vertigo, opisthotony, fits of trembling, spasms, affections of the sinews, sciatica, stomachic complaints, and paralysis, the patient either being rubbed with it all over, or else taking it as an electuary, bruised and incorporated with seed of vitex, vinegar, and oil of roses, to the consistency of honey. In the last form, too, it is taken for the cure of epilepsy, and in a potion, for the purpose of dispelling flatulency and gripings in the bowels, and for counteracting the effects of poison.

When taken as a potion, the only difference is in the mode of mixing it, according to the poison that it is intended to neutralize; thus, for example, when it is taken for the sting of the scorpion, wine is used as the medium; and when for injuries inflicted by spiders or by the phalangium, honied wine where it is intended to be brought up again, and rue where it is desirable that it should remain upon the stomach. For injuries inflicted by the chalcis, it is taken with myrtle wine; for the sting of the cerastes or prester with panax or rue in wine; and for those of other serpents, with wine only. In all these cases two drachmæ of castoreum is the proper dose, to one of the other ingredients respectively. It is particularly useful, also, in combination with vinegar, in cases where viscus has been taken internally, and, with milk or water, as a neutralizer of aconite: as an antidote to white hellebore it is taken with hydromel and nitre. It is curative, also, of tooth-ache, for which purpose it is beaten up with oil and injected into the ear, on the side affected. For the cure of ear-ache, the best plan is to mix it with meconium. Applied with Attic honey in the form of an ointment, it improves the eyesight, and taken with vinegar it arrests hiccup.

The urine, too, of the beaver, is a neutralizer of poisons, and for this reason is used as an ingredient in antidotes. The best way of keeping it, some think, is in the bladder of the animal.

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CHAP. 14. (4)

THE TORTOISE: SIXTY-SIX REMEDIES AND OBSERVATIONS.

The tortoise, too, is an animal that is equally amphibious with the beaver, and possessed of medicinal properties as strongly developed; in addition to which, it claims an equal degree of notice for the high price which luxury sets upon its shell, and the singularity of its conformation. Of tortoises, there are various kinds, land tortoises, sea tortoises, tortoises which live in muddy waters, and tortoises which live in fresh; these last being known to some Greek authors by the name of "emydes." The flesh of the land-tortoise is employed for fumigations more particularly, and we find it asserted that it is highly salutary for repelling the malpractices of magic, and for neutralizing poisons. These tortoises are found in the greatest numbers in Africa; where the head and feet being first cut off, it is said, they are given to persons by way of antidote. Eaten, too, in a broth made from them, they are thought to disperse scrofula, diminish the volume of the spleen, and effect the cure of epilepsy. The blood of the land-tortoise improves the eyesight, and removes cataract: it is kept also, made up with meal into pills, which are given with wine when necessary, to neutralize the poison of all kinds of serpents, frogs, spiders, and similar venomous animals. It is found a useful plan, too, in cases of glaucoma, to anoint the eyes with gall of tortoises, mixed with Attic honey, and, for the cure of injuries inflicted by scorpions, to drop the gall into the wound.

Ashes of tortoiseshell, kneaded up with wine and oil, are used for the cure of chaps upon the feet, and of ulcerations. The shavings of the surface of the shell, administered in drink, act as an antaphrodisiac: a thing that is the more surprising, from the fact that a powder prepared from the whole of the shell has the reputation of being a strong aphrodisiac. As to the urine of the land-tortoise, I do not think that it can be obtained otherwise than by opening it and taking out the bladder; this being one of those substances to which the adepts in magic attribute such marvellous properties. For the sting of the asp, they say, it is wonderfully effectual; and even more

so, if bugs are mixed with it. The eggs of the tortoise, hardened by keeping, are applied to scrofulous sores and ulcers arising from burns or cold: they are taken also for pains in the stomach.

The flesh of the sea-tortoise, mixed with that of frogs, is an excellent remedy for injuries caused by the salamander; indeed there is nothing that is a better neutralizer of the secretions of the salamander than the sea-tortoise. The blood of this animal reproduces the hair when lost through alopecy, and is curative of porrigo and all kinds of ulcerations of the head; the proper method of using it being to let it dry, and then gently wash it off. For the cure of ear-ache, this blood is injected with woman's milk, and for epilepsy it is eaten with fine wheaten flour, three heminæ of the blood being mixed with one hemina of vinegar. It is prescribed also for the cure of asthma; but in this case in combination with one hemina of wine. Sometimes, too, it is taken by asthmatic patients, with barley-meal and vinegar, in pieces about the size of a bean; one of these pieces being taken each morning and evening at first, but after some days, two in the evening. In cases of epilepsy, the mouth of the patient is opened and this blood introduced. For spasmodic affections, when not of a violent nature, it is injected, in combination with castoreum, as a clyster. If a person rinses his teeth three times a year with blood of tortoises, he will be always exempt from tooth-ache. This blood is also a cure for asthmatic affections, and for the malady called "orthopnœa," being administered for these purposes in polenta.

The gall of the tortoise improves the eye-sight, effaces scars, and cures affections of the tonsillary glands, quinsy, and all kinds of diseases of the mouth, cancers of that part more particularly, as well as cancer of the testes. Applied to the nostrils it dispels epilepsy, and sets the patient on his feet: incorporated in vinegar with the slough of a snake, it is a sovereign remedy for purulent discharges from the ears. Some persons add ox-gall and the broth of boiled tortoise-flesh, with an equal proportion of snake's slough; but in such case, care must be taken to boil the tortoise in wine. Applied with honey, this gall is curative of all diseases of the eyes; and for the cure of cataract, gall of the sea-tortoise is used, in combination with blood of the river-tortoise and milk. The hair, too, of females, is dyed with this gall. For the cure of injuries inflicted by the salamander, it will be

quite sufficient to drink the broth of boiled tortoise-flesh.

There is, again, a third kind of tortoise, which inhabits mud and swampy localities: the shell on its back is flat and broad, like that upon the breast, and the callipash is not arched and rounded, the creature being altogether of a repulsive appearance. However, there are some remedial medicaments to be derived even from this animal. Thus, for instance, three of them are thrown into a fire made with wood cuttings, and the moment their shells begin to separate they are taken off: the flesh is then removed, and boiled with a little salt, in one congius of water. When the water has boiled down to one third, the broth is used, being taken by persons apprehensive of paralysis or of diseases of the joints. The gall, too, is found very useful for carrying off pituitous humours and corrupt blood: taken in cold water, it has an astringent effect upon the bowels.

There is a fourth kind of tortoise, which frequents rivers. When used for its remedial properties, the shell of the animal is removed, and the fat separated from the flesh and beaten up with the plant aizoüm, in combination with unguent and lily seed: a preparation highly effectual, it is said, for the cure of quartan fevers, the patient being rubbed with it all over, the head excepted, just before the paroxysms come on, and then well wrapped up and made to drink hot water. It is stated also, that to obtain as much fat as possible, the tortoise should be taken on the fifteenth day of the moon, the patient being anointed on the sixteenth. The blood of this tortoise, dropt, by way of embrocation, upon the region of the brain, allays head-ache; it is curative also of scrofulous sores. Some persons recommend that the tortoise should be laid upon its back and its head cut off with a copper knife, the blood being received in a new earthen vessel; and they assure us that the blood of any kind of tortoise, when thus obtained, will be an excellent liniment for the cure of erysipelas, running ulcers upon the head, and warts. Upon the same authority, too, we are assured that the dung of any kind of tortoise is good for the removal of inflammatory tumours. Incredible also as the statement is, we find it asserted by some, that ships make way more slowly when they have the right foot of a tortoise on board.

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CHAP. 15.

REMEDIES DERIVED FROM THE AQUATIC ANIMALS, CLASSIFIED ACCORDING TO THE RESPECTIVE DISEASES.

We will now proceed to classify the various remedies derived from the aquatic animals, according to the several diseases; not that we are by any means unaware that an exposition of all the properties of each animal at once, would be more to the reader's taste, and more likely to excite his admi- ration; but because we consider it more conducive to the practical benefit of mankind to have the various recipes thus grouped and classified; seeing that this thing may <*> good for one patient, that for another, and that some of these remedies may be more easily met with in one place and some in another.

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CHAP. 16. (5.)

REMEDIES FOR POISONS, AND FOR NOXIOUS SPELLS. THE DORADE: FOUR REMEDIES. THE SEA-STAR: SEVEN REMEDIES.

We have already stated in what country the honey is venomous: the fish known as the dorade is an antidote to its effects. Honey, even in a pure state, is sometimes productive of surfeit, and of fits of indigestion, remarkable for their severity; the best remedy in such case, according to Pelops, is to cut off the feet, head, and tail, of a tortoise, and boil and eat the body; in place, however, of the tortoise, Apelles mentions the scincus, an animal which has been described elsewhere We have already mentioned too, on several occasions, how highly venomous is the menstruous fluid: the surmullet, as already stated, entirely neutralizes its effects. This last fish, too, either applied topically or taken as food, acts as an antidote to the venom of the pastinaca, the land and sea scorpion, the dragon, and the phalangium. The head of this fish, taken fresh and reduced to ashes, is an active neutralizer of all poisons, that of fungi more particularly.

It is asserted also, that if the fish called the sea-star is smeared with a fox's blood, and then nailed to the upper lintel of the door, or to the door itself, with a copper nail, no noxions spells will be able to obtain admittance, or, at all events, to be productive of any ill effects.

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CHAP. 17.

REMEDIES FOR THE STINGS OF SERPENTS, FOR THE BITES OF DOGS, AND FOR INJURIES INFLICTED BY VENOMOUS ANIMALS, THE SEA-DRAGON: THREE REMEDIES. TWENTY-FIVE REMEDIES DERIVED FROM SALTED FISH. THE SARDA: ONE REMEDY. ELEVEN REMEDIES DERIVED FROM CYBIUM.

Stings inflicted by the sea-dragon or by the sea-scorpion, are cured by an application of the flesh of those animals to the wound; the bites, too, of spiders are healed by the same means. In fine, as an antidote to every kind of poison, whether taken internally or acting through the agency of a sting or bite, there is considered to be nothing in existence more effectual than a decoction of the sea-dragon and sea-scorpion.

There are also certain remedies of this nature derived from preserved fish. Persons, for instance, who have received injuries from serpents, or have been bitten by other venomous animals, are recommended to eat salt fish, and to drink undiluted wine every now and then, so as, through its agency, to bring up the whole of the food again by vomit: this method being particularly good in cases where injuries have been received from the lizard called "chalcis," the cerastes, the reptile known as the "seps," the elops, or the dipsas. For the sting of the scorpion, salted fish should be taken in larger quantities, but not brought up again, the patient submitting to any amount of thirst it may create: salt fish, too, should be applied, by way of plaster, to the wound. For the bite of the crocodile there is no more efficient remedy known. For the sting of the serpent called "prester," the sarda is particularly good. Salt fish is employed also as a topical application for the bite of the mad dog; and even in cases where the wound has not been cauterized with hot iron, this is found to be sufficiently effectual as a remedy. For injuries, also, inflicted by the sea-dragon, an application is made of salt fish steeped in vinegar. Cybium, too, is productive of similar effects. As a cure for the venomous sting inflicted with its stickle by the sea-dragon, the fish itself is applied topically to the wound, or else its brain, extracted whole.

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CHAP. 18.

THE SEA-FROG: SIX REMEDIES. THE RIVER-FROG: FIFTY-TWO REMEDIES. THE BRAMBLE-FROG: ONE REMEDY. THIRTY-TWO OBSERVATIONS ON THESE ANIMALS.

The broth prepared from sea-frogs, boiled in wine and vinegar, is taken internally as a neutralizer of poisons and of the venom of the bramble-frog, as also for injuries inflicted by the salamander. For the cure of injuries caused by the seahare and the various serpents above mentioned, it is a good plan to eat the flesh of river-frogs, or to drink the liquor in which they have been boiled: as a neutralizer, too, of the venom of the scorpion, river-frogs are taken in wine. Democritus assures us that if the tongue is extracted from a live frog, with no other part of the body adhering to it, and is then applied — the frog being first replaced in the water — to a woman while asleep, just at the spot where the heart is felt to palpitate, she will be sure to give a truthful answer to any question that may be put to her.

To this the Magi add some other particulars, which, if there is any truth in them, would lead us to believe that frogs ought to be considered much more useful to society than laws. They say, for instance, that if a man takes a frog and transfixes it with a reed, entering the body at the sexual parts and coming out at the mouth, and then dips the reed in the menstrual discharge of his wife, she will be sure to conceive an aversion for all paramours. That the flesh of frogs, attached to the kype or hook, as the case may be, makes a most excellent bait, for purples more particularly, is a well-known fact. Frogs, they say, have a double liver; and of this liver, when exposed to the attacks of ants, the part that is most eaten away is thought to be an effectual antidote to every kind of poison.

There are some frogs, again, which live only among brakes and thickets, for which reason they have received the name of “rubetæ,” or “bramble-frogs,” as already stated. The Greeks call them “phryni:” they are the largest in size of all the frogs, have two protuberances like horns, and are full of poison. Authors quite vie with one another in relating marvellous stories about them; such, for instance, as that

if they are brought into the midst of a concourse of people, silence will instantly prevail; as also that by throwing into boiling water a small bone that is found in their right side, the vessel will immediately cool, and the water refuse to boil again until it has been removed. This bone, they say, may be found by exposing a dead bramble-frog to ants, and letting them eat away the flesh: after which the bones must be put into the vessel, one by one.

On the other hand, again, in the left side of this reptile there is another bone, they say, which, thrown into water, has all the appearance of making it boil, and the name given to which is "apocynon." This bone, it is said, has the property of assuaging the fury of dogs, and, if put into the drink, of conciliating love and ending discord and strife. Worn, too, as an amulet, it acts as an aphrodisiac, we are told. The bone, on the contrary, which is taken from the right side, acts powerfully as a refrigerative upon boiling liquids, it is said: attached to the patient in a piece of fresh lamb's-skin, it has the repute of assuaging quartan and other fevers, and of checking amorous propensities. The spleen of these frogs is used as an antidote to the various poisons that are prepared from them; and for all these purposes the liver is considered still more efficacious.

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CHAP. 19.

THE ENHYDRIS: SIX REMEDIES. THE RIVER-CRAB: FOURTEEN REMEDIES. THE SEA-CRAB: SEVEN REMEDIES. THE RIVER-SNAIL: SEVEN REMEDIES. THE CORACINUS: FOUR REMEDIES. THE SEA-PIG: TWO REMEDIES.

There is also a snake which lives in the water, the fat and gall of which, carried about them by persons when in pursuit of the crocodile, are said to be marvellously efficacious, the beast not venturing, in such case, to make an attack upon them. As such preservative, they are still more effectual if mixed with the herbaceous plant known as potamogiton. River-crabs, taken fresh and beaten up and drunk in water, or the ashes of them, kept for the purpose, are useful in all cases of poisoning, as a counter-poison: taken with asses' milk they are particularly serviceable as a neutralizer of the venom of the scorpion; goats' milk or any other kind of milk being substituted where asses' milk cannot be procured. Wine, too, should also be used in all such cases. River-crabs, beaten up with ocimum, and applied to scorpions, are fatal to them. They are possessed of similar virtues, also, for the bites of all other kinds of venomous animals, the scytale in particular, adders, the sea-hare, and the bramble-frog. The ashes of them, preserved, are good for persons who give symptoms of hydrophobia after being bitten by a mad dog, some adding gentian as well, and administering the mixture in wine. In cases, too, where hydrophobia has already appeared, it is recommended that these ashes should be kneaded up into boluses with wine, and swallowed. If ten of these crabs are tied together with a handful of ocimum, all the scorpions in the neighbourhood, the magicians say, will be attracted to the spot. They recommend, also, that to wounds inflicted by the scorpion, these crabs, or the ashes of them, should be applied, with ocimum. For all these purposes, however, sea-crabs, it should be remembered, are not so useful. Thrasyllus informs us that there is nothing so antagonistic to serpents as crabs; that swine, when stung by a serpent, cure themselves by eating them; and that, while the sun is in the sign of Cancer, serpents suffer the greatest tortures.

The flesh, too, of river-snails, eaten either raw or boiled, is an excellent antidote to the venom of the scorpion, some persons keeping them salted for the purpose. These snails are applied, also, topically to the wound.

The coracinus is a fish peculiar to the river Nilus, it is true, but the particulars we are here relating are for the benefit of all parts of the world: the flesh of it is most excellent as an application for the cure of wounds inflicted by scorpions. In the number of the poisonous fishes we ought to reckon the sea-pig, a fish which causes great suffering to those who have been pierced with the pointed fin upon its back: the proper remedy in such case is the slime taken from the other parts of the body of the fish.

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CHAP. 20.

THE SEA-CALF: TEN REMEDIES. THE MURÆNA: ONE REMEDY. THE HIPPOCAMPUS: NINE REMEDIES. THE SEA-URCHIN: ELEVEN REMEDIES.

In cases of hydrophobia resulting from the bite of the mad dog, the practice is to rub the patient's face with the fat of the sea-calf; an application rendered still more efficacious by the admixture of hyæna's marrow, oil of mastich, and wax. Bites inflicted by the muræna are cured by an application of the head of that fish, reduced to ashes. The pastinaca, also, is remedial for its own bite, the ashes of the same fish, or of another of the same genus, being applied to the wound with vinegar. When this fish is intended for food, every portion of the back that is of a saffron colour should be removed, as well as the whole of the head: care, too, should be taken not to wash it over much; an observation equally applicable to all kinds of shell-fish, when intended for food, the flavour being deteriorated thereby.

The hippocampus, taken in drink, neutralizes the poison of the sea-hare. As a counter-poison to dorycnium, sea-urchins are remarkably useful; as also in cases where persons have taken juice of carpathum internally; more particularly if the urchins are used with the liquor in which they are boiled. Boiled sea-crabs, too, are looked upon as highly efficacious in cases of poisoning by dorycnium; and as a neutralizer of the venom of the sea-hare they are particularly good.

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CHAP. 21. (6.)

THE VARIOUS KINDS OF OYSTERS: FIFTY-EIGHT REMEDIES AND OBSERVATIONS. PURPLES: NINE REMEDIES.

Oysters, too, neutralize the venom of the sea-hare — and now that we are speaking of oysters, it may possibly be thought that I have not treated of this subject at sufficient length in the former part of my work, seeing that for this long time past the palm has been awarded to them at our tables as a most exquisite dish. Oysters love fresh water and spots where numerous rivers discharge themselves into the sea; hence it is that the pelagia are of such small size and so few in number. Still, however, we do find them breeding among rocks and in places far remote from the contact of fresh water, as in the neighbourhood of Grynium and of Myrina, for example. Generally speaking, they increase in size with the increase of the moon, as already stated by us when treating of the aquatic animals: but it is at the beginning of summer, more par- ticularly, and when the rays of the sun penetrate the shallow waters, that they are swollen with an abundance of milk. This, too, would appear to be the reason why they are so small when found out at sea; the opacity of the water tending to arrest their growth, and the moping consequent thereon producing a comparative indisposition for food.

Oysters are of various colours; in Spain they are red, in Illyricum of a tawny hue, and at Circeii black, both in meat and shell. But in every country, those oysters are the most highly esteemed that are compact without being slimy from their secretions, and are remarkable more for their thickness than their breadth. They should never be taken in either muddy or sandy spots, but from a firm, hard bottom; the meat should be compressed, and not of a fleshy consistence; and the oyster should be free from fringed edges, and lying wholly in the cavity of the shell. Persons of experience in these matters add another characteristic; a fine purple thread, they say, should run round the margins of the beard, this being looked upon as a sign of superior quality, and obtaining for them their name of “calliblephara.”

Oysters are all the better for travelling and being removed to new waters; thus, for example, the oysters of Brundisium, it is thought, when fed in the waters of Avernus, both retain their own native juices and acquire the flavour of those of Lake Lucrinus. Thus much with reference to the meat of the oyster; we will now turn to the various countries which produce it, so that no coast may be deprived of the honours which properly belong to it. But in giving this description we will speak in the language of another, using the words of a writer who has evinced more careful discernment in treating of this subject than any of the other authors of our day. These then are the words of Mucianus, in reference to the oyster:— "The oysters of Cyzicus are larger than those of Lake Lucrinus, fresher than those of the British coasts, sweeter than those of Medulæ, more tasty than those of Ephesus, more plump than those of Lucus, less slimy than those of Coryphas, more delicate than those of Istria, and whiter than those of Circeii." For all this, however, it is a fact well ascertained that there are no oysters fresher or more delicate than those of Circeii, last mentioned.

According to the historians of the expedition of Alexander, there were oysters found in the Indian Sea a foot in diameter: among ourselves, too, the nomenclature of some spendthrift and gourmand has found for certain oysters the name of "tridacna," wishing it to be understood thereby, that they are so large as to require three bites in eating them. We will take the present opportunity of stating all the medicinal properties that are attributed to oysters. They are singularly refreshing to the stomach, and tend to restore the appetite. Luxury, too, has imparted to them an additional coolness by burying them in snow, thus making a medley of the produce of the tops of mountains and the bottom of the sea. Oysters are slightly laxative to the bowels; and boiled in honied wine, they relieve tenesmus, in cases where it is unattended with ulceration. They act detergently also upon ulcerations of the bladder. Boiled in their shells, unopened just as they come to hand, oysters are marvellously efficacious for rheumatic defluxions. Calcined oyster-shells, mixed with honey, allay affections of the uvula and of the tonsillary glands: they are similarly used for imposthumes of the parotid glands, inflamed tumours, and indurations of the mamillæ. Applied with water, these

ashes are good for ulcerations of the head, and impart a plumpness to the skin in females. They are sprinkled, too, upon burns, and are highly esteemed as a dentifrice. Applied with vinegar, they are good for the removal of prurigo and of pituitous eruptions. Beaten up in a raw state, they are curative of scrofula and of chilblains upon the feet.

Purples, too, are useful as a counterpoison.

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CHAP. 22.

SEA-WEED: TWO REMEDIES.

According to Nicander, sea-weed is also a theriac. There are numerous varieties of it, as already stated; one, for instance, with an elongated leaf, another red, another again with a broader leaf, and another crisped. The most esteemed kind of all is that which grows off the shores of Crete, upon the rocks there, close to the ground: it being used also for dyeing wool, as it has the property of so fixing the colours as never to allow of their being washed out. Nicander recommends it to be taken with wine.

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CHAP. 23. (7.)

REMEDIES FOR ALOPECY, CHANGE OF COLOUR IN THE HAIR, AND ULCERATIONS OF THE HEAD. THE SEA-MOUSE: TWO REMEDIES. THE SEA-SCORPION: TWELVE REMEDIES. THE LEECH: SEVEN REMEDIES. THE MUREX: THIRTEEN REMEDIES. THE CONCHYLIUM: FIVE REMEDIES.

Ashes of the hippocampus, mixed with nitre and hog's lard, or else used solely with vinegar, are curative of alopecy; the skin being first prepared for the reception of the necessary medicaments by an application of powdered bone of sæpia. Alopecy is cured also with ashes of the sea-mouse, mixed with oil; ashes of the sea-urchin, burnt, flesh and all together; the gall of the sea-scorpion; or else ashes of three frogs burnt alive in an earthen pot, applied with honey, or what is still better, in combination with tar. Leeches left to putrefy for forty days in red wine stain the hair black. Others, again, recommend one sextarius of leeches to be left to putrefy the same number of days in a leaden vessel, with two sextarii of vinegar, the hair to be well rubbed with the mixture in the sun. According to Sornatius, this preparation is naturally so penetrating, that if females, when they apply it, do not take the precaution of keeping some oil in the mouth, the teeth even will become blackened thereby. Ashes of burnt shells of the murex or purple are used as a liniment, with honey, for ulcerations of the head; the shells, too, of other shell-fish, powdered merely, and not calcined, are very useful for the same purpose, applied with water. For the cure of head-ache, castoreum is employed, in combination with peucedanum and oil of roses.

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CHAP. 24.

REMEDIES FOR DISEASES OF THE EYES AND EYE-LIDS. TWO REMEDIES DERIVED FROM THE FAT OF FISHES. THE CALLIONYMUS: THREE REMEDIES. THE GALL OF THE CORACINUS: ONE REMEDY. THE SÆPIA: TWENTY-FOUR REMEDIES. ICHTHYOCOLLA: FIVE REMEDIES.

The fat of all kinds of fish, both fresh-water as well as sea fish, melted in the sun and incorporated with honey, is an excellent improver of the eye-sight; the same, too, with castoreum, in combination with honey. The gall of the callionymus heals marks upon the eyes and cauterizes fleshy excrescences about those organs: indeed, there is no fish with a larger quantity of gall than this, an opinion expressed too by Menander in his Comedies. This fish is known also as the "uranoscopos," from the eyes being situate in the upper part of the head. The gall, too, of the coracinus has the effect of sharpening the eyesight.

The gall of the red sea-scorpion, used with stale oil or Attic honey, disperses incipient cataract; for which purpose, the application should be made three times, on alternate days. A similar method is also employed for removing indurations of the membrane of the eyes. The surmullet, used as a diet, weakens the eyesight, it is said. The sea-hare is poisonous itself, but the ashes of it are useful as an application for preventing superfluous hairs on the eyelids from growing again, when they have been once pulled out by the roots. For this purpose, however, the smaller the fish is, the better. Small scallops, too, are salted and beaten up with cedar resin for a similar purpose, or else the frogs known as "diopetes" and "calamitæ," are used; the blood of them being applied with vine gum to the eyelids, after the hairs have been removed.

Powdered shell of sæpia, applied with woman's milk, allays swellings and inflammations of the eyes; employed by itself it removes eruptions of the eyelids. When this remedy is used, it is the practice to turn up the eyelids, and to leave the medicament there a few moments only; after which, the part is anointed with oil of roses, and the inflammation modified by the application of a bread-poultice. Powdered bone of sæpia is used also for the treatment of nyctalopy,

being applied to the eyes with vinegar. Reduced to ashes, this substance removes scales upon the eyes: applied with honey, it effaces marks upon those organs: and used with salt and cadmia, one drachma of each, it disperses webs which impede the eyesight, as also albugo in the eyes of cattle. They say, too, that if the eyelids are rubbed with the small bone taken from this fish, a perfect cure will be experienced.

Sea-urchins, applied with vinegar, cause epinyctis to disappear. According to what the magicians say, they should be burnt with vipers' skins and frogs, and the ashes sprinkled in the drink; a great improvement of the eyesight being guaranteed as the sure result.

"Ichthyocolla" is the name given to a fish with a glutinous skin; the glue made from which is also known by the same name, and is highly useful for the removal of epinyctis. Some persons, however, assert that it is from the belly of the fish, and not the skin — as in the case of bull glue — that the ichthyocolla is prepared. That of Pontus is highly esteemed: it is white, free from veins or scales, and dissolves with the greatest rapidity. The proper way of using it, is to cut it into small pieces, and then to leave it to soak in water or vinegar a night and a day, after which it should be pounded with sea-shore pebbles, to make it melt the more easily. It is generally asserted that this substance is good for pains in the head and for tetanus.

The right eye of a frog, suspended from the neck in a piece of cloth made from wool of the natural colour, is a cure for ophthalmia in the right eye; and the left eye of a frog, similarly suspended, for ophthalmia in the left. If the eyes, too, of a frog are taken out at the time of the moon's conjunction, and similarly worn by the patient, enclosed in an eggshell, they will effectually remove indurations of the membrane of the eyes. The rest of the flesh applied topically, removes all marks resulting from blows. The eyes, too, of a crab, worn attached to the neck, by way of amulet, are a cure for ophthalmia, it is said. There is a small frog which lives in reed-beds and among grass more particularly, never croaks, being quite destitute of voice, is of a green colour, and is apt to cause tympanitis in cattle, if they should happen to swallow it. The slimy moisture on this reptile's body, scraped off with a spatula and applied to the eyes, greatly improves the sight, they say: the flesh, too, is employed as a

topical application for the removal of pains in the eyes.

Some persons take fifteen frogs, and after spitting them upon as many bulrushes, put them into a new earthen vessel: they then mix the juices which flow from them, with gum of the white vine, and use it as an application for the eye-lids; first pulling out such eye-lashes as are in the way, and then dropping the preparation with the point of a needle into the places from which the hairs have been removed. Meges used to prepare a depilatory for the eyelids, by killing frogs in vinegar, and leaving them to putrefy; for which purpose he employed the spotted frogs which make their appearance in vast numbers during the rains of autumn. Ashes of burnt leeches, it is thought, applied in vinegar, are productive of a similar effect; care must be taken, however, to burn them in a new earthen vessel. Dried liver, too, of the tunny, made up into an ointment, in the proportion of four denarii, with oil of cedar, and applied as a depilatory for nine months together, is considered to be highly effectual for this purpose.

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CHAP. 25.

REMEDIES FOR DISEASES OF THE EARS. THE BATIA: ONE REMEDY. THE BACCHUS OR MYXON: TWO REMEDIES. THE SEA-LOUSE: TWO REMEDIES.

For diseases of the ears, fresh gall of the fish called “batia” is remarkably good; the same, too, when it has been kept in wine. The gall, also, of the bacchus, by some known as the “myxon,” is equally good; as also that of the callionymus, injected into the ears with oil of roses, or else castoreum, used with poppy-juice. There are certain animals too, known as “sea-lice,” which are recommended as an injection for the ears, beaten up with vinegar. Wool, too, that has been dyed with the juice of the murex, employed by itself, is highly useful for this purpose; some persons, however moisten it with vinegar and nitre.

Others, again, more particularly recommend for all affections of the ears one cyathus of the best garum, with one cyathus and a half of honey, and one cyathus of vinegar, the whole gently boiled in a new pot over a slow fire, and skimmed with a feather every now and then: when it has become wholly free from scum, it is injected lukewarm into the ears. In cases where the ears are swollen, the same authorities recommend that the swellings should be first reduced with juice of coriander. The fat of frogs, injected into the ears, instantly removes all pains in these organs. The juice of river-crabs, kneaded up with barley-meal, is a most effectual remedy for wounds in the ears. Shells of the murex, reduced to ashes, and applied with honey, or the burnt shells of other shellfish, used with honied wine, are curative of imposthumes of the parotid glands.

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CHAP. 26.

REMEDIES FOR TOOTH-ACHE. THE DOG-FISH : FOUR REMEDIES. WHALE'S FLESH.

Tooth-ache is alleviated by scarifying the gums with bones of the sea-dragon, or by rubbing the teeth once a year with the brains of a dog-fish boiled in oil, and kept for the purpose. It is a very good plan too, for the cure of tooth-ache, to lance the gums with the sting of the pastinaca in some cases. This sting, too, is pounded, and applied to the teeth with white hellebore, having the effect of extracting them without the slightest difficulty. Another of these remedies is, ashes of salted fish calcined in an earthen vessel, mixed with powdered marble. Stale cybium, rinsed in a new earthen vessel, and then pounded, is very useful for the cure of tooth-ache. Equally good, it is said, are the back-bones of all kinds of salt fish, pounded and applied in a liniment. A decoction is made of a single frog boiled in one hemina of vinegar, and the teeth are rinsed with it, the decoction being retained in the mouth. In cases where a repugnance existed to making use of this remedy, Sallustius Dionysius used to suspend frogs over boiling vinegar by the hind legs, so as to make them discharge their humours into the vinegar by the mouth, using considerable numbers of frogs for the purpose: to those, however, who had a stronger stomach, he prescribed the frogs themselves, eaten with their broth. It is generally thought, too, that this recipe applies more particularly to the double teeth, and that the vinegar prepared as above-mentioned, is remarkably useful for strengthening them when loose.

For this last purpose, some persons cut off the legs of two frogs, and then macerate the bodies in two heminæ of wine, recommending this preparation as a collutory for strengthening loose teeth. Others attach the frogs, whole, to the exterior of the jaws : and with some it is the practice to boil ten frogs, in three sextarii of vinegar, down to one-third, and to use the decoction as a strengthener of loose teeth. By certain authorities, too, it has been recommended to boil the hearts of six-and-thirty frogs beneath a copper vessel, in one

sextarius of old oil, and then to inject the decoction into the ear on the same side of the jaw as the part affected: while others again have used, as an application for the teeth, a frog's liver, boiled, and beaten up with honey. All the preparations above described will be found still more efficacious if made from the seafrog In cases where the teeth are carious and emit an offensive smell, it is recommended to dry some whale's flesh in an oven for a night, and then to add an equal quantity of salt, and use the mixture as a dentifrice. "Enhydris" is the name given by the Greeks to a snake that lives in the water. With the four upper teeth of this reptile, it is the practice, for the cure of aching in the upper teeth, to lance the upper gums, and with the four lower teeth, for aching in the lower. Some persons, however, content themselves with using an eyetooth only. Ashes, too, of burnt crabs are used for this purpose; and the murex, reduced to ashes, makes an excellent dentifrice.

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CHAP. 27.

REMEDIES FOR LICHENS, AND FOR SPOTS UPON THE FACE. THE DOLPHIN: NINE REMEDIES. COLUTHIA OR CORYPHIA: THREE REMEDIES. HALCYONEUM : SEVEN REMEDIES. THE TUNNY : FIVE REMEDIES.

Lichens and leprous spots are removed by applying the fat of the sea-calf, ashes of the mæna in combination with three oboli of honey, liver of the pastinaca boiled in oil, or ashes of the dolphin or hippocampus mixed with water. After the parts have been duly excoriated, a cicatrizing treatment ought to be pursued. Some persons bake dolphin's liver in an earthen vessel, till a grease flows therefrom like oil in ap- pearance: this they use by way of ointment for these diseases.

Burnt shells of the murex or purple, applied with honey, have a detergent effect upon spots on the face in females: used as an application for seven consecutive days, a fomentation made of white of eggs being substituted on the eighth, they efface wrinkles, and plump out the skin. To the genus " murex" belong the shell-fish known by the Greeks as "coluthia" or "coryphia," equally turbinated, but considerably smaller: for all the above purposes they are still more efficacious, and the use of them tends to preserve the sweetness of the breath. Fish-glue effaces wrinkles and plumps out the skin; being boiled for the purpose in water some four hours, and then pounded and kneaded up till it attains a thin consistency, like that of honey. After being thus prepared, it is put by in a new vessel for keeping; and, when wanted for use, is mixed, in the proportion of four drachmæ, with two drachmæ of sulphur, two of alkanet, and eight of litharge; the whole being sprinkled with water and beaten up together. The preparation is then applied to the face, and is washed off at the end of four hours. For the cure of freckles and other affections of the face, calcined bones of cuttle-fish are also used; an application which is equally good for the removal of fleshy excrescences and the dispersion of running sores.

(8.) For the cure of itch-scab, a frog is boiled in five semisextarii of sea-water, the decoction being reduced to the consistency of

honey. There is a sea production called “halcyoneum,” composed, as some think, of the nests of the birds known as the “halcyon” and “ceyx,” or, according to others, of the concretion of sea-foam, or of some slime of the sea, or a certain lanuginous inflorescence thrown up by it. Of this halcyoneum there are four different kinds; the first, of an ashy colour, of a compact substance, and possessed of a pungent odour; the second, soft, of a milder nature, and with a smell almost iden- tical with that of sea-weed; the third, whiter, and with a variegated surface; the fourth, more like pumice in appearance, and closely resembling rotten sponge. The best of all is that which nearly borders upon a purple hue, and is known as the “Milesian” kind: the whiter it is, the less highly it is esteemed.

The properties of halcyoneum are ulcerative and detergent: when required for use, it is parched and applied without oil. It is quite marvellous how efficiently it removes leprous sores, lichens, and freckles, used in combination with lupines and two oboli of sulphur. It is employed, also, for the removal of marks upon the eyes. Andreas has recommended for the cure of leprosy ashes of burnt crabs, with oil; and Attalus, fresh fat of tunny.

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CHAP. 28.

REMEDIES FOR SCROFULA, IMPOSTHUMES OF THE PAROTID GLANDS, QUINSY, AND DISEASES OF THE FAUCES. THE MÆNA: THIRTEEN REMEDIES. THE SEA-SCOLOPENDRA: TWO REMEDIES. THE SAURUS: ONE REMEDY. SHELL-FISH: ONE REMEDY. THE SILURUS: FIFTEEN REMEDIES.

Ulcerations of the mouth are cured by an application of brine in which mænæ have been pickled, in combination with calcined heads of the fish, and honey. For the cure of scrofula, it is a good plan to prick the sores with the small bone that is found in the tail of the fish known as the sea-frog; care being taken to avoid making a wound, and to repeat the operation daily, until a perfect cure is effected. The same property, too, belongs to the sting of the pastinaca, and to the sea-hare, applied topically to the sores: but in both cases due care must be taken to remove them in an instant. Shells of sea-urchins are bruised, also, and applied with vinegar; shells also of sea-scolopendræ, applied with honey; and river-crabs pounded or calcined, and applied with honey. Bones, too, of the sæpia, triturated and applied with stale axle-grease, are marvellously useful for this purpose.

This last preparation is used, also, for the cure of imposthumes of the parotid glands; a purpose for which the liver of the sea-fish known as the "saurus" is employed. Nay, even more than this, fragments of earthen vessels in which salt fish have been kept are pounded with stale axle-grease, and applied to scrofulous sores and imposthumes of the parotid glands; as also calcined murex, incorporated with oil. Stiffness in the neck is allayed by taking what are known as sea-lice, in doses of one drachma in drink, taking castoreum mixed with pepper in honied wine, or making a decoction of frogs in oil and salt, and taking the liquor.

Opisthotony, too, and tetanus are treated in a similar manner; and spasms, with the addition of pepper. Ashes of burnt heads of salted mænæ are applied externally, with honey, for the cure of quinsy; as also a decoction of frogs, boiled in vinegar, a preparation which is equally good for affections of the tonsillary glands. River-crabs,

pounded, one to each hemina of water, are used as a gargle for the cure of quinsy; or else they are taken with wine and hot water. Garum, put beneath the uvula with a spoon, effectually cures diseases of that part. The silurus, used as food, either fresh or salted, improves the voice.

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CHAP. 29.

REMEDIES FOR COUGH AND DISEASES OF THE CHEST.

Surmullets act as an emetic, dried and pounded, and taken in drink. Castoreum, taken fasting, with a small quantity of hammoniacum in oxymel, is extremely good for asthma: spasms, too, in the stomach are assuaged by taking a similar potion with warm oxymel. Frogs stewed in their own liquor in the saucepan, the same way in fact that fish are dressed, are good for a cough, it is said. In some cases, also, frogs are suspended by the legs, and after their juices have been received in a platter, it is recommended to gut them, and the entrails being first carefully removed, to preserve them for the above purpose. There is a small frog, also, which ascends trees, and croaks aloud there: if a person suffering from cough spits into its mouth and then lets it go, he will experience a cure, it is said. For cough attended with spitting of blood, it is recommended to beat up the raw flesh of a snail, and to drink it in hot water.

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CHAP. 30. (9.)

REMEDIES FOR PAINS IN THE LIVER AND SIDE. THE ELONGATED CONCH: SIX REMEDIES. THE TETHEA: FIVE REMEDIES.

For pains in the liver, a sea-scorpion is killed in wine, and the liquid is taken. The meat, too, of the elongated conch is taken with honied wine and water, in equal quantities, or, if there are symptoms of fever, with hydromel. Pains in the side are assuaged by taking the flesh of the hippocampus, grilled, or else the tethea, very similar to the oyster, with the ordinary food. For sciatica, the pickle of the silurus is injected, by way of clyster. The flesh of conchs, too, is prescribed, for fifteen days, in doses of three oboli soaked in two sextarii of wine.

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CHAP. 31.

REMEDIES FOR DISEASES OF THE BOWELS. SEA-WORT: ONE REMEDY. THE MYAX: TWENTY-FIVE REMEDIES. THE MITULUS: EIGHT REMEDIES. PELORIDES: ONE REMEDY. SERIPHUM: TWO REMEDIES. THE ERYTHINUS: TWO REMEDIES.

The silurus, taken in its broth, or the torpedo, used as food, acts as a laxative upon the bowels. There is a sea-wort, also, similar in appearance to the cultivated cabbage: it is injurious to the stomach, but acts most efficiently as a purgative, requiring to be cooked with fat meat for the purpose, in consequence of its extreme acridity. The broth, too, of all boiled fish is good for this purpose; it acting, also, as a strong diuretic, taken with wine more particularly. The best kind of all is that prepared from the sea-scorpion, the iulis, and rock-fish in general, as they are destitute of all rankness and are free from fat. The proper way of cooking them is with dill, parsley, coriander, and leeks, with the addition of oil and salt. Stale cybium, too, acts as a purgative, and is particularly useful for carrying off crudities, pituitous humours, and bile.

The myax is of a purgative nature, a shell-fish of which we shall take this opportunity of giving the natural history at length. These fish collect together in masses, like the murex, and are found in spots covered with sea-weed. They are the finest eating in autumn, and are found in the greatest perfection in places where fresh-water streams discharge themselves into the sea; for which reason it is that those of Egypt are held in such high esteem. As the winter advances, they contract a bitter flavour, and assume a reddish hue. The liquor of these fish, it is said, acts as a purgative upon the bowels and bladder, has a detergent effect upon the intestines, acts aperiently upon all the passages, purges the kidneys, and diminishes the blood and adipose secretions. Hence it is that these shell-fish are found of the greatest use for the treatment of dropsy, for the regulation of the catamenia, and for the removal of jaundice, all diseases of the joints, and flatulency. They are very good, also, for the reduction of obesity, for diseases of the bile and of the pituitous secretions, for affections of the lungs, liver, and spleen, and for rheumatic defluxions. The only

inconvenience resulting from them is, that they irritate the throat and impede the articulation. They have, also, a healing effect upon ulcers of a serpiginous nature, or which stand in need of detergents, as also upon carcinomatous sores. Calcined, the same way as the murex, and employed with honey, they are curative of bites inflicted either by dogs or human beings, and of leprous spots or freckles. The ashes of them, rinsed, are good for the removal of films upon the eyes, granulations of those organs and indurations of the membrane, as also for diseases of the gums and teeth, and for pituitous eruptions. They serve, also, as an antidote to dorycnium and to opocarpathon.

There are two species of this shell-fish, of a degenerate kind: the mitulus, which has a strong flavour, and a saltish taste; and the myisca, which differs from the former in the roundness of its shell, is somewhat smaller, and is covered with filaments, the shell being thinner, and the meat of a sweeter flavour. The ashes, also, of the mitulus, like those of the murex, are possessed of certain caustic properties, and are very useful for the removal of leprous spots, freckles, and blemishes of the skin. They are rinsed, too, in the same manner as lead, for the removal of swellings of the eyelids, of indurations of the membranes, and of films upon the eyes, as also of sordid ulcers upon other parts of the body, and of pustules upon the head. The meat of them, also, is employed as an application for bites inflicted by dogs.

As to pelorides, they act as a gentle laxative upon the bowels, an effect equally produced by castoreum, taken in doses of two drachmæ, in hydromel: where, however, a more drastic purgative is required, one drachma of dried garden-cucumber root is added, and two drachmæ of aphronitrum. The tethea is good for griping pains in the bowels and for attacks of flatulency: they are generally found adhering to the leaves of marine plants, sucking their nutriment therefrom, and may be rather looked upon as a sort of fungus than as a fish. They are useful, also, for the removal of tenesmus and of diseases of the kidneys.

There grows also in the sea a kind of absinthium, known by some persons as “seriphum,” and found in the vicinity of Taposiris, in Egypt, more particularly. It is of a more slender form than the land absinthium, acts as a purgative upon the bowels, and effectually

removes intestinal worms. The sæpia, too, is a laxative; for which purpose these fish are administered with the food, boiled with a mixture of oil, salt, and meal. Salted mænæ, applied with bull's gall to the navel, acts as a purgative upon the bowels.

The liquor of fish, boiled in the saucepan with lettuces, dispels tenesmus. River-crabs, beaten up and taken with water, act astringently upon the bowels, and they have a diuretie effect, if taken with white wine. Deprived of the legs, and taken in doses of three oboli with myrrh and iris, one drachma of each, they disperse urinary calculi. For the cure of the iliac passion and of attacks of flatulency, castoreum should be taken, with seed of daucus and of parsley, a pinch in three fingers of each, the whole being mixed with four cyathi of warm honied wine. Griping pains in the bowels should be treated with castoreum and a mixture of dill and wine. The fish called "erythinus," used as food, acts astringently upon the bowels. Dysentery is cured by taking frogs boiled with squills, and prepared in the form of boluses, or else hearts of frogs beaten up with honey, as Niceratus recommends. For the cure of jaundice, salt fish should be taken with pepper, the patient abstaining from all other kinds of meat.

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CHAP. 32.

REMEDIES FOR DISEASES OF THE SPLEEN, FOR URINARY CALCULI, AND FOR AFFECTIONS OF THE BLADDER. THE SOLE: ONE REMEDY. THE TURBOT: ONE REMEDY. THE BLENDIUS: ONE REMEDY. THE SEA-NETTLE: SEVEN REMEDIES. THE PULMO MARINUS: SIX REMEDIES. ONYCHES: FOUR REMEDIES.

For the cure of spleen diseases, the fish known as the sole is applied to that part; the torpedo, also, or else a live turbot; it being then set at liberty in the sea. The seascorpion, killed in wine, is a cure for diseases of the bladder and for urinary calculi; the stone, also, that is found in the tail of this last fish, taken in drink, in doses of one obolus; the liver of the enhydris; and the ashes of the fish called "blendius; taken with rue. In the head, too, of the fish called "bacchus," there are found certain small stones, as it were: these, taken in water, six in number, are an excellent cure for urinary calculi. They say, too, that the sea-nettle, taken in wine, is very useful for this purpose, as also the pulmo marinus, boiled in water, The eggs of the sæpia have a diuretic effect, and carry off pituitous humours from the kidneys. Ruptures and convulsions are very effectually treated by taking river-crabs, bruised in asses' milk more particularly; and urinary calculi by drinking sea-urchins pounded, spines and all, in wine; the due proportion being one semisextarius of wine for each urchin, and the treatment being continued till its good effects are visible. The flesh, too, of the sea-urchin, taken as food, is very useful as a remedy for the same malady.

Scallops also, taken as food, act detergently upon the bladder: the male fish is by some persons called "donax," and by others "aulos," the female being known as "onyx." The male scallop has a diuretic effect: the flesh of the female is sweeter than that of the male, and of an uniform colour. The eggs, too, of the sæpia promote the urinary secretions, and act detergently upon the kidneys.

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CHAP. 33.

REMEDIES FOR INTESTINAL HERNIA, AND FOR DISEASES OF THE RECTUM. THE WATER-SNAKE: ONE REMEDY. THE HYDRUS: ONE REMEDY. THE MULLET: ONE REMEDY. THE PELAMIS: THREE REMEDIES.

For the cure of intestinal hernia the sea-hare is applied, bruised with honey. The liver of the water-snake, and that of the hydrus, bruised and taken in drink, are remedial for urinary calculi. Sciatica is cured by using the pickle of the silurus as a clyster, the bowels being first thoroughly purged. For chafing of the fundament, an application is made of heads of mullets and surmullets, reduced to ashes; for which purpose they are calcined in an earthen vessel, and must be applied in combination with honey. Calcined heads, too, of the fish known as mænæ are useful for the cure of chaps and condylomata; as also heads of salted pelamides, reduced to ashes, or calcined cybium, applied with honey.

The torpedo, applied topically, reduces procidence of the rectum. River-crabs, reduced to ashes, and applied with oil and wax, are curative of chaps of the fundament: sea-crabs, too, are equally useful for the purpose.

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CHAP. 34.

REMEDIES FOR INFLAMED TUMOURS, AND FOR DISEASES OF THE GENERATIVE ORGANS. THE SCIÆNA: ONE REMEDY. THE PERCH: FOUR REMEDIES. THE SQUATINA: THREE REMEDIES. THE SMARIS: THREE REMEDIES.

The pickle of the coracinus disperses inflammatory tumours; an effect which is equally produced by using the cal- cined intestines and scales of the sciæna. The sea-scorpion, too, is used for the same purpose, boiled in wine, and applied as a fomentation to the part affected. Shells of sea-urchins, bruised and applied with water, act as a check upon incipient inflammatory tumours. Ashes of the murex, or of the purple, are employed in either case, whether it is wanted to disperse inflammatory tumours in an incipient state, or to bring them to a head and break them. Some authorities prescribe the following preparation: of wax and frankincense twenty drachmæ, of litharge forty drachmæ, of calcined murex ten drachmæ, and of old oil, one semisextarius. Salt fish, boiled and applied by itself, is highly useful for the above purposes.

River crabs, bruised and applied, disperse pustules on the generative organs: the same, too, with calcined heads of mænæ, or the flesh of that fish, boiled and applied. Heads of salted perch, reduced to ashes, and applied with honey, are equally useful for the purpose; or else calcined heads of pelamides, or skin of the squatina reduced to ashes. It is the skin of this fish that is used, as already stated, for giving a polish to wood; for the sea even, we find, furnishes its aid to our artificers. For a similar purpose the fishes called "smarides" are applied topically; as also ashes of the shell of the murex or of the purple, applied with honey; which last are still more efficacious when the flesh has been burnt with the shell.

Salt fish, boiled with honey, is particularly good for the cure of carbuncles upon the generative organs. For relaxation of the testes, the slime of snails is recommended, applied in the form of a liniment.

The flesh of hippocampi, grilled and taken frequently as food, is a cure for incontinence of urine; the ophidion, too, a little fish similar to the conger in appearance, eaten with a lily root; or the small fry

found in the bellies of larger fish that have swallowed them, reduced to ashes and taken in water. It is recommended, too, to burn African snails, both shells and flesh, and to administer the ashes with wine of Signia.

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CHAP. 36.

REMEDIES FOR GOUT, AND FOR PAINS IN THE FEET. THE BEAVER: FOUR REMEDIES. BRYON: ONE REMEDY.

For the cure of gout and of diseases of the joints, oil is useful in which the intestines of frogs have been boiled. Ashes, too, of burnt bramble-frogs are similarly employed, with stale grease; in addition to which, some persons use calcined barley, the three ingredients being mixed in equal proportions. It is recommended too, in cases of gout, to rub the parts affected with a sea-hare, fresh caught, and to wear shoes made of beaver's skin, Pontic beaver more particularly, or else of sea-calf's skin, an animal the fat of which is very useful for the purpose: the same being the case also with bryon, a plant of which we have already spoken, similar to the lettuce in appearance, but with more wrinkled leaves, and destitute of stem. This plant is of a styptic nature, and, applied topically, it tends to modify the paroxysms of gout. The same, too, with sea-weed, of which we have also spoken already; due precaution being taken not to apply it dry.

Chilblains are cured by applying the pulmo marinus; ashes of sea-crabs with oil; river crabs, bruised and burnt to ashes and kneaded up with oil; or else fat of the silurus. In diseases of the joints, the paroxysms are modified by applying fresh frogs every now and then: some authorities recommend that they should be split asunder before being applied. The liquor from mussels and other shell-fish has a tendency to make flesh.

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CHAP. 37.

REMEDIES FOR EPILEPSY.

Epileptic patients, as already stated, are recommended to drink the rennet of the sea-calf, mixed with mares' milk or asses' milk, or else with pomegranate juice, or, in some cases, with oxymel: some persons, too, swallow the rennet by itself, in the form of pills. Castoreum is sometimes administered, in three cyathi of oxymel, to the patient fasting; but where the attacks are frequent, it is employed in the form of a clyster, with marvellous effect. The proper proportions, in this last case, are two drachmæ of castoreum, one sextarius of oil and honey, and the same quantity of water. At the moment that the patient is seized with a fit, it is a good plan to give him castoreum, with vinegar, to smell. The liver, too, of the sea-weasel is given to epileptic patients, or else that of sea-mice, or the blood of tortoises.

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CHAP. 38. (10.)

REMEDIES FOR FEVERS. THE FISH CALLED ASELLUS: ONE REMEDY. THE PHAGRUS: ONE REMEDY. THE BALÆNA: ONE REMEDY.

Recurrent fevers are effectually checked by making the patient taste the liver of a dolphin, just before the paroxysm comes on. Hippocampi are stifled in oil of roses, and the patients are rubbed therewith in cold agues, the fish, also, being worn as an amulet by the patient. In the same way, too, the small stones that are found at full moon in the head of the fish called "asellus" are worn, attached in a piece of linen cloth to the patient's body. A similar virtue is attributed to the longest tooth of the river-fish called phagrus, attached to the patient with a hair, provided he does not see the person who attaches it to him for five days. Frogs are boiled in oil in a spot where three roads meet, and, the flesh being first thrown away, the patients are rubbed with the decoction, by way of cure for quartan fever. Some persons, again, suffocate frogs in oil, and, after attaching them to the patient without his knowing it, anoint him with the oil. The heart of a frog, worn as an amulet, modifies the cold chills in fevers; the same, too, with oil in which the intestines of frogs have been boiled. But the best remedy for quartan fevers, is to wear attached to the body either frogs from which the claws have been removed, or else the liver or heart of a bramble-frog, attached in a piece of russet-coloured cloth.

River-crabs, bruised in oil and water, are highly beneficial in fevers, the patient being anointed with the preparation just before the paroxysms come on: some authorities recommend the addition of pepper to the mixture. Others prescribe for quartan fevers a decoction of river-crabs in wine, boiled down to one fourth, the patient taking it at the moment of leaving the bath: by some, too, it is recommended to swallow the left eye of a river-crab. The magicians engage to cure a tertian fever, by attaching as an amulet to the patient, before sunrise, the eyes of river-crabs, the crabs when thus blinded being set at liberty in the water. They say, too, that these eyes, attached to the body in a piece of deer's hide, with the flesh of a nightingale, will

dispel sleep and promote watchfulness. In cases where there are symptoms of lethargy, the rennet of the balæna or of the sea-calf is given to the patient to smell; some persons, too, use the blood of tortoises as a liniment for lethargic patients.

Tertian fevers, it is said, may be cured by wearing one of the vertebræ of a perch attached to the body, and quartan fevers by using fresh river snails, as an aliment. Some persons preserve these snails in salt for this purpose, and give them, pounded, in drink.

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CHAP. 39.

REMEDIES FOR LETHARGY, CACHEXY, AND DROPSY.

Strombi, left to putrefy in vinegar, act as an excitant upon lethargic patients by their smell; they are very useful, too, for the cure of cardiac diseases. For cachectic patients, where the body is wasting with consumption, tetheæ are considered beneficial, mixed with rue and honey. For the cure of dropsy, dolphin's fat is melted and taken with wine, the repulsive taste of it being neutralized by first touching the nostrils with unguent or some other odoriferous substance, or else by plugging the nostrils in some way or other. The flesh of strombi, pounded and given in three heminæ of honied wine and the same quantity of water, or, if there is fever, in hydromel, is very useful for dropsy: the same, too, with the juice of river-crabs, administered with honey. Water frogs, too, are boiled with old wine and spelt, and taken as food, the liquor in which they have been boiled being drunk from the same vessel: or else the feet, head, and tail of a tortoise are cut off, and the intestines removed, the rest of the flesh being seasoned in such a manner as to allow of its being taken without loathing. River-crabs, too, eaten with their broth, are said to be very good for the cure of phthisis.

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CHAP. 40.

REMEDIES FOR BURNS AND FOR ERYSIPELAS.

Burns are cured by applying ashes of calcined sea-crabs or river-crabs with oil: fish-glue, too, and calcined frogs are used as an application for scalds produced by boiling water. The same treatment also restores the hair, provided the ashes are those of river-crabs: it is generally thought, too, that the preparation should be applied with wax and bears' grease. Ashes, too, of burnt beaver-skin are very useful for these purposes. Live frogs act as a check upon crysipelas, the belly side being applied to the part affected: it is recommended, too, to attach them lengthwise by the hinder legs, so as to render them more beneficial by reason of their increased respiration. Heads, too, of salted siluri are reduced to ashes and applied with vinegar.

Prurigo and itch-scab, not only in man but in quadrupeds as well, are most efficaciously treated with the liver of the pastinaca boiled in oil.

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CHAP. 41.

REMEDIES FOR DISEASES OF THE SINEWS.

The exterior callosity with which the flesh of purples is covered, beaten up, unites the sinews, even when they have been severed asunder. It is a good plan, for patients suffering from tetanus, to take sea-calf's rennet in wine, in doses of one obolus, as also fish-glue. Persons affected with fits of trembling find much relief from castoreum, provided they are well anointed with oil. I find it stated that the surmullet, used as an article of diet, acts injuriously upon the sinews.

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CHAP. 42.

METHODS OF ARRESTING HÆMORRHAGE AND OF LETTING BLOOD. THE POLYP: ONE REMEDY.

Fish, used as an aliment, it is generally thought, make blood. The polyp, bruised and applied, arrests hæmorrhage, it is thought: in addition to which we find stated the following particulars respecting it — that of itself it emits a sort of brine, in consequence of which, there is no necessity to use any in cooking it — that it should always be sliced with a reed — and that it is spoilt by using an iron knife, becoming tainted thereby, owing to the antipathy which naturally exists (between it and iron). For the purpose also of arresting hæmorrhage, ashes of burnt frogs are applied topically, or else the dried blood of those animals. Some authorities recommend the frog to be used, that is known by the Greeks as "calamites," from the fact that it lives among reeds and shrubs; it is the smallest and greenest of all the frogs, and either the blood or the ashes of it are recommended to be employed. Others, again, prescribe, in cases of bleeding at the nostrils, an injection of the ashes of young water-frogs, in the tadpole state, calcined in a new carthen vessel.

On the other hand, again, in cases where it is required to let blood, the kind of leech is used which is known among us by the name of "sanguisuga." Indeed, the action of these leeches is looked upon as pretty much the same as that of the cupping-glasses used in medicine, their effect being to relieve the body of superfluous blood, and to open the pores of the skin. Still, however, there is this inconvenience attending them — when they have been once applied, they create a necessity for laving recourse to the same treatment at about the same period in every succeeding year. Many physicians have been of opinion also, that leeches may be successfully applied in cases of gout. When gorged, they fall off in consequence of los<*>ag their hold through the weight of the blood, but if not, they must be sprinkled with salt for the purpose.

Leeches ar apt, however, to leave their heads buried in the flesh; the consequence of which is an incurable wound, which has caused

death in many cases, that of Messalinus, for example, a patrician of consular rank, after an application of leeches to his knee. When this is the case, that which was intended as a remedy is turned into an active poison; a result which is to be apprehended in using the red leeches more particularly. Hence it is that when these last are employed, it is the practice to snip them with a pair of scissors while sucking; the consequence of which is, that the blood oozes forth, through a siphon, as it were, and the head, gradually contracting as the animal dies, is not left behind in the wound. There is a natural antipathy existing between leeches and bugs, and hence it is that the latter are killed by the aid of a fumigation made with leeches. Ashes of beaver-skin burnt with tar, kneaded up with leek-juice, arrest bleeding at the nostrils.

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CHAP. 43.

METHODS OF EXTRACTING FOREIGN BODIES FROM THE FLESH.

To extract pointed weapons which have pierced the flesh, ashes of calcined shells of the sæpia are used, as also of the purple, the meat of salted fish, bruised river-crabs, or flesh of the silurus (a river-fish that is found in other streams as well as the Nilus), applied either fresh or salted. The ashes also of this fish, as well as the fat, have the property of extracting pointed bodies, and the back-bone, in a calcined state, is used as a substitute for spodium.

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CHAP. 44.

REMEDIES FOR ULCERS, CARCINOMATA, AND CARBUNCLES.

Ulcers of a serpiginous nature, as also the fleshy excrescences which make their appearance in them, are kept in check by applying ashes of calcined heads of mænæ, or else ashes of the silurus. Carcinomata, too, are treated with heads of salted perch, their efficacy being considerably increased by using some salt along with the ashes, and kneading them up with heads of cunila and olive-oil. Ashes of sea-crabs, calcined with lead, arrest the progress of carcinomatous sores: a purpose for which ashes of river-crabs, in combination with honey and fine lint, are equally useful; though there are some authorities which prefer mixing alum and barley with the ashes. Phagedænic ulcers are cured by an application of dried silurus pounded with sandarach; malignant cancers, corrosive ulcers, and putrid sores, by the agency of stale cybium.

Maggots that breed in sores are removed by applying frogs' gall; and fistulas are opened and dried by introducing a tent made of salt fish, with a dossil of lint. Salt fish, kneaded up and applied in the form of a plaster, will remove all proud flesh in the course of a day, and will arrest the further progress of putrid and serpiginous ulcers. Alex, applied in lint, acts detergently, also, upon ulcers; the same, too, with the ashes of calcined shells of sea-urchins. Salted slices of the coracinus disperse carbuncles, an effect equally produced by the ashes of salted surmullets. Some persons, however, use the head only of the surmullet, in combination with honey or with the flesh of the coracinus. Ashes of the murex, applied with oil, disperse tumours, and the gall of the sea-scorpion makes scars disappear.

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CHAP. 45.

REMEDIES FOR WARTS, AND FOR MALFORMED NAILS. THE GLANIS: ONE REMEDY.

To remove warts, the liver of the glanis is applied to the part; ashes also of heads of mænæ bruised with garlic — substances which should be used raw where it is thymewarts that require to be removed — the gall of the red seascorpion, smarides pounded and applied, or alex thoroughly boiled. Ashes of calcined heads of mænæ are used to rectify malformed nails.

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CHAP. 46.

REMEDIES FOR FEMALE DISEASES. THE GLAUCISCUS: ONE REMEDY.

The milk is increased in females by eating the glauciscus in its own liquor, or else smarides with a ptisan, or boiled with fennel. Ashes of calcined shells of the murex or purple, applied with honey, are an effectual cure for affections of the mamillæ; river-crabs, too, and sea-crabs, applied topically, are equally good. The meat of the murex, applied to the mamillæ, removes hairs growing upon those parts. The squatina, applied topically, prevents the mamillæ from becoming too distended. Lint greased with dolphin's fat, and then ignited, produces a smoke which acts as an excitant upon females suffering from hysterical suffocations; the same, too, with strombi, left to putrefy in vinegar. Heads of perch or of mænæ, calcined and mixed with salt, oil, and cunila, are curative of diseases of the uterus: used as a fumigation, they bring away the afterbirth. Fat, too, of the sea-calf, melted by the agency of fire, is introduced into the nostrils of females when swooning from hysterical suffocations; and for a similar purpose, the rennet of that animal is applied as a pessary, in wool.

The pulmo marinus, attached to the body as an amulet, is an excellent promoter of menstruation; an effect which is equally produced by pounding live sea-urchins, and taking them in sweet wine. River-crabs, bruised in wine, and taken internally, arrest menstruation. The silurus, that of Africa more particularly, used as a fumigation, facilitates parturition, it is said. Crabs, taken in water, arrest menstruation; but used with hyssop, they act as an emmenagogue, we are told. In cases, too, where the infant is in danger of suffocation at the moment of delivery, a similar drink, administered to the mother, is highly efficacious. Crabs, too, either fresh or dried, are taken in drink, for the purpose of preventing abortion. Hippocrates prescribes them as a promoter of menstruation, and as an expellent of the dead fœtus, beaten up with five roots of lapathum and rue and some soot, and administered in honied wine. Crabs, boiled and taken in their liquor, with lapathum and parsley, promote the menstrual discharge, and increase the milk. In cases of

fever, attended with pains in the head and throbbing of the eyes, crabs are said to be highly beneficial to females, given in astringent wine.

Castoreum, taken in honied wine, is useful as a promoter of menstruation: in cases of hysterical suffocation, it is given to the patient to smell at with pitch and vinegar, or else it is made up into tablets and used as a pessary. For the purpose also of bringing away the afterbirth it is found a useful plan to employ castoreum with panax, in four cyathi of wine; and in cases where the patient is suffering from cold, in doses of three oboli. If, however, a female in a state of pregnancy should happen to step over castoreum, or over the beaver itself, abortion, it is said, will be the sure result: so, too, if castoreum is only held over a pregnant woman's head, there will be great danger of miscarriage.

There is a very marvellous fact, too, that I find stated in reference to the torpedo: if it is caught at the time that the moon is in Libra, and kept in the open air for three days, it will always facilitate parturition, as often as it is introduced into the apartment of a woman in labour. The sting, too, of the pastinaca, attached to the navel, is generally thought to have the property of facilitating delivery: it must be taken, however, from the fish while alive; which done, the fish must be returned to the sea. I find it stated by some authorities that there is a substance called "ostraceum," which is also spoken of as "onyx" by others; that, used as a fumigation, it is wonderfully beneficial for suffocations of the uterus; that in smell it resembles castoreum, and is still more efficacious, if burnt with this last substance; and that in a calcined state it has the property of healing inveterate ulcers, and cancerous sores of a malignant nature. As to carbuncles and carcinomatous sores upon the secret parts of females, there is nothing more efficacious, it is said, than a female crab beaten up, just after full moon, with flower of salt and applied with water.

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CHAP. 47.

METHODS OF REMOVING SUPERFLUOUS HAIR. DEPILATORIES.

Depilatories are prepared from the blood, gall, and liver of the tunny, either fresh or preserved; as also from pounded liver of the same fish, preserved with cedar resin in a leaden box; a re- cipe which we find given by the midwife Salpe for disguising the age of boys on sale for slaves. A similar property belongs to the pulmo marinus, to the blood and gall of the sea-hare, and to the sea-hare itself, stifled in oil. The same, too, with ashes of burnt crabs or sea scolopendræ, mixed with oil; sea-nettles, bruised in squill vinegar; and brains of the torpedo applied with alum on the sixteenth day of the moon. The thick matter emitted by the small frogs, which we have described when treating of eye-diseases, is a most efficient depilatory, if applied fresh: the same, too, with the frog itself, dried and pounded, and then boiled down to one-third in three heminæ of water, or else boiled in a copper vessel with oil in a like proportion. Others, again, prepare a depilatory from fifteen frogs, in manner already stated under the head of remedies for the eyes. Leeches, also, grilled in an earthen vessel, and applied with vinegar, have the same property as a depilatory; the very odour, too, which attaches to the persons who thus burn them is singularly efficacious for killing bugs. Cases are to be found, too, where persons have used castoreum with honey, for many days together, as a depilatory. In the case, however, of every depilatory, the hairs should always be removed before it is applied.

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CHAP. 48.

REMEDIES FOR THE DISEASES OF INFANTS.

Dentition in infants is promoted, and the gums greatly relieved, by rubbing them with ashes of a dolphin's teeth, mixed with honey, or else by touching the gums with the tooth itself of that fish. One of these teeth, worn as an amulet, is a preventive of sudden frights; the tooth of the dog-fish being also possessed of a similar property. As to ulcers which make their appearance in the ears, or in any other parts of the body, they may be cured by applying the liquor of river-crabs, with barley-meal. These crabs, too, bruised in oil and employed as a friction, are very useful for other kinds of maladies. A sponge moistened with cold water from time to time, or a frog applied, the back part to the head, is a most efficacious cure for siriasis in infants. When the frog is removed, it will be found quite dry, they say.

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CHAP. 49.

METHODS OF PREVENTING INTOXICATION. THE FISH CALLED RUBELLIO: ONE REMEDY. THE EEL: ONE REMEDY. THE GRAPE-FISH: ONE REMEDY.

A surmullet stifled in wine; the fish called “rubellio;” or a couple of eels similarly treated; or a grapefish, left to putrefy in wine, all of them, produce an aversion to wine in those who drink thereof.

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CHAP. 50.

ANTAPHRODISIACS AND APHRODISIACS. THE HIPPOPOTAMUS: ONE REMEDY. THE CROCODILE: ONE REMEDY.

In the number of antaphrodisiacs, we have the echeneïs; the skin from the left side of the forehead of the hippopotamus, attached to the body in lamb-skin; and the gall of a live torpedo, applied to the generative organs.

The following substances act as aphrodisiacs — the flesh of river-snails, preserved in salt and given to drink in wine; the erythinus taken as food; the liver of the frog called “diopetes” or “calamites” attached to the body in a small piece of crane’s skin; the eye-tooth of a crocodile, attached to the arm; the hippocampus; and the sinews of a bramble-frog, worn as an amulet upon the right arm. A bramble-frog, attached to the body in a piece of fresh sheep-skin, effectually puts an end to love.

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CHAP. 51.

REMEDIES FOR THE DISEASES OF ANIMALS.

A decoction of frogs in water, reduced to the form of a lini- ment, is curative of itch-scab in horses; indeed, it is said, that a horse, when once treated in this manner, will never again be attacked with the disease. Salpe says that if a live frog is given to dogs in their mess, they will lose the power of barking.

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CHAP. 52.

OTHER AQUATIC PRODUCTIONS. ADARCA OR CALAMOCHNOS: THREE REMEDIES. REEDS: EIGHT REMEDIES. THE INK OF THE SÆPIA.

Among the aquatic productions ought also to be mentioned calamochnos, in Latin known as “adarea,” a substance which collects about small reeds, from a mixture of the foam of fresh and of sea water. It possesses certain caustic properties, and hence it is that it is so useful as an ingredient in “acopa” and as a remedy for cold shiverings; it is used too, for removing freckles upon the face of females. And now we are speaking of adarca, the reed ought equally to be mentioned. The root of that known as the “phragmites,” pounded fresh, is curative of sprains, and, applied topically with vinegar, removes pains in the spine. The calcined bark, too, of the Cyprian reed, known as the “donax,” is curative of alopecy and inveterate ulcers; and its leaves are good for the extraction of foreign bodies adhering to the flesh, and for the cure of erysipelas: should, however, the flower of the panicle happen to enter the ears, deafness is the consequence.

The ink of the sæpia is possessed of such remarkable potency, that if it is put into a lamp, Anaxilaüs tells us, the light will become entirely changed, and all present will look as black as Æthiopians. The bramble-frog, boiled in water, and given to swine with their drink, is curative of the maladies with which they are affected; an effect equally produced by the ashes of any other kind of frog. If wood is rubbed with the pulmo marinus, it will have all the appearance of being on fire; so much so, indeed, that a walking-stick, thus treated, will light the way like a torch.

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CHAP. 53. (11.)

THE NAMES OF ALL THE ANIMALS THAT EXIST IN THE SEA, ONE HUNDRED AND SEVENTY-SIX IN NUMBER.

Having now completed our exposition of the properties which belong to the aquatic productions, it would appear by no means foreign to my purpose to give a list of the various animated beings which inhabit the seas; so many as these are in number, of such vast extent, and not only making their way into the interior of the land to a distance of so many miles, but also surrounding the exterior of it to an extent almost equal to that of the world itself. These animals, it is generally considered, embrace one hundred and seventy-six different species, and it will be my object to set them forth, each by its distinct name, a thing that cannot possibly be done in reference to the terrestrial animals and the birds.

For, in fact, we are by no means acquainted with all the wild beasts or all the birds that are to be found in India, Æthiopia, Scythia, or the desert regions of the earth; and even of man himself there are numerous varieties, which as yet we have been unable to make ourselves acquainted with. In addition, too, to the various countries above mentioned, we have Taprobane and other isles of the Ocean, about which so many fabulous stories are related. Surely then, every one must allow that it is quite impossible to comprise every species of animal in one general view for the information of mankind. And yet, by Hercules! in the sea and in the Ocean, vast as it is, there exists nothing that is unknown to us, and, a truly marvellous fact, it is with those things which Nature has concealed in the deep that we are the best acquainted!

To begin then with the monsters that are found in this ele- ment. We here find sea-trees, physeters, balænæ, pistrices, tritons, nereids, elephants, the creatures known as seamen, sea-wheels, oreæ, sea-rams, musculi, other fish too with the form of rams, dolphins, sea-calves, so celebrated by Homer, tortoises to minister to our luxury, and beavers, so extensively employed in medicine, to which class belongs the otter, an animal which we nowhere find frequenting the

sea, it being only of the marine animals that we are speaking. There are dog-fish, also, drinones, cornutæ, swordfish, saw-fish, hippopotami and crocodiles, common to the sea, the land, and the rivers; tunnies also, thynnides, siluri, coracini, and perch, common to the sea only and to rivers.

To the sea only, belong also the acipenser, the dorade, the asellus, the acharne, the aphye, the alopex, the eel, the araneus, the boca, the batia, the bacchus, the batrachus, the belonæ, known to us as "aculeati," the balanus, the corvus, the citharus, the least esteemed of all the turbots, the chalcis, the cobio, the callarias, which would belong to the genus of the aselli were it not smaller; the colias, otherwise known as the fish of Parium or of Sexita, this last from a place of that name in Bætica its native region, the smallest, too, of the lacerti; the colias of the Mæotis, the next smallest of the lacerti; the cybium, (the name given, when cut into pieces, to the pelamis which returns at the end of forty days from the Euxine to the Palus Mæotis); the cordyla — which is also a small pelamis, so called at the time when it enters the Euxine from the Palus Mæotis — the cantharus, the callionymus or uranoscopus, the cinædus, the only fish that is of a yellow colour; the cnide, known to us as the sea-nettle; the different kinds of crabs, the striated chemæ, the smooth chemæ, the chemæ belonging to the genus of pelorides, all differing in the variety of their colours and in the roundness of the shells; the chemæ glycymarides, still larger than the pelorides; the coluthia or coryphia; the various kinds of shellfish, among which we find the pearl oysters, the cochleæ, (belonging to which class are the pentadactyli,) the helices, by some known as actinophori, the spokes on whose shells are used for musical purposes; and, in addition to these, the round cochleæ, the shells of which are used in measuring oil, as also the seacucumber, the cynopos, the cammarus, and the cynosdexia.

Next to these we have the sea-dragon, a fish which, according to some, is altogether distinct from the dracunculus, and resembles the gerricula in appearance, it having on the gills a stickle which points towards the tail and inflicts a wound like that of the scorpion when the fish is handled — the erythinus, the echeneïs, the sea-urchin, the sea-elephant, a black kind of crayfish, with four forked legs, in addition to two arms with double joints, and furnished, each of them,

with a pair of claws, indented at the edge; the faber, also, or zæus, the glauciscus, the glanis, the gonger, the gerres, the galeos, the garos, the hippos, the hippuros, the hirundo, the halipleumon, the hippocampus, the hepar, the ictinus and the iulis. There are various kinds also of lacerti, the springing loligo, the crayfish, the lantern-fish, the lepas, the larinus, the sea-hare, and the sea-lion, with arms like those of the crab, and in the other parts of the body like the cray-fish.

We have the surmullet also, the sea black-bird, highly esteemed among the rock-fish; the mullet, the melanurus, the mæna, the mæotis, the muræna, the mys, the mitulus, the myiscus, the murex, the oculata, the ophidion, the oyster, the otia, the orcynus — the largest of all the pelamides and one that never returns to the Palus Mæotis, like the tritomus in appearance, and best when old — the orbis, the orthagoriscus, the phager, the phycis a rock-fish, the pelamis, (the largest kind of which is called "apolectum," and is tougher than the tritomus) the sea-pig, the phthir, the sea-sparrow, the pastinaca, the several varieties of the polyp, the scallop, which is larger and more swarthy in summer than at other times, and the most esteemed of which are those of Mitylene, Tyndaris, Salonæ, Altinum, the island of Chios, and Alexandria in Egypt; the small scallop, the purple, the pegris, the pinna, the pinnotheres, the rhine or squalus of the Latins, the turbot, the scarus a fish which holds the first rank at the present day; the sole, the sargus, the squilla, the sarda — such being the name of an elongated pelamis which comes from the Ocean; the scomber, the salpa, the sorus, the scorpæna, the sea-scorpion, the solas, the sciæna, the sciadeus, the scolopendra, the smyrus, the sæpia, the strombus, the solen, otherwise known as the aulos, donax, onyx or dactylus; the spondylus, the smaris, the starfish, and the sponges. There is the sea-thrush also, famous among the rock-fish, the thynnis, the thranis, by some writers known as the xiphias; the thrissa, the torpedo, the tethea, the tritomus, a large kind of pelamis, which admits of being cut into three cybia; the shells of Venus, the grapefish, and the xiphias.

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CHAP. 54.

ADDITIONAL NAMES OF FISHES FOUND IN THE POEM OF OVID.

To the above enumeration we will add some names given in the poem of Ovid, which are not to be found in any other writer: species, however, which are probably peculiar to the Euxine, on the shores of which he commenced that work towards the close of his life. The fishes thus mentioned by him are the sea-ox, the cercyrus, that dwells among the rocks, the orphus, the red erythinus, the iulus, the tinted mormyr, the chrysophrys a fish of a golden colour, the parus, the tragus, the melanurus remarkable for the beauty of its tail, and the epodes, a flat fish.

In addition to these remarkable kinds of fishes, the same poet tells us that the channes conceives of itself, that the glaucus never makes its appearance in summer, that the pompilus always accompanies vessels in their course, and that the chromis makes its nest in the water. The helops, he says, is unknown to our waters; from which it would appear that those are in error who look upon it as identical with our acipenser. Many persons have given the preference to the helops before all other fish, in point of flavour.

There are several fishes also, which have been mentioned by no author; such, for instance, as the one called "sudis" by the Latins, and "sphyrene" by the Greeks, names which indicate the peculiar form of its muzzle. It is one of the very largest kinds, but rarely found, and by no means of inferior flavour. "Perna," too, is the name given to a kind of shellfish, found in vast numbers in the vicinity of the islands of the Euxine. These fish are found firmly planted in the sand, resembling in appearance the long shank of a hog. Opening wide their shells, where there is sufficient space, they lie in wait for their prey; this opening being not less than a foot in breadth, and the edges of it garnished around with teeth closely set, much resembling the teeth of a comb in form. Within the shell, the meat consists of a vast lump of flesh. I once saw, too, a fish called the "hyæna," which had been caught off the island of Ænaria.

In addition to these animals, there are certain excretions thrown

up by the sea, which do not merit any further notice, and indeed ought to be reckoned among the sea-weeds, rather than looked upon as animated beings.

SUMMARY. — Remedies, narratives, and observations, nine hundred and ninety.

ROMAN AUTHORS QUOTED. — Licinius Macer, Trebius Niger, Sextius Niger who wrote in Greek, the Poet Ovid, Cassius Hemina, Mæcenas, Iacchus, Sornatius.

FOREIGN AUTHORS QUOTED. — Juba, Andreas, Salpe, Apion, Pelops, Apelles, Thrasyllus, Nicander.

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BOOK XXXIII. THE NATURAL HISTORY OF METALS.

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CHAP. 1. (1.)

METALS.

WE are now about to speak of metals, of actual wealth, the standard of comparative value, objects for which we diligently search, within the earth, in numerous ways. In one place, for instance, we undermine it for the purpose of obtaining riches, to supply the exigencies of life, searching for either gold or silver, electrum or copper. In another place, to satisfy the requirements of luxury, our researches extend to gems and pigments, with which to adorn our fingers and the walls of our houses: while in a third place, we gratify our rash propensities by a search for iron, which, amid wars and carnage, is deemed more acceptable even than gold. We trace out all the veins of the earth, and yet, living upon it, undermined as it is beneath our feet, are astonished that it should occasionally cleave asunder or tremble: as though, forsooth, these signs could be any other than expressions of the indignation felt by our sacred parent! We penetrate into her entrails, and seek for treasures in the abodes even of the Manes, as though each spot we tread upon were not sufficiently bounteous and fertile for us!

And yet, amid all this, we are far from making remedies the object of our researches: and how few in thus delving into the earth have in view the promotion of medicinal knowledge! For it is upon her surface, in fact, that she has presented us with these substances, equally with the cereals, bounteous and ever ready, as she is, in supplying us with all things for our benefit! It is what is concealed from our view, what is sunk far beneath her surface, objects, in fact, of no rapid formation, that urge us to our ruin, that send us to the very depths of hell. As the mind ranges in vague speculation, let us only consider, proceeding through all ages, as these operations are, when will be the end of thus exhausting the earth, and to what point will avarice finally penetrate! How innocent, how happy, how truly delightful even would life be, if we were to desire nothing but what is to be found upon the face of the earth; in a word, nothing but what is provided ready to our hands!

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CHAP. 2.

GOLD.

Gold is dug out of the earth, and, in close proximity to it, chrysocolla, a substance which, that it may appear all the more precious, still retains the name which it has borrowed from gold. It was not enough for us to have discovered one bane for the human race, but we must set a value too upon the very humours of gold. While avarice, too, was on the search for silver, it congratulated itself upon the discovery of minium, and devised a use to be made of this red earth.

Alas for the prodigal inventions of man! in how many ways have we augmented the value of things! In addition to the standard value of these metals, the art of painting lends its aid, and we have rendered gold and silver still more costly by the art of chasing them. Man has learned how to challenge both Nature and art to become the incitements to vice! His very cups he has delighted to engrave with libidinous subjects, and he takes pleasure in drinking from vessels of obscene form! But in lapse of time, the metals passed out of fashion, and men began to make no account of them; gold and silver, in fact, became too common. From this same earth we have extracted vessels of murrhine and vases of crystal, objects the very fragility of which is considered to enhance their value. In fact, it has come to be looked upon as a proof of opulence, and as quite the glory of luxury, to possess that which may be irremediably destroyed in an instant. Nor was even this enough; — we now drink from out of a mass of gems, and we set our goblets with smaragdi; we take delight in possessing the wealth of India, as the promoter of intoxication, and gold is now nothing more than a mere accessory.

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CHAP. 3.

WHAT WAS THE FIRST RECOMMENDATION OF GOLD.

Would that gold could have been banished for ever from the earth, accursed by universal report, as some of the most celebrated writers have expressed themselves, reviled by the reproaches of the best of men, and looked upon as discovered only for the ruin of mankind. How much more happy the age when things themselves were bartered for one another; as was the case in the times of the Trojan war, if we are to believe what Homer says. For, in this way, in my opinion, was commerce then carried on for the supply of the necessaries of life. Some, he tells us, would make their purchases by bartering ox-hides, and others by bartering iron or the spoil which they had taken from the enemy: and yet he himself, already an admirer of gold, was so far aware of the relative value of things, that Glaucus, he informs us, exchanged his arms of gold, valued at one hundred oxen, for those of Diomedes, which were worth but nine. Proceeding upon the same system of barter, many of the fines imposed by ancient laws, at Rome even, were levied in cattle, [and not in money].

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CHAP. 4.

THE ORIGIN OF GOLD RINGS.

The worst crime against mankind was committed by him who was the first to put a ring upon his fingers: and yet we are not informed, by tradition, who it was that first did so. For as to all the stories told about Prometheus, I look upon them as utterly fabulous, although I am aware that the ancients used to represent him with a ring of iron: it was their intention, however, to signify a chain thereby, and not an ornament. As to the ring of Midas, which, upon the collet being turned inwards, conferred invisibility upon the wearer, who is there that must not admit, perforce, that this story is even still more fabulous? It was the hand, and a sinister hand, too, in every sense, that first brought gold into such high repute: not a Roman hand, however, for upon that it was the practice to wear a ring of iron only, and solely as an indication of warlike prowess.

As to the usage followed by the Roman kings, it is not easy to pronounce an opinion: the statue of Romulus in the Capitol wears no ring, nor does any other statue — not that of L. Brutus even — with the sole exception of those of Numa and Servius Tullius. I am surprised at this absence of the ring, in the case of the Tarquinii more particularly, seeing that they were originally from Greece, a country from which the use of gold rings was first introduced; though even at the present day the people of Lacedæmon are in the habit of wearing rings made of iron. Tarquinius Priscus, however, it is well known, was the first who presented his son with the golden bulla, on the occasion of his slaying an enemy before he had laid aside the prætexta; from which period the custom of wearing the bulla has been continued, a distinction confined to the children of those who have served in the cavalry, those of other persons simply wearing a leather thong. Such being the case, I am the more surprised that the statue of this Tarquinius should be without a ring.

And yet, with reference to the very name of the ring, I find that there has been considerable uncertainty. That given to it originally by the Greeks is derived from the finger; while our ancestors styled it

"ungulus;" and in later times both Greeks and Latins have given it the name of "symbolum." For a great length of time, it is quite clear, not even the Roman senators wore rings of gold: for rings were given, and at the public expense, to those only who were about to proceed on an embassy to foreign nations, the reason being, I suppose, because men of highest rank among foreign nations were perceived to be thus distinguished. Nor was it the practice for any person to wear these rings, except those who for this reason had received them at the public expense; and in most instances, it was without this distinction that the Roman generals celebrated their public triumphs. For whereas an Etruscan crown of gold was supported from behind over the head of the victor, he himself, equally with the slave probably, who was so supporting the crown, had nothing but a ring of iron upon his finger. It was in this manner that C. Marius celebrated his triumph over Jugurtha; and he never assumed the golden ring, it is said, until the period of his third consulship. Those, too, who had received golden rings on the occasion of an embassy, only wore them when in public, resuming the ring of iron when in their houses. It is in pursuance of this custom that even at the present day, an iron ring is sent by way of present to a woman when betrothed, and that, too, without any stone in it.

For my own part, I do not find that any rings were used in the days of the Trojan War; at all events, Homer nowhere makes mention of them; for although he speaks of the practice of sending tablets by way of letter, of clothes and gold and silver plate being kept laid up in chests, still he gives us to understand that they were kept secure by the aid of a knot tied fast, and not under a seal impressed by a ring. He does not inform us too, that when the chiefs drew lots to ascertain which one of them should reply to the challenge of the enemy, they made any use of rings for the purpose; and when he enumerates the articles that were manufactured at the forge of the gods, he speaks of this as being the origin of fibulæ and other articles of female ornament, such as earrings for example, but does not make any mention of rings.

Whoever it was that first introduced the use of rings, he did so not without hesitation; for he placed this ornament on the left hand, the hand which is generally concealed, whereas, if he had been sure of

its being an honourable distinction, it would have been made more conspicuous upon the right. And if any one should raise the objection that this would have acted as an impediment to the right hand, I can only say that the usage in more recent times fortifies my opinion, and that the inconvenience of wearing rings on the left hand would have been still greater, seeing that it is with the left hand that the shield is held. We find mention made too, in Homer, of men wearing gold plaited with the hair; and hence it is that I am at a loss to say whether the practice first originated with females.

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CHAP. 5.

THE QUANTITY OF GOLD POSSESSED BY THE ANCIENTS.

At Rome, for a long period of time, the quantity of gold was but very small. At all events, after the capture of the City by the Gauls, when peace was about to be purchased, not more than one thousand pounds' weight of gold could be collected. I am by no means unaware of the fact that in the third consulship of Pompeius there was lost from the throne of Jupiter Capitolinus two thousand pounds' weight of gold, originally placed there by Camillus; a circumstance which has led most persons to suppose, that two thousand pounds' weight was the quantity then collected. But in reality, this excess of one thousand pounds was contributed from the spoil taken from the Gauls, amplified as it was by the gold of which they had stripped the temples, in that part of the City which they had captured.

The story of Torquatus, too, is a proof that the Gauls were in the habit of wearing ornaments of gold when engaged in combat; from which it would appear that the sum taken from the Gauls themselves, and the amount of which they had pillaged the temples, were only equal to the amount of gold collected for the ransom, and no more; and this is what was really meant by the response given by the augurs, that Jupiter Capitolinus had rendered again the ransom twofold. As we were just now speaking on the subject of rings, it may be as well to add, by way of passing remark, that upon the officer in charge of the Temple of Jupiter Capitolinus being arrested, he broke the stone of his ring between his teeth, and expired upon the spot, thus putting an end to all possibility of discovering the perpetrator of the theft.

It appears, therefore, that in the year of the City 364, when Rome was captured by the Gauls, there was but two thousand pounds' weight of gold, at the very most; and this, too, at a period when, according to the returns of the census, there were already one hundred and fifty-two thousand five hundred and seventy-three free citizens in it. In this same city, too, three hundred and seven years later, the gold which C. Marius the younger conveyed to Præneste

from the Temple of the Capitol when in flames, and all the other shrines, amounted to thirteen thousand pounds' weight, such being the sum that figured in the inscriptions at the triumph of Sylla; on which occasion it was displayed in the procession, as well as six thousand pounds' weight of silver. The same Sylla had, the day before, displayed in his triumph fifteen thousand pounds' weight of gold, and one hundred and fifteen thousand pounds' weight of silver, the fruit of all his other victories.

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CHAP. 6.

THE RIGHT OF WEARING GOLD RINGS.

It does not appear that rings were in common use before the time of Cneius Flavius, the son of Annius. This Flavius was the first to publish a table of the days for pleading, which till then the populace had to ascertain each day from a few great personages. The son of a freedman only, and secretary to Appius Cæcus, (at whose request, by dint of natural shrewdness and continual observation, he had selected these days and made them public), he obtained such high favour with the people, that he was created curule ædile; in conjunction with Quintus Anicius Prænestinus, who a few years before had been an enemy to Rome, and to the exclusion of C. Pœtilius and Domitius, whose fathers respectively were of consular rank. The additional honour was also conferred on Flavius, of making him tribune of the people at the same time, a thing which occasioned such a degree of indignation, that, as we find stated in the more ancient Annals, "the rings were laid aside!"

Most persons, however, are mistaken in the supposition that on this occasion the members of the equestrian order did the same: for it is in consequence of these additional words, "the phaleræ, too, were laid aside as well," that the name of the equestrian order was added. These rings, too, as the Annals tell us, were laid aside by the nobility, and not by the whole body of the senate. This event took place in the consulship of P. Sempronius and P. Sulpicius. Flavius made a vow that he would consecrate a temple to Concord, if he should succeed in reconciling the privileged orders with the plebeians: and as no part of the public funds could be voted for the purpose, he accordingly built a small shrine of brass in the Græ- costasis, then situate above the Comitium, with the fines which had been exacted for usury. Here, too, he had an inscription engraved upon a tablet of brass, to the effect that the shrine was dedicated two hundred and three years after the consecration of the Capitol. Such were the events that happened four hundred and forty-nine years after the foundation of the City, this being the earliest period at which we find any traces of the

common use of rings.

A second occasion, however, that of the Second Punic War, shows that rings must have been at that period in very general use; for if such had not been the case, it would have been impossible for Hannibal to send the three modii of rings, which we find so much spoken of, to Carthage. It was through a dispute, too, at an auction about the possession of a ring, that the feud first commenced between Cæpio and Drusus, a dispute which gave rise to the Social War, and the public disasters which thence ensued. Not even in those days, however, did all the senators possess gold rings, seeing that, in the memory of our grandsires, many personages who had even filled the prætorship, wore rings of iron to the end of their lives; Calpurnius, for example, as Fenestella tells us, and Manilius, who had been legatus to Caius Marius in the Jugurthine War. Many historians also state the same of L. Fufidius, he to whom Scaurus dedicated the history of his life.

In the family of the Quintii, it is the usage for no one, not the females even, ever to wear a ring; and even at the present day, the greater part of the nations known to us, peoples who are living under the Roman sway, are not in the habit of wearing rings. Neither in the countries of the East, nor in Egypt, is any use made of seals, the people being content with simple writing only.

In this, as in every other case, luxury has introduced various fashions, either by adding to rings gems of exquisite brilliancy, and so loading the fingers with whole revenues, as we shall have further occasion to mention in our Book on Gems; or else by engraving them with various devices: so that it is in one instance the workmanship, in another the material, that constitutes the real value of the ring. Then again, in the case of other gems, luxury has deemed it no less than sacrilege to make a mark even upon them, and has caused them to be set whole, that no one may suppose that the ring was ever intended to be employed as a signet. In other instances, luxury has willed that certain stones, on the side even that is concealed by the finger, should not be closed in with gold, thus making gold of less account than thousands of tiny pebbles. On the other hand again, many persons will admit of no gems being set in their rings, but impress their seal with the gold itself, an invention which dates from the reign of

Claudius Cæsar. At the present day, too, the very slaves even, incase their iron rings with gold (while other articles belonging to them, they decorate with pure gold), a licence which first originated in the Isle of Samothrace, as the name given to the invention clearly shows.

It was the custom at first to wear rings on a single finger only, the one, namely, that is next to the little finger; and this we see the case in the statues of Numa and Servius Tullius In later times, it became the practice to put rings on the finger next to the thumb, even in the case of the statues of the gods; and more recently, again, it has been the fashion to wear them upon the little finger as well. Among the peoples of Gallia and Britannia, the middle finger, it is said, is used for this purpose. At the present day, however, among us, this is the only finger that is excepted, all the others being loaded with rings, smaller rings even being separately adapted for the smaller joints of the fingers. Some there are who heap several rings upon the little finger alone; while others, again, wear but one ring upon this finger, the ring that sets a seal upon the signetring itself, this last being kept carefully shut up as an object of rarity, too precious to be worn in common use, and only to be taken from the cabinet as from a sanctuary. And thus is the wearing of a single ring upon the little finger no more than an ostentatious advertisement that the owner has property of a more precious nature under seal at home!

Some, too, make a parade of the weight of their rings, while to others it is quite a labour to wear more than one at a time: some, in their solicitude for the safety of their gems, make the hoop of gold tinsel, and fill it with a lighter material than gold, thinking thereby to diminish the risks of a fall. Others, again, are in the habit of inclosing poisons beneath the stones of their rings, and so wear them as instruments of death; Demosthenes, for instance, that greatest of the orators of Greece. And then, besides, how many of the crimes that are stimulated by cupidity, are committed through the instrumentality of rings! How happy the times, how truly innocent, in which no seal was ever put to anything! At the present day, on the contrary, our very food even and our drink have to be preserved from theft through the agency of the ring: a result owing to those legions of slaves, those throngs of foreigners which are introduced into our houses, multitudes so numerous that we require the services of a nomenclator

even, to tell us the names of our own servants. Very different was it in the times of our forefathers, when each person possessed a single servant only, one of his master's own lineage, called Marcipor or Lucipor, from his master's name, as the case might be, and taking all his meals with him in common; when, too, there was no occasion for taking precautions at home by keeping a watch upon the domestics. But at the present day, we not only procure dainties which are sure to be pilfered, but hands to pilfer them as well; and so far is it from being sufficient to have the very keys sealed, that the signet-ring is often taken from off the owner's finger while he is overpowered with sleep or lying on his death-bed.

Indeed the most important transactions of life are now made to depend upon this instrument, though at what period this first began to be the case, I am at a loss to say. It would appear, however, so far as foreign nations are concerned, that we may admit the importance attached to it, from the days of Polycrates, the tyrant of Samos, whose favourite ring, after being thrown in the sea, was recovered from a fish that was caught; and this Polycrates, we know, was put to death about the year of our City, 230. The use of the ring must, of necessity, have become greatly extended with the increase of usury; one proof of which is, the usage still prevalent among the lower classes, of whipping off the ring the moment a simple contract is made; a practice which takes its date, no doubt, from a period when there was no more expeditious method of giving an earnest on closing a bargain. We may therefore very safely conclude, that though money was first introduced among us, the use of rings was introduced very shortly after. Of money, I shall shortly have occasion to speak further.

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CHAP. 7.

THE DECURIES OF THE JUDGES.

Rings, as soon as they began to be commonly worn, distinguished the second order from the plebeians, in the same manner as the use of the tunic distinguished the senate from those who only were the ring. Still, however, this last distinction was introduced at a later period only, and we find it stated by writers that the public heralds even were formerly in the habit of wearing the tunic with the purple laticlave; the father of Lucius Ælius Stilo, for instance, from whom his son received the cognomen of "Præconinus," in consequence of his father's occupation as a herald. But the use of rings, no doubt, was the distinguishing mark of a third and intermediate order, between the plebeians and the senators; and the title of "eques," originally derived from the possession of a war-horse, is given at the present day as an indication of a certain amount of income. This, however, is of comparatively recent introduction; for when the late Emperor Augustus made his regulations for the decuries, the greater part of the members thereof were persons who wore iron rings, and these bore the name, not of "equites," but of "judices," the former name being reserved solely for the members of the squadrons furnished with war-horses at the public charge.

Of these judices, too, there were at first but four decuries only, and in each of these decuries there was hardly one thousand men to be found, the provinces not having been hitherto admitted to the office; an observance which is still in force at the present day, no one newly admitted to the rights of citizenship being allowed to perform the duties of judex as a member of the decuries.

(2.) These decuries, too, were themselves distinguished by several denominations—" tribunes of the treasury," "selecti," and "judices:" in addition to whom, there were the persons styled the "nine hundred," chosen from all the decuries for the purpose of keeping the voting-boxes at the comitia. From the ambitious adoption, however, of some one of these names, great divisions ensued in this order, one person styling himself a member of the nine hundred, another one of

the selecti, and a third a tribune of the treasury.

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CHAP. 8.

PARTICULARS CONNECTED WITH THE EQUESTRIAN ORDER.

At length, however, in the ninth year of the reign of the Emperor Tiberius, the equestrian order was united in a single body; and a decree was passed, establishing to whom belonged the right of wearing the ring, in the consulship of C. Asinius Pollio and C. Antistius Vetus, the year from the foundation of the City, 775. It is a matter for surprise, how almost futile, we may say, was the cause which led to this change. C. Sulpicius Galba, desirous in his youth to establish his credit with the Emperor by hunting out grounds for prosecuting the keepers of victualling-houses, made complaint in the senate that the proprietors of those places were in the habit of protecting themselves from the consequences of their guilt by their plea of wearing the golden ring. For this reason, an ordinance was made that no person whatsoever should have this right of wearing the ring, unless, freeborn himself as regarded his father and paternal grandfather, he should be assessed by the censors at four hundred thousand sesterces, and entitled, under the Julian Law, to sit in the fourteen tiers of seats at the theatre. In later times, however, people began to apply in whole crowds for this mark of rank; and in consequence of the diversities of opinion which were occasioned thereby, the Emperor Caius added a fifth decury to the number. Indeed to such a pitch has conceit now arisen, that whereas, under the late Emperor Augustus, the decuries could not be completed, at the present day they will not suffice to receive all the members of the equestrian order, and we see in every quarter persons even who have been but just liberated from slavery, making a leap all at once to the distinction of the golden ring: a thing that never used to happen in former days, as it was by the ring of iron that the equites and the judices were then to be recognized.

Indeed, so promiscuously was this privilege at last conferred, that Flavius Proculus, one of the equites, informed against four hundred persons on this ground, before the Emperor Claudius, who was then censor: and thus we see, an order, which was established as a mark of

distinction from other private individuals of free birth, has been shared in common with slaves !

The Gracchi were the first to attach to this order the separate appellation of “judices,” their object being at the same moment a seditious popularity and the humiliation of the senate. After the fall of these men, in consequence of the varying results of seditious movements, the name and influence of the equestrian order were lost, and became merged in those of the publicani, who, for some time, were the men that constituted the third class in the state. At last, however, Marcus Cicero, during his consulship, and at the period of the Catilinarian troubles, re-established the equestrian name, it being his vaunt that he himself had sprung from that order, and he, by certain acts of popularity peculiar to himself, having conciliated its support. Since that period, it is very clear that the equites have formed the third body in the state, and the name of the equestrian order has been added to the formula— “The Senate and People of Rome.” Hence it is, too, that at the present day even, the name of this order is written after that of the people, it being the one that was the last instituted.

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CHAP. 9.

HOWOFTEN THE NAME OF THE EQUESTRIAN ORDER HAS BEEN CHANGED.

Indeed, the name itself of the equites even, has been frequently changed, and that too, in the case of those who only owed their name to the fact of their service on horseback. Under Romulus and the other kings, the equites were known as "Celeres," then again as "Flexuntes," and after that as "Trossuli," from the fact of their having taken a certain town of Etruria, situate nine miles on this side of Volsinii, without any assistance from the infantry; a name too which survived till after the death of C. Gracchus.

At all events, in the writings left by Junius, who, from his affection for C. Gracchus, took the name of Gracchanus, we find the following words— "As regards the equestrian order, its members were formerly called 'Trossuli,' but at the present day they have the name of 'Equites;' because it is not understood what the appellation 'Trossuli' really means, and many feel ashamed at being called by that name." — He then goes on to explain the reason, as above mentioned, and adds that, though much against their will, those persons are still called "Trossuli."

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CHAP. 10.

GIFTS FOR MILITARY SERVICES, IN GOLD AND SILVER.

There are also some other distinctions connected with gold, the mention of which ought not to be omitted. Our ancestors, for instance, presented tores of gold to the auxiliaries and foreign troops, while to Roman citizens they only granted silver ones: bracelets too, were given by them to citizens, but never to foreigners.

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CHAP. 11.

AT WHAT PERIOD THE FIRST CROWN OF GOLD WAS PRESENTED.

But, a thing that is more surprising still, crowns of gold were given to the citizens as well. As to the person who was first presented with one, so far as I have enquired, I have not been able to ascertain his name: L. Piso says, however, that the Dictator A. Posthumius was the first who conferred one: on taking the camp of the Latins at Lake Regillus, he gave a crown of gold, made from the spoil, to the soldier whose valour had mainly contributed to this success. L. Lentulus, also, when consul, presented one to Servius Cornelius Merenda, on taking a town of the Samnites; but in his case it was five pounds in weight. Piso Frugi, too, presented his son with a golden crown, at his own private expense, making it a specific legacy in his will.

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CHAP. 12. (3.)

OTHER USES MADE OF GOLD, BY FEMALES.

To honour the gods at their sacrifices, no greater mark of honour has been thought of than to gild the horns of the animals sacrificed — that is, of the larger victims only. But in warfare, this species of luxury made such rapid advances, that in the Epistles of M. Brutus from the Plains of Philippi, we find expressions of indignation at the fibulæ of gold that were worn by the tribunes. Yes, so it is, by Hercules! and yet you, the same Brutus, have not said a word about women wearing gold upon their feet; while we, on the other hand, charge him with criminality who was the first to confer dignity upon gold by wearing the ring. Let men even, at the present day, wear gold upon the arms in form of bracelets — known as "dardania," because the practice first originated in Dardania, and called "viriolæ" in the language of the Celts, "viriæ" in that of Celtiberia, let women wear gold upon their arms and all their fingers, their necks, their ears, the tresses of their hair; let chains of gold run meandering along their sides; and in the still hours of the night let sachets filled with pearls hang suspended from the necks of their mistresses, all bedizened with gold, so that in their very sleep even they may still retain the consciousness that they are the possessors of such gems: but are they to cover their feet as well with gold, and so, between the stola of the matrons and the garb of the plebeians, establish an intermediate or equestrian order of females? Much more becomingly do we accord this distinction to our pages, and the adorned beauty of these youths has quite changed the features of our public baths.

At the present day, too, a fashion has been introduced among the men even, of wearing effigies upon their fingers representing Harpocrates and other divinities of Egypt. In the reign of Claudius, also, there was introduced another unusual distinction, in the case of those to whom was granted the right of free admission, that, namely, of wearing the likeness of the emperor engraved in gold upon a ring: a circumstance that gave rise to vast numbers of informations, until the timely elevation of the Emperor Vespasianus rendered them

impossible, by proclaiming that the right of admission to the emperor belonged equally to all. Let these particulars suffice on the subject of golden rings and the use of them.

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CHAP. 13.

COINS OF GOLD. AT WHAT PERIODS COPPER, GOLD, AND SILVER WERE FIRST IMPRESSED. HOW COPPER WAS USED BEFORE GOLD AND SILVER WERE COINED. WHAT WAS THE LARGEST SUM OF MONEY POSSESSED BY ANY ONE AT THE TIME OF OUR FIRST CENSUS. HOW OFTEN, AND AT WHAT PERIODS, THE VALUE OF COPPER AND OF COINED MONEY HAS BEEN CHANGED.

The next crime committed against the welfare of mankind was on the part of him who was the first to coin a denarius of gold, a crime the author of which is equally unknown. The Roman people made no use of impressed silver even before the period of the defeat of King Pyrrhus. The "as" of copper weighed exactly one libra; and hence it is that we still use the terms "libella" and "dupondius." Hence it is, too, that fines and penalties are inflicted under the name of "æs grave," and that the words still used in keeping accounts are "expensa," "impendia," and "dependere." Hence, too, the word "stipendium," meaning the pay of the soldiers, which is nothing more than "stipis pondera;" and from the same source those other words, "dispensatores" and "libripendes." It is also from this circumstance that in sales of slaves, at the present day even, the formality of using the balance is introduced.

King Servius was the first to make an impress upon copper. Before his time, according to Timæus, at Rome the raw metal only was used. The form of a sheep was the first figure impressed upon money, and to this fact it owes its name, "pecunia." The highest figure at which one man's property was assessed in the reign of that king was one hundred and twenty thousand asses, and consequently that amount of property was considered the standard of the first class.

Silver was not impressed with a mark until the year of the City 485, the year of the consulship of Q. Ogulnius and C. Fabius, five years before the First Punic War; at which time it was ordained that the value of the denarius should be ten libræ of copper, that of the quinarius five libræ, and that of the sestertius two libræ and a half. The weight, however, of the libra of copper was diminished during the First Punic War, the republic not having means to meet its

expenditure: in consequence of which, an ordinance was made that the as should in future be struck of two ounces weight. By this contrivance a saving of five-sixths was effected, and the public debt was liquidated. The impression upon these copper coins was a two-faced Janus on one side, and the beak of a ship of war on the other: the triens, however, and the quadrans, bore the impression of a ship. The quadrans, too, had, previously to this, been called "teruncius," as being three unciæ in weight. At a later period again, when Hannibal was pressing hard upon Rome, in the dictatorship of Q. Fabius Maximus, asses of one ounce weight were struck, and it was ordained that the value of the denarius should be sixteen asses, that of the quinarius eight asses, and that of the sestertius four asses; by which last reduction of the weight of the as the republic made a clear gain of one half. Still, however, so far as the pay of the soldiers is concerned, one denarius has always been given for every ten asses. The impressions upon the coins of silver were two-horse and four-horse chariots, and hence it is that they received the names of "bigati" and "quadrigati."

Shortly after, in accordance with the Law of Papirius, asses were coined weighing half an ounce only. Livius Drusus, when tribune of the people, alloyed the silver with one-eighth part of copper. The coin that is known at the present day as the "victoriatus," was first struck in accordance with the Clodian Law: before which period, a coin of this name was imported from Illyricum, but was only looked upon as an article of merchandize. The impression upon it is a figure of Victory, and hence its name.

The first golden coin was struck sixty-two years after that of silver, the scruple of gold being valued at twenty sesterces; a computation which gave, according to the value of the sesterce then in use, nine hundred sesterces to each libra of gold. In later times, again, an ordinance was made, that denarii of gold should be struck, at the rate of forty denarii to each libra of gold; after which period, the emperors gradually curtailed the weight of the golden denarius, until at last, in the reign of Nero, it was coined at the rate of forty-five to the libra.

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CHAP. 14.

CONSIDERATIONS ON MAN'S CUPIDITY FOR GOLD.

But the invention of money opened a new field to human avarice, by giving rise to usury and the practice of lending money at interest, while the owner passes a life of idleness: and it was with no slow advances that, not mere avarice only, but a perfect hunger for gold became inflamed with a sort of rage for acquiring: to such a degree, in fact, that Septimuleius, the familiar friend of Caius Gracchus, not only cut off his head, upon which a price had been set of its weight in gold, but, before bringing it to Opimius, poured molten lead into the mouth, and so not only was guilty of the crime of parricide, but added to his criminality by cheating the state. Nor was it now any individual citizen, but the universal Roman name, that had been rendered infamous by avarice, when King Mithridates caused molten gold to be poured into the mouth of Aquilius the Roman general, whom he had taken prisoner: such were the results of cupidity.

One cannot but feel ashamed, on looking at those new-fangled names which are invented every now and then, from the Greek language, by which to designate vessels of silver filagreed or inlaid with gold, and the various other practices by which such articles of luxury, when only gilded, are made to sell at a higher price than they would have done if made of solid gold: and this, too, when we know that Spartacus forbade any one of his followers to introduce either gold or silver into the camp — so much more nobleness of mind was there in those days, even in our runaway slaves.

The orator Messala has informed us that Antonius the triumvir made use of golden vessels when satisfying the most humiliating wants of nature, a piece of criminality that would have reflected disgrace upon Cleopatra even! Till then, the most consummate instances of a similar licentiousness had been found among strangers only — that of King Philip, namely, who was in the habit of sleeping with a golden goblet placed beneath his pillows, and that of Hagnon of Teos, a commander under Alexander the Great, who used to fasten the soles of his sandals with nails of gold. It was reserved for

Antonius to be the only one thus to impart a certain utility to gold, by putting an insult upon Nature. Oh how righteously would he himself have been proscribed! but then the proscription should have been made by Spartacus.

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CHAP. 15.

THE PERSONS WHO HAVE POSSESSED THE GREATEST QUANTITY OF GOLD AND SILVER.

For my own part, I am much surprised that the Roman people has always imposed upon conquered nations a tribute in silver, and not in gold; Carthage, for instance, from which, upon its conquest under Hannibal, a ransom was exacted in the shape of a yearly payment, for fifty years, of eight hundred thousand pounds' weight of silver, but no gold. And yet it does not appear that this could have arisen from there being so little gold then in use throughout the world. Midas and Crœsus, before this, had possessed gold to an endless amount: Cyrus, already, on his conquest of Asia, had found a booty consisting of twenty-four thousand pounds' weight of gold, in addition to vessels and other articles of wrought gold, as well as leaves of trees, a plane-tree, and a vine, all made of that metal.

It was through this conquest too, that he carried off five hundred thousand talents of silver, as well as the vase of Semiramis, the weight of which alone amounted to fifteen talents, the Egyptian talent being equal, according to Varro, to eighty of our pounds. Before this time too, Saulaces, the descendant of Æëtes, had reigned in Colchis, who, on finding a tract of virgin earth, in the country of the Suani, extracted from it a large amount of gold and silver, it is said, and whose kingdom besides, had been famed for the possession of the Golden Fleece. The golden arches, too, of his palace, we find spoken of, the silver supports and columns, and pilasters, all of which he had come into possession of on the conquest of Sesostris, king of Egypt; a monarch so haughty, that every year, it is said, it was his practice to select one of his vassal kings by lot, and yoking him to his car, celebrate his triumph afresh.

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CHAP. 16.

AT WHAT PERIOD SILVER FIRST MADE ITS APPEARANCE UPON THE ARENA AND UPON THE STAGE.

We, too, have done things that posterity may probably look upon as fabulous. Cæsar, who was afterwards dictator, but at that time ædile, was the first person, on the occasion of the funeral games in honour of his father, to employ all the apparatus of the arena in silver; and it was on the same occasion that for the first time criminals encountered wild beasts with implements of silver, a practice imitated at the present day in our municipal towns even.

At the games celebrated by C. Antonius the stage was made of silver; and the same was the case at those celebrated by L. Muræna. The Emperor Caius had a scaffold introduced into the Circus, upon which there were one hundred and twenty-four thousand pounds' weight of silver. His successor Claudius, on the occasion of his triumph over Britain, announced by the inscriptions that among the coronets of gold, there was one weighing seven thousand pounds' weight, contributed by Nearer Spain, and another of nine thousand pounds, presented by Gallia Comata. Nero, who succeeded him, covered the Theatre of Pompeius with gold for one day, the occasion on which he displayed it to Tiridates, king of Armenia. And yet how small was this theatre in comparison with that Golden Palace of his, with which he environed our city.

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CHAP. 17.

AT WHAT PERIODS THERE WAS THE GREATEST QUANTITY OF GOLD AND SILVER IN THE TREASURY OF THE ROMAN PEOPLE.

In the consulship of Sextus Julius and Lucius Aurelius, seven years before the commencement of the Third Punic War, there was in the treasury of the Roman people seventeen thousand four hundred and ten pounds' weight of uncoined gold, twenty-two thousand and seventy pounds' weight of silver, and in specie, six million one hundred and thirty-five thousand four hundred sesterces.

In the consulship of Sextus Julius and Lucius Marcius, that is to say, at the commencement of the Social War, there was in the public treasury one million six hundred and twenty thousand eight hundred and thirty-one pounds' weight of gold. Caius Cæsar, at his first entry into Rome, during the civil war which bears his name, withdrew from the treasury fifteen thousand pounds' weight in gold ingots, thirty thousand pounds' weight in uncoined silver, and in specie, three hundred thousand sesterces: indeed, at no period was the republic more wealthy. Æmilius Paulus, too, after the defeat of King Perseus, paid into the public treasury, from the spoil obtained in Macedonia, three hundred millions of sesterces, and from this period the Roman people ceased to pay tribute.

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CHAP. 18.

AT WHAT PERIOD CEILINGS WERE FIRST GILDED.

The ceilings which, at the present day, in private houses even, we see covered with gold, were first gilded in the Capi- tol, after the destruction of Carthage, and during the censorship of Lucius Mummius. From the ceilings this luxuriousness has been since transferred to the arched roofs of buildings, and the party-walls even, which at the present day are gilded like so many articles of plate: very different from the times when Catulus was far from being unanimously approved of for having gilded the brazen tiles of the Capitol!

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CHAP. 19.

FOR WHAT REASONS THE HIGHEST VALUE IS SET UPON GOLD.

We have already stated, in the Seventh Book, who were the first discoverers of gold, as well as nearly all the other metals. The highest rank has been accorded to this substance, not, in my opinion, for its colour, (which in silver is clearer and more like the light of day, for which reason silver is preferred for our military ensigns, its brightness being seen at a greater distance); and those persons are manifestly in error who think that it is the resemblance of its colour to the stars that is so prized in gold, seeing that the various gems and other things of the same tint, are in no such particular request. Nor yet is it for its weight or malleability that gold has been preferred to other metals, it being inferior in both these respects to lead — but it is because gold is the only substance in nature that suffers no loss from the action of fire, and passes unscathed through conflagrations and the flames of the funeral pile. Nay, even more than this, the oftener gold is subjected to the action of fire, the more refined in quality it becomes; indeed, fire is one test of its goodness, as, when sub- mitted to intense heat, gold ought to assume a similar colour, and turn red and igneous in appearance; a mode of testing which is known as "obrussa."

The first great proof, however, of the goodness of gold, is its melting with the greatest difficulty: in addition to which, it is a fact truly marvellous, that though proof against the most intense fire, if made with wood charcoal, it will melt with the greatest readiness upon a fire made with chaff; and that, for the purpose of purifying it, it is fused with lead. There is another reason too, which still more tends to enhance its value, the fact that it wears the least of all metals by continual use: whereas with silver, copper, and lead, lines may be traced, and the hands become soiled with the substance that comes from off them. Nor is there any material more malleable than this, none that admits of a more extended division, seeing that a single ounce of it admits of being beaten out into seven hundred and fifty leaves, or more, four fingers in length by the same in breadth. The

thickest kind of gold-leaf is known as “leaf of Prænceste,”it still retaining that name from the excellence of the gilding upon the statue of Fortune there. The next in thickness is known as the “quæstorian leaf.” In Spain, small pieces of gold are known by the name of “striges.”

A thing that is not the case with any other metal, gold is found pure in masses or in the form of dust; and whereas all other metals, when found in the ore, require to be brought to perfection by the aid of fire, this gold that I am speaking of is gold the moment it is found, and has all its component parts already in a state of perfection. This, however, is only such gold as is found in the native state, the other kinds that we shall have to speak of, being refined by art. And then, more than anything else, gold is subject to no rust, no verdigris, no emanation whatever from it, either to alter its quality or to lessen its weight. In addition to this, gold steadily resists the corrosive action of salt and vinegar, things which obtain the mastery over all other substances: it admits, too, beyond all other metals, of being spun out and woven like wool. Verrius tells us that Tarquinius Priscus celebrated a triumph, clad in a tunic of gold; and I myself have seen Agrippina, the wife of the Emperor Claudius, on the occasion of a naval combat which he exhibited, seated by him, attired in a military scarf made entirely of woven gold without any other material. For this long time past, gold has been interwoven in the Attalic textures, an invention of the kings of Asia.

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CHAP. 20.

THE METHOD OF GILDING.

On marble and other substances which do not admit of being brought to a white heat, gilt is laid with glair of egg, and on wood by the aid of a glutinous composition, known as “leucophoron:” what this last is, and how it is prepared, we shall state on the appropriate occasion. The most convenient method for gilding copper would be to employ quicksilver, or, at all events, hydrargyros; but with reference to these substances, as we shall have occasion to say when describing the nature of them, methods of adulteration have been devised. To effect this mode of gilding, the copper is first well hammered, after which it is subjected to the action of fire, and then cooled with a mixture of salt, vinegar, and alum. It is then cleansed of all extraneous substances, it being known by its brightness when it has been sufficiently purified. This done, it is again heated by fire, in order to enable it, when thus prepared, with the aid of an amalgam of pumice, alum, and quicksilver, to receive the gold leaf when applied. Alum has the same property of purifying copper, that we have already mentioned as belonging to lead with reference to gold.

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CHAP. 21. (4.)

HOW GOLD IS FOUND.

Gold is found in our own part of the world; not to mention the gold extracted from the earth in India by the ants, and in Scythia by the Griffins. Among us it is procured in three different ways; the first of which is, in the shape of dust, found in running streams, the Tagus in Spain, for instance, the Padus in Italy, the Hebrus in Thracia, the Pactolus in Asia, and the Ganges in India; indeed, there is no gold found in a more perfect state than this, thoroughly polished as it is by the continual attrition of the current.

A second mode of obtaining gold is by sinking shafts or seeking it among the debris of mountains; both of which methods it will be as well to describe. The persons in search of gold in the first place remove the "segutilum," such being the name of the earth which gives indication of the presence of gold. This done, a bed is made, the sand of which is washed, and, according to the residue found after washing, a conjecture is formed as to the richness of the vein. Sometimes, indeed, gold is found at once in the surface earth, a success, however, but rarely experienced. Recently, for instance, in the reign of Nero, a vein was discovered in Dalmatia, which yielded daily as much as fifty pounds' weight of gold. The gold that is thus found in the surface crust is known as "talutium," in cases where there is auriferous earth beneath. The mountains of Spain, in other respects arid and sterile, and productive of nothing whatever, are thus constrained by man to be fertile, in supplying him with this precious commodity.

The gold that is extracted from shafts is known by some persons as "canalicium," and by others as "canaliense;" it is found adhering to the gritty crust of marble, and, altogether different from the form in which it sparkles in the sapphirus of the East, and in the stone of Thebais and other gems, it is seen interlaced with the molecules of the marble. The channels of these veins are found running in various directions along the sides of the shafts, and hence the name of the gold they yield— "canalicium." In these shafts, too, the

superincumbent earth is kept from falling in by means of wooden pillars. The substance that is extracted is first broken up, and then washed; after which it is subjected to the action of fire, and ground to a fine powder. This powder is known as "apitascudes," while the silver which becomes disengaged in the furnace has the name of "sudor" given to it. The im- purities that escape by the chimney, as in the case of all other metals, are known by the name of "scoria." In the case of gold, this scoria is broken up a second time, and melted over again. The crucibles used for this purpose are made of "tasconium," a white earth similar to potter's clay in appearance; there being no other substance capable of with-standing the strong current of air, the action of the fire, and the intense heat of the melted metal.

The third method of obtaining gold surpasses the labours of the Giants even: by the aid of galleries driven to a long distance, mountains are excavated by the light of torches, the duration of which forms the set times for work, the workmen never seeing the light of day for many months together. These mines are known as "arrugiæ;" and not unfrequently clefts are formed on a sudden, the earth sinks in, and the workmen are crushed beneath; so that it would really appear less rash to go in search of pearls and purples at the bottom of the sea, so much more dangerous to ourselves have we made the earth than the water! Hence it is, that in this kind of mining, arches are left at frequent intervals for the purpose of supporting the weight of the mountain above. In mining either by shaft or by gallery, barriers of silex are met with, which have to be driven asunder by the aid of fire and vinegar; or more frequently, as this method fills the galleries with suffocating vapours and smoke, to be broken to pieces with bruising- machines shod with pieces of iron weighing one hundred and fifty pounds: which done, the fragments are carried out on the workmen's shoulders, night and day, each man passing them on to his neighbour in the dark, it being only those at the pit's mouth that ever see the light. In cases where the bed of silex appears too thick to admit of being penetrated, the miner traces along the sides of it, and so turns it. And yet, after all, the labour entailed by this silex is looked upon as comparatively easy, there being an earth — a kind of potter's clay mixed with gravel, "gangadia" by

name, which it is almost impossible to overcome. This earth has to be attacked with iron wedges and hammers like those previously mentioned, and it is generally considered that there is nothing more stubborn in existence — except indeed the greed for gold, which is the most stubborn of all things.

When these operations are all completed, beginning at the last, they cut away the wooden pillars at the point where they support the roof: the coming downfall gives warning, which is instantly perceived by the sentinel, and by him only, who is set to watch upon a peak of the same mountain. By voice as well as by signals, he orders the workmen to be immediately summoned from their labours, and at the same moment takes to flight himself. The mountain, rent to pieces, is cleft asunder, hurling its debris to a distance with a crash which it is impossible for the human imagination to conceive; and from the midst of a cloud of dust, of a density quite incredible, the victorious miners gaze upon this downfall of Nature. Nor yet even then are they sure of gold, nor indeed were they by any means certain that there was any to be found when they first began to excavate, it being quite sufficient, as an inducement to undergo such perils and to incur such vast expense, to entertain the hope that they shall obtain what they so eagerly desire.

Another labour, too, quite equal to this, and one which entails even greater expense, is that of bringing rivers from the more elevated mountain heights, a distance in many instances of one hundred miles perhaps, for the purpose of washing these debris. The channels thus formed are called “corrugi,” from our word “corrivatio,” I suppose; and even when these are once made, they entail a thousand fresh labours. The fall, for instance, must be steep, that the water may be precipitated, so to say, rather than flow; and it is in this manner that it is brought from the most elevated points. Then, too, vallies and crevasses have to be united by the aid of aqueducts, and in another place impassable rocks have to be hewn away, and forced to make room for hollowed troughs of wood; the person hewing them hanging suspended all the time with ropes, so that to a spectator who views the operations from a distance, the workmen have all the appearance, not so much of wild beasts, as of birds upon the wing. Hanging thus suspended in most instances, they

take the levels, and trace with lines the course the water is to take; and thus, where there is no room even for man to plant a footstep, are rivers traced out by the hand of man. The water, too, is considered in an unfit state for washing, if the current of the river carries any mud along with it. The kind of earth that yields this mud is known as "urium;" and hence it is that in tracing out these channels, they carry the water over beds of silex or pebbles, and carefully avoid this urium. When they have reached the head of the fall, at the very brow of the mountain, reservoirs are hollowed out, a couple of hundred feet in length and breadth, and some ten feet in depth. In these reservoirs there are generally five sluices left, about three feet square; so that, the moment the reservoir is filled, the floodgates are struck away, and the torrent bursts forth with such a degree of violence as to roll onwards any fragments of rock which may obstruct its passage.

When they have reached the level ground, too, there is still another labour that awaits them. Trenches — known as "agogæ" — have to be dug for the passage of the water; and these, at regular intervals, have a layer of ulex placed at the bottom. This ulex is a plant like rosemary in appearance, rough and prickly, and well-adapted for arresting any pieces of gold that may be carried along. The sides, too, are closed in with planks, and are supported by arches when carried over steep and precipitous spots. The earth, carried onwards in the stream, arrives at the sea at last, and thus is the shattered mountain washed away; causes which have greatly tended to extend the shores of Spain by these encroachments upon the deep. It is also by the agency of canals of this description that the material, excavated at the cost of such immense labour by the process previously described, is washed and car- ried away; for otherwise the shafts would soon be choked up by it.

The gold found by excavating with galleries does not require to be melted, but is pure gold at once. In these excavations, too, it is found in lumps, as also in the shafts which are sunk, sometimes exceeding ten pounds even. The names given to these lumps are "palagæ," and "palacurnæ," while the gold found in small grains is known as "baluce." The ulex that is used for the above purpose is dried and burnt, after which the ashes of it are washed upon a bed of grassy turf, in order that the gold may be deposited thereupon.

Asturia, Gallæcia, and Lusitania furnish in this manner, yearly, according to some authorities, twenty thousand pounds' weight of gold, the produce of Asturia forming the major part. Indeed, there is no part of the world that for centuries has maintained such a continuous fertility in gold. I have already mentioned that by an ancient decree of the senate, the soil of Italy has been protected from these researches; otherwise, there would be no land more fertile in metals. There is extant also a censorial law relative to the gold mines of Victumulæ, in the territory of Vercellæ, by which the farmers of the revenue were forbidden to employ more than five thousand men at the works.

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CHAP. 22.

ORPIMENT.

There is also one other method of procuring gold; by making it from orpiment, a mineral dug from the surface of the earth in Syria, and much used by painters. It is just the colour of gold, but brittle, like mirror-stone, in fact. This substance greatly excited the hopes of the Emperor Caius, a prince who was most greedy for gold. He accordingly had a large quantity of it melted, and really did obtain some excellent gold; but then the proportion was so extremely small, that he found himself a loser thereby. Such was the result of an experiment prompted solely by avarice: and this too, although the price of the orpiment itself was no more than four denarii per pound. Since his time, the experiment has never been repeated.

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CHAP. 23.

ELECTRUM.

In all gold ore there is some silver, in varying proportions; a tenth part in some instances, an eighth in others. In one mine, and that only, the one known as the mine of Albucrara, in Gallæcia, the proportion of silver is but one thirty-sixth: hence it is that the ore of this mine is so much more valuable than that of others. Whenever the proportion of silver is one-fifth, the ore is known also by the name of "electrum;" grains, too, of this metal are often found in the gold known as "canaliense." An artificial electrum, too, is made, by mixing silver with gold. If the proportion of silver exceeds one-fifth, the metal offers no resistance on the anvil.

Electrum, too, was highly esteemed in ancient times, as we learn from the testimony of Homer, who represents the palace of Menelaüs as refulgent with gold and electrum, silver and ivory. At Lindos, in the island of Rhodes, there is a temple dedicated to Minerva, in which there is a goblet of electrum, consecrated by Helena: history states also that it was moulded after the proportions of her bosom. One peculiar advantage of electrum is, its superior brilliancy to silver by lamp-light. Native electrum has also the property of detecting poisons; for in such case, semicircles, resembling the rainbow in appearance, will form upon the surface of the goblet, and emit a crackling noise, like that of flame, thus giving a twofold indication of the presence of poison.

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CHAP. 24.

THE FIRST STATUES OF GOLD.

The first statue of massive gold, without any hollowness within, and anterior to any of those statues of bronze even, which are known as "holosphyratæ," is said to have been erected in the Temple of the goddess Anaïtis. To what particular region this name belongs, we have already stated, it being that of a divinity held in the highest veneration by the nations in that part of the world. This statue was carried off during the wars of Antonius with the people of Parthia; and a witty saying is told, with reference to it, of one of the veterans of the Roman army, a native of Bononia. Entertaining on one occasion the late Emperor Augustus at dinner, he was asked by that prince whether he was aware that the person who was the first to commit this violence upon the statue, had been struck with blindness and paralysis, and then expired. To this he made answer, that at that very moment Augustus was making his dinner off of one of her legs, for that he himself was the very man, and to that bit of plunder he had been indebted for all his fortune.

As regards statues of human beings, Gorgias of Leontini was the first to erect a solid statue of gold, in the Temple at Delphi, in honour of himself, about the seventieth Olympiad: so great were the fortunes then made by teaching the art of oratory!

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CHAP. 25.

EIGHT REMEDIES DERIVED FROM GOLD.

Gold is efficacious as a remedy in many ways, being applied to wounded persons and to infants, to render any malpractices of sorcery comparatively innocuous that may be directed against them. Gold, however, itself is mischievous in its effects if carried over the head, in the case of chickens and lambs more particularly. The proper remedy in such case is to wash the gold, and to sprinkle the water upon the objects which it is wished to preserve. Gold, too, is melted with twice its weight of salt, and three times its weight of misy; after which it is again melted with two parts of salt and one of the stone called "schistos." Employed in this manner, it withdraws the natural acridity from the substances torrefied with it in the crucible, while at the same time it remains pure and incorrupt; the residue forming an ash which is preserved in an earthen vessel, and is applied with water for the cure of lichens on the face: the best method of washing it off is with bean-meal. These ashes have the property also of curing fistulas and the discharges known as "hæmorrhoides:" with the addition, too, of powdered pumice, they are a cure for putrid ulcers and sores which emit an offensive smell.

Gold, boiled in honey with melanthium and applied as a liniment to the navel, acts as a gentle purgative upon the bowels. M. Varro assures us that gold is a cure for warts.

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CHAP. 26. (5.)

CHRYSOCOLLA.

Chrysocolla is a liquid which is found in the shafts already mentioned, flowing through the veins of gold; a kind of slime which becomes indurated by the cold of winter till it has attained the hardness even of pumice. The most esteemed kind of it, it has been ascertained, is found in copper-mines, the next best being the produce of silver-mines: it is found also in lead-mines, but that found in combination with gold ore is much inferior.

In all these mines, too, an artificial chrysocolla is manu- factured; much inferior, however, to the native chrysocolla. The method of preparing it consists in introducing water gradually into a vein of metal, throughout the winter and until the month of June; after which, it is left to dry up during the months of June and July: so that, in fact, it is quite evident that chrysocolla is nothing else but the putrefaction of a metallic vein. Native chrysocolla, known as "uva," differs from the other in its hardness more particularly; and yet, hard as it is, it admits of being coloured with the plant known as "lutum." Like flax and wool, it is of a nature which imbibes liquids. For the purpose of dyeing it, it is first bruised in a mortar, after which, it is passed through a fine sieve. This done, it is ground, and then passed through a still finer sieve; all that refuses to pass being replaced in the mortar, and subjected once more to the mill. The finest part of the powder is from time to time measured out into a crucible, where it is macerated in vinegar, so that all the hard particles may be dissolved; after which, it is pounded again, and then rinsed in shell-shaped vessels, and left to dry. This done, the chrysocolla is dyed by the agency of schist alum and the plant above-mentioned; and thus is it painted itself before it serves to paint. It is of considerable importance, too, that it should be absorbent and readily take the dye: indeed, if it does not speedily take the colour, scytanum and turbistum are added to the dye; such being the name of two drugs which compel it to absorb the colouring matter.

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CHAP. 27.

THE USE MADE OF CHRYSOCOLLA IN PAINTING.

When chrysocolla has been thus dyed, painters call it “orobitis,” and distinguish two kinds of it, the cleansed orobitis, which is kept for making lomentum, and the liquid, the balls being dissolved for use by evaporation. Both these kinds are prepared in Cyprus, but the most esteemed is that made in Armenia, the next best being that of Macedonia: it is Spain, however, that produces the most. The great point of its excellence consists in its producing exactly the tint of corn when in a state of the freshest verdure. Before now, we have seen, at the spectacles exhibited by the Emperor Nero, the arena of the Circus entirely sanded with chrysocolla, when the prince himself, clad in a dress of the same colour, was about to exhibit as a charioteer.

The unlearned multitude of artisans distinguish three kinds of chrysocolla; the rough chrysocolla, which is valued at seven denarii per pound; the middling, worth five denarii; and the bruised, also known as the “herbaceous” chrysocolla, worth three denarii per pound. Before laying on the sanded chrysocolla, they underlay coats of atramentum and parætonium, substances which make it hold, and impart a softness to the colours. The parætonium, as it is naturally very unctuous, and, from its smoothness, extremely tenacious, is laid on first, and is then covered with a coat of atramentum, lest the parætonium, from its extreme whiteness, should impart a paleness to the chrysocolla. The kind known as “lutea,” derives its name, it is thought, from the plant called “lutum;” which itself is often pounded with cæruleum instead of real chrysocolla, and used for painting, making a very inferior kind of green and extremely deceptive.

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CHAP. 28.

SEVEN REMEDIES DERIVED FROM CHRYSOCOLLA.

Chroysocolla, too, is made use of in medicine. In combination with wax and oil, it is used as a detergent for wounds; and used by itself in the form of a powder, it acts as a desiccative, and heals them. In cases, too, of quinsy and hardness of breathing, chrysocolla is prescribed, in the form of an electuary, with honey. It acts as an emetic also, and is used as an ingredient in eye-salves, for the purpose of effacing cicatrizations upon the eyes. In green plasters too, it is used, for soothing pain and making scars disappear. This kind of chrysocolla is known by medical men as “acesis,” and is altogether different from orobitis.

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CHAP. 29.

THE CHRYSOCOLLA OF THE GOLDSMITHS, KNOWN ALSO AS SANTERNA.

The goldsmiths also employ a chrysocolla of their own, for the purpose of soldering gold; and it is from this chrysocolla, they say, that all the other substances, which present a similar green, have received their name. This preparation is made from verdigris of Cyprian copper, the urine of a youth who has not arrived at puberty, and a portion of nitre. It is then pounded with a pestle of Cyprian copper, in a copper mortar, and the name given to the mixture is "santerna." It is in this way that the gold known as "silvery" gold is soldered; one sign of its being so alloyed being its additional brilliancy on the application of santerna. If, on the other hand, the gold is impregnated with copper, it will contract, on coming in contact with the santerna, become dull, and only be soldered with the greatest difficulty: indeed, for this last kind of gold, there is a peculiar solder employed, made of gold and one- seventh part of silver, in addition to the materials above-mentioned, the whole beaten up together.

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CHAP. 30.

THE MARVELLOUS OPERATIONS OF NATURE IN SOLDERING METALLIC SUBSTANCES, AND BRINGING THEM TO A STATE OF PERFECTION.

While speaking on this subject, it will be as well to annex the remaining particulars, that our admiration may here be drawn to all the marvels presented by Nature in connection therewith. The proper solder for gold is that above described; for iron, potter's clay; for copper, when in masses, cadmia, and in sheets, alum; for lead and marble, resin. Lead is also united by the aid of white lead; white lead with white lead, by the agency of oil; stannum, with copper file-dust; and silver, with stannum.

For smelting copper and iron, pine-wood is the best, Egyptian papyrus being also very good for the purpose. Gold is melted most easily with a fire made of chaff. Limestone and Thracian stone are ignited by the agency of water, this last being extinguished by the application of oil. Fire, however, is extinguished most readily by the application of vinegar, viscus, and unboiled eggs. Earth will under no circumstance ignite. When charcoal has been once quenched, and then again ignited, it gives out a greater heat than before.

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CHAP. 31. (6.)

SILVER.

After stating these facts, we come to speak of silver ore, the next folly of mankind. Silver is never found but in shafts sunk deep in the ground, there being no indications to raise hopes of its existence, no shining sparkles, as in the case of gold. The earth in which it is found is sometimes red, sometimes of an ashy hue. It is impossible, too, to melt it, except in combination with lead or with galena, this last being the name given to the vein of lead that is mostly found running near the veins of the silver ore. When submitted, too, to the action of fire, part of the ore precipitates itself in the form of lead, while the silver is left floating on the surface, like oil on water.

Silver is found in nearly all our provinces, but the finest of all is that of Spain; where it is found, like gold, in uncultivated soils, and in the mountains even. Wherever, too, one vein of silver has been met with, another is sure to be found not far off: a thing that has been remarked, in fact, in the case of nearly all the metals, which would appear from this circumstance to have derived their Greek name of "metalla." It is a remarkable fact, that the shafts opened by Hannibal in the Spanish provinces are still worked, their names being derived from the persons who were the first to discover them. One of these mines, which at the present day is still called Bæbelo, furnished Hannibal with three hundred pounds' weight of silver per day. The mountain is already excavated for a distance of fifteen hundred paces; and throughout the whole of this distance there are water-bearers standing night and day, baling out the water in turns, regulated by the light of torches, and so forming quite a river.

The vein of silver that is found nearest the surface is known by the name of "crudaria." In ancient times, the excavations used to be abandoned the moment alum was met with, and no further search was made. Of late, however, the discovery of a vein of copper beneath alum, has withdrawn any such limits to man's hopes. The exhalations from silver-mines are dangerous to all animals, but to dogs more particularly. The softer they are, the more beautiful gold

and silver are considered. It is a matter of surprise with most persons, that lines traced with silver should be black.

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CHAP. 32.

QUICKSILVER.

There is a mineral also found in these veins of silver, which yields a humour that is always liquid, and is known as “quicksilver.” It acts as a poison upon everything, and pierces vessels even, making its way through them by the agency of its malignant properties. All substances float upon the surface of quicksilver, with the exception of gold, this being the only substance that it attracts to itself. Hence it is, that it is such an excellent refiner of gold; for, on being briskly shaken in an earthen vessel with gold, it rejects all the impurities that are mixed with it. When once it has thus expelled these superfluities, there is nothing to do but to separate it from the gold; to effect which, it is poured out upon skins that have been well tawed, and so, exuding through them like a sort of perspiration, it leaves the gold in a state of purity behind.

Hence it is, too, that when copper has to be gilded, a coat of quicksilver is laid beneath the gold leaf, which it retains in its place with the greatest tenacity: in cases, however, where the leaf is single, or very thin, the presence of the quicksilver is detected by the paleness of the colour. For this reason, persons, when meditating a piece of fraud, have been in the habit of substituting glair of egg for quicksilver, and then laying upon it a coat of hydrargyros, a substance of which we shall make further mention in the appropriate place. Generally speaking, quicksilver has not been found in any large quantities.

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CHAP. 33.

STIMMI, STIBI, ALABASTRUM, LARBASIS, OR PLATYOPHTHALMON.

In the same mines in which silver is found, there is also found a substance which, properly speaking, may be called a stone made of concrete froth. It is white and shining, without being transparent, and has the several names of stimmi, stibi, alabastrum, and larbasis. There are two kinds of it, the male and the female. The latter kind is the more approved of, the male stimmi being more uneven, rougher to the touch, less ponderous, not so radiant, and more gritty. The female kind, on the other hand, is bright and friable, and separates in laminæ, and not in globules.

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CHAP. 34.

SEVEN REMEDIES DERIVED FROM STIMMI.

Stimmi is possessed of certain astringent and refrigerative properties, its principal use, in medicine, being for the eyes. Hence it is that most persons call it "platyophthalmon," it being extensively employed in the calliblepharie preparations of females, for the purpose of dilating the eyes. It acts also as a check upon fluxes of the eyes and ulcerations of those organs; being used, as a powder, with pounded frankincense and gum. It has the property, too, of arresting discharges of blood from the brain; and, sprinkled in the form of a powder, it is extremely efficacious for the cure of recent wounds and bites of dogs which have been some time inflicted. For the cure of burns it is remarkably good, mixed with grease, litharge, ceruse, and wax.

The method of preparing it, is to burn it, enclosed in a coat of cow-dung, in a furnace; which done, it is quenched with woman's milk, and pounded with rain-water in a mortar. While this is doing, the thick and turbid part is poured off from time to time into a copper vessel, and purified with nitre. The lees of it, which are rejected, are recognized by their being full of lead and falling to the bottom. The vessel into which the turbid part has been poured off, is then covered with a linen cloth and left untouched for a night; the portion that lies upon the surface being poured off the following day, or else removed with a sponge. The part that has fallen to the bottom of the vessel is regarded as the choicest part, and is left, covered with a linen cloth, to dry in the sun, but not to become parched. This done, it is again pounded in a mortar, and then divided into tablets. But the main thing of all is, to observe such a degree of nicety in heating it, as not to let it become lead. Some persons, when preparing it on the fire, use grease instead of dung. Others, again, bruise it in water and then pass it through a triple strainer of linen cloth; after which, they reject the lees, and pour off the remainder of the liquid, collecting all that is deposited at the bottom, and using it as an ingredient in plasters and eye-salves.

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CHAP. 35.

THE SCORIA OF SILVER. SIX REMEDIES DERIVED FROM IT.

The scoria of silver is called by the Greeks "helcysma." It has certain restringent and refrigerative effects upon bodies, and, like molybdæna, of which we shall make further mention when speaking of lead, is used as an ingredient in making plasters, those more particularly which are to promote the cicatrization of wounds. It is employed also for the cure of tenesmus and dysentery, being injected in the form of a clyster with myrtle-oil. It forms an ingredient, too, in the medicaments known as "liparæ," for the removal of fleshy excrescences in sores, ulcerations arising from chafing, or running ulcers on the head.

The same mines also furnish us with the preparation known as "scum of silver." There are three varieties of it; the best, known as "chrysitis;" the second best, the name of which is "argyritis;" and a third kind, which is called "molybditis." In most instances, too, all these tints are to be found in the same cake.

The most approved kind is that of Attica; the next being that which comes from Spain. Chrysitis is the produce of the metallic vein, argyritis is obtained from the silver itself, and molybditis is the result of the smelting of lead, a work that is done at Puteoli; to which last circumstance, in fact, molybditis owes its name. All these substances are prepared in the following manner: the metal is first melted, and then allowed to flow from a more elevated receiver into a lower. From this last it is lifted by the aid of iron spits, and is then twirled round at the end of the spit in the midst of the flames, in order to make it all the lighter. Thus, as may be easily per- ceived from the name, it is in reality the scum of a substance in a state of fusion — of the future metal, in fact. It differs from scoria in the same way that the scum of a liquid differs from the lees, the one being an excretion thrown out by the metal while purifying itself, the other an excretion of the metal when purified.

Some persons distinguish two kinds of scum of silver, and give them the names of "scirerytis" and "peumene; a third variety being

molybdæna, of which we shall have to make further mention when treating of lead. To make this scum fit for use, the cakes are again broken into pieces the size of a hazel-nut, and then melted, the fire being briskly blown with the bellows. For the purpose of separating the charcoal and ashes from it, it is then rinsed with vinegar or with wine, and is so quenched. In the case of argyritis, it is recommended, in order to blanch it, to break it into pieces the size of a bean, and then to boil it with water in an earthen vessel, first putting with it, wrapped in linen cloths, some new wheat and barley, which are left there till they have lost the outer coat. This done, they bruise the whole in mortars for six consecutive days, taking care to rinse the mixture in cold water three times a day, and after that, in an infusion of hot water and fossil salt, one obolus of the latter to every pound of scum: at the end of the six days it is put away for keeping in a vessel of lead.

Some persons boil it with white beans and a ptisan of barley, and then dry it in the sun; others, again, with white wool and beans, till such time as it imparts no darkness to the wool; after which, first adding fossil salt, they change the water from time to time, and then dry it during the forty hot- test days of summer. In some instances the practice is, to boil it in water in a swine's paunch, and then to take it out and rub it with nitre; after which, following the preceding method, they pound it in a mortar with salt. Some again never boil it, but pound it only with salt, and then rinse it with water.

Scum of silver is used as an ingredient in eye-salves, and, in the form of a liniment, by females, for the purpose of removing spots and blemishes caused by scars, as also in washes for the hair. Its properties are desiccative, emollient, refrigerative, temperative, and detergent. It fills up cavities in the flesh produced by ulceration, and reduces tumours. For all these purposes it is employed as an ingredient in plaster, and in the liparæ previously mentioned. In combination with rue, myrtle, and vinegar, it removes erysipelas: and, with myrtle and wax, it is a cure for chilblains.

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CHAP. 36. (7.)

MINIUM: FOR WHAT RELIGIOUS PURPOSES IT WAS USED BY THE ANCIENTS.

It is also in silver-mines that minium is found, a pigment held at the present day in very high estimation; and by the Romans in former times not only held in the highest estimation, but used for sacred purposes as well. Verrius enumerates certain authors, upon whose testimony we find it satisfactorily established that it was the custom upon festivals to colour the face of the statue of Jupiter even with minium, as well as the bodies of triumphant generals; and that it was in this guise that Camillus celebrated his triumph. We find, too, that it is through the same religious motives that it is employed at the present day for colouring the unguents used at triumphal banquets, and that it is the first duty of the censors to make a contract for painting the statue of Jupiter with this colour.

For my own part, I am quite at a loss for the origin of this usage; but it is a well-known fact, that at the present day even, minium is in great esteem with the nations of Æthiopia, their nobles being in the habit of staining the body all over with it, and this being the colour appropriated to the statues of their gods. I shall therefore use all the more diligence in enquiring into all the known facts respecting it.

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CHAP. 37.

THE DISCOVERY AND ORIGIN OF MINIUM.

Theophrastus states that, ninety years before the magistracy of Praxibulus at Athens — a date which answers to the year of our City, 439 — minium was discovered by Callias the Athenian, who was in hopes to extract gold, by submitting to the action of fire the red sand that was found in the silver-mines. This, he says, was the first discovery of minium. He states, also, that in his own time, it was already found in Spain, but of a harsh and sandy nature; as also in Colchis, upon a certain inaccessible rock there, from which it was brought down by the agency of darts. This, however, he says, was only an adulterated kind of minium, the best of all being that procured in the Cilbian Plains, above Ephesus, the sand of which has just the colour of the kermes berry. This sand, he informs us, is first ground to powder and then washed, the portion that settles at the bottom being subjected to a second washing. From this circumstance, he says, arises a difference in the article; some persons being in the habit of preparing their minium with a single washing, while with others it is more diluted. The best kind, however, he says, is that which has undergone a second washing.

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CHAP. 38.

CINNABARIS.

I am not surprised that this colour should have been held in such high esteem; for already, in the days of the Trojan War, rubrica was highly valued, as appears from the testimony of Homer, who particularly notices the ships that were coloured with it, whereas, in reference to other colours and paintings, he but rarely notices them. The Greeks call this red earth “miltos,” and give to minium the name of “cinnabaris,” and hence the error caused by the two meanings of the same word; this being properly the name given to the thick matter which issues from the dragon when crushed beneath the weight of the dying elephant, mixed with the blood of either animal, as already described. Indeed this last is the only colour that in painting gives a proper representation of blood. This cinnabaris, too, is extremely useful as an ingredient in antidotes and various medicaments. But, by Hercules ! our physicians, because minium also has the name of “cinnabaris,” use it as a substitute for the other, and so employ a poison, as we shall shortly show it to be.

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CHAP. 39.

THE EMPLOYMENT OF CINNABARIS IN PAINTING.

The ancients used to paint with cinnabaris those pictures of one colour, which are still known among us as “ monochromata.” They painted also with the minium of Ephesus: but the use of this last has been abandoned, from the vast trouble which the proper keeping of the picture entailed. And then besides, both these colours were thought to be too harsh; the consequence of which is, that painters have now adopted the use of rubrica and of sinopis, substances of which I shall make further mention in the appropriate places.

Cinnabaris is adulterated by the agency of goats’ blood, or of bruised sorb-apples. The price of genuine cinnabaris is fifty sesterces per pound.

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CHAP. 40.

THE VARIOUS KINDS OF MINIUM. THE USE MADE OF IT IN PAINTING.

According to Juba minium is also a production of Carmania, and Timagenes says that it is found in Æthiopia. But from neither of those regions is it imported to Rome, nor, indeed, from hardly any other quarter but Spain ; that of most note coming from Sisapo, a territory of Bætica, the mine of minium there forming a part of the revennes of the Roman people. Indeed there is nothing guarded with a more constant circumspection; for it is not allowable to reduce and refine the ore upon the spot, it being brought to Rome in a crude state and under seal, to the amount of about two thousand pounds per annum. At Rome, the process of washing is performed, and, in the sale of it, the price is regulated by statute; it not being allowed to exceed seventy sesterces per pound. There are numerous ways, however, of adulterating it, a source of considerable plunder to the company.

For there is, in fact, another kind of minium, found in most silver-mines as well as lead-mines, and prepared by the calcination of certain stones that are found mixed with the metallic vein — not the minerals, however, to the fluid humours of which we have given the name of quicksilver; for if those are subjected to the action of fire they will yield silver — but another kind of stone that is found with them. These barren stones, too, may be recognized by their uniform leaden colour, and it is only when in the furnace that they turn red. After being duly calcined they are pulverized, and thus form a minium of second-rate quality, known to but very few, and far inferior to the produce of the native sand that we have mentioned. It is with this substance, then, as also with syricum, that the genuine minium is adulterated in the manufactories of the company. How syricum is prepared we shall describe in the appropriate place. One motive, however, for giving an under-coat of syricum to minium, is the evident saving of expense that results therefrom. Minium, too, in another way affords a very convenient opportunity to painters for pilfering, by wash- ing their brushes, filled with the colouring matter,

every now and then. The minium of course falls to the bottom, and is thus so much gained by the thief.

Genuine minium ought to have the brilliant colour of the kermes berry; but when that of inferior quality is used for walls, the brightness of it is sure to be tarnished by the moisture, and this too, although the substance itself is a sort of metallic mildew. In the mines of Sisapo, the veins are composed exclusively of the sandy particles of minium, without the intermixture of any silver whatever; the practice being to melt it like gold. Minium is assayed by the agency of gold in a state of incandescence: if it has been adulterated, it will turn black, but if genuine, it retains its colour. I find it stated also that minium is adulterated with line; the proper mode of detecting which, is similarly to employ a sheet of red hot iron, if there should happen to be no gold at hand.

To objects painted with minium the action of the sun and moon is highly injurious. The proper method of avoiding this inconvenience, is to dry the wall, and then to apply, with a hair brush, hot Punic wax, melted with oil; after which, the varnish must be heated, with an application of gall-nuts, burnt to a red heat, till it quite perspires. This done, it must be smoothed down with rollers made of wax, and then polished with clean linen cloths, like marble, when made to shine. Persons employed in the manufactories in preparing minium protect the face with masks of loose bladder-skin, in order to avoid inhaling the dust, which is highly pernicious; the covering being at the same time sufficiently transparent to admit of being seen through.

Minium is employed also for writing in books; and the letters made with it being more distinct, even on gold or marble, it is used for the inscriptions upon tombs.

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CHAP. 41. (8.)

HYDRARGYROS. REMEDIES DERIVED FROM MINIUM.

Human industry has also discovered a method of extracting hydrargyros from the inferior minium, a substitute for quick-silver, the further mention of which was deferred, a few pages before, to the present occasion. There are two methods of preparing this substance; either by pounding minium and vinegar with a brazen pestle and mortar, or else by putting minium into flat earthen pans, covered with a lid, and then enclosed in an iron seething-pot well luted with potter's clay. A fire is then lighted under the pans, and the flame kept continually burning by the aid of the bellows; which done, the steam is carefully removed, that is found adhering to the lid, being like silver in colour, and similar to water in its fluidity. This liquid, too, is easily made to separate in globules, which, from their fluid nature, readily unite.

As it is a fact generally admitted, that minium is a poison, I look upon all the recipes given as highly dangerous which recommend its employment for medicinal purposes; with the exception, perhaps, of those cases in which it is applied to the head or abdomen, for the purpose of arresting hæmorrhage, due care being taken that it is not allowed to penetrate to the viscera, or to touch any sore. Beyond such cases as these, for my own part, I should never recommend it to be used in medicine.

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CHAP. 42.

THE METHOD OF GILDING SILVER.

At the present day silver is gilded almost exclusively by the agency of hydrargyros; and a similar method should always be employed in laying gold leaf upon copper. But the same fraud which ever shows itself so extremely ingenious in all departments of human industry, has devised a plan of substituting an inferior material, as already mentioned.

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CHAP. 43.

TOUCHSTONES FOR TESTING GOLD.

A description of gold and silver is necessarily accompanied by that of the stone known as “coticula.” In former times, according to Theophrastus, this stone was nowhere to be found, except in the river Tmolus, but at the present day it is found in numerous places. By some persons it is known as the “Heraclian,” and by others as the “Lydian” stone. It is found in pieces of moderate size, and never exceeding four inches in length by two in breadth. The side that has lain facing the sun is superior to that which has lain next to the ground. Persons of experience in these matters, when they have scraped a particle off the ore with this stone, as with a file, can tell in a moment the proportion of gold there is in it, how much silver, or how much copper; and this to a scruple, their accuracy being so marvellous that they are never mistaken.

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CHAP. 44.

THE DIFFERENT KINDS OF SILVER, AND THE MODES OF TESTING IT.

There are two kinds of silver. On placing a piece of it upon an iron fire-shovel at a white heat, if the metal remains perfectly white, it is of the best quality: if again it turns of a reddish colour, it is inferior; but if it becomes black, it is worthless. Fraud, however, has devised means of stultifying this test even; for by keeping the shovel immersed in men's urine, the piece of silver absorbs it as it burns, and so displays a fictitious whiteness. There is also a kind of test with reference to polished silver: when the human breath comes in contact with it, it should immediately be covered with steam, the cloudiness disappearing at once.

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CHAP. 45. (9.)

MIRRORS.

It is generally supposed among us that it is only the very finest silver that admits of being laminated, and so converted into mirrors. Pure silver was formerly used for the purpose, but, at the present day, this too has been corrupted by the devices of fraud. But, really, it is a very marvellous property that this metal has, of reflecting objects; a property which, it is generally agreed, results from the repercussion of the air, thrown back as it is from the metal upon the eyes. The same too is the action that takes place when we use a mirror. If, again, a thick plate of this metal is highly polished, and is rendered slightly concave, the image or object reflected is enlarged to an immense extent; so vast is the difference between a surface receiving, and throwing back the air. Even more than this-drinking-cups are now made in such a manner, as to be filled inside with numerous concave facets, like so many mirrors; so that if but one person looks into the interior, he sees reflected a whole multitude of persons.

Mirrors, too, have been invented to reflect monstrous forms; those, for instance, which have been consecrated in the Temple at Smyrna. This, however, all results from the configuration given to the metal; and it makes all the difference whether the surface has a concave form like the section of a drinking cup, or whether it is [convex] like a Thracian buckler; whether it is depressed in the middle or elevated; whether the surface has a direction transversely or obliquely; or whether it runs horizontally or vertically; the peculiar configuration of the surface which receives the shadows, causing them to undergo corresponding distortions: for, in fact, the image is nothing else but the shadow of the object collected upon the bright surface of the metal.

However, to finish our description of mirrors on the present occasion — the best, in the times of our ancestors, were those of Brundisium, composed of a mixture of stannum and copper: at a later period, however, those made of silver were preferred, Pasiteles being the first who made them, in the time of Pompeius Magnus. More

recently, a notion has arisen that the object is reflected with greater distinctness, by the application to the back of the mirror of a layer of gold.

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CHAP. 46.

EGYPTIAN SILVER.

The people of Egypt stain their silver vessels, that they may see represented in them their god Anubis; and it is the custom with them to paint, and not to chase, their silver. This usage has now passed to our own triumphal statues even; and, a truly marvellous fact, the value of silver has been enhanced by deadening its brilliancy. The following is the method adopted: with the silver are mixed two-thirds of the very finest Cyprian copper, that known as "coronarium," and a proportion of live sulphur equal to that of the silver. The whole of these are then melted in an earthen vessel well luted with potter's clay, the operation being completed when the cover becomes detached from the vessel. Silver admits also of being blackened with the yolk of a hard-boiled egg; a tint, however, which is removed by the application of vinegar and chalk.

The Triumvir Antonius alloyed the silver denarius with iron: and in spurious coin there is an alloy of copper employed. Some, again, curtail the proper weight of our denarii, the legitimate proportion being eighty-four denarii to a pound of silver. It was in consequence of these frauds that a method was devised of assaying the denarius: the law ordaining which was so much to the taste of the plebeians, that in every quarter of the City there was a full-length statue erected in honour of Marius Gratidianus. It is truly marvellous, that in this art, and in this only, the various methods of falsification should be made a study: for the sample of the false denarius is now an object of careful examination, and people absolutely buy the counterfeit coin at the price of many genuine ones!

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CHAP. 47. (10.)

INSTANCES OF IMMENSE WEALTH. PERSONS WHO HAVE POSSESSED THE GREATEST SUMS OF MONEY.

The ancients had no number whereby to express a larger sum than one hundred thousand; and hence it is that, at the present day, we reckon by multiples of that number, as, for instance, ten times one hundred thousand, and so on. For these multiplications we are indebted to usury and the use of coined money; and hence, too, the expression "æs alienum," or "another man's money," which we still use. In later times, again, the surname "Dives" was given to some: only be it known to all, that the man who first received this surname became a bankrupt and so bubbled his creditors. M. Crassus, a member of the same family, used to say that no man was rich, who could not maintain a legion upon his yearly income. He possessed in land two hundred millions of sesterces, being the richest Roman citizen next to Sylla. Nor was even this enough for him, but he must want to possess all the gold of the Parthians too! And yet, although he was the first to become memorable for his opulence — so pleasant is the task of stigmatizing this insatiate cupidity — we have known of many manumitted slaves, since his time, much more wealthy than he ever was; three for example, all at the same time, in the reign of the Emperor Claudius, Pallas, Callistus, and Narcissus.

But to omit all further mention of these men, as though they were still the rulers of the empire, let us turn to C. Cæcilius Claudius Isidorus, who, in the consulship of C. Asinius Gallus and C. Marcius Censorinus, upon the sixth day before the calends of February, declared by his will, that though he had suffered great losses through the civil wars, he was still able to leave behind him four thousand one hundred and sixteen slaves, three thousand six hundred pairs of oxen, and two hundred and fifty-seven thousand heads of other kind of cattle, besides, in ready money, sixty millions of sesterces. Upon his funeral, also, he ordered eleven hundred thousand sesterces to be expended.

And yet, supposing all these enormous riches to be added

together, how small a proportion will they bear to the wealth of Ptolemæus; the person who, according to Varro, when Pompeius was on his expedition in the countries adjoining Judæa, entertained eight thousand horsemen at his own expense, and gave a repast to one thousand guests, setting before every one of them a drinking-cup of gold, and changing these vessels at every course! And then, again, how insignificant would his wealth have been by the side of that of Pythius the Bithynian — for I here make no mention of kings, be it remarked. He it was who gave the celebrated plane-tree and vine of gold to King Darius, and who entertained at a banquet the troops of Xerxes, seven hundred and eighty-eight thousand men in all; with a promise of pay and corn for the whole of them during the next five months, on condition that one at least of his five children, who had been drawn for service, should be left to him as the solace of his old age. And yet, let any one compare the wealth of Pythius to that possessed by King Crœsus!

In the name of all that is unfortunate, what madness it is for human nature to centre its desires upon a thing that has either fallen to the lot of slaves, or else has reached no known limit in the aspirations even of kings!

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CHAP. 48.

AT WHAT PERIOD THE ROMAN PEOPLE FIRST MADE VOLUNTARY CONTRIBUTIONS.

The Roman people first began to make voluntary contributions in the consulship of Spurius Posthumius and Quintus Marcius. So abundant was money at that period, that the people assessed themselves for a contribution to L. Scipio, to defray the expenses of the games which he celebrated. As to the contribution of the sixth part of an as, for the purpose of defraying the funeral expenses of Agrippa Menenius, I look upon that to have been a mark of respect paid to him, an honour, too, that was rendered necessary by his poverty, rather than in the light of a largess.

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CHAP. 49. (11.)

INSTANCES OF LUXURY IN SILVER PLATE.

The caprice of the human mind is marvellously exemplified in the varying fashions of silver plate; the work of no individual manufactory being for any long time in vogue. At one period, the Furnian plate, at another the Clodian, and at another the Gratian, is all the rage — for we borrow the shop even at our tables. — Now again, it is embossed plate that we are in search of, and silver deeply chiselled around the marginal lines of the figures painted upon it; and now we are building up on our sideboards fresh tiers of tables for supporting the various dishes. Other articles of plate we nicely pare away, it being an object that the file may remove as much of the metal as possible.

We find the orator Calvus complaining that the saucepans are made of silver; but it has been left for us to invent a plan of covering our very carriages with chased silver, and it was in our own age that Poppæa, the wife of the Emperor Nero, ordered her favourite mules to be shod even with gold!

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CHAP. 50.

INSTANCES OF THE FRUGALITY OF THE ANCIENTS IN REFERENCE TO SILVER PLATE.

The younger Scipio Africanus left to his heir thirty-two pounds' weight of silver; the same person who, on his triumph over the Carthaginians, displayed four thousand three hundred and seventy pounds' weight of that metal. Such was the sum total of the silver possessed by the whole of the inhabitants of Carthage, that rival of Rome for the empire of the world! How many a Roman since then has surpassed her in his display of plate for a single table! After the destruction of Numantia, the same Africanus gave to his soldiers, on the day of his triumph, a largess of seven denarii each — and right worthy were they of such a general, when satisfied with such a sum! His brother, Scipio Allobrogicus, was the very first who possessed one thousand pounds' weight of silver, but Drusus Livius, when he was tribune of the people, possessed ten thousand. As to the fact that an ancient warrior, a man, too, who had enjoyed a triumph, should have incurred the notice of the censor for being in possession of five pounds' weight of silver, it is a thing that would appear quite fabulous at the present day. The same, too, with the instance of Catus Ælius, who, when consul, after being found by the Ætolian ambassadors taking his morning meal off of common earthenware, refused to receive the silver vessels which they sent him; and, indeed, was never in possession, to the last day of his life, of any silver at all, with the exception of two drinking-cups, which had been presented to him as the reward of his valour, by L. Paulus, his father-in-law, on the conquest of King Perseus.

We read, too, that the Carthaginian ambassadors declared that no people lived on more amicable terms among themselves than the Romans, for that wherever they had dined they had always met with the same silver plate. And yet, by Hercules! to my own knowledge, Pompeius Paulinus, son of a Roman of equestrian rank at Arelate, a member, too, of a family, on the paternal side, that was graced with the fur, had with him, when serving with the army, and that, too, in a

war against the most savage nations, a service of silver plate that weighed twelve thousand pounds!

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CHAP. 51.

AT WHAT PERIOD SILVER WAS FIRST USED AS AN ORNAMENT FOR COUCHES.

For this long time past, however, it has been the fashion to plate the couches of our women, as well as some of our ban- quetting-couches, entirely with silver. Carvilius Pollio, a Roman of equestrian rank, was the first, it is said, to adorn these last with silver; not, I mean, to plate them all over, nor yet to make them after the Delian pattern; the Punic fashion being the one he adopted. It was after this last pattern too, that he had them ornamented with gold as well: and it was not long after his time that silver couches came into fashion, in imitation of the couches of Delos. All this extravagance, however, was fully expiated by the civil wars of Sulla.

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CHAP. 52.

AT WHAT PERIOD SILVER CHARGERS OF ENORMOUS SIZE WERE FIRST MADE. WHEN SILVER WAS FIRST USED AS A MATERIAL FOR SIDEBOARDS. WHEN THE SIDEBOARDS CALLED TYMPANA WERE FIRST INTRODUCED.

In fact, it was but very shortly before that period that these couches were invented, as well as chargers of silver, one hundred pounds in weight: of which last, it is a well-known fact, that there were then upwards of one hundred and fifty in Rome, and that many persons were proscribed through the devices of others who were desirous to gain possession thereof. Well may our Annals be put to the blush for having to impute those civil wars to the existence of such vices as these!

Our own age, however, has waxed even stronger in this respect. In the reign of Claudius, his slave Drusillanus, surnamed Rotundus, who acted as his steward in Nearer Spain, possessed a silver charger weighing five hundred pounds, for the manufacture of which a workshop had had to be expressly built. This charger was accompanied also by eight other dishes, each two hundred and fifty pounds in weight. How many of his fellow-slaves, pray, would it have taken to introduce these dishes, or who were to be the guests served therefrom?

Cornelius Nepos says that before the victory gained by Sylla, there were but two banquetting couches adorned with silver at Rome, and that in his own recollection, silver was first used for adorning sideboards. Fenestella, who died at the end of the reign of Tiberius Cæsar, informs us that at that period sideboards, inlaid even with tortoiseshell, had come into fashion; whereas, a little before his time, they had been made of solid wood, of a round shape, and not much larger than our tables. He says, however, that when he was quite a boy, they had begun to make the sideboards square, and of different pieces of wood, or else veneered with maple or citrus: and that at a later period the fashion was introduced of overlaying the corners and the seams at the joinings with silver. The name given to them in his youth, he says, was “tympana;” and it was at this period, too, that the

chargers which had been known as “magides” by the ancients, first received the name of “lances,” from their resemblance to the scales of a balance.

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CHAP. 53.

THE ENORMOUS PRICE OF SILVER PLATE.

It is not, however, only for vast quantities of plate that there is such a rage among mankind, but even more so, if possible, for the plate of peculiar artists: and this too, to the exculpation of our own age, has long been the case. C. Gracchus possessed some silver dolphins, for which he paid five thousand sesterces per pound. Lucius Crassus, the orator, paid for two goblets chased by the hand of the artist Mentor, one hundred thousand sesterces: but he confessed that for very shame he never dared use them, as also that he had other articles of plate in his possession, for which he had paid at the rate of six thousand sesterces per pound. It was the conquest of Asia that first introduced luxury into Italy; for we find that Lucius Scipio, in his triumphal procession, exhibited one thousand four hundred pounds' weight of chased silver, with golden vessels, the weight of which amounted to one thousand five hundred pounds. This took place in the year from the foundation of the City, 565. But that which inflicted a still more severe blow upon the Roman morals, was the legacy of Asia, which King Attalus left to the state at his decease, a legacy which was even more disadvantageous than the victory of Scipio, in its results. For, upon this occasion, all scruple was entirely removed, by the eagerness which existed at Rome, for making purchases at the auction of the king's effects. This took place in the year of the City, 622, the people having learned, during the fifty-seven years that had intervened, not only to admire, but to covet even, the opulence of foreign nations. The tastes of the Roman people had received, too, an immense impulse from the conquest of Achaia, which, during this interval, in the year of the City, 608, that nothing might be wanting, had introduced both statues and pictures. The same epoch, too, that saw the birth of luxury, witnessed the downfall of Carthage; so that, by a fatal coincidence, the Roman people, at the same moment, both acquired a taste for vice and obtained a license for gratifying it.

Some, too, of the ancients sought to recommend themselves by this love of excess; for Caius Marius, after his victory over the

Cimbri, drank from a cantharus, it is said, in imitation of Father Liber; Marius, that ploughman of Arpinum, a general who had risen from the ranks.!

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CHAP. 54. (12.)

STATUES OF SILVER.

It is generally believed, but erroneously, that silver was first employed for making statues of the deified Emperor Augustus, at a period when adulation was all the fashion: for I find it stated, that in the triumph celebrated by Pompeius Magnus there was a silver statue exhibited of Pharnaces, the first king of Pontus, as also one of Mithridates Eupator, besides chariots of gold and silver.

Silver, too, has in some instances even supplanted gold; for the luxurious tastes of the female plebeians having gone so far as to adopt the use of shoe-buckles of gold, it is considered old-fashioned to wear them made of that metal. I myself, too, have seen Arellius Fuscus — the person whose name was erased from the equestrian order on a singularly calumnious charge, when his school was so thronged by our youth, attracted thither by his celebrity — wearing rings made of silver. But of what use is it to collect all these instances, when our very soldiers, holding ivory even in contempt, have the hilts of their swords made of chased silver? when, too, their scabbards are heard to jingle with their silver chains, and their belts with the plates of silver with which they are inlaid?

At the present day, too, the continence of our very pages is secured by the aid of silver: our women, when bathing, quite despise any sitting-bath that is not made of silver: while for serving up food at table, as well as for the most unseemly purposes, the same metal must be equally employed! Would that Fabricius could behold these instances of luxuriousness, the baths of our women — bathing as they do in company with the men — paved with silver to such an extent that there is not room left for the sole of the foot even! Fabricius, I say, who would allow of no general of an army having any other plate than a patera and a salt-cellar of silver. — Oh that he could see how that the rewards of valour in our day are either composed of these objects of luxury, or else are broken up to make them! Alas for the morals of our age! Fabricius puts us to the blush.

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CHAP. 55.

THE MOST REMARKABLE WORKS IN SILVER, AND THE NAMES OF THE MOST FAMOUS ARTISTS IN SILVER.

It is a remarkable fact that the art of chasing gold should have conferred no celebrity upon any person, while that of embossing silver has rendered many illustrious. The greatest renown, however, has been acquired by Mentor, of whom mention has been made already. Four pairs [of vases] were all that were ever made by him; and at the present day, not one of these, it is said, is any longer in existence, owing to the conflagrations of the Temple of Diana at Ephesus and of that in the Capitol. Varro informs us in his writings that he also was in possession of a bronze statue, the work of this artist. Next to Mentor, the most admired artists were Acra- gas, Boëthus, and Mys. Works of all these artists are still extant in the Isle of Rhodes; of Boëthus, in the Temple of Minerva, at Lindus; of Acragas, in the Temple of Father Liber, at Rhodes, consisting of cups engraved with figures in relief of Centaurs and Bacchantes; and of Mys, in the same temple, figures of Sileni and Cupids. Representations also of the chase by Acragas on drinking cups were held in high estimation.

Next to these in repute comes Calamis. Antipater too, it has been said, laid, rather than engraved, a Sleeping Satyr upon a drinking-bowl. Next to these come Stratonicus of Cyzicus, and Tauriscus: Ariston also, and Eunicus, of Mytilene are highly praised; Hecatæus also, and, about the age of Pompeius Magnus, Pasiteles, Posidonius of Ephesus, Hedystratides who engraved battle-scenes and armed warriors, and Zopyrus, who represented the Court of the Areopa- gus and the trial of Orestes, upon two cups valued at twelve thousand sesterces. There was Pytheas also, a work of whose sold at the rate of ten thousand denarii for two ounces: it was a drinking-bowl, the figures on which represented Ulysses and Diomedes stealing the Palladium. The same artist engraved also, upon some small drinking-vessels, kitchen scenes, known as “magiriscia;” of such remarkably fine workmanship and so liable to injury, that it was quite impossible

to take copies of them. Teucer too, the inlayer, enjoyed a great reputation.

All at once, however, this art became so lost in point of excellence, that at the present day ancient specimens are the only ones at all valued; and only those pieces of plate are held in esteem the designs on which are so much worn that the figures cannot be distinguished.

Silver becomes tainted by the contact of mineral waters, and of the salt exhalations from them, as in the interior of Spain, for instance.

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CHAP. 56.

SIL: THE PERSONS WHO FIRST USED IT IN PAINTING, AND THE METHOD THEY ADOPTED.

In the mines of gold and silver there are some other pigments also found, sil and cæruleum. Sil is, properly speaking, a sort of slime. The best kind is that known as Attic sil; the price of which is two denarii per pound. The next best kind is the marbled sil, the price of which is half that of the Attic kind. A third sort is the compressed sil, known to some persons as Scyric sil, it coming from the Isle of Scyros. Then, too, there is the sil of Achaia, which painters make use of for shadow-painting, and the price of which is two sesterces per pound. At a price of two asses less per pound, is sold the clear sil, which comes from Gaul. This last kind, as well as the Attic sil, is used for painting strong lights: but the marbled sil only is employed for colouring compartitions, the marble in it offering a resistance to the natural acridity of the lime. This last kind is extracted also from some mountains twenty miles distant from the City. When thus extracted, it is submitted to the action of fire; in which form it is adulterated by some, and sold for compressed sil. That it has been burnt, however, and adulterated, may be very easily detected by its acridity, and the fact that it very soon crumbles into dust.

Polygnotus and Micon were the first to employ sil in painting, but that of Attica solely. The succeeding age used this last kind for strong lights only, and employed the Scyric and Lydian kinds for shadow painting. The Lydian sil used to be bought at Sardes; but at the present day we hear nothing of it.

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CHAP. 57. (13.)

CÆRULEUM.

Cæruleum is a kind of sand. In former times there were three kinds of it; the Egyptian, which was the most esteemed of all; the Scythian, which is easily dissolved, and which produces four colours when pounded, one of a lighter blue and one of a darker blue, one of a thicker consistency and one comparatively thin; and the Cyprian, which is now preferred as a colour to the preceding. Since then, the kinds imported from Puteoli and Spain have been added to the list, this sand having of late been prepared there. Every kind, however, is submitted to a dyeing process, it being boiled with a plant used particularly for this purpose, and imbibing its juices. In other respects, the mode of preparing it is similar to that of chrysocolla. From cæruleum, too, is prepared the substance known as "lomentum," it being washed and ground for the purpose. Lomentum is of a paler tint than cæruleum; the price of it is ten denarii per pound, and that of cæruleum but eight. Cæruleum is used upon a surface of clay, for upon lime it will not hold. A more recent invention is the Vestorian cæruleum, so called from the person who first manufactured it: it is prepared from the finer parts of Egyptian cæruleum, and the price of it is eleven denarii per pound. That of Puteoli is used in a similar manner, as also for windows: it is known as "cylon."

It is not so long since that indicum was first imported to Rome, the price being seventeen denarii per pound. Painters make use of it for incisures, or in other words, the division of shadows from light. There is also a lomentum of very inferior quality, known to us as "ground" lomentum, and valued at only five asses per pound.

The mode of testing the genuineness of cæruleum, is to see whether it emits a flame, on being laid upon burning coals. One method of adulterating it is to boil dried violets in water, and then to strain the liquor through linen into Eretrian clay.

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CHAP. 58.

TWO REMEDIES DERIVED FROM CÆRULEUM.

Cæruleum has the medicinal property of acting as a detergent upon ulcers. Hence it is, that it is used as an ingredient in plasters, as also in cauteries. As to sil, it is pounded with the greatest difficulty: viewed as a medicament, it is slightly mordent and astringent, and fills up the cavities left by ulcers. To make it the more serviceable, it is burnt in earthen vessels.

The prices of things, which I have in different places annexed, vary, I am well aware, according to the locality, and experience a change almost every year: variations dependent upon the opportunities afforded for navigation, and the terms upon which the merchant may have purchased the article. It may so happen, too, that some wealthy dealer has engrossed the market, and so enhanced the price: for I am by no means forgetful of the case of Demetrius, who in the reign of the Emperor Nero was accused before the consuls by the whole community of the Seplasia. Still, however, I have thought it necessary to annex the usual price of each commodity at Rome, in order to give some idea of their relative values.

SUMMARY. — Remedies, narratives, and observations, one thousand one hundred and twenty-five.

ROMAN AUTHORS QUOTED. — Domitianus Cæsar, Junius Gracchanus, L. Piso, Verrius, M. Varro, Corvinus, Atticus Pomponius, Calvus Licinius, Cornelius Nepos, Mucianus, Bocchus, Fetialis, Fenestella, Valerius Maximus, Julius Bassus who wrote on Medicine in Greek, Sextius Niger who did the same.

FOREIGN AUTHORS QUOTED. — Theophrastus, Democritus, Juba, Timæus the historian, who wrote on Metallic Medicines, Heraclides, Andreas, Diagoras, Botrys, Archidemus, Dionysius, Aristogenes, Democles, Mnesides, Attalus the physician, Xenocrates the son of Zeno, Theomnestus, Nymphodorus, Iollas, Apollodorus, Pasiteles who wrote on Wonderful Works, Antigonus who wrote on the Toreutic art, Menæchmus who did the same, Xenocrates who did the same, Duris who did the same, Menander who wrote on

Toreutics, Heliodorus who wrote on the Votive Offerings of the Athenians, Metrodorus of Scepsis.

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BOOK XXXIV. THE NATURAL HISTORY OF METALS.

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CHAP. 1. (1.)

THE ORES OF BRASS.

WE must, in the next place, give an account of the ores of brass, a metal which, in respect of utility, is next in value; indeed the Corinthian brass comes before silver, not to say almost before gold itself. It is also, as I have stated above, the standard of monetary value; hence the terms “æra militum,” “tribuni ærarii,” “ærarium,” “obærati,” and “ære diruti.” I have already mentioned for what length of time the Roman people employed no coin except brass; and there is another ancient fact which proves that the esteem in which it was held was of equal antiquity with that of the City itself, the circumstance that the third associated body which Numa established, was that of the braziers.

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CHAP. 2.

THE DIFFERENT KINDS OF COPPER.

The ore is extracted in the mode that has been described above, and is then purified by fusion. The metal is also obtained from a coppery stone called “cadmia.” The most highly esteemed copper is procured from beyond seas: it was formerly obtained in Campania also, and at present is found in the country of the Bergomates, at the extremity of Italy. It is said to have been lately discovered also in the province of Germany.

(2.) In Cyprus, where copper was first discovered, it is also procured from another stone, which is called “chalcitis.” This, however, was afterwards considered of little value, a better kind having been found in other regions, especially that called “aurichalcum,” which was long in high request, on account of its excellent quality; but none of it has been found for this long time, the earth having been quite exhausted. The kind which was next in value was the Sallustian, procured from the Alpine district of the Centrones; but this did not last long, and was succeeded by the Livian, in Gaul. They both took their names from the owners of the mines; the former a friend of the Emperor Augustus, the latter that emperor’s wife. They soon failed, however, and in the Livian even there is now found but a very small quantity of ore. That which is at present held in the highest estimation is the Marian, likewise known as the Corduban: next to the Livian, this kind most readily absorbs cadmia, and becomes almost as excellent as aurichalcum for making sesterces and double asses, the Cyprian copper being thought good enough for the as. Thus much concerning the natural qualities of this metal.

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CHAP. 3.

THE CORINTHIAN BRASS.

The other kinds are made artificially, all of which will be described in the appropriate places, the more celebrated kinds first coming under our notice. Formerly a mixture was made of copper fused with gold and silver, and the workmanship in this metal was considered even more valuable than the material itself; but, at the present day, it is difficult to say whether the workmanship in it, or the material, is the worst. Indeed, it is wonderful, that while the value of these works has so infinitely increased, the reputation of the art itself is nearly extinct. But it would appear, that in this, as in every thing else, what was formerly done for the sake of reputation, is now undertaken for the mere purpose of gain. For whereas this art was ascribed to the gods themselves, and men of rank in all countries endeavoured to acquire fame by the practice of it, we have now so entirely lost the method of making this valuable compound by fusion, that, for this long time past, not even chance itself has assumed, in this department, the privilege which formerly belonged to art.

Next after the above compound, so celebrated in antiquity, the Corinthian metal has been the most highly esteemed. This was a compound produced by accident, when Corinth was burnt at the time of its capture. There has been a wonderful mania with many for gaining possession of this metal. It is even said, that Verres, whom M. Cicero caused to be condemned, was proscribed by Antonius, along with Cicero, for no other reason than his refusal to give up some specimens of Corinthian metal, which were in his possession. But most of these people seem to me to make a pretence of their discernment in reference to this metal, rather for the purpose of distinguishing themselves from the multitude, than from any real knowledge which they possess; and this I will briefly show.

Corinth was captured in the third year of the 158th Olympiad, being the year of the City, 608, some ages after the period when those artists flourished, who produced all the specimens of what these persons now call Corinthian metal. It is in order, therefore, to

refute this opinion, that I shall state the age when these different artists lived; for, if we reckon according to the above-mentioned era of the Olympiads, it will be easy to compare their dates with the corresponding years of our City. The only genuine Corinthian vessels, then, are those which these men of taste metamorphose, sometimes into dishes, sometimes into lamps, or even into washing-basins, without any regard to decency. They are of three kinds; the white variety, approaching very nearly to the splendour of silver, and in which that metal forms a large proportion of the compound; a second kind, in which the yellow colour of gold predominates; and a third, in which all the metals are mixed in equal proportions. Besides these, there is another mixture, the composition of which it is impossible to describe, for although it has been formed into images and statues by the hand of man, it is chance that rules in the formation of the compound. This last is highly prized for its colour, which approaches to that of liver, and it is on this account that it is called "hepatizon:" it is far inferior to the Corinthian metal, but much superior to the Æginetan and Delian, which long held the first rank.

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CHAP. 4.

THE DELIAN BRASS.

The Delian brass was the first that became famous, all the world coming to Delos to purchase it; and hence the attention paid to the manufacture of it. It was in this island that brass first obtained celebrity for the manufacture of the feet and supports of dining-couches. After some time it came to be employed for the statues of the gods, and the effigies of men and other animated beings.

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CHAP. 5.

THE ÆGINETAN BRASS.

The next most esteemed brass was the Æginetan; the island itself being rendered famous for its brass — not indeed that the metal was produced there, but because the annealing of the Æginetan manufactories was so excellent. A brazen Ox, which was taken from this is and, now stands in the Forum Bearium at Rome. This is a specimen of the Æginetan metal, as the Jupiter in the Temple of Jupiter Tonans, in the Capitol, is of the Delian. Myron used the former metal and Polycletus the latter; they were contemporaries and fellow-pupils, but there was great rivalry between them as to their materials.

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CHAP. 6. (3.)

STANDS FOR LAMPS.

Ægina was particularly famous for the manufacture of sockets only for lamp-stands, as Tarentum was for that of the branches; the most complete articles were, therefore, produced by the union of the two. There are persons, too, who are not ashamed to give for one a sum equal to the salary of a military tribune, although, as its name indicates, its only use is to hold a lighted candle. On the sale of one of these lamp-stands, Theon the public crier announced, that the purchaser must also take, as part of the lot, one Clesippus, a fuller, who was hump-backed, and in other respects, of a hideous aspect. The purchase was made by a female named Gegania, for fifty thousand sesterces. Upon her exhibiting these purchases at an entertainment which she gave, the slave, for the amusement of her guests, was brought in naked. Conceiving an infamous passion for him, she first admitted him to her bed, and finally left him all her estate. Having thus become excessively rich, he adored the lamp-stand as much as any divinity, and the story became a sort of pendant to the celebrity of the Corinthian lamp-stands. Still, however, good morals were vindicated in the end, for he erected a splendid monument to her memory, and so kept alive the eternal remembrance of the misconduct of Gegania. But although it is well known that there are no lamp-stands in existence made of the Corinthian metal, yet this name is very generally attached to them, because, in consequence of the victory of Mummius, Corinth was destroyed: at the same time, however, it should be remembered that this victory dispersed a number of bronzes which originally came from many other cities of Achaia.

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CHAP. 7.

ORNAMENTS OF THE TEMPLES MADE OF BRASS.

The ancients were in the habit of making the door-sills and even the doors of the temples of brass. I find it stated, also, that Cneius Octavius, who obtained a naval triumph over King Perseus, erected the double portico to the Flaminian Circus, which was called the "Corinthian" from the brazen capitals of the pillars. It is stated also, that an ordinance was made that the Temple of Vesta should be covered with a coating of Syracusan metal. The capitals, too, of the pillars, which were placed by M. Agrippa in the Pantheon, are made of similar metal. Even the opulence, too, of private individuals has been wrested to similar purposes. Spurius Carvilius, the quæstor, among the other charges which he brought against Camillus, accused him of having brazen doors in his house.

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CHAP. 8.

COUCHES OF BRASS.

We learn from L. Piso, that Cneius Manlius was the first who introduced brazen banquetting-couches, buffets, and tables with single feet, when he entered the City in triumph, in the year of Rome 567, after his conquests in Asia. We also learn from Antias, that the heirs of L. Crassus, the orator, sold a number of banquetting-couches adorned with brass. The tripods, which were called Delphian, because they were devoted more particularly to receiving the offerings that were presented to the Delphian Apollo, were usually made of brass: also the pendant lamps, so much admired, which were placed in the temples, or gave their light in the form of trees loaded with fruit; such as the one, for instance, in the Temple of the Palatine Apollo, which Alexander the Great, at the sacking of Thebes, brought to Cyme, and dedicated to that god.

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CHAP. 9. (4.)

WHICH WAS THE FIRST STATUE OF A GOD MADE OF BRASS AT ROME. THE ORIGIN OF STATUES, AND THE RESPECT PAID TO THEM.

But after some time the artists everywhere applied themselves to representations of the gods. I find that the first brass image, which was made at Rome, was that of Ceres; and that the expenses were defrayed out of the property that belonged to Spurius Cassius, who was put to death by his own father, for aspiring to the regal office. The practice, however, soon passed from the gods to the statues and representations of men, and this in various forms. The ancients stained their statues with bitumen, which makes it the more remarkable that they were afterwards fond of covering them with gold. I do not know whether this was a Roman invention; but it certainly has the repute of being an ancient practice at Rome.

It was not the custom in former times to give the likeness of individuals, except of such as deserved to be held in lasting remembrance on account of some illustrious deed; in the first instance, for a victory at the sacred games, and more particularly the Olympic Games, where it was the usage for the victors always to have their statues consecrated. And if any one was so fortunate as to obtain the prize there three times, his statue was made with the exact resemblance of every individual limb; from which circumstance they were called “iconicæ.” I do not know whether the first public statues were not erected by the Athenians, and in honour of Harmodius and Aristogiton, who slew the tyrant; an event which took place in the same year in which the kings were expelled from Rome. This custom, from a most praiseworthy emulation, was afterwards adopted by all other nations; so that statues were erected as ornaments in the public places of municipal towns, and the memory of individuals was thus preserved, their various honours being inscribed on the pedestals, to be read there by posterity, and not on their tombs alone. After some time, a kind of forum or public place came to be made in private houses and in our halls, the clients adopting this method of doing honour to their patrons.

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CHAP. 10. (5.)

THE DIFFERENT KINDS AND FORMS OF STATUES. STATUES AT ROME WITH CUIRASSES.

In former times the statues that were thus dedicated were clad in the toga. Naked statues also, brandishing a spear, after the manner of the youths at their gymnastic exercises, were much admired; these were called “Achillean.” The Greek practice is, not to cover any part of the body; while, on the contrary, the Roman and the military statues have the addition of a cuirass. Cæsar, the Dictator, permitted a statue with a cuirass to be erected in honour of him in his Forum. As to the statues which are made in the garb of the Luperci, they are of no older date than those which have been lately erected, covered with a cloak. Mancinus gave directions, that he should be represented in the dress which he wore when he was surrendered to the enemy. It has been remarked by some authors, that L. Attius, the poet, had a statue of himself erected in the Temple of the Muses, which was extremely large, although he himself was very short.

Equestrian statues are also held in esteem in Rome; but they are of Greek origin, no doubt. Among the Greeks, those persons only were honoured with equestrian statues who were victors on horseback in the sacred games; though afterwards the same distinction was bestowed on those who were successful in the races with chariots with two or four horses: hence the use of chariots with us in the statues of those who have triumphed. But this did not take place until a late period; and it was not until the time of the late Emperor Augustus, that we had chariots represented with six horses, as also with elephants.

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CHAP. 11.

IN HONOUR OF WHOM PUBLIC STATUES WERE FIRST ERECTED: IN HONOUR OF WHOM THEY WERE FIRST PLACED ON PILLARS: WHEN THE ROSTRA WERE FIRST ERECTED.

The custom of erecting chariots with two horses in honour of those who had discharged the office of prætor, and had passed round the Circus in a chariot, is not of ancient date. That of placing statues on pillars is older, as it was done in honour of C. Mænius, who conquered the ancient Latins, to whom the Romans by treaty gave one third of the spoil which they had obtained. It was in the same consulship also, that the "rostra" or beaks of the ships, which had been taken from the Antiates when vanquished, were fixed to the tribunal; it being the year of the City, 416. The same thing was done also by Caius Duillius, who was the first to obtain a naval triumph over the Carthaginians: his column still remains in the Forum. I am not certain whether this honour was not first conferred by the people on L. Minutius, the præfect of the markets; whose statue was erected without the Trigeminian Gate, by means of a tax of the twelfth of an as per head: the same thing, however, had been previously done by the senate, and it would have been a more distinguished honour had it not had its origin on such frivolous occasions. The statue of Attus Navius, for example, was erected before the senate-house, the pedestal of which was consumed when the senate-house itself was burnt at the funeral of Publius Clodius. The statue of Hermodorus also, the Ephesian, the interpreter of the laws which were transcribed by the Decemvirs, was erected by the public in the Comitium.

It was for a very different, and more important reason, that the statue of Horatius Cocles was erected, he having singly prevented the enemy from passing the Sublician bridge; a statue which remains to this day. I am not at all surprized, too, that statues of the Sibyl should have been erected near the Rostra, even though three in number; one of which was repaired by Sextus Pacuvius Taurus, ædile of the people, and the other two by M. Messala. I should have considered these and that of Attus Navius to have been the oldest, as having

been placed there in the time of Tarquinius Priscus, had there not been in the Capitol the statues of the preceding kings.

(6.) Among these we have the statues of Romullus and Tatius without the tunic; as also that of Camillus, near the Rostra. The equestrian statue of Marcius Tremulus, clad in the toga, stood before the Temple of the Castors; him who twice subdued the Samnites, and by the capture of Anagnia delivered the people from their tribute. Among the most ancient are those of Tullus Clœlius, Lucius Roscius, Spurius Nautius, and C. Fulcinus, near the Rostra, all of whom were assassinated by the Fidenates, when on their mission as ambassadors. It was the custom with the republic to confer this honour on those who had been unjustly put to death; such as P. Junius, also, and Titus Coruncanius, who were slain by Teuta, queen of the Illyrians. It would be wrong not to mention what is stated in the Annals, that their statues, erected in the Forum, were three feet in height; whence it would appear that such were the dimensions of these marks of honour in those times.

Nor must I forget to mention Cneius Octavius, on account of the language used by the senate. When King Antiochus said, that he would give him an answer at another time, Octavius drew a line round him with a stick, which he happened to have in his hand, and compelled him to give an answer before he allowed him to step beyond the circle. Octavius being slain while on this embassy, the senate ordered his statue to be placed in the most conspicuous spot; and that spot was the Rostra. A statue appears also to have been decreed to Taracia Caia, or Furetia, a Vestal Virgin, the same, too, to be placed wherever she might think fit; an additional honour, no less remarkable, it is thought, than the grant itself of a statue to a female. I will state her merits in the words of the Annals: “Because she had gratuitously presented to the public the field bordering on the Tiber.

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CHAP. 12.

IN HONOUR OF WHAT FOREIGNERS PUBLIC STATUES WERE ERECTED AT ROME.

I find also, that statues were erected in honour of Pythagoras and of Alcibiades, in the corners of the Comitium; in obedience to the command of the Pythian Apollo, who, in the Samnite War, had directed that statues of the bravest and the wisest of the Greeks should be erected in some conspicuous spot: and here they remained until Sylla, the Dictator, built the senate-house on the site. It is wonderful that the senate should then have preferred Pythagoras to Socrates, who, in consequence of his wisdom, had been preferred to all other men by the god himself; as, also, that they should have preferred Alcibiades for valour to so many other heroes; or, indeed, any one to Themistocles, who so greatly excelled in both qualities. The reason of the statues being raised on columns, was, that the persons represented might be elevated above other mortals; the same thing being signified by the use of arches, a new invention which had its origin among the Greeks. I am of opinion that there is no one to whom more statues were erected than to Demetrius Phalereus at Athens: for there were three hundred and sixty erected in his honour, there being reckoned at that period no more days in the year: these, however, were soon broken to pieces. The different tribes erected statues, in all the quarters of Rome, in honour of Marius Gratidianus, as already stated; but they were all thrown down by Sylla, when he entered Rome.

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CHAP. 13.

THE FIRST EQUESTRIAN STATUES PUBLICLY ERECTED AT ROME, AND IN HONOUR OF WHAT FEMALES STATUES WERE PUBLICLY ERECTED THERE.

Pedestrian statues have been, undoubtedly, for a long time in estimation at Rome: equestrian statues are, however, of considerable antiquity, and females even have participated in this honour; for the statue of Clælia is equestrian, as if it had not been thought sufficient to have her clad in the toga; and this, although statues were not decreed to Lucretia, or to Brutus, who had expelled the kings, and through both of whom Clælia had been given as a hostage. I should have thought that this statue, and that of Cocles, were the first that were erected at the public expense — for it is most likely that the statues of Attus and the Sibyl were erected by Tarquinius, and those of each of the other kings by themselves respectively — had not Piso stated that the statue of Clælia was erected by those who had been hostages with her, when they were given up by Porsena, as a mark of honour.

But Annius Fetialis states, on the other hand, that the equestrian statue, which stood opposite the Temple of Jupiter Stator, in the vestibule of the house of Tarquinius Superbus, was that of Valeria, the daughter of the consul Publicola; and that she was the only person that escaped and swam across the Tiber; the rest of the hostages that had been sent to Porsena having been destroyed by a stratagem of Tarquinius.

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CHAP. 14.

AT WHAT PERIOD ALL THE STATUES ERECTED BY PRIVATE INDIVIDUALS WERE REMOVED FROM THE PUBLIC PLACES.

We are informed by L. Piso, that when M. Æmilius and C. Popilius were consuls, for the second time, the censors, P. Cornelius Scipio and M. Popilius, caused all the statues erected round the Forum in honour of those who had borne the office of magistrates, to be removed; with the exception of those which had been placed there, either by order of the people or of the senate. The statue also which Spurius Cassius, who had aspired to the supreme authority, had erected in honour of himself, before the Temple of Tellus, was melted down by order of the censors; for even in this respect, the men of those days took precautions against ambition.

There are still extant some declamations by Cato, during his censorship, against the practice of erecting statues of women in the Roman provinces. However, he could not prevent these statues being erected at Rome even; to Cornelia, for instance, the mother of the Gracchi, and daughter of the elder Scipio Africanus. She is represented in a sitting posture, and the statue is remarkable for having no straps to the shoes. This statue, which was formerly in the public Portico of Metellus, is now in the Buildings of Octavia.

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CHAP. 15.

THE FIRST STATUES PUBLICLY ERECTED BY FOREIGNERS.

The first statue that was erected at Rome at the expense of a foreigner was that of C. Ælius, the tribune of the people, who had introduced a law against Sthennius Statilius Lucanus, for having twice attacked Thurii: on which account the inhabitants of that place presented Ælius with a statue and a golden crown. At a later period, the same people erected a statue to Fabricius, who had delivered their city from a state of siege. From time to time various nations thus placed themselves under the protection of the Romans; and all distinctions were thereby so effectually removed, that statues of Hannibal even are to be seen in three different places in that city, within the walls of which, he alone of all its enemies, had hurled his spear.

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CHAP. 16. (7.)

THAT THERE WERE STATUARIES IN ITALY ALSO AT AN EARLY PERIOD.

Various circumstances prove, that the art of making statues was commonly practised in Italy at an early period. The statue in the Cattle Market is said to have been consecrated to Hercules by Evander; it is called the triumphal Hercules, and, on the occasion of triumphal processions, is arrayed in triumphal vestments. And then besides, King Numa dedicated the statue of the two-faced Janus; a deity who is worshipped as presiding over both peace and war. The fingers, too, are so formed as to indicate three hundred and sixty-five days, or in other words, the year; thus denoting that he is the god of time and duration.

There are also Etruscan statues dispersed in various parts of the world, which beyond a doubt were originally made in Etruria. I should have supposed that these had been the statues only of divinities, had not Metrodorus of Scepsis, who had his surname from his hatred to the Roman name, reproached us with having pillaged the city of Volsinii for the sake of the two thousand statues which it contained. It appears to me a singular fact. that although the origin of statues was of such great antiquity in Italy, the images of the gods, which were consecrated to them in their temples, should have been formed either of wood or of earthenware, until the conquest of Asia, which introduced luxury among us. It will be the best plan to enlarge upon the origin of the art of expressing likenesses, when we come to speak of what the Greeks call “plastice;” for the art of modelling was prior to that of statuary. This last, however, has flourished to such an extraordinary degree, that an account of it would fill many volumes, if we were desirous of making an extensive acquaintance with the subject: but as to learning everything connected with it, who could do it?

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CHAP. 17.

THE IMMODERATE PRICES OF STATUES.

In the ædileship of M. Scaurus, there were three thousand statues erected on the stage of what was a temporary theatre only. Mummius, the conqueror of Achaia, filled the City with statues; he who at his death was destined not to leave a dowry to his daughter, for why not mention this as an apology for him? The Luculli also introduced many articles from abroad. Yet we learn from Mucianus, who was thrice consul, that there are still three thousand statues in Rhodes, and it is supposed that there are no fewer in existence at Athens, at Olympia, and at Delphi. What living mortal could enumerate them all? or of what utility would be such information? Still, however, I may, perhaps, afford amusement by giving some slight account of such of those works of art as are in any way remarkable, and stating the names of the more celebrated artists. Of each of these it would be impossible to enumerate all the productions, for Lysippus alone is said to have executed no less than fifteen hundred works of art, all of which were of such excellence that any one of them might have immortalized him. The number was ascertained by his heir, upon opening his coffers after his death, it having been his practice to lay up one golden denarius out of the sum which he had received as the price of each statue.

This art has arrived at incredible perfection, both in successfulness and in boldness of design. As a proof of successfulness, I will adduce one example, and that of a figure which represented neither god nor man. We have seen in our own time, in the Capitol, before it was last burnt by the party of Vitellius, in the shrine of Juno there, a bronze figure of a dog licking its wounds. Its miraculous excellence and its perfect truthfulness were not only proved by the circumstance of its having been consecrated there, but also by the novel kind of security that was taken for its safety; for, no sum appearing equal to its value, it was publicly enacted that the keepers of it should be answerable for its safety with their lives.

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CHAP. 18.

THE MOST CELEBRATED COLOSSAL STATUES IN THE CITY.

As to boldness of design, the examples are innumerable; for we see designed, statues of enormous bulk, known as colossal statues and equal to towers in size. Such, for instance, is the Apollo in the Capitol, which was brought by M. Lucullus from Apollonia, a city of Pontus, thirty cubits in height, and which cost five hundred talents: such, too, is the statue of Jupiter, in the Campus Martius, dedicated by the late Emperor Claudius, but which appears small in comparison from its vicinity to the Theatre of Pompeius: and such is that at Tarentum, forty cubits in height, and the work of Lysippus. It is a remarkable circumstance in this statue, that though, as it is stated, it is so nicely balanced as to be moveable by the hand, it has never been thrown down by a tempest. This indeed, the artist, it is said, has guarded against, by a column erected at a short distance from it, upon the side on which the violence of the wind required to be broken. On account, therefore, of its magnitude, and the great difficulty of moving it, Fabius Verrucosus did not touch it, when he transferred the Hercules from that place to the Capitol, where it now stands.

But that which is by far the most worthy of our admiration, is the colossal statue of the Sun, which stood formerly at Rhodes, and was the work of Chares the Lindian, a pupil of the above-named Lysippus; no less than seventy cubits in height. This statue fifty-six years after it was erected, was thrown down by an earthquake; but even as it lies, it excites our wonder and admiration. Few men can clasp the thumb in their arms, and its fingers are larger than most statues. Where the limbs are broken asunder, vast caverns are seen yawning in the interior. Within it, too, are to be seen large masses of rock, by the weight of which the artist steadied it while erecting it. It is said that it was twelve years before this statue was completed, and that three hundred talents were expended upon it; a sum raised from the engines of warfare which had been abandoned by King Demetrius, when tired of the long-protracted siege of Rhodes. In the

same city there are other colossal statues, one hundred in number; but though smaller than the one already mentioned, wherever erected, they would, any one of them, have ennobled the place. In addition to these, there are five colossal statues of the gods, which were made by Bryaxis.

Colossal statues used also to be made in Italy. At all events, we see the Tuscan Apollo, in the library of the Temple of Augustus, fifty feet in height from the toe; and it is a question whether it is more remarkable for the quality of the metal, or for the beauty of the workmanship. Spurius Carvilius also erected the statue of Jupiter which is seen in the Capitol, after he had conquered the Samnites, who fought in obedience to a most solemn oath; it being formed out of their breast-plates, greaves, and helmets, and of such large dimensions that it may be seen from the statue of Jupiter Latiaris. He made his own statue, which is at the feet of the other one, out of the filings of the metal. There are also, in the Capitol, two heads which are very much admired, and which were dedicated by the Consul P. Lentulus, one of them executed by the above-mentioned Chares, the other by Decius; but this last is so greatly excelled by the former, as to have all the appearance of being the work of one of the poorest of artists.

But all these gigantic statues of this kind have been surpassed in our own age by that of Mercury, made by Zenodotus for the city of the Arverni in Gaul, which was ten years in being completed, and the making of which cost four hundred thousand sesterces. Having given sufficient proof there of his artistic skill, he was sent for by Nero to Rome, where he made a colossal statue intended to represent that prince, one hundred and ten feet in height. In consequence, however, of the public detestation of Nero's crimes, this statue was consecrated to the Sun. We used to admire in his studio, not only the accurate likeness in the model of clay, but in the small sketches also, which served as the first foundation of the work. This statue proves that the art of fusing [precious] brass was then lost, for Nero was prepared to furnish the requisite gold and silver, and Zenodotus was inferior to none of the ancients, either as a designer or as an engraver. At the time that he was working at the statue for the Arverni, he copied for Dubius Avitus, the then governor of the province, two

drinking-cups, chased by the hand of Calamis, which had been highly prized by Germanicus Cæsar, and had been given by him to his preceptor Cassius Silanus, the uncle of Avitus; and this with such exactness, that they could scarcely be distinguished from the originals. The greater, then, the superiority of Zenodotus, the more certainly it may be concluded that the secret of fusing [precious] brass is lost.

(8.) Persons who possess what are called Corinthian bronzes, are generally so much enamoured of them, as to carry them about with them from place to place; Hortensius, the orator, for instance, who possessed a Sphinx, which he had made Verres give him, when accused. It was to this figure that Cicero alluded, in an altercation which took place at the trial: when, upon Hortensius saying that he could not understand enigmas, Cicero made answer that he ought to understand them, as he had got a Sphinx at home. The Emperor Nero, also, used to carry about with him the figure of an Amazon, of which I shall speak further hereafter; and, shortly before this, C. Cestius, a person of consular rank, had possessed a figure, which he carried with him even in battle. The tent, too, of Alexander the Great was usually supported, it is said, by statues, two of which are consecrated before the Temple of Mars Ultor, and a similar number before the Palace.

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CHAP. 19.

AN ACCOUNT OF THE MOST CELEBRATED WORKS IN BRASS, AND OF THE ARTISTS, 366 IN NUMBER.

An almost innumerable multitude of artists have been rendered famous by their statues and figures of smaller size. Before all others is Phidias, the Athenian, who executed the Jupiter at Olympia, in ivory and gold, but who also made figures in brass as well. He flourished in the eighty-third Olympiad, about the year of our City, 300. To the same age belong also his rivals Alcamenes, Critias, Nesiotes, and Hegias. Afterwards, in the eighty-seventh Olympiad, there were Agelades, Callon, and Gorgias the Laconian. In the ninetieth Olympiad there were Polycletus, Phradmon, Myron, Pythagoras, Scopas, and Perellus. Of these, Polycletus had for pupils, Argius, Asopodorus, Alexis, Aristides, Phrynon, Dinon, Athenodorus, and Demeas the Clitorian: Lycius, too, was the pupil of Myron. In the ninety-fifth Olympiad flourished Naucsydes, Dinomenes, Canachus, and Patroclus. In the hundred and second Olympiad there were Polycles, Cephisodotus, Leochares, and Hypatodorus. In the hundred and fourth Olympiad, flourished Praxiteles and Euphranor; in the hundred and seventh, Aëtion and Therimachus; in the hundred and thirteenth, Lysippus, who was the contemporary of Alexander the Great, his brother Lysistratus, Sthennis, Euphron, Eucles, Sostratus, Ion, and Silanion, who was remarkable for having acquired great celebrity without any instructor: Zeuxis was his pupil. In the hundred and twenty-first Olympiad were Eutychides, Euthycrates, Laïppus, Cephisodotus, Timarchus, and Pyromachus.

The practice of this art then ceased for some time, but revived in the hundred and fifty-sixth Olympiad, when there were some artists, who, though far inferior to those already mentioned, were still highly esteemed; Antæus, Callistratus, Polycles, Athenæus, Callixenus, Pythocles, Pythias, and Timocles.

The ages of the most celebrated artists being thus distinguished, I shall cursorily review the more eminent of them, the greater part

being mentioned in a desultory manner. The most celebrated of these artists, though born at different epochs, have joined in a trial of skill in the Amazons which they have respectively made. When these statues were dedicated in the Temple of Diana at Ephesus, it was agreed, in order to ascertain which was the best, that it should be left to the judgment of the artists themselves who were then present: upon which, it was evident that that was the best, which all the artists agreed in considering as the next best to his own. Accordingly, the first rank was assigned to Polycletus, the second to Phidias, the third to Cresilas, the fourth to Cydon, and the fifth to Phradmon.

Phidias, besides the Olympian Jupiter, which no one has ever equalled, also executed in ivory the erect statue of Minerva, which is in the Parthenon at Athens. He also made in brass, beside the Amazon above mentioned, a Minerva, of such exquisite beauty, that it received its name from its fine proportions. He also made the Cliduchus, and another Minerva, which Paulus Æmilius dedicated at Rome in the Temple of Fortune of the passing day. Also the two statues, draped with the pallium, which Catulus erected in the same temple; and a nude colossal statue. Phidias is deservedly considered to have discovered and developed the toreutic art.

Polycletus of Sicyon, the pupil of Agelades, executed the Diadumenos, the statue of an effeminate youth, and remarkable for having cost one hundred talents; as also the statue of a youth full of manly vigour, and called the Doryphoros. He also made what the artists have called the Model statue, and from which, as from a sort of standard, they study the lineaments: so that he, of all men, is thought in one work of art to have exhausted all the resources of art. He also made statues of a man using the body-scraper, and of a naked man challenging to play at dice; as also of two naked boys playing at dice, and known as the Astragalizontes; they are now in the atrium of the Emperor Titus, and it is generally considered, that there can be no work more perfect than this. He also executed a Mercury, which was formerly at Lysimachia; a Hercules Ageter, seizing his arms, which is now at Rome; and an Artemon, which has received the name of Periphoretos. Polycletus is generally considered as having attained the highest excellence in statuary, and as having perfected the toreutic art, which Phidias invented. A discovery which

was entirely his own, was the art of placing statues on one leg. It is remarked, however, by Varro, that his statues are all square-built, and made very much after the same model.

Myron of Eleutheræ, who was also the pupil of Agelades, was rendered more particularly famous by his statue of a heifer, celebrated in many well-known lines: so true is it, that most men owe their renown more to the genius of others, than to their own. He also made the figure of a dog, a Discobolus, a Perseus, the Pristæ, a Satyr admiring a flute, and a Minerva, the Delphic Pentathletes, the Pancratiastæ, and a Hercules, which is at the Circus Maximus, in the house of Pompeius Magnus. Erinna, in her poems, makes allusion to a monument which he erected to a cricket and a locust. He also executed the Apollo, which, after being taken from the Ephesians by the Triumvir Antonius, was restored by the Emperor Augustus, he having been admonished to do so in a dream. Myron appears to have been the first to give a varied development to the art, having made a greater number of designs than Polycletus, and shewn more attention to symmetry. And yet, though he was very accurate in the proportions of his figures, he has neglected to give expression; besides which, he has not treated the hair and the pubes with any greater attention than is observed in the rude figures of more ancient times.

Pythagoras of Rhegium, in Italy, excelled him in the figure of the Pancratiast which is now at Delphi, and in which he also surpassed Leontiscus. Pythagoras also executed the statue of Astylos, the runner, which is exhibited at Olympia; that of a Libyan boy holding a tablet, also in the same place; and a nude male figure holding fruit. There is at Syracuse a figure of a lame man by him: persons, when looking at it, seem to feel the very pain of his wound. He also made an Apollo, with the serpent pierced by his arrows; and a Player on the Lyre, known as the Dicæus, from the fact that, when Thebes was taken by Alexander the Great, a fugitive successfully concealed in its bosom a sum of gold. He was the first artist who gave expression to the sinews and the veins, and paid more attention to the hair.

There was also another Pythagoras, a Samian, who was originally a painter, seven of whose nude figures, in the Temple of Fortune of the passing day, and one of an aged man, are very much admired. He

is said to have resembled the last-mentioned artist so much in his features, that they could not be distinguished. Sostratus, it is said, was the pupil of Pythagoras of Rhegium, and his sister's son.

According to Duris, Lysippus the Sicyonian was not the pupil of any one, but was originally a worker in brass, and was first prompted to venture upon statuary by an answer that was given by Eupompus the painter; who, upon being asked which of his predecessors he proposed to take for his model, pointed to a crowd of men, and replied that it was Nature herself, and no artist, that he proposed to imitate. As already mentioned, Lysippus was most prolific in his works, and made more statues than any other artist. Among these, is the Man using the Body-scraper, which Marcus Agrippa had erected in front of his Warm Baths, and which wonderfully pleased the Emperor Tiberius. This prince, although in the beginning of his reign he imposed some restraint upon himself, could not resist the temptation, and had this statue removed to his bed-chamber, having substituted another for it at the baths: the people, however, were so resolutely opposed to this, that at the theatre they clamourously demanded the Apoxyomenos to be replaced; and the prince, notwithstanding his attachment to it, was obliged to restore it.

Lysippus is also celebrated for his statue of the intoxicated Female Flute-player, his dogs and huntsmen, and, more particularly, for his Chariot with the Sun, as represented by the Rhodians. He also executed a numerous series of statues of Alexander the Great, commencing from his childhood. The Emperor Nero was so delighted with his statue of the infant Alexander, that he had it gilt: this addition, however, to its value, so detracted from its artistic beauty that the gold was removed, and in this state it was looked upon as still more precious, though disfigured by the scratches and seams which remained upon it, and in which the gold was still to be seen. He also made the statue of Hephæstion, the friend of Alexander the Great, which some persons attribute to Polycletus, whereas that artist lived nearly a century before his time. Also, the statue of Alexander at the chase, now consecrated at Delphi, the figure of a Satyr, now at Athens, and the Squadron of Alexander, all of whom he represented with the greatest accuracy. This last work of art, after his conquest of Macedonia, Metellus conveyed to Rome. Lysippus

also executed chariots of various kinds. He is considered to have contributed very greatly to the art of statuary by expressing the details of the hair, and by making the head smaller than had been done by the ancients, and the body more graceful and less bulky, a method by which his statues were made to appear taller. The Latin language has no appropriate name for that "symmetry," which he so attentively observed in his new and hitherto untried method of modifying the squareness observable in the ancient statues. Indeed, it was a common saying of his, that other artists made men as they actually were, while he made them as they appeared to be. One peculiar characteristic of his work, is the finish and minuteness which are observed in even the smallest details. Lysippus left three sons, who were also his pupils, and became celebrated as artists, Laippus, Bœdas, and, more particularly, Euthycrates; though this last-named artist rivalled his father in precision rather than in elegance, and preferred scrupulous correctness to gracefulness. Nothing can be more expressive than his Hercules at Delphi, his Alexander, his Hunter at Thespiæ, and his Equestrian Combat. Equally good, too, are his statue of Trophonius, erected in the oracular cave of that divinity, his numerous chariots, his Horse with the Panniers, and his hounds.

Tisicrates, also a native of Sicyon, was a pupil of Euthycrates, but more nearly approaching the style of Lysippus; so much so, that several of his statues can scarcely be distinguished from those of Lysippus; his aged Theban, for example, his King Demetrius, and his Peucestes, who saved the life of Alexander the Great, and so rendered himself deserving of this honour.

Artists, who have transmitted these details in their works, bestow wonderful encomiums upon Telephanes, the Phocæan, a statuary but little known, they say, because he lived in Thessaly, where his works remained concealed; according to their account, however, he is quite equal to Polycletus, Myron, and Pythagoras. They more particularly commend his Larissa, his Spintharus, the pentathlete, and his Apollo. Others, however, assign another reason for his being so little known; it being owing, they think, to his having devoted himself to the studios established by Kings Xerxes and Darius.

Praxiteles, who excelled more particularly in marble, and thence

acquired his chief celebrity, also executed some very beautiful works in brass, the Rape of Proserpine, the Catagusa, a Father Liber, a figure of Drunkenness, and the celebrated Satyr, to the Greeks known as "Periboetos." He also executed the statues, which were formerly before the Temple of Good Fortune, and the Venus, which was destroyed by fire, with the Temple of that goddess, in the reign of Claudius, and was considered equal to his marble statue of Venus, so celebrated throughout the world. He also executed a Stephanusa, a Spilumene, an Œnophorus, and two figures of Harmodius and Aristogiton, who slew the tyrants; which last, having been taken away from Greece by Xerxes, were restored to the Athenians on the conquest of Persia by Alexander the Great. He also made the youthful Apollo, known as the "Sauroctonos," because he is aiming an arrow at a lizard which is stealing towards him. There are greatly admired, also, two statues of his, expressive of contrary emotions — a Matron in tears, and a Courtesan full of gaiety: this last is supposed to be a likeness of Phryne, and it is said that we can detect in her figure the love of the artist, and in the countenance of the courtesan the promised reward.

His kindness of heart, too, is witnessed by another figure; for in a chariot and horses which had been executed by Calamis, he himself made the charioteer, in order that the artist, who excelled in the representation of horses, might not be considered deficient in the human figure. This last-mentioned artist has executed other chariots also, some with four horses, and some with two; and in his horses he is always unrivalled. But that it may not be supposed that he was so greatly inferior in his human figures, it is as well to remark that his Alcmena is equal to any that was ever produced.

Alcamenes, who was a pupil of Phidias, worked in marble and executed a Pentathlete in brass, known as the "Encrinomenos." Aristides, too, who was the scholar of Polycletus, executed chariots in metal with four and two horses. The Leæna of Amphicrates is highly commended. The courtesan Leæna, who was a skilful performer on the lyre, and had so become acquainted with Harmodius and Aristogiton, submitted to be tortured till she expired, rather than betray their plot for the extermination of the tyrants. The Athenians, being desirous of honouring her memory, without at the

same time rendering homage to a courtesan, had her represented under the figure of the animal whose name she bore; and, in order to indicate the cause of the honour thus paid her, ordered the artist to represent the animal without a tongue.

Bryaxis executed in brass statues of Æsculapius and Seleucus; Bœdas a figure in adoration; Baton, an Apollo and a Juno, which are in the Temple of Concord at Rome.

Ctesilaüs executed a statue of a man fainting from his wounds, in the expression of which may be seen how little life remains; as also the Olympian Pericles, well worthy of its title: indeed, it is one of the marvellous adjuncts of this art, that it renders men who are already celebrated even more so.

Cephisodotus is the artist of an admirable Minerva, now erected in the port of Athens; as also of the altar before the Temple of Jupiter Servator, at the same place, to which, indeed, few works are comparable.

Canachus executed a nude Apollo, which is known as the "Philesian:" it is at Didymi, and is composed of bronze that was fused at Ægina. He also made a stag with it, so nicely poised on its hoofs, as to admit of a thread being passed beneath. One fore-foots, too, and the alternate hind-foot are so made as firmly to grip the base, the socket being so indented on either side, as to admit of the figure being thrown at pleasure upon alternate feet. Another work of his was the boys known as the "Celetizontes."

Chæreas made statues of Alexander the Great and of his father Philip. Desilaüs made a Doryphoros and a wounded Amazon; and Demetrius a statue of Lysimache, who was priestess of Minerva sixty-four years. This statuary also made the Minerva, which has the name of Musica, and so called because the dragons on its Gorgon's head vibrate at the sound of the lyre; also an equestrian statue of Simon, the first writer on the art of equitation. Dædalus, who is highly esteemed as a modeller in clay, made two brazen figures of youths using the body-scraper; and Dinomenes executed figures of Protesilaüs and Pythodemus the wrestler.

The statue of Alexander Paris is the work of Euphranor: it is much admired, because we recognize in it, at the same moment, all these characteristics; we see him as the umpire between the goddesses, the

paramour of Helen, and yet the slayer of Achilles. We have a Minerva, too, by Euphranor, at Rome, known as the "Catulina," and dedicated below the Capitol, by Q. Lutatius; also a figure of Good Success, holding in the right hand a patera, and in the left an ear of corn and a poppy. There is also a Latona by him, in the Temple of Concord, with the new-born infants Apollo and Diana in her arms. He also executed some brazen chariots with four and two horses, and a Cliduchus of beautiful proportions; as also two colossal statues, one representing Virtue, the other Greece; and a figure of a female lost in wonder and adoration: with statues of Alexander and Philip in chariots with four horses. Eutychides executed an emblematic figure of the Eurotas, of which it has been frequently remarked, that the work of the artist appears more flowing than the waters even of the river.

Hegias is celebrated for his Minerva and his King Pyrrhus, his youthful Celetizontes, and his statues of Castor and Pollux, before the Temple of Jupiter Tonans: Hegesias, for his Hercules, which is at our colony of Parium. Of Isidotus we have the Buthytes.

Lycius was the pupil of Myron: he made a figure representing a boy blowing a nearly extinguished fire, well worthy of his master, as also figures of the Argonauts. Leochares made a bronze representing the eagle carrying off Ganymede: the eagle has all the appearance of being sensible of the importance of his burden, and for whom he is carrying it, being careful not to injure the youth with his talons, even through the garments. He executed a figure, also, of Autolycus, who had been victorious in the contests of the Pancratium, and for whom Xenophon wrote his Symposium; the figure, also, of Jupiter Tonans in the Capitol, the most admired of all his works; and a statue of Apollo crowned with a diadem. He executed, also, a figure of Lyciscus, and one of the boy Lagon, full of the archness and low-bred cunning of the slave. Lycius also made a figure of a boy burning perfumes.

We have a young bull by Menæchmus, pressed down beneath a man's knee, with its neck bent back: this Menæch- mus has also written a treatise on his art. Naucydes is admired for a Mercury, a Discobolus, and a Man sacrificing a Ram. Naucerus made a figure of a wrestler panting for breath; Niceratus, an Æsculapius and Hygeia,

which are in the Temple of Concord at Rome. Pyromachus represented Alcibiades, managing a chariot with four horses: Polycles made a splendid statue of Hermaphroditus; Pyrrhus, statues of Hygeia and Minerva; and Phanis, who was a pupil of Lysippus, an Epithyusa.

Stypax of Cyprus acquired his celebrity by a single work, the statue of the Splanchnoptes; which represents a slave of the Olympian Pericles, roasting entrails and kindling the fire with his breath. Silanion made a statue in metal of Apollodorus, who was himself a modeller, and not only the most diligent of all in the study of this art, but a most severe criticizer of his own works, frequently breaking his statues to pieces when he had finished them, and never able to satisfy his intense passion for the art — a circumstance which procured him the surname of "the Madman." Indeed, it is this expression which he has given to his works, which represent in metal embodied anger rather than the lineaments of a human being. The Achilles, also, of Silanion is very excellent, and his Epistates exercising the Athletes. Strongylion made a figure of an Amazon, which, from the beauty of the legs, was known as the "Eucnemos," and which Nero used to have carried about with him in his travels. Strongylion was the artist, also, of a youthful figure, which was so much admired by Brutus of Philippi, that it received from him its surname.

Theodorus of Samos, who constructed the Labyrinth, cast his own statue in brass; which was greatly admired, not only for its resemblance, but for the extreme delicacy of the work. In the right hand he holds a file, and with three fingers of the left, a little model of a four-horse chariot, which has since been transferred to Præneste: it is so extremely minute, that the whole piece, both chariot and charioteer, may be covered by the wings of a fly, which he also made with it.

Xenocrates was the pupil of Ticrates, or, as some say, of Euthycrates: he surpassed them both, however, in the number of his statues, and was the author of some treatises on his art.

Several artists have represented the battles fought by Attalus and Eumenes with the Galli; Isigonus, for instance, Pyromachus, Stratonicus, and Antigonus, who also wrote some works in reference

to his art. Boëthus, although more celebrated for his works in silver, has executed a beautiful figure of a child strangling a goose. The most celebrated of all the works, of which I have here spoken, have been dedicated, for some time past, by the Emperor Vespasianus in the Temple of Peace, and other public buildings of his. They had before been forcibly carried off by Nero, and brought to Rome, and arranged by him in the reception-rooms of his Golden Palace.

In addition to these, there are several other artists, of about equal celebrity, but none of whom have produced any first-rate works; Ariston, who was principally employed in chasing silver, Callides, Ctesias, Cantharus of Sicyon, Diodorus, a pupil of Critias, Deliades, Euphorion, Eunicus, and Hecatæus, all of them chasers in silver; Lesbocles, also, Prodorus, Pythodicus, and Polygnotus, one of the most celebrated painters; also two other chasers in silver, Stratonicus, and Scymnus, a pupil of Critias.

I shall now enumerate those artists who have executed works of the same class: — Apollodorus, for example, Antrobulus, Asclepiodorus, and Aleuas, who have executed statues of philosophers. Apellas has left us some figures of females in the act of adoration; Antignotus, a Perixyomenos, and figures of the Tyrannicides, already mentioned. Antimachus and Athenodorus made some statues of females of noble birth; Aristodemus executed figures of wrestlers, two-horse chariots with the charioteers, philosophers, aged women, and a statue of King Seleucus: his Doryphoros, too, possesses his characteristic gracefulness.

There were two artists of the name of Cephisodotus: the earlier of them made a figure of Mercury nursing Father Liber when an infant; also of a man haranguing, with the hand elevated, the original of which is now unknown. The younger Cephisodotus executed statues of philosophers. Colotes, who assisted Phidias in the Olympian Jupiter, also executed statues of philosophers; the same, too, with Cleon, Cenchramis, Callicles, and Cepis. Chalcosthenes made statues of comedians and athletes. Daïppus executed a Perixyomenos. Daïphron, Democritus, and Dæmon made statues of philosophers.

Epigonus, who has attempted nearly all the above-named classes of works, has distinguished himself more particularly by his Trumpeter, and his Child in Tears, caressing its murdered mother.

The Woman in Admiration, of Eubulus, is highly praised; and so is the Man, by Eubulides, reckoning on his Fingers. Micon is admired for his athletes; Menogenes, for his four-horse chariots. Niceratus, too, who attempted every kind of work that had been executed by any other artist, made statues of Aleibiades and of his mother Demarate, who is represented sacrificing by the light of torches.

Tisicrates executed a two-horse chariot in brass, in which Piston afterwards placed the figure of a female. Piston also made the statues of Mars and Mercury, which are in the Temple of Concord at Rome. No one can commend Perillus; more cruel even than the tyrant Phalaris himself, he made for him a brazen bull, asserting that when a man was enclosed in it, and fire applied beneath, the cries of the man would resemble the roaring of a bull: however, with a cruelty in this instance marked by justice, the experiment of this torture was first tried upon himself. To such a degree did this man degrade the art of representing gods and men, an art more adapted than any other to refine the feelings! Surely so many persons had not toiled to perfect it in order to make it an instrument of torture! Hence it is that the works of Perillus are only preserved, in order that whoever sees them, may detest the hands that made them.

Sthennis made the statues of Ceres, Jupiter, and Minerva, which are now in the Temple of Concord; also figures of matrons weeping, adoring, and offering sacrifice; Simon executed figures of a dog and an archer. Stratonicus, the chaser in silver, made some figures of philosophers; and so did both of the artists named Scopas.

The following artists have made statues of athletes, armed men, hunters, and sacrificers — Baton, Euchir, Glaucides, Heliodorus, Hicanus, Leophon, Lyson, Leon, Menodorus, Myagrus, Polycrates, Polyidus, Pythocritus, Protogenes, a famous painter, whom we shall have occasion to mention hereafter; Patrocles, Pollis, Posidonius the Ephesian, who was also a celebrated chaser in silver; Periclymenus, Philon, Symenus, Timotheus, Theomnestus, Timarchides, Timon, Tisias, and Thrason.

But of all these, Callimachus is the most remarkable, on account of his surname. Being always dissatisfied with himself, and continually correcting his works, he obtained the name of "Catatexitechnos;" thus affording a memorable example of the

necessity of observing moderation even in carefulness. His Laconian Female Dancers, for instance, is a most correct performance, but one in which, by extreme correctness, he has effaced all gracefulness. It has been said, too, that Callimachus was a painter also. Cato, in his expedition against Cyprus, sold all the statues that he found there, with the exception of one of Zeno; in which case he was influenced, neither by the value of the metal nor by its excellence as a work of art, but by the fact that it was the statue of a philosopher. I only mention this circumstance casually, that an example so little followed, may be known.

While speaking of statues, there is one other that should not be omitted, although its author is unknown, that of Her- cules clothed in a tunic, the only one represented in that costume in Rome: it stands near the Rostra, and the countenance is stern and expressive of his last agonies, caused by that dress. There are three inscriptions on it; the first of which states that it had formed part of the spoil obtained by L. Lucullus the general; the second, that his son, while still a minor, dedicated in accordance with a decree of the Senate; the third, that T. Septimius Sabinus, the curule ædile, had it restored to the public from the hands of a private individual. So vast has been the rivalry caused by this statue, and so high the value set upon it.

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CHAP. 20.

THE DIFFERENT KINDS OF COPPER AND ITS COMBINATIONS. PYROPUS. CAMPANIAN COPPER.

We will now return to the different kinds of copper, and its several combinations. In Cyprian copper we have the kind known as "coronarium," and that called "regulare," both of them ductile. The former is made into thin leaves, and, after being coloured with ox-gall, is used for what has all the appearance of gilding on the coronets worn upon the stage. The same substance, if mixed with gold, in the proportion of six scruples of gold to the ounce, and reduced into thin plates, acquires a fiery red colour, and is termed "pyropus." In other mines again, they prepare the kind known as "regulare," as also that which is called "caldarium." These differ from each other in this respect, that, in the latter, the metal is only fused, and breaks when struck with the hammer, whereas the "regulare" is malleable, or ductile, as some call it, a property which belongs naturally to all the copper of Cyprus. In the case, however, of all the other mines, this difference between bar copper and cast brass is produced by artificial means. All the ores, in fact, will produce bar or malleable copper when sufficiently melted and purified by heat. Among the other kinds of copper, the palm of excellence is awarded to that of Campania, which is the most esteemed for vessels and utensils. This last is prepared several ways. At Capua it is melted upon fires made with wood, and not coals, after which it is sprinkled with cold water and cleansed through a sieve made of oak. After being thus smelted a number of times, Spanish silver-lead is added to it, in the proportion of ten pounds of lead to one hundred pounds of copper; a method by which it is rendered pliable, and made to assume that agreeable colour which is imparted to other kinds of copper by the application of oil and the action of the sun. Many parts, however, of Italy, and the provinces, produce a similar kind of metal; but there they add only eight pounds of lead, and, in consequence of the scarcity of wood, melt it several times over upon coals. It is in Gaul more particularly, where the ore is

melted between red-hot stones, that the difference is to be seen that is produced by these variations in the method of smelting. Indeed, this last method scorches the metal, and renders it black and friable. Besides, they only melt it twice; whereas, the oftener this operation is repeated, the better in quality it becomes.

(9.) It is also as well to remark that all copper fuses best when the weather is intensely cold. The proper combination for making statues and tablets is as follows: the ore is first melted; after which there is added to the molten metal one third part of second-hand copper, or in other words, copper that has been in use and bought up for the purpose. For it is a peculiarity of this metal that when it has been some time in use, and has been subject to long-continued friction, it becomes seasoned, and subdued, as it were, to a high polish. Twelve pounds and a half of silver-lead are then added to every hundred pounds of the fused metal. There is also a combination of copper, of a most delicate nature, "mould-copper," as it is called; there being added to the metal one tenth part of lead and one twentieth of silver-lead, this combination being the best adapted for taking the colour known as "Græcanicus." The last kind is that known as "ollaria," from the vessels that are made of it: in this combination three or four pounds of silver-lead are added to every hundred pounds of copper. By the addition of lead to Cyprian copper, the purple tint is produced that we see upon the drapery of statues.

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CHAP. 21.

THE METHOD OF PRESERVING COPPER.

Copper becomes covered with verdigris more quickly when cleaned than when neglected, unless it is well rubbed with oil. It is said that the best method of preserving it is with a coating of tar. The custom of making use of copper for monuments, which are intended to be perpetuated, is of very ancient date: it is upon tablets of brass that our public enactments are engraved.

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CHAP. 22. (10.)

CADMIA.

The ores of copper furnish a number of resources that are employed in medicine; indeed, all kinds of ulcers are healed thereby with great rapidity. Of these, however, the most useful is cadmia. This substance is formed artificially, beyond a doubt, in the furnaces, also, where they smelt silver, but it is whiter and not so heavy, and by no means to be compared with that from copper. There are several kinds of it. For, as the mineral itself, from which it is prepared artificially, so necessary in fusing copper ore, and so useful in medicine, has the name of "cadmia," so also is it found in the smelting-furnaces, where it receives other names, according to the way in which it is formed. By the action of the flame and the blast, the more attenuated parts of the metal are separated, and become attached, in proportion to their lightness, to the arched top and sides of the furnace. These flakes are the thinnest near the exterior opening of the furnace, where the flame finds a vent, the substance being called "capnitis;" from its burnt appearance and its extreme lightness it resembles white ashes. The best is that which is found in the interior, hanging from the arches of the chimney, and from its form and position named "botryitis." It is heavier than the first-mentioned kind, but lighter than those which follow. It is of two different colours: the least valuable is ash-coloured, the better kind being red, friable, and extremely useful as a remedy for affections of the eyes.

A third kind of cadmia is that found on the sides of the furnace, and which, in consequence of its weight, could not reach the arched vaults of the chimney. This species is called "placitis," in reference to its solid appearance, it presenting a plane surface more like a solid crust than pumice, and mottled within. Its great use is, for the cure of itch-scab, and for making wounds cicatrize. Of this last there are two varieties, the "onychitis," which is almost entirely blue on the exterior, and spotted like an onyx within; and the "ostracitis," which is quite black and more dirty than the others, but particularly useful for healing wounds. All the species of cadmia are of the best quality

from the furnaces of Cyprus. When used in medicine it is heated a second time upon a fire of pure charcoal, and when duly incinerated, is quenched in Aminean wine, if required for making plasters, but in vinegar, if wanted for the cure of itch-scab. Some persons first pound it, and then burn it in earthen pots; which done, they wash it in mortars and then dry it.

Nymphodorus recommends that the most heavy and dense pieces of mineral cadmia that can be procured, should be burnt upon hot coals and quenched in Chian wine; after which, it must be pounded and then sifted through a linen cloth. It is then pulverized in a mortar and macerated in rain water, the sediment being again pounded until it is reduced to the consistency of ceruse, and presents no grittiness to the teeth. Iollas recommends the same process; except that he selects the purest specimens of native cadmia.

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CHAP. 23.

FIFTEEN REMEDIES DERIVED FROM CADMIA. TEN MEDICINAL EFFECTS OF CALCINED COPPER.

Cadmia acts as a desiccative, heals wounds, arrests discharges, acts detergently upon webs and foul incrustations of the eyes, removes eruptions, and produces, in fact, all the good effects which we shall have occasion to mention when speaking of lead. Copper too, itself, when calcined, is employed for all these purposes; in addition to which it is used for white spots and cicatrizations upon the eyes. Mixed with milk, it is curative also of ulcers upon the eyes; for which purpose, the people in Egypt make a kind of eye-salve by grinding it upon whet stones. Taken with honey, it acts as an emetic. For these purposes, Cyprian copper is calcined in unbaked earthen pots, with an equal quantity of sulphur; the apertures of the vessel being well luted, and it being left in the furnace until the vessel itself has become completely hardened. Some persons add salt, and others substitute alum for sulphur; others, again, add nothing, but merely sprinkle the copper with vinegar. When calcined, it is pounded in a mortar of Thebaic stone, after which it is washed with rain water, and then pounded with a large quantity of water, and left to settle. This process is repeated until the deposit has gained the appearance of minium; after which it is dried in the sun, and put by for keeping in a box made of copper.

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CHAP. 24. (11.)

THE SCORIA OF COPPER.

The scoria, too, of copper is washed in the same manner; but the action of it is less efficacious than that of copper itself. The flower, too, of copper is also used in medicine; a substance which is procured by fusing copper, and then removing it into another furnace, where the repeated action of the bellows makes the metal separate into small scales, like the husks of millet, and known as "flower of copper." These scales are also separated, when the cakes of metal are plunged into water: they become red, too, like the scales of copper known as "lepis," by means of which the genuine flower of copper is adulterated, it being also sold under that name. This last is made by hammering nails that are forged from the cakes of metal. All these processes are principally carried on in the furnaces of Cyprus; the great difference between these substances being, that this lepis is detached from the cakes by hammering, whereas the flower falls off spontaneously.

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CHAP. 25.

STOMOMA OF COPPER; FORTY-SEVEN REMEDIES.

There is another finer kind of scale which is detached from the surface of the metal, like a very fine down, and known as "stomoma." But of all these substances, and even of their names, the physicians, if I may venture so to say, are quite ignorant, as appears by the names they give them; so unacquainted are they with the preparation of medicaments, a thing that was formerly considered the most essential part of their profession. At the present day, whenever they happen to find a book of recipes, if they wish to make any composition from these substances, or, in other words, to make trial of the prescription at the expense of their unhappy patients, they trust entirely to the druggists, who spoil everything by their fraudulent adulterations. For this long time past, they have even purchased their plasters and eye-salves ready made, and the consequence is, that the spoiled or adulterated wares in the druggists' shops are thus got rid of.

Both lepis and flower of copper are calcined in shallow earthen or brazen pans; after which they are washed, as described above, and employed for the same purposes; in addition to which, they are used for excrescences in the nostrils and in the anus, as also for dullness of the hearing, being forcibly blown into the ears through a tube. Incorporated with meal, they are applied to swellings of the uvula, and, with honey, to swellings of the tonsils. The scales prepared from white copper are much less efficacious than those from Cyprian copper. Sometimes they first macerate the nails and cakes of copper in a boy's urine; and in some instances, they pound the scales, when detached, and wash them in rain water. They are then given to dropsical patients, in doses of two drachmæ, with one semisextarius of honied wine: they are also made into a liniment with fine flour.

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CHAP. 26.

VERDIGRIS; EIGHTEEN REMEDIES.

Verdigris is also applied to many purposes, and is prepared in numerous ways. Sometimes it is detached already formed, from the mineral from which copper is smelted: and sometimes it is made by piercing holes in white copper, and suspending it over strong vinegar in casks, which are closed with covers; it being much superior if scales of copper are used for the purpose. Some persons plunge vessels themselves, made of white copper, into earthen pots filled with vinegar, and scrape them at the end of ten days. Others, again, cover the vessels with husks of grapes, and scrape them in the same way, at the end of ten days. Others sprinkle vinegar upon copper filings, and stir them frequently with a spatula in the course of the day, until they are completely dissolved. Others prefer triturating these filings with vinegar in a brazen mortar: but the most expeditious method of all is to add to the vinegar shavings of coronet copper. Rhodian verdigris, more particularly, is adulterated with pounded marble; some persons use pumice-stone or gum.

The adulteration, however, which is the most difficult to detect, is made with copperas; the other sophistications being detected by the crackling of the substance when bitten with the teeth. The best mode of testing it is by using an iron fire-shovel; for when thus subjected to the fire, if pure, the verdigris retains its colour, but if mixed with copperas, it becomes red. The fraud may also be detected by using a leaf of papyrus, which has been steeped in an infusion of nut-galls; for it becomes black immediately upon the genuine verdigris being applied. It may also be detected by the eye; the green colour being unpleasant to the sight. But whether it is pure or adulterated, the best method is first to wash and dry it, and then to burn it in a new earthen vessel, turning it over until it is reduced to an ash; after which it is pounded and put by for use. Some persons calcine it in raw earthen vessels, until the earthenware becomes thoroughly baked: others again add to it male frankincense. Verdigris is washed, too, in the same manner as cadmia.

It affords a most useful ingredient for eye-salves, and from its mordent action is highly beneficial for watery humours of the eyes. It is necessary, however, to wash the part with warm water, applied with a fine sponge, until its mordency is no longer felt.

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CHAP. 27.

HIERACIUM.

“Hieracium” is the name given to an eye-salve, which is essentially composed of the following ingredients; four ounces of sal ammoniac, two of Cyprian verdigris, the same quantity of the kind of copperas which is called “chalcanthum,” one ounce of misy and six of saffron; all these substances being pounded together with Thasian vinegar and made up into pills. It is an excellent remedy for incipient glaucoma and cataract, as also for films upon the eyes, eruptions, albugo, and diseases of the eye-lids. Verdigris, in a crude state, is also used as an ingredient in plasters for wounds. In combination with oil, it is wonderfully efficacious for ulcerations of the mouth and gums, and for sore lips. Used in the form of a cerate, it acts detergently upon ulcers, and promotes their cicatrization. Verdigris also consumes the callosities of fistulas and excrescences about the anus, either used by itself, applied with sal ammoniac, or inserted in the fistula in the form of a salve. The same substance, kneaded with one third part of resin of turpentine, removes leprosy.

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CHAP. 28. (12.)

SCOLEX OF COPPER; EIGHTEEN REMEDIES.

There is another kind of verdigris also, which is called “scolex.” It is prepared by triturating in a mortar of Cyprian copper, alum and salt, or an equal quantity of nitre, with the very strongest white vinegar. This preparation is only made during the hottest days of the year, about the rising of the Dog-star. The whole is triturated until it becomes green, and assumes the appearance of small worms, to which it owes its name. This repulsive form is corrected by mixing the urine of a young child, with twice the quantity of vinegar. Scolex is used for the same medicinal purposes as santerna, which we have described as being used for soldering gold, and they have, both of them, the same properties as verdigris. Native scolex is also procured by scraping the copper ore of which we are about to speak.

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CHAP. 29.

CHALCITIS: SEVEN REMEDIES.

Chalcitis is the name of a mineral, from which, as well as cadmia, copper is extracted by heat. It differs from cadmia in this respect, that this last is procured from beds below the surface, while chalcitis is detached from rocks that are exposed to the air. Chalcitis also becomes immediately friable, being naturally so soft as to have the appearance of a compressed mass of down. There is also this other distinction between them, that chalcitis is a composition of three other substances, copper, misy, and sory, of which last we shall speak in their appropriate places. The veins of copper which it contains are oblong. The most approved kind is of the colour of honey; it is streaked with fine sinuous veins, and is friable and not stony. It is generally thought to be most valuable when fresh, as, when old, it becomes converted into sory. It is highly useful for removing fleshy excrescences in ulcers, for arresting hæmorrhage, and, in the form of a powder, for acting as- tringently upon the gums, the uvula, and the tonsillary glands. It is applied in wool, as a pessary, for affections of the uterus; and with leek juice it is formed into plasters for diseases of the genitals. This substance is macerated for forty days in vinegar, in an earthen vessel luted with dung; after which it acquires a saffron colour. When this composition is mixed with an equal proportion of cadmia, it forms the medicament known as “psoricon.” If two parts of chalcitis are combined with one of cadmia, the medicament becomes more active; and it is rendered still more powerful if vinegar is used instead of wine. For all these purposes, calcined chalcitis is the most efficacious.

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CHAP. 30.

SORY: THREE REMEDIES.

The sory of Egypt is the most esteemed, being considered much superior to that of Cyprus, Spain, and Africa; although some prefer the sory from Cyprus for affections of the eyes. But from whatever place it comes, the best is that which has the strongest odour, and which, when triturated, becomes greasy, black, and spongy. It is a substance so unpleasant to the stomach, that some persons are made sick merely by its smell. This is the case more particularly with the sory from Egypt. That from other countries, by trituration, acquires the lustre of misy, and is of a more gritty consistency. Held in the mouth, and used as a collutory, it is good for toothache. It is also useful for malignant ulcers of a serpiginous nature. It is calcined upon charcoal, like chalcitis.

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CHAP. 3

MISY: THIRTEEN REMEDIES.

Some persons have stated, that misy is formed by the calcination of the mineral, in trenches; its fine yellow powder becoming mixed with the ashes of the burnt fire-wood. The fact is, however, that though obtained from the mineral, it is already formed, and in compact masses, which require force to detach them. The best is that which comes from the manufactories of Cyprus, its characteristics being, that when broken, it sparkles like gold, and when triturated, it presents a sandy or earthy appearance, like chalcitis. Misy is used in the process of refining gold. Mixed with oil of roses, it is used as an injection for suppurations of the ears, and, in combination with wool, it is applied to ulcers of the head. It also removes inveterate granulations of the eye-lids, and is particularly useful for affections of the tonsils, quinsy, and suppurations. For these maladies, sixteen drachmæ should be mixed with one semisextarius of vinegar, and boiled with the addition of some honey, until it becomes of a viscous consistency; in which state it is applicable to the different purposes above mentioned. When its action is wanted to be modified, a sprinkling of honey is added. A fomentation of misy and vinegar removes the callosities of fistulous ulcers; it also enters into the composition of eye-salves. It arrests hæmorrhage, prevents the spreading of serpiginous and putrid ulcers, and consumes fleshy excrescences. It is particularly useful for diseases of the male generative organs, and acts as a check upon menstruation.

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CHAP. 32.

CHALCANTHUM, OR SHOEMAKERS' BLACK: SIXTEEN REMEDIES.

The Greeks, by the name which they have given to it, have indicated the relation between shoemakers' black and copper; for they call it "chalcanthum." Indeed there is no substance so singular in its nature. It is prepared in Spain, from the water of wells or pits which contain it in dissolution. This water is boiled with an equal quantity of pure water, and is then poured into large wooden reservoirs. Across these reservoirs there are a number of immovable beams, to which cords are fastened, and then sunk into the water beneath by means of stones; upon which, a slimy sediment attaches itself to the cords, in drops of a vitreous appearance, somewhat resembling a bunch of grapes. Upon being removed, it is dried for thirty days. It is of an azure colour, and of a brilliant lustre, and is often taken for glass. When dissolved, it forms the black dye that is used for colouring leather.

Chalcanthum is also prepared in various other ways: the earth which contains it being sometimes excavated into trenches, from the sides of which globules exude, which become concrete when exposed to the action of the winter frosts. This kind is called "stalagmia," and there is none more pure. When its colour is nearly white, with a slight tinge of violet, it is called "lonchoton." It is also prepared in pans hollowed out in the rocks; the rain water carrying the slime into them, where it settles and becomes hardened. It is also formed in the same way in which we prepare salt; the intense heat of the sun separating the fresh water from it. Hence it is that some distinguish two kinds of chalcanthum, the fossil and the artificial; the latter being paler than the former, and as much inferior to it in quality as it is in colour.

The chalcitis which comes from Cyprus is the most highly esteemed for the purposes of medicine, being taken in doses of one drachma with honey, as an expellent of intestinal worms. Diluted and injected into the nostrils, it acts detergently upon the brain, and, taken with honey or with hydromel, it acts as a purgative upon the

stomach. It removes granulations upon the eye-lids, and is good for pains and films upon the eyes; it is curative also of ulcerations of the mouth. It arrests bleeding at the nostrils, and hæmorrhoidal discharges. In combination with seed of hyoscyamus, it brings away splinters of broken bones. Applied to the forehead with a sponge, it acts as a check upon defluxions of the eyes. Made up into plasters, it is very efficacious as a detergent for sores and fleshy excrescences in ulcers. The decoction of it, by the contact solely, is curative of swellings of the uvula. It is laid with linseed upon plasters which are used for relieving pains. The whitish kind is preferred to the violet in one instance only, for the purpose of being blown into the ears, through a tube, to relieve deafness. Applied topically by itself, it heals wounds; but it leaves a discoloration upon the scars. It has been lately discovered, that if it is sprinkled upon the mouths of bears and lions in the arena, its astringent action is so powerful as to deprive the animals of the power of biting.

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CHAP. 33. (13.)

POMPHOLYX.

The substances called pompholyx and spodos are also found in the furnaces of copper-smelting works; the difference between them being, that pompholyx is disengaged by washing, while spodos is not washed. Some persons have called the part which is white and very light “pompholyx,” and say that it is the ashes of copper and cadmia; whereas spodos is darker and heavier, being a substance scraped from the walls of the furnace, mixed with extinguished sparks from the metal, and sometimes with the residue of coals. When vinegar is combined with it, pompholyx emits a coppery smell, and if it is touched with the tongue, the taste is most abominable. It is useful as an ingredient in ophthalmic preparations for all diseases of the eyes, as also for all the purposes for which spodos is used; this last only differing from it in its action being less powerful. It is also used for plasters, when required to be gently cooling and desiccative. For all these purposes it is more efficacious when it has been moistened with wine

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CHAP. 34.

SPODOS; FIVE REMEDIES.

The Cyprian spodos is the best. It is formed by fusing cadmia with copper ore. This substance, which is the lightest part of the metal disengaged by fusion, escapes from the furnace, and adheres to the roof, being distinguished from the soot by the whiteness of its colour. Such parts of it as are less white are indicative of incomplete combustion, and it is this which some persons call "pompholyx." Such portions of it as are of a more reddish colour are possessed of a more energetic power, and are found to be so corrosive, that if it touches the eyes, while being washed, it will cause blindness. There is also a spodos of a honey colour, an indication that it contains a large proportion of copper. All the different kinds, however, are improved by washing; it being first skimmed with a feather, and afterwards submitted to a more substantial washing, the harder grains being removed with the finger. That, too, which has been washed with wine is more modified in its effects; there being also some difference according to the kind of wine that is used. When it has been washed with weak wine the spodos is considered not so beneficial as an ingredient in medicaments for the eyes; but the same kind of preparation is more efficacious for running sores, and for ulcers of the mouth attended with a discharge of matter, as well as in all those remedies which are used for gangrene.

There is also a kind of spodos, called "lauriotis," which is made in the furnaces where silver is smelted. The kind, however, that is best for the eyes, it is said, is that produced in the furnaces for smelting gold. Indeed there is no department of art in which the ingenuity of man is more to be admired; for it has discovered among the very commonest objects, a substance that is in every way possessed of similar properties.

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CHAP. 35.

FIFTEEN VARIETIES OF ANTISPODOS.

The substance called “antispodos” is produced from the ashes of the fig-tree or wild fig, or of leaves of myrtle, together with the more tender shoots of the branches. The leaves, too, of the wild olive furnish it, the cultivated olive, the quince-tree, and the lentisk; unripe mulberries also, before they have changed their colour, dried in the sun; and the foliage of the box, pseudo-cypirus, bramble, terebinth and œnanthe. The same virtues have also been found in the ashes of bull-glue and of linen cloth. All these substances are burnt in a pot of raw earth, which is heated in a furnace, until the earthenware is thoroughly baked.

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CHAP. 36.

SMEGMA.

In the copper forges also smegma is prepared. When the metal is liquefied and thoroughly smelted, charcoal is added to it and gradually kindled; after which, upon it being suddenly acted upon by a powerful pair of bellows, a substance is disengaged like a sort of copper chaff. The floor on which it is received ought to be prepared with a stratum of coal-dust.

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CHAP. 37.

DIPHRYX.

There is another product of these furnaces, which is easily distinguished from smegma, and which the Greeks call “diphryx,” from its being twice calcined. This substance is prepared from three different sources. It is prepared, they say, from a mineral pyrites, which is heated in the furnace until it is converted by calcination into a red earth. It is also made in Cyprus, from a slimy substance extracted from a certain cavern there, which is first dried and then gradually heated, by a fire made of twigs. A third way of making it, is from the residue in the copper-furnaces that falls to the bottom. The difference between the component parts of the ore is this; the copper itself runs into the receivers, the scoriæ make their escape from the furnace, the flower becomes sublimated, and the diphryx remains behind.

Some say that there are certain globules in the ore, while being smelted, which become soldered together; and that the rest of the metal is fused around it, the mass itself not becoming liquefied, unless it is transferred to another furnace, and forming a sort of knot, as it were, in the metal. That which remains after the fusion, they say, is called “diphryx.” Its use in medicine is similar to that of the substances mentioned above; it is desiccative, removes morbid excrescenses, and acts as a detergent. It is tested by placing it on the tongue, which ought to be instantly parched by it, a coppery flavour being perceptible.

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CHAP. 38.

PARTICULARS RELATIVE TO THE SERVILIAN TRIENS.

We must not neglect to mention one other very remarkable fact relative to copper. The Servilian family, so illustrious in our annals, nourishes with gold and silver a copper triens, which devours them both. The origin and nature of this coin is to me incomprehensible; but I will quote the very words of the story, as given by old Messala himself— “The family of the Servilii is in possession of a sacred triens, to which they offer every year a sacrifice, with the greatest care and magnificence; the triens itself, they say, appears sometimes to increase in size and sometimes to diminish; changes which indicate the coming advancement or decadence of the family.”

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CHAP. 39. (14).

IRON ORES.

Next to copper we must give an account of the metal known as iron, at the same time the most useful and the most fatal instrument in the hand of mankind. For by the aid of iron we lay open the ground, we plant trees, we prepare our vineyard-trees, and we force our vines each year to resume their youthful state, by cutting away their decayed branches. It is by the aid of iron that we construct houses, cleave rocks, and perform so many other useful offices of life. But it is with iron also that wars, murders, and robberies are effected, and this, not only hand to hand, but from a distance even, by the aid of missiles and winged weapons, now launched from engines, now hurled by the human arm, and now furnished with feathery wings. This last I regard as the most criminal artifice that has been devised by the human mind; for, as if to bring death upon man with still greater rapidity, we have given wings to iron and taught it to fly. Let us there- fore acquit Nature of a charge that here belongs to man himself.

Indeed there have been some instances in which it has been proved that iron might be solely used for innocent purposes. In the treaty which Porsena granted to the Roman people, after the expulsion of the kings, we find it expressly stipulated, that iron shall be only employed for the cultivation of the fields; and our oldest authors inform us, that in those days it was considered unsafe to write with an iron pen. There is an edict extant, published in the third consulship of Pompeius Magnus, during the tumults that ensued upon the death of Clodius, prohibiting any weapon from being retained in the City.

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CHAP. 40.

STATUES OF IRON; CHASED WORKS IN IRON.

Still, however, human industry has not failed to employ iron for perpetuating the honours of more civilized life. The artist Aristonidas, wishing to express the fury of Athamas subsiding into repentance, after he had thrown his son Learchus from the rock, blended copper and iron, in order that the blush of shame might be more exactly expressed, by the rust of the iron making its appearance through the shining substance of the copper; a statue which still exists at Rhodes. There is also, in the same city, a Hercules of iron, executed by Alcon, the endurance displayed in his labours by the god having suggested the idea. We see too, at Rome, cups of iron consecrated in the Temple of Mars the Avenger, Nature, in conformity with her usual benevolence, has limited the power of iron, by inflicting upon it the punishment of rust; and has thus displayed her usual foresight in rendering nothing in existence more perishable, than the substance which brings the greatest dangers upon perishable mortality.

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CHAP. 41.

THE DIFFERENT KINDS OF IRON, AND THE MODE OF TEMPERING IT.

Iron ores are to be found almost everywhere; for they exist even in the Italian island of Ilva, being easily distinguished by the ferruginous colour of the earth. The method of working the ore is the same as that employed in the case of copper. In Cappadocia, however, it is peculiarly questionable whether this metal is a present due to the water or to the earth; because, when the latter has been saturated with the water of a certain river, it yields, and then only, an iron that may be obtained by smelting.

There are numerous varieties of iron ore; the chief causes of which arise from differences in the soil and in the climate. Some earths produce a metal that is soft, and nearly akin to lead; others an iron that is brittle and coppery, the use of which must be particularly avoided in making wheels or nails, the former kind being better for these purposes. There is another kind, again, which is only esteemed when cut into short lengths, and is used for making hobnails; and another which is more particularly liable to rust. All these varieties are known by the name of "strictura," an appellation which is not used with reference to the other metals, and is derived from the steel that is used for giving an edge. There is a great difference, too, in the smelting; some kinds producing knurrs of metal, which are especially adapted for hardening into steel, or else, prepared in another manner, for making thick anvils or heads of hammers. But the main difference results from the quality of the water into which the red-hot metal is plunged from time to time. The water, which is in some places better for this purpose than in others, has quite ennobled some localities for the excellence of their iron, Bilbilis, for example, and Turiasso in Spain, and Comum in Italy; and this, although there are no iron mines in these spots.

But of all the different kinds of iron, the palm of excellence is awarded to that which is made by the Seres,who send it to us with their tissues and skins; next to which, in quality, is the Parthian iron. Indeed, none of the other kinds of iron are made of the pure hard

metal, a softer alloy being welded with them all. In our part of the world, a vein of ore is occasionally found to yield a metal of this high quality, as in Noricum for instance; but, in other cases, it derives its value from the mode of working it, as at Sulmo, for example, a result owing to the nature of its water, as already stated. It is to be observed also, that in giving an edge to iron, there is a great difference between oil-whetstones and water-whetstones, the use of oil producing a much finer edge. It is a remarkable fact, that when the ore is fused, the metal becomes liquefied like water, and afterwards acquires a spongy, brittle texture. It is the practice to quench smaller articles made of iron with oil, lest by being hardened in water they should be rendered brittle. Human blood revenges itself upon iron; for if the metal has been once touched by this blood it is much more apt to become rusty.

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CHAP. 42.

THE METAL CALLED LIVE IRON.

We shall speak of the loadstone in its proper place, and of the sympathy which it has with iron. This is the only metal that acquires the properties of that stone, retaining them for a length of time, and attracting other iron, so that we may sometimes see a whole chain formed of these rings. The lower classes, in their ignorance, call this "live iron," and the wounds that are made by it are much more severe. This mineral is also found in Cantabria, not in continuous strata, like the genuine loadstone, but in scattered fragments, which they call "bullationes." I do not know whether this species of ore is proper also for the fusion of glass, as no one has hitherto tried it; but it certainly imparts the same property as the magnet to iron. The architect Timochares began to erect a vaulted roof of loadstone, in the Temple of Arsinoë, at Alexandria, in order that the iron statue of that princess might have the appearance of hanging suspended in the air: his death, however, and that of King Ptolemæus, who had ordered this monument to be erected in honour of his sister, prevented the completion of the project.

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CHAP. 43. (15.)

METHODS OF PREVENTING RUST.

Of all metals, the ores of iron are found in the greatest abundance. In the maritime parts of Cantabria which are washed by the Ocean, there is a steep and lofty mountain, which, however incredible it may appear, is entirely composed of this metal, as already stated in our description of the parts bordering upon the Ocean

Iron which has been acted upon by fire is spoiled, unless it is forged with the hammer. It is not in a fit state for being hammered when it is red-hot, nor, indeed, until it has begun to assume a white heat. By sprinkling vinegar or alum upon it, it acquires the appearance of copper. It is protected from rust by an application of ceruse, gypsum, and tar; a property of iron known by the Greeks as "antipathia." Some pretend, too, that this may be ensured by the performance of certain religious ceremonies, and that there is in existence at the city of Zeugma, upon the Euphrates, an iron chain, by means of which Alexander the Great constructed a bridge across the river; the links of which that have been replaced are attacked with rust, while the original links are totally exempt from it.

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CHAP. 44.

SEVEN REMEDIES DERIVED FROM IRON.

Iron is employed in medicine for other purposes besides that of making incisions. For if a circle is traced with iron, or a pointed weapon is carried three times round them, it will preserve both infant and adult from all noxious influences: if nails, too, that have been extracted from a tomb, are driven into the threshold of a door, they will prevent night-mare. A slight puncture with the point of a weapon, with which a man has been wounded, will relieve sudden pains, attended with stitches in the sides or chest. Some affections are cured by cauterization with red-hot iron, the bite of the mad dog more particularly; for even if the malady has been fully developed, and hydrophobia has made its appearance, the patient is instantly relieved on the wound being cauterized. Water in which iron has been plunged at a white heat, is useful, as a potion, in many diseases, dysentery more particularly.

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CHAP. 45.

FOURTEEN REMEDIES DERIVED FROM RUST.

Rust itself, too, is classed among the remedial substances; for it was by means of it that Achilles cured Telephus, it is said, whether it was an iron weapon or a brazen one that he used for the purpose. So it is, however, that he is represented in paintings detaching the rust with his sword. The rust of iron is usually obtained for these purposes by scraping old nails with a piece of moistened iron. It has the effect of uniting wounds, and is possessed of certain desiccative and astringent properties. Applied in the form of a liniment, it is curative of alopecy. Mixed with wax and myrtle-oil, it is applied to granulations of the eyelids, and pustules in all parts of the body, with vinegar it is used for the cure of erysipelas; and, applied with lint, it is curative of itch, whitlows on the fingers, and hang-nails. Used as a pessary with wool, it arrests female discharges. Diluted in wine, and kneaded with myrrh, it is applied to recent wounds, and, with vinegar, to condylomatous6 swellings. Employed in the form of a liniment, it alleviates gout.

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CHAP. 46.

SEVENTEEN REMEDIES DERIVED FROM THE SCALES OF IRON. HYGREMPLASTRUM.

The scales of iron, which are procured from a fine point or a sharp edge, are also made use of, being very similar in effect to rust, but more active; for which reason they are employed for defluxions of the eyes. They arrest bleeding, also, more particularly from wounds inflicted with iron; and they act as a check upon female discharges. They are applied, too, for diseases of the spleen, and they arrest hæmorrhoidal swellings and serpiginous ulcers. They are useful also for affections of the eyelids, gradually applied in the form of a fine powder. But their chief recommendation is, their great utility in the form of a hygremplastrum or wet plaster, for cleansing wounds and fistulous sores, consuming all kinds of callosities, and making new flesh on bones that are denuded. The following are the ingredients: of pitch, six oboli, of Cimolian chalk, six drachmæ, two drachmæ of pounded copper, the same quantity of scales of iron, six drachmæ of wax, and one sextarius of oil. To these is added some cerate, when it is wanted to cleanse or fill up wounds.

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CHAP. 47. (16.)

THE ORES OF LEAD.

The nature of lead next comes to be considered. There are two kinds of it, the black and the white. The white is the most valuable: it was called by the Greeks "cassiteros," and there is a fabulous story told of their going in quest of it to the islands of the Atlantic, and of its being brought in barks made of osiers, covered with hides. It is now known that it is a production of Lusitania and Gallæcia. It is a sand found on the surface of the earth, and of a black colour, and is only to be detected by its weight. It is mingled with small pebbles, particularly in the dried beds of rivers. The miners wash this sand, and calcine the deposit in the furnace. It is also found in the gold mines that are known as "alutiæ," the stream of water which is passed through them detaching certain black pebbles, mottled with small white spots and of the same weight as gold. Hence it is that they remain with the gold in the baskets in which it is collected; and being separated in the furnace, are then melted, and become converted into white lead.

Black lead is not procured in Gallæcia, although it is so greatly abundant in the neighbouring province of Cantabria; nor is silver procured from white lead, although it is from black. Pieces of black lead cannot be soldered without the intervention of white lead, nor can this be done without employing oil; nor can white lead, on the other hand, be united without the aid of black lead. White lead was held in estimation in the days even of the Trojan War, a fact that is attested by Homer, who calls it "cassiteros." There are two different sources of black lead: it being procured either from its own native ore, where it is produced without the intermixture of any other substance, or else from an ore which contains it in common with silver, the two metals being fused together. The metal which first becomes liquid in the furnace, is called "stannum;" the next that melts is silver; and the metal that remains behind is galena, the third constituent part of the mineral. On this last being again submitted to fusion black lead is produced, with a deduction of two-ninths.

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CHAP. 48. (17.)

STANNUM. ARGENTARIUM.

When copper vessels are coated with stannum, they produce a less disagreeable flavour, and the formation of verdigris is prevented; it is also remarkable, that the weight of the vessel is not increased. As already mentioned, the finest mirrors were formerly prepared from it at Brundisium, until everybody, our maid-servants even, began to use silver ones. At the present day a counterfeit stannum is made, by adding one-third of white copper to two-thirds of white lead. It is also counterfeited in another way, by mixing together equal parts of white lead and black lead; this last being what is called "argentarium." There is also a composition called "tertiarium," a mixture of two parts of black lead and one of white: its price is twenty denarii per pound, and it is used for soldering pipes. Persons still more dishonest mix together equal parts of tertiarium and white lead, and, calling the compound "argentarium," coat articles with it melted. This last sells at sixty denarii per ten pounds, the price of the pure unmixed white lead being eighty denarii, and of the black seven.

White lead is naturally more dry; while the black, on the contrary, is always moist; consequently the white, without being mixed with another metal, is of no use for anything. Silver too, cannot be soldered with it, because the silver becomes fused before the white lead. It is confidently stated, also, that if too small a proportion of black lead is mixed with the white, this last will corrode the silver. It was in the Gallic provinces that the method was discovered of coating articles of copper with white lead, so as to be scarcely distinguishable from silver: articles thus plated are known as "incoctilia." At a later period, the people of the town of Alesia began to use a similar process for plating articles with silver, more particularly ornaments for horses, beasts of burden, and yokes of oxen: the merit, however, of this invention belongs to the Bituriges. After this, they began to ornament their esseda, colisata, and petorita in a similar manner; and luxury has at last arrived at such a pitch, that not only are their decorations made of silver, but of gold even,

and what was formerly a marvel to behold on a cup, is now subjected to the wear and tear of a carriage, and this in obedience to what they call fashion!

White lead is tested, by pouring it, melted, upon paper, which ought to have the appearance of being torn rather by the weight than by the heat of the metal. India has neither copper nor lead, but she procures them in exchange for her precious stones and pearls.

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CHAP. 49.

BLACK LEAD.

Black lead is used in the form of pipes and sheets: it is extracted with great labour in Spain, and throughout all the Gallic provinces; but in Britannia it is found in the upper stratum of the earth, in such abundance, that a law has been spontaneously made, prohibiting any one from working more than a certain quantity of it. The various kinds of black lead are known by the following names — the Ovetanian, the Caprariensian, and the Oleastrensian. There is no difference whatever in them, when the scoria has been carefully removed by calcination. It is a marvellous fact, that these mines, and these only, when they have been abandoned for some time, become replenished, and are more prolific than before. This would appear to be effected by the air, infusing itself at liberty through the open orifices, just as some women become more prolific after abortion. This was lately found to be the case with the Santarensian mine in Bætica; which, after being farmed at an annual rental of two hundred thousand denarii, and then abandoned, is now rented at two hundred and fifty- five thousand per annum. In the same manner, the Antonian mine in the same province has had the rent raised to four hundred thousand sesterces per annum.

It is a remarkable fact, that if we pour water into a vessel of lead, it will not melt; but that if we throw into the water a pebble or a copper quadrans, the vessel will be penetrated by the fire.

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CHAP. 50. (18.)

FIFTEEN REMEDIES DERIVED FROM LEAD.

Lead is used in medicine, without any addition, for the removal of scars; if it is applied, too, in plates, to the region of the loins and kidneys, in consequence of its cold nature it will restrain the venereal passions, and put an end to libidinous dreams at night, attended with spontaneous emissions, and assuming all the form of a disease. The orator Calvus, it is said, effected a cure for himself by means of these plates, and so preserved his bodily energies for labour and study. The Emperor Nero — for so the gods willed it — could never sing to the full pitch of his voice, unless he had a plate of lead upon his chest; thus showing us one method of preserving the voice. For medicinal purposes the lead is melted in earthen vessels; a layer of finely powdered sulphur being placed beneath, very thin plates of lead are laid upon it, and are then covered with a mixture of sulphur and iron. While it is being melted, all the apertures in the vessel should be closed, otherwise a noxious vapour is discharged from the furnace, of a deadly nature, to dogs in particular. Indeed, the vapours from all metals destroy flies and gnats; and hence it is that in mines there are none of those annoyances. Some persons, during the process, mix lead-filings with the sulphur, while others substitute ceruse for sulphur. By washing, a preparation is made from lead, that is much employed in medicine: for this purpose, a leaden mortar, containing rain water, is beaten with a pestle of lead, until the water has assumed a thick consistency; which done, the water that floats on the surface is removed with a sponge, and the thicker part of the sediment is left to dry, and is then divided into tablets. Some persons triturate lead-filings in this way, and some mix with it lead ore, or else vinegar, wine, grease, or rose-leaves. Others, again, prefer triturating the lead in a stone mortar, one of Thebaic stone more particularly, with a pestle of lead; by which process a whiter preparation is obtained.

As to calcined lead, it is washed, like stibi and cadmia. Its action is astringent and repressive, and it is promotive of cicatrization. The

same substance is also employed in preparations for the eyes, cases of procidence of those organs more particularly; also for filling up the cavities left by ulcers, and for removing excrescences and fissures of the anus, as well as hæmorrhoidal and condylomatous tumours. For all these purposes the lotion of lead is particularly useful; but for serpiginous or sordid ulcers it is the ashes of calcined lead that are used, these producing the same advantageous effects as ashes of burnt papyrus.

The lead is calcined in thin plates, laid with sulphur in shallow vessels, the mixture being stirred with iron rods or stalks of fennel-giant, until the melted metal becomes calcined; when cold, it is pulverized. Some persons calcine lead-filings in a vessel of raw earth, which they leave in the furnace, until the earthenware is completely baked. Others, again, mix with it an equal quantity of ceruse or of barley, and triturate it in the way mentioned for raw lead; indeed, the lead which has been prepared this way is preferred to the spodium of Cyprus.

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CHAP. 51.

FIFTEEN REMEDIES DERIVED FROM THE SCORIA OF LEAD.

The scoria of lead is also made use of; the best kind being that which approaches nearest to a yellow colour, without any vestiges of lead, or which has the appearance of sulphur without any terreous particles. It is broken into small pieces and washed in a mortar, until the mortar assumes a yellow colour; after which, it is poured off into a clean vessel, the process being repeated until it deposits a sediment, which is a substance of the greatest utility. It possesses the same properties as lead, but of a more active nature. How truly wonderful is the knowledge which we gain by experiment, when even the very dregs and foul residues of substances have in so many ways been tested by mankind!

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CHAP. 52.

SPODIUM OF LEAD.

A spodium of lead is also prepared in the same manner as that extracted from Cyprian copper. It is washed with rain water, in linen of a loose texture, and the earthy parts are separated by pouring it off; after which it is sifted, and then pounded. Some prefer removing the fine powder with a feather, and then triturating it with aromatic wine.

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CHAP. 53.

MOLYBDÆNA: FIFTEEN REMEDIES.

Molybdæna, which in another place I have called “galena,” is a mineral compounded of silver and lead. It is considered better in quality the nearer it approaches to a golden colour and the less lead it contains; it is also friable, and of moderate weight. When it is melted with oil, it acquires the colour of liver. It is found adhering also to the furnaces in which gold and silver have been smelted; and in this case it is called “metallic.” The most esteemed kind is that prepared at Zephyrium. Those kinds, too, are considered the best that are the least earthy and the least stony. It is used in preparing liparæ, as also for soothing or cooling ulcers, and as an ingredient in plasters, which are applied without ligatures, but are used only as a liniment for producing cicatrization on the bodies of delicate persons and the more tender parts. The composition is made of three pounds of molybdæna, one pound of wax, and three heminæ of oil; to which are added lees of olives, in the case of aged persons. Combined with scum of silver and scoria of lead, it is employed warm in fomentations for dysentery and tenesmus.

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CHAP. 54.

PSIMITHIUM, OR CERUSE; SIX REMEDIES.

Psimithium, which is also known as ceruse, is another production of the lead-works. The most esteemed comes from Rhodes. It is made from very fine shavings of lead, placed over a vessel filled with the strongest vinegar; by which means the shavings become dissolved. That which falls into the vinegar is first dried, and then pounded and sifted, after which it is again mixed with vinegar, and is then divided into tablets and dried in the sun, during summer. It is also made in another way; the lead is thrown into jars filled with vinegar, which are kept closed for ten days; the sort of mould that forms upon the surface is then scraped off, and the lead is again put into the vinegar, until the whole of the metal is consumed. The part that has been scraped off is triturated and sifted, and then melted in shallow vessels, being stirred with ladles, until the substance becomes red, and assumes the appearance of sandarach. It is then washed with fresh water, until all the cloudy impurities have disappeared, after which it is dried as before, and divided into tablets.

Its properties are the same as those of the substances above mentioned. It is, however, the mildest of all the preparations of lead; in addition to which, it is also used by females to whiten the complexion. It is, however, like scum of silver, a deadly poison. Melted a second time, ceruse becomes red.

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CHAP. 55.

SANDARACH; ELEVEN REMEDIES.

We have already mentioned nearly all the properties of sandarach. It is found both in gold-mines and in silver-mines. The redder it is, the more pure and friable, and the more powerful its odour, the better it is in quality. It is detergent, astringent, heating, and corrosive, but is most remarkable for its septic properties. Applied topically with vinegar, it is curative of alopecy. It is also employed as an ingredient in ophthalmic preparations. Used with honey, it cleanses the fauces and makes the voice more clear and harmonious. Taken with the food, in combination with turpentine, it is a pleasant cure for cough and asthma. In the form of a fumigation also, with cedar, it has a remedial effect upon those complaints.

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CHAP. 56.

ARRHENICUM.

Arrhenicum, too, is procured from the same sources. The best in quality is of the colour of the finest gold; that which is of a paler hue, or resembling sandarach, being less esteemed. There is a third kind also, the colour of which is a mixture of that of gold and of sandarach. The last two kinds are both of them scaly, but the other is dry and pure, and divides into delicate long veins. This substance has the same virtues as the one last mentioned, but is more active in its effects. Hence it is that it enters into the composition of cauteries and depilatory preparations. It is also used for the removal of hangnails, polypi of the nostrils, condylomatous tumours, and other kinds of excrescences. For the purpose of increasing its energies, it is heated in a new earthen vessel, until it changes its colour.

SUMMARY. — Remedies, one hundred and fifty-eight, Facts, narratives, and observations, nine hundred and fifteen.

ROMAN AUTHORS QUOTED. — L. Piso, Antias, Verrius, M. Varro, Cornelius Nepos, Messala, Rufus, the Poet Marsus, Bocchus, Julius Bassus who wrote in Greek on Medicine, Sextus Niger who did the same, Fabius Vestalis.

FOREIGN AUTHORS QUOTED. — Democritus, Metrodorus of Scepsis, Menæchmus who wrote on the Toreutic art, Xenocrates who did the same, Antigonus who did the same, Duris who did the same, Heliodorus who wrote on the Votive Offerings of the Athenians, Pasiteles who wrote on Wonderful Works, Timæus who wrote on the Medicines de- rived from Metals, Nymphodorus, Iollas, Apollodorus, Andreas, Heraclides, Diagoras, Botrys, Archidemus, Dionysius, Aristogenes, Democles, Mnesides, Xenocrates the son of Zeno, Theomnestus.

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BOOK XXXV. AN ACCOUNT OF PAINTINGS AND COLOURS.

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CHAP. 1. (1.)

THE HONOUR ATTACHED TO PAINTING.

I HAVE now given at considerable length an account of the nature of metals, which constitute our wealth, and of the substances that are derived from them; so connecting my various subjects, as, at the same time, to describe an immense number of medicinal compositions which they furnish, the mysteries thrown upon them by the druggists, and the tedious minutiæ of the arts of chasing, and statuary, and of dyeing. It remains for me to describe the various kinds of earths and stones; a still more extensive series of subjects, each of which has been treated of, by the Greeks more particularly, in a great number of volumes. For my own part, I propose to employ a due degree of brevity, at the same time omitting nothing that is necessary or that is a product of Nature.

I shall begin then with what still remains to be said with reference to painting, an art which was formerly illustrious, when it was held in esteem both by kings and peoples, and ennobling those whom it deigned to transmit to posterity. But at the present day, it is completely banished in favour of marble, and even gold. For not only are whole walls now covered with marble, but the marble itself is carved out or else marqueted so as to represent objects and animals of various kinds. No longer now are we satisfied with formal compartitions of marble, or with slabs extended like so many mountains in our chambers, but we must begin to paint the very stone itself! This art was invented in the reign of Claudius, but it was in the time of Nero that we discovered the method of inserting in marble spots that do not belong to it, and so varying its uniformity; and this, for the purpose of representing the marble of Numidia variegated with ovals, and that of Synnada veined with purple; just, in fact, as luxury might have willed that Nature should produce them. Such are our resources when the quarries fail us, and luxury ceases not to busy itself, in order that as much as possible may be lost whenever a conflagration happens.

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CHAP. 2. (2.)

THE HONOUR ATTACHED TO PORTRAITS.

Correct portraits of individuals were formerly transmitted to future ages by painting; but this has now completely fallen into desuetude. Brazen shields are now set up, and silver faces, with only some obscure traces of the countenance: the very heads, too, of statues are changed, a thing that has given rise before now to many a current sarcastic line; so true it is that people prefer showing off the valuable material, to having a faithful likeness. And yet, at the same time, we tapestry the walls of our galleries with old pictures, and we prize the portraits of strangers; while as to those made in honour of ourselves, we esteem them only for the value of the material, for some heir to break up and melt, and so forestall the noose and slip-knot of the thief. Thus it is that we possess the portraits of no living individuals, and leave behind us the pictures of our wealth, not of our persons.

And yet the very same persons adorn the palæstra and the anointing-room with portraits of athletes, and both hang up in their chamber and carry about them a likeness of Epicurus. On the twentieth day of each moon they celebrate his birthday by a sacrifice, and keep his festival. known as the "Icas," every month: and these too, people who wish to live without being known! So it is, most assuredly, our indolence has lost sight of the arts, and since our minds are destitute of any characteristic features, those of our bodies are neglected also.

But on the contrary, in the days of our ancestors, it was these that were to be seen in their halls, and not statues made by foreign artists, or works in bronze or marble: portraits modelled in wax were arranged, each in its separate niche, to be always in readiness to accompany the funeral processions of the family; occasions on which every member of the family that had ever existed was always present. The pedigree, too, of the individual was traced in lines upon each of these coloured portraits. Their muniment-rooms, too, were filled with archives and memoirs, stating what each had done when holding the magistracy. On the outside, again, of their houses, and

around the thresholds of their doors, were placed other statues of those mighty spirits, in the spoils of the enemy there affixed, memorials which a purchaser even was not allowed to displace; so that the very house continued to triumph even after it had changed its master. A powerful stimulus to emulation this, when the walls each day reproached an unwarlike owner for having thus intruded upon the triumphs of another! There is still extant an address by the orator Messala, full of indignation, in which he forbids that there should be inserted among the images of his family any of those of the stranger race of the Lævini. It was the same feeling, too, that extorted from old Messala those compilations of his "On the Families of Rome;" when, upon passing through the hall of Scipio Pomponianus, he observed that, in consequence of a testamentary adoption, the Salvittos — for that had been their surname — to the disgrace of the Africani, had surreptitiously contrived to assume the name of the Scipios. But the Messalas must pardon me if I remark, that to lay a claim, though an untruthful one, to the statues of illustrious men, shows some love for their virtues, and is much more honourable than to have such a character as to merit that no one should wish to claim them.

There is a new invention too, which we must not omit to notice. Not only do we consecrate in our libraries, in gold or silver, or at all events, in bronze, those whose immortal spirits hold converse with us in those places, but we even go so far as to reproduce the ideal of features, all remembrance of which has ceased to exist; and our regrets give existence to likenesses that have not been transmitted to us, as in the case of Homer, for example. And indeed, it is my opinion, that nothing can be a greater proof of having achieved success in life, than a lasting desire on the part of one's fellow-men, to know what one's features were. This practice of grouping portraits was first introduced at Rome by Asinius Pollio, who was also the first to establish a public library, and so make the works of genius the property of the public. Whether the kings of Alexandria and of Pergamus, who had so energetically rivalled each other in forming libraries, had previously introduced this practice, I cannot so easily say.

That a strong passion for portraits formerly existed, is attested

both by Atticus, the friend of Cicero, who wrote a work on this subject, and by M. Varro, who conceived the very liberal idea of inserting, by some means or other, in his numerous volumes, the portraits of seven hundred individuals; as he could not bear the idea that all traces of their features should be lost, or that the lapse of centuries should get the better of mankind. Thus was he the inventor of a benefit to his fellow-men, that might have been envied by the gods themselves; for not only did he confer upon them immortality, but he transmitted them, too, to all parts of the earth; so that everywhere it might be possible for them to be present, and for each to occupy his niche. This service, too, Varro conferred upon persons who were no members of his own family.

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CHAP. 3. (3.)

WHEN SHIELDS WERE FIRST INVENTED WITH PORTRAITS UPON THEM; AND WHEN THEY WERE FIRST ERECTED IN PUBLIC.

So far as I can learn, Appius Claudius, who was consul with P. Servilius, in the year of the City, 259, was the first to dedicate shields in honour of his own family in a sacred or public place. For he placed representations of his ancestors in the Temple of Bellona, and desired that they might be erected in an elevated spot, so as to be seen, and the inscriptions reciting their honours read. A truly graceful device; more particularly when a multitude of children, represented by so many tiny figures, displays those germs, as it were, which are destined to continue the line: shields such as these, no one can look at without a feeling of pleasure and lively interest.

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CHAP. 4.

WHEN THESE SHIELDS WERE FIRST PLACED IN PRIVATE HOUSES.

More recently, M. Æmilius, who was consul with Quintus Lutatius, not only erected these shields in the Æmilian Basilica, but in his own house as well; in doing which he followed a truly warlike example. For, in fact, these portraits were represented on bucklers, similar to those used in the Trojan War; and hence it is that these shields received their present name of "clypei," and not, as the perverse subtleties of the grammarians will have it, from the word "cluo." It was an abundant motive for valour, when upon each shield was represented the features of him who had borne it. The Carthaginians used to make both their bucklers and their portraits of gold, and to carry them with them in the camp: at all events, Marcius, the avenger of the Scipios in Spain, found one of this kind on capturing the camp of Hasdrubal, and it was this same buckler that remained suspended over the gate of the Capitoline Temple until the time when it was first burnt. Indeed, in the days of our ancestors, so assured was the safety of these shields, that it has been a subject of remark, that in the consulship of L. Manlius and Q. Fulvius, in the year of the City, 575, M. Aufidius, who had given security for the safety of the Capitol, informed the senate that the bucklers there which for some lustra had been assessed as copper, were in reality made of silver.

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CHAP. 5.

THE COMMENCEMENT OF THE ART OF PAINTING. MO- NOCHROME PAINTINGS. THE EARLIEST PAINTERS.

We have no certain knowledge as to the commencement of the art of painting, nor does this enquiry fall under our consideration. The Egyptians assert that it was invented among themselves, six thousand years before it passed into Greece; a vain boast, it is very evident. As to the Greeks, some say that it was invented at Sicyon, others at Corinth; but they all agree that it originated in tracing lines round the human shadow. The first stage of the art, they say, was this, the second stage being the employment of single colours; a process known as “monochromaton,” after it had become more complicated, and which is still in use at the present day. The invention of line-drawing has been assigned to Philocles, the Egyptian, or to Cleanthes of Corinth. The first who practised this line-drawing were Aridices, the Corinthian, and Telephanes, the Sicyonian, artists who, without making use of any colours, shaded the interior of the outline by drawing lines; hence, it was the custom with them to add to the picture the name of the person represented. Ecphantus, the Corinthian, was the first to employ colours upon these pictures, made, it is said, of broken earthenware, reduced to powder. We shall show on a future occasion, that it was a different artist of the same name, who, according to Cornelius Nepos, came to Italy with Demaratus, the father of the Roman king, Tarquinius Priscus, on his flight from Corinth to escape the violence of the tyrant Cypselus.

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CHAP. 6.

THE ANTIQUITY OF PAINTING IN ITALY.

But already, in fact, had the art of painting been perfectly developed in Italy. At all events, there are extant in the temples at Ardea, at this day, paintings of greater antiquity than Rome itself; in which, in my opinion, nothing is more marvellous, than that they should have remained so long unprotected by a roof, and yet preserving their freshness. At Lanuvium, too, it is the same, where we see an Atalanta and a Helena, without drapery, close together, and painted by the same artist. They are both of the greatest beauty, the former being evidently the figure of a virgin, and they still remain uninjured, though the temple is in ruins. The Emperor Caius, inflamed with lustfulness, attempted to have them removed, but the nature of the plaster would not admit of it. There are in existence at Cære, some paintings of a still higher antiquity. Whoever carefully examines them, will be forced to admit that no art has arrived more speedily at perfection, seeing that it evidently was not in existence at the time of the Trojan War.

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CHAP. 7. (4.)

ROMAN PAINTERS.

Among the Romans, too, this art very soon rose into esteem, for it was from it that the Fabii, a most illustrious family, derived their surname of "Pictor;" indeed the first of the family who bore it, himself painted the Temple of Salus, in the year of the City, 450; a work which lasted to our own times, but was destroyed when the temple was burnt, in the reign of Claudius. Next in celebrity were the paintings of the poet Pacuvius, in the Temple of Hercules, situate in the Cattle Market: he was a son of the sister of Ennius, and the fame of the art was enhanced at Rome by the success of the artist on the stage. After this period, the art was no longer practised by men of rank; unless, indeed, we would make reference to Turpilius, in our own times, a native of Venetia, and of equestrian rank, several of whose beautiful works are still in existence at Verona. He painted, too, with his left hand, a thing never known to have been done by any one before.

Titidius Labeo, a person of prætorian rank, who had been formerly proconsul of the province of Gallia Narbonensis, and who lately died at a very advanced age, used to pride himself upon the little pictures which he executed, but it only caused him to be ridiculed and sneered at. I must not omit, too, to mention a celebrated consultation upon the subject of painting, which was held by some persons of the highest rank.

Q. Pedius, who had been honoured with the consulship and a triumph, and who had been named by the Dictator Cæsar as co-heir with Augustus, had a grandson, who being dumb from his birth, the orator Messala, to whose family his grandmother belonged, recommended that he should be brought up as a painter, a proposal which was also approved of by the late Emperor Augustus. He died, however, in his youth, after having made great progress in the art. But the high estimation in which painting came to be held at Rome, was principally due, in my opinion, to M. Valerius Maximus Messala, who, in the year of the City, 490, was the first to exhibit a

painting to the public; a picture, namely, of the battle in which he had defeated the Carthaginians and Hiero in Sicily, upon one side of the Curia Hostilia. The same thing was done, too, by L. Scipio, who placed in the Capitol a painting of the victory which he had gained in Asia; but his brother Africanus, it is said, was offended at it, and not without reason, for his son had been taken prisoner in the battle. Lucius Hostilius Mancinus, too, who had been the first to enter Carthage at the final attack, gave a very similar offence to Æmilianus, by exposing in the Forum a painting of that city and the attack upon it, he himself standing near the picture, and describing to the spectators the various details of the siege; a piece of complaisance which secured him the consulship at the ensuing Comitia.

The stage, too, which was erected for the games celebrated by Claudius Pulcher, brought the art of painting into great admiration, it being observed that the ravens were so deceived by the resemblance, as to light upon the decorations which were painted in imitation of tiles.

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CHAP. 8.

AT WHAT PERIOD FOREIGN PAINTINGS WERE FIRST INTRODUCED AT ROME.

The high estimation in which the paintings of foreigners were held at Rome commenced with Lucius Mummius, who, from his victories, acquired the surname of “Achaicus.” For upon the sale of the spoil on that occasion, King Attalus having purchased, at the price of six thousand denarii, a painting of Father Liber by Aristides, Mummius, feeling surprised at the price, and suspecting that there might be some merit in it of which he himself was unaware, in spite of the complaints of Attalus, broke off the bargain, and had the picture placed in the Temple of Ceres; the first instance, I conceive, of a foreign painting being publicly exhibited at Rome.

After this, I find, it became a common practice to exhibit foreign pictures in the Forum; for it was to this circumstance that we are indebted for a joke of the orator Crassus. While pleading below the Old Shops, he was interrupted by a witness who had been summoned, with the question, “Tell me then, Crassus, what do you take me to be?” “Very much like him,” answered he, pointing to the figure of a Gaul in a picture, thrusting out his tongue in a very unbecoming manner. It was in the Forum, too, that was placed the picture of the Old Shepherd leaning on his staff; respecting which, when the envoy of the Teutones was asked what he thought was the value of it, he made answer that he would rather not have the original even, at a gift.

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CHAP. 9.

AT WHAT PERIOD PAINTING WAS FIRST HELD IN HIGH ESTEEM AT ROME, AND FROM WHAT CAUSES.

But it was the Dictator Cæsar that first brought the public exhibition of pictures into such high estimation, by consecrating an Ajax and a Medea before the Temple of Venus Genetrix. After him there was M. Agrippa, a man who was naturally more attached to rustic simplicity than to refinement. Still, however, we have a magnificent oration of his, and one well worthy of the greatest of our citizens, on the advantage of exhibiting in public all pictures and statues; a practice which would have been far preferable to sending them into banishment at our country-houses. Severe as he was in his tastes, he paid the people of Cyzicus twelve hundred thousand sesterces for two paintings, an Ajax and a Venus. He also ordered small paintings to be set in marble in the very hottest part of his Warm Baths; where they remained until they were removed a short time since, when the building was repaired.

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CHAP. 10.

WHAT PICTURES THE EMPERORS HAVE EXHIBITED IN PUBLIC.

The late Emperor Augustus did more than all the others; for he placed in the most conspicuous part of his Forum, two pictures, representing War and Triumph. He also placed in the Temple of his father, Cæsar, a picture of the Castors, and one of Victory, in addition to those which we shall mention in our account of the works of the different artists. He also inserted two pictures in the wall of the Curia which he consecrated in the Comitium; one of which was a Nemea seated upon a lion, and bearing a palm in her hand. Close to her is an Old Man, standing with a staff, and above his head hangs the picture of a chariot with two horses. Nicias has written upon this picture that he "inburned" it, such being the word he has employed.

In the second picture the thing to be chiefly admired, is the resemblance that the youth bears to the old man his father, allowing, of course, for the difference in age; above them soars an eagle, which grasps a dragon in its talons. Philochares attests that he is the author of this work, an instance, if we only consider it, of the mighty power wielded by the pictorial art; for here, thanks to Philochares, the senate of the Roman people, age after age, has before its eyes Glaucion and his son Aristippus, persons who would otherwise have been altogether unknown. The Emperor Tiberius, too, a prince who was by no means very gracious, has exhibited in the temple dedicated by him, in his turn, to Augustus, several pictures which we shall describe hereafter.

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CHAP. 11. (5.)

THE ART OF PAINTING.

Thus much then with reference to the dignity of this now expiring art. We have already stated with what single colours the earlier artists painted, when speaking of these pigments under the head of metals. The new modes of painting which were afterwards discovered, and are known as “neogrammatea,” the names of the artists, their different inventions, and the periods at which these inventions were adopted, will all be described when we come to enumerate the painters: for the present, however, the proposed plan of this work requires, that I should enlarge upon the nature of the several colours that are employed.

The art of painting at last became developed, in the inven- tion of light and shade, the alternating contrast of the colours serving to heighten the effect of each. At a later period, again, lustre was added, a thing altogether different from light. The gradation between lustre and light on the one hand and shade on the other, was called “tonos;” while the blending of the various tints, and their passing into one another, was known as “harmoge.”

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CHAP. 12. (6.)

PIGMENTS OTHER THAN THOSE OF A METALLIC ORIGIN. ARTIFICIAL COLOURS.

Colours are either sombre or florid, these qualities arising either from the nature of the substances or their mode of combination. The florid colours are those which the employer supplies to the painter at his own expense; minium, namely, armenium, cinnabaris, chrysocolla, indicum, and purpurissum. The others are the sombre colours. Taking both kinds together, some are native colours, and others are artificial. Sinopis, rubrica, parætonium, melinum, cretria and orpiment, are native colours. The others are artificial, more particularly those described by us when speaking of metals; in addition to which there are, among the more common colours, ochra, usta or burnt ceruse, sandarach, sandyx, syricum, and atramentum.

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CHAP. 13.

SINOPIS: ELEVEN REMEDIES.

Sinopis was discovered in Pontus; and hence its name, from the city of Sinope there. It is produced also in Egypt, the Balearic islands, and Africa; but the best is found in Lemnos and Cappadocia, being extracted from quarries there. That part is considered the best which has been found adhering to the rock. In the native mass, it has its own proper colour within, but is spotted on the exterior; the ancients made use of it for tone.

There are three kinds of sinopis, the red, the pale red, and the intermediate. The price of the best is twelve denarii per pound; it is used both for painting with the brush, and for colouring wood. The kind which comes from Africa sells at eight asses per pound; the name given to it is "cicerculum." That which is of the deepest red is the most in use for colouring compartitions. The sinopis known as the dull kind, being of a very tawny complexion, sells also at the price of eight asses per pound; it is used principally for the lower parts of compartitions.

Used medicinally, sinopis is of a soothing nature, and is employed as an ingredient in plasters and emollient poultices. It admits of being easily used, whether in the form of a dry or of a liquid composition, for the cure of ulcers situate in the humid parts of the body, the mouth and the rectum, for instance. Used as an injection, it arrests looseness of the bowels, and, taken in doses of one denarius, it acts as a check upon female discharges. Applied in a burnt state, with wine in particular, it has a desiccative effect upon granulations of the eyelids.

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CHAP. 14.

RUBRICA; LEMNIAN EARTH: FOUR REMEDIES.

Some persons have wished to make out that sinopis is nothing else but a kind of rubrica of second-rate quality, looking upon earth of Lemnos as a rubrica of the highest quality. This last approaches very nearly to minium, and was as highly esteemed among the ancients as the island that produces it: it was never sold except in sealed packages, a circumstance to which it was indebted for its additional name of "sphragis." It is with this material that they give the undercoating to minium, in the adulteration of which it is also extensively employed.

In medicine it is very highly esteemed. Applied to the eyes in the form of a liniment, it allays defluxions and pains in those organs, and arrests the discharges from lachrymal fistulas. To persons vomiting blood, it is administered with vinegar to drink. It is taken also internally for affections of the spleen and kidneys; and by females for the purpose of arresting flooding. It is employed too, to counteract the effects of poisons, and of stings inflicted by sea or land serpents; hence it is that it is so commonly used as an ingredient in antidotes.

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CHAP. 15.

EGYPTIAN EARTH.

Of the other kinds of rubrica, those of Egypt and Africa are of the greatest utility to workers in wood, from the fact of their being absorbed with the greatest rapidity. They are used also for painting, and are found in a native state in iron-mines.

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CHAP. 16.

OCHRA: REMEDIES DERIVED FROM RUBRICA.

It is from rubrica also, that ochra is prepared, the rubrica being burnt in new earthen pots well luted with clay. The more highly it is calcined in the furnace, the better the colour is. All kinds of rubrica are of a desiccative nature, and hence it is that they are so useful for plasters, and as an application even for erysipelas.

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CHAP. 17.

LEUCOPHORON.

Half a pound of Pontic sinopis, ten pounds of bright sil, and two pounds of Greek melinum, well mixed and triturated together for twelve successive days, produce “leucophoron,” a cement used for applying gold-leaf to wood.

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CHAP. 18.

PARÆTONIUM.

Parætonium is so called from the place of that name in Egypt. It is sea-foam, they say, solidified with slime, and hence it is that minute shells are often found in it. It is prepared also in the Isle of Crete, and at Cyrenæ. At Rome, it is adulterated with Cimolian earth, boiled and thickened. The price of that of the highest quality is fifty denarii per six pounds. This is the most unctuous of all the white colours, and the most tenacious as a coating for plaster, the result of its smoothness.

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CHAP. 19.

MELINUM: SIX REMEDIES. CERUSE.

Melinum, too, is a white colour, the best being the produce of the Isle of Melos. It is found also in Samos; but this last kind is never used by painters, in consequence of its being too unctuous. The persons employed in extracting it, lie at full length upon the ground, and search for the veins among the rocks. In medicine it is employed for much the same purposes as eretria; in addition to which, it dries the tongue, acts as a depilatory, and has a soothing effect. The price of it is one sestertius per pound.

The third of the white pigments is ceruse, the nature of which we have already explained when speaking of the ores of lead; there was also a native ceruse, formerly found on the lands of Theodotus at Smyrna, which the ancients made use of for painting ships. At the present day, all ceruse is prepared artificially, from lead and viuegar, as already stated.

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CHAP. 20.

USTA.

Usta was accidentally discovered at a fire in the Piræus, some ceruse having been burnt in the jars there. Nicias, the artist above-mentioned, was the first to use it. At the present day, that of Asia, known also as “purpurea,” is considered the best. The price of it is six denarii per pound. It is prepared also at Rome by calcining marbled sil, and quenching it with vinegar. Without the use of usta shadows cannot be made.

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CHAP. 21.

ERETRIA.

Eretria takes its name from the territory which produces it. Nicomachus and Parrhasius made use of it. In a medicinal point of view, it is cooling and emollient. In a calcined state, it promotes the cicatrization of wounds, is very useful as a desiccative, and is particularly good for pains in the head, and for the detection of internal suppurations. If the earth, when applied with water, does not dry with rapidity, the presence of purulent matter is apprehended.

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CHAP. 22.

SANDARACH.

According to Juba, sandarach and ochra are both of them productions of the island of Topazus, in the Red Sea; but neither of them are imported to us from that place. The mode of preparing sandarach we have described already: there is a spurious kind also, prepared by calcining ceruse in the furnace. This substance, to be good, ought to be of a flame colour; the price of it is five asses per pound.

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CHAP. 23.

SANDYX.

Calcined with an equal proportion of rubrica, sandarach forms sandyx; although I perceive that Virgil, in the following line, has taken sandyx to be a plant —
“Sandyx itself shall clothe the feeding lambs.”

The price of sandyx is one half that of sandarach; these two colours being the heaviest of all in weight.

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CHAP. 24.

SYRICUM.

Among the artificial colours, too, is syricum, which is used as an under-coating for minium, as already stated. It is prepared from a combination of sinopis with sandyx.

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CHAP. 25.

ATRAMENTUM.

Atramentum, too, must be reckoned among the artificial colours, although it is also derived in two ways from the earth. For sometimes it is found exuding from the earth like the brine of salt-pits, while at other times an earth itself of a sulphurous colour is sought for the purpose. Painters, too, have been known to go so far as to dig up half-charred bones from the sepulchres for this purpose.

All these plans, however, are new-fangled and troublesome; for this substance may be prepared, in numerous ways, from the soot that is yielded by the combustion of resin or pitch; so much so, indeed, that manufactories have been built on the principle of not allowing an escape for the smoke evolved by the process. The most esteemed black, however, that is made in this way, is prepared from the wood of the torch-pine.

It is adulterated by mixing it with the ordinary soot from furnaces and baths, a substance which is also employed for the purpose of writing. Others, again, calcine dried wine-lees, and assure us that if the wine was originally of good quality from which the colour is made, it will bear comparison with that of indicum. Polygnotus and Micon, the most celebrated painters of Athens, made their black from grape-husks, and called it "tryginon." Apelles invented a method of preparing it from burnt ivory, the name given to it being "elephantinon."

We have indicum also, a substance imported from India, the composition of which is at present unknown to me. Dyers, too, prepare an atramentum from the black inflorescence which adheres to the brazen dye-pans. It is made also from logs of torch-pine, burnt to charcoal and pounded in a mortar. The sæpia, too, has a wonderful property of secreting a black liquid; but from this liquid no colour is prepared. The preparation of every kind of atramentum is completed by exposure to the sun; the black, for writing, having an admixture of gum, and that for coating walls, an admixture of glue. Black pigment that has been dissolved in vinegar is not easily effaced by washing.

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CHAP. 26.

PURPURISSUM.

Among the remaining colours which, as already stated, owing to their dearness are furnished by the employer, purpurissum holds the highest rank. For the purpose of preparing it, argentaria or silver chalk is dyed along with purple cloth, it imbibing the colour more speedily than the wool. The best of all is that which, being thrown the very first into the boiling cauldron, becomes saturated with the dye in its primitive state. The next best in quality is that which has been put into the same liquor, after the first has been removed. Each time that this is done, the quality becomes proportionally deteriorated, owing, of course, to the comparative thinness of the liquid. The reason that the purpurissum of Puteoli is more highly esteemed than that of Tyre, Gætulia, or Laconia, places which produce the most precious kinds of purple, is the fact that it combines more readily with hysginum, and that it is made to absorb the colouring liquid of madder. The worst purpurissum is that of Lanuvium.

The price of purpurissum is from one to thirty denarii per pound. Persons who use it in painting, place a coat of sandyx beneath; a layer on which of purpurissum with glair of egg, produces all the brilliant tints of minium. If, on the other hand, it is their object to make a purple, they lay a coat of cæruleum beneath, and purpurissum, with egg, upon it.

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CHAP. 27.

INDICUM.

Next in esteem to this is indicum, a production of India, being a slime which adheres to the scum upon the reeds there. When powdered, it is black in appearance, but when diluted in water it yields a marvellous combination of purple and cæruleum. There is another kind, also, which floats upon the surface of the pans in the purple dye-houses, being the scum which rises upon the purple dye. Persons who adulterate it, stain pigeons' dung with genuine indicum, or else colour Selinusian earth, or anularian chalk with woad.

The proper way of testing indicum is by laying it on hot coals, that which is genuine producing a fine purple flame, and emitting a smell like that of sea-water while it smokes: hence it is that some are of opinion that it is gathered from the rocks on the sea-shore. The price of indicum is twenty denarii per pound. Used medicinally, it alleviates cold shiverings and defluxions, and acts as a desiccative upon sores.

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CHAP. 28.

ARMENIUM; ONE REMEDY.

Armenia sends us the colouring substance which is known to us by its name. This also is a mineral, which admits of being dyed, like chrysocolla, and is best when it most closely resembles that substance, the colour being pretty much that of cæruleum. In former times it was sold at thirty sesterces per pound; but there has been found of late in the Spanish provinces a sand which admits of a similar preparation, and consequently armenium has come to be sold so low as at six denarii per pound. It differs from cæruleum in a certain degree of whiteness, which causes the colour it yields to be thinner in comparison. The only use made of it in medicine is for the purpose of giving nourishment to the hair, that of the eyelids in particular.

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CHAP. 29.

APPIANUM.

There are also two colours of very inferior quality, which have been recently discovered. One of these is the green known as “appianum,” a fair imitation of chrysocolla; just as though we had not had to mention sufficient of these counterfeits already. This colour, too, is prepared from a green chalk, the usual price of it being one sesterce per pound.

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CHAP. 30.

ANULARIAN WHITE.

The other colour is that known as “anularian white;” being used for giving a brilliant whiteness to the figures of females. This, too, is prepared from a kind of chalk, combined with the glassy paste which the lower classes wear in their rings: hence it is, that it has the name “anulare.”

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CHAP. 31. (7.)

WHICH COLOURS DO NOT ADMIT OF BEING LAID ON A WET COATING.

Those among the colours which require a dry, cretaceous, coating, and refuse to adhere to a wet surface, are purpurissum, indicum, cæruleum, melinum, orpiment, appianum, and ceruse. Wax, too, is stained with all these colouring substances for encaustic painting; a process which does not admit of being applied to walls, but is in common use by way of ornament for ships of war, and, indeed, merchant-ships at the present day. As we go so far as to paint these vehicles of danger, no one can be surprised if we paint our funeral piles as well, or if we have our gladiators conveyed in handsome carriages to the scene of death, or, at all events, of carnage. When we only contemplate this extensive variety of colours, we cannot but admire the ingenuity displayed by the men of former days.

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CHAP. 32.

WHAT COLOURS WERE USED BY THE ANCIENTS IN PAINTING.

It was with four colours only, that Apelles, Echion, Melanthius, and Nicomachus, those most illustrous painters, executed their immortal works; melinum for the white, Attic sil for the yellow, Pontic sinopis for the red, and atramentum for the black; and yet a single picture of theirs has sold before now for the treasures of whole cities. But at the present day, when purple is employed for colouring walls even, and when India sends to us the slime of her rivers, and the corrupt blood of her dragons and her elephants, there is no such thing as a picture of high quality produced. Everything, in fact, was superior at a time when the resources of art were so much fewer than they now are. Yes, so it is; and the reason is, as we have already stated, that it is the material, and not the efforts of genius, that is now the object of research.

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CHAP. 33.

AT WHAT TIME COMBATS OF GLADIATORS WERE FIRST PAINTED AND PUBLICLY EXHIBITED.

One folly, too, of this age of ours, in reference to painting, I must not omit. The Emperor Nero ordered a painting of himself to be executed upon canvass, of colossal proportions, one hundred and twenty feet in height; a thing till then unknown. This picture was just completed when it was burnt by lightning, with the greater part of the gardens of Maius, in which it was exhibited.

A freedman of the same prince, on the occasion of his exhibiting a show of gladiators at Antium, had the public porticos hung, as everybody knows, with paintings, in which were represented genuine portraits of the gladiators and all the other assistants. Indeed, at this place, there has been a very prevailing taste for paintings for many ages past. C. Terentius Lucanus was the first who had combats of gladiators painted for public exhibition: in honour of his grandfather, who had adopted him, he provided thirty pairs of gladiators in the Forum, for three consecutive days, and exhibited a painting of their combats in the Grove of Diana.

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CHAP. 34. (8.)

THE AGE OF PAINTING; WITH THE NAMES OF THE MORE CELEBRATED WORKS AND ARTISTS, FOUR HUNDRED AND FIVE IN NUMBER.

I shall now proceed to enumerate, as briefly as possible, the more eminent among the painters; it not being consistent with the plan of this work to go into any great lengths of detail. It must suffice therefore, in some cases, to name the artist in a cursory manner only, and with reference to the account given of others; with the exception, of course, of the more famous pro- ductions of the pictorial art, whether still in existence or now lost, all of which it will be only right to take some notice of. In this department, the ordinary exactness of the Greeks has been somewhat inconsistent, in placing the painters so many Olympiads after the statuaries and toreutic artists, and the very first of them so late as the ninetieth Olympiad; seeing that Phidias himself is said to have been originally a painter, and that there was a shield at Athens which had been painted by him: in addition to which, it is universally agreed that in the eighty-third Olympiad, his brother Panænus painted, at Elis, the interior of the shield of Minerva, which had been executed by Colotes, a disciple of Phidias and his assistant in the statue of the Olympian Jupiter. And then besides, is it not equally admitted that Candaules, the last Lydian king of the race of the Heraclidæ, very generally known also by the name of Myrsilus, paid its weight in gold for a picture by the painter Bularchus, which represented the battle fought by him with the Magnetes? so great was the estimation in which the art was already held. This circumstance must of necessity have happened about the period of our Romulus; for it was in the eighteenth Olympiad that Candaules perished, or, as some writers say, in the same year as the death of Romulus: a thing which clearly demonstrates that even at that early period the art had already become famous, and had arrived at a state of great perfection.

If, then, we are bound to admit this conclusion, it must be equally evident that the commencement of the art is of much earlier date, and that those artists who painted in monochrome, and whose dates have

not been handed down to us, must have flourished at even an anterior period; Hygiænon, namely, Dinias, Charmadas, Eumarus, of Athens, the first who distinguished the sexes in painting, and attempted to imitate every kind of figure; and Cimon of Cleonæ, who improved upon the inventions of Eumarus.

It was this Cimon, too, who first invented foreshortenings, or in other words, oblique views of the figure, and who first learned to vary the features by representing them in the various attitudes of looking backwards, upwards, or downwards. It was he, too, who first marked the articulations of the limbs, indicated the veins, and gave the natural folds and sinuosities to drapery. Panænus, too, the brother of Phidias, even executed a painting of the battle fought by the Athenians with the Persians at Marathon: so common, indeed, had the employment of colours become, and to such a state of perfection had the art arrived, that he was able to represent, it is said, the portraits of the various generals who commanded at that battle, Miltiades, Callimachus, and Cynægirus, on the side of the Athenians, and, on that of the barbarians, Datis and Artaphernes.

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CHAP. 35. (9.)

THE FIRST CONTEST FOR EXCELLENCE IN THE PICTORIAL ART.

And not only this, but, during the time that Panænus flourished, there were contests in the pictorial art instituted at Corinth and Delphi. On the first occasion, Panænus himself entered the lists, at the Pythian Games, with Timagoras of Chalcis, by whom he was defeated; a circumstance which is recorded in some ancient lines by Timagoras himself, and an undoubted proof that the chroniclers are in error as to the date of the origin of painting. After these, and yet before the ninetieth Olympiad, there were other celebrated painters, Polygnotus of Thasos, for instance, who was the first to paint females in transparent drapery, and to represent the head covered with a parti-coloured head-dress. He, too, was the first to contribute many other improvements to the art of painting, opening the mouth, for example, showing the teeth, and throwing expression into the countenance, in place of the ancient rigidity of the features.

There is a picture by this artist in the Portico of Pompeius, before the Curia that was built by him; with reference to which, there is some doubt whether the man represented with a shield is in the act of ascending or descending. He also embellished the Temple at Delphi, and at Athens the Portico known as the Pœcile; at which last he worked gratuitously, in conjunction with Micon, who received pay for his labours. Indeed Polygnotus was held in the higher esteem of the two; for the Amphictyons, who form the general Council of Greece, decreed that he should have his lodging furnished him at the public expense.

There was also another Micon, distinguished from the first Micon by the surname of "the younger," and whose daughter Timarete also practised the art of painting.

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CHAP. 36.

ARTISTS WHO PAINTED WITH THE PENCIL.

In the ninetieth Olympiad lived Aglaophon, Cephisodorus, Erillus, and Evenor, the father of Parrhasius, one of the greatest of painters, and of whom we shall have to speak when we come to the period at which he flourished. All these were artists of note, but not sufficiently so to detain us by any further details, in our haste to arrive at the luminaries of the art; first among whom shone Apollodorus of Athens, in the ninety-third Olympiad. He was the first to paint objects as they really appeared; the first too, we may justly say, to confer glory by the aid of the pencil. Of this artist there is a Priest in Adoration, and an Ajax struck by Lightning, a work to be seen at Pergamus at the present day: before him, there is no painting of any artist now to be seen which has the power of rivetting the eye.

The gates of art being now thrown open by Apollodorus, Zeuxis of Heraclea entered upon the scene, in the fourth year of the ninety-fifth Olympiad, destined to lead the pencil — for it is of the pencil that we are still speaking — a pencil for which there was nothing too arduous, to a very high pitch of glory. By some writers he is erroneously placed in the eighty-ninth Olympiad, a date that must of necessity be reserved for Demophilus of Himera and Neseus of Thasos, of one of whom, it is uncertain which, Zeuxis was the pupil. It was in reference to him that Apollodorus, above-mentioned, wrote a verse to the effect, that Zeuxis had stolen the art from others and had taken it all to himself. Zeuxis also acquired such a vast amount of wealth, that, in a spirit of ostentation, he went so far as to parade himself at Olympia with his name embroidered on the checked pattern of his garments in letters of gold. At a later period, he came to the determination to give away his works, there being no price high enough to pay for them, he said. Thus, for instance, he gave an Alcmena to the people of Agrigentum, and a Pan to Archelaüs. He also painted a Penelope, in which the peculiar character of that matron appears to be delineated to the very life; and a figure of an

athlete, with which he was so highly pleased, that he wrote beneath it the line which has since become so famous, to the effect that it would be easier to find fault with him than to imitate him. His Jupiter seated on the throne, with the other Deities standing around him, is a magnificent production: the same, too, with his Infant Hercules strangling the Dragons, in presence of Amphitryon and his mother Alcmena, who is struck with horror. Still, however, Zeuxis is generally censured for making the heads and articulations of his figures out of proportion. And yet, so scrupulously careful was he, that on one occasion, when he was about to execute a painting for the people of Agrigentum, to be consecrated in the Temple of the Lacinian Juno there, he had the young maidens of the place stripped for examination, and selected five of them, in order to adopt in his picture the most commendable points in the form of each. He also painted some monochromes in white.

The contemporaries and rivals of Zeuxis were Timanthes, Androcydes, Eupompus, and Parrhasius. (10.) This last, it is said, entered into a pictorial contest with Zeuxis, who represented some grapes, painted so naturally that the birds flew towards the spot where the picture was exhibited. Parrhasius, on the other hand, exhibited a curtain, drawn with such singular truthfulness, that Zeuxis, elated with the judgment which had been passed upon his work by the birds, haughtily demanded that the curtain should be drawn aside to let the picture be seen. Upon finding his mistake, with a great degree of ingenuous candour he admitted that he had been surpassed, for that whereas he himself had only deceived the birds, Parrhasius had deceived him, an artist.

There is a story, too, that at a later period, Zeuxis having painted a child carrying grapes, the birds came to peck at them; upon which, with a similar degree of candour, he expressed himself vexed with his work, and exclaimed—" I have surely painted the grapes better than the child, for if I had fully succeeded in the last, the birds would have been in fear of it." Zeuxis executed some figures also in clay, the only works of art that were left behind at Ambracia, when Fulvius Nobilior transported the Muses from that city to Rome. There is at Rome a Helena by Zeuxis, in the Porticos of Philippus, and a Marsyas Bound, in the Temple of Concord there.

Parrhasius of Ephesus also contributed greatly to the progress of painting, being the first to give symmetry to his figures, the first to give play and expression to the features, elegance to the hair, and gracefulness to the mouth: indeed, for contour, it is universally admitted by artists that he bore away the palm. This, in painting, is the very highest point of skill. To paint substantial bodies and the interior of objects is a great thing, no doubt, but at the same time it is a point in which many have excelled: but to make the extreme outline of the figure, to give the finishing touches to the painting in rounding off the contour, this is a point of success in the art which is but rarely attained. For the extreme outline, to be properly executed, requires to be nicely rounded, and so to terminate as to prove the existence of something more behind it, and thereby disclose that which it also serves to hide.

Such is the merit conceded to Parrhasius by Antigonus and Xenocrates, who have written on the art of painting; and in this as well as in other points, not only do they admit his excellence, but enlarge upon it in terms of the highest commendation. There are many pen sketches by him still in existence, both upon panel and on parchment, from the study of which, even artists, it is said, may greatly profit.

Notwithstanding these points of excellence, however, Parrhasius seems comparatively inferior to himself in giving the proper expression to the middle of the body. In his allegorical picture of the People of Athens, he has displayed singular ingenuity in the treatment of his subject; for in representing it, he had to depict it as at once fickle, choleric, unjust, and versatile; while, again, he had equally to show its attributes of implacability and clemency, compassionateness and pride, loftiness and humility, fierceness and timidity — and all these at once. He painted a Theseus also, which was formerly in the Capitol at Rome, a Naval Commander wearing a cuirass, and, in one picture, now at Rhodes, figures of Meleager, Hercules, and Perseus. This last painting, though it has been thrice struek by lightning, has escaped being effaced, a circumstance which tends to augment the admiration which it naturally excites. He painted an Archigallus also, a picture which the Emperor Tiberius greatly admired. According to Deculo, that prince had it shut up in

his chamber, the price at which it was valued being six hundred thousand sesterces.

Parrhasius also painted a Thracian Nurse, with an Infant in her arms, a Philiscus, a Father Liber attended by Virtue, Two Children, in which we see pourtrayed the careless simplicity of childhood, and a Priest attended by a Boy, with a censer and chaplet. There are also two most noble pictures by him; one of which represents a Runner contending for the prize, completely armed, so naturally depicted that he has all the appearance of sweating. In the other we see the Runner taking off his armour, and can fancy that we hear him panting aloud for breath. His Æneas, Castor, and Pollux, all represented in the same picture, are highly praised; his Telephus also, and his Achilles, Agamemnon, and Ulysses.

Parrhasius was a most prolific artist, but at the same time there was no one who enjoyed the glory conferred upon him by his talent with greater insolence and arrogance. It was in this spirit, that he went so far as to assume certain surnames, and to call himself "Habrodiætus;" while in some other verses he declared himself to be the "prince of painters," and asserted that in him the art had arrived at perfection. But above all things, it was a boast with him that he had sprung from the lineage of Apollo, and that he had painted his Hercules, a picture now at Lindos, just as he had often seen him in his sleep. It was in this spirit, too, that upon being defeated by Timanthes, at Samos, by a great majority of votes, the subject of the picture being Ajax and the Award of the Arms, he declared, in the name of his hero, that he felt himself quite disgraced on thus seeing himself a second time defeated by an unworthy opponent. He painted also some smaller pictures of an immodest nature, indulging his leisure in such prurient fancies as these.

As to Timanthes, he was an artist highly gifted with genius, and loud have some of the orators been in their commendations of his Iphigenia, represented as she stands at the altar awaiting her doom. Upon the countenance of all present, that of her uncle in particular, grief was depicted; but having already exhausted all the characteristic features of sorrow, the artist adopted the device of veiling the features of the victim's father, finding himself unable adequately to give expression to his feelings. There are also some other proofs of

his genius, a Sleeping Cyclops, for instance, which he has painted upon a small panel; but, being desirous to convey an idea of his gigantic stature, he has painted some Satyrs near him measuring his thumb with a thyrsus. Indeed, Timanthes is the only one among the artists in whose works there is always something more implied by the pencil than is expressed, and whose execution, though of the very highest quality, is always surpassed by the inventiveness of his genius. He has also painted the figure of a Hero, a master-piece of skill, in which he has carried the art to the very highest pitch of perfection, in the delineation of the warrior: this last-mentioned work is now at Rome, in the Temple of Peace.

It was at this period, too, that Euxinidas had for his pupil Aristides, who became a most illustrious artist; and that Eupompus instructed Pamphilus, who afterwards became the instructor of Apelles. There is by Eupompus, a Victor in a gymnastic contest, holding a palm. So high was the reputation of this artist, that he established a school of painting, and so divided the art into three styles; whereas till then there had been but two, known respectively as the Helladic and the Asiatic. In honour of him, a native of Sicyon by birth, the Helladic school was divided into two, and from this period there were three distinct styles recognized, the Ionic, the Sicyonian, and the Attic.

We have, by Pamphilus, a picture representing the Alliance and the Battle that was fought at Phlius; the Victory also that was gained by the Athenians, and a representation of Ulysses in his ship. He was a Macedonian by birth, but was the first painter who was also skilled in all the other sciences, arithmetic and geometry more particularly, without the aid of which he maintained that the pictorial art could not attain perfection. He gave instruction to no one for a smaller sum than one talent, at the rate of five hundred denarii per annum, and this fee both Apelles and Melanthius paid. It was through his influence that, first at Sicyon, and then throughout the whole of Greece, all children of free birth were taught the graphic art, or in other words, the art of depicting upon boxwood, before all others; in consequence of which this came to be looked upon as the first step in the liberal arts. It is the fact, however, that this art has always been held in high estimation, and cultivated by persons of free birth, and that, at a more

recent period, men of rank even began to pursue it; it having always been forbidden that slaves should receive instruction in it. Hence it is, that neither in painting nor in the toreutic art has there been any celebrated work executed by a slave.

In the hundred and seventh Olympiad, flourished Aëtion and Therimachus. By the former we have some fine pictures; a Father Liber, Tragedy and Comedy, Semiramis from the rank of a slave elevated to the throne, an Old Woman bearing torches, and a New-made Bride, remarkable for the air of modesty with which she is pourtrayed.

But it was Apelles of Cos, in the hundred and twelfth Olympiad, who surpassed all the other painters who either preceded or succeeded him. Single-handed, he contributed more to painting than all the others together, and even went so far as to publish some treatises on the principles of the art. The great point of artistic merit with him was his singular charm of gracefulness, and this too, though the greatest of painters were his contemporaries. In admiring their works and bestowing high eulogiums upon them, he used to say that there was still wanting in them that ideal of beauty so peculiar to himself, and known to the Greeks as "Charis;" others, he said, had acquired all the other requisites of perfection, but in this one point he himself had no equal. He also asserted his claim to another great point of merit: admiring a picture by Protogenes, which bore evident marks of unbounded laboriousness and the most minute finish, he remarked that in every respect Protogenes was fully his equal, or perhaps his superior, except in this, that he himself knew when to take his hand off a picture — a memorable lesson, which teaches us that over-carefulness may be productive of bad results. His candour too, was equal to his talent; he acknowledged the superiority of Melanthius in his grouping, and of Asclepiodorus in the niceness of his measurements, or, in other words, the distances that ought to be left between the objects represented.

A circumstance that happened to him in connection with Protogenes is worthy of notice. The latter was living at Rhodes, when Apelles disembarked there, desirous of seeing the works of a man whom he had hitherto only known by reputation. Accordingly, he repaired at once to the studio; Protogenes was not at home, but

there happened to be a large panel upon the easel ready for painting, with an old woman who was left in charge. To his enquiries she made answer, that Protogenes was not at home, and then asked whom she should name as the visitor. “Here he is,” was the reply of Apelles, and seizing a brush, he traced with colour upon the panel an outline of a singularly minute fineness. Upon his return, the old woman mentioned to Protogenes what had happened. The artist, it is said, upon remarking the delicacy of the touch, instantly exclaimed that Apelles must have been the visitor, for that no other person was capable of executing anything so exquisitely perfect. So saying, he traced within the same outline a still finer outline, but with another colour, and then took his departure, with instructions to the woman to show it to the stranger, if he returned, and to let him know that this was the person whom he had come to see. It happened as he anticipated; Apelles returned, and vexed at finding himself thus surpassed, he took up another colour and split both of the outlines, leaving no possibility of anything finer being executed. Upon seeing this, Protogenes admitted that he was defeated, and at once flew to the harbour to look for his guest. He thought proper, too, to transmit the panel to posterity, just as it was, and it always continued to be held in the highest admiration by all, artists in particular. I am told that it was burnt in the first fire which took place at Cæsar’s palace on the Palatine Hill; but in former times I have often stopped to admire it. Upon its vast surface it contained nothing whatever except the three outlines, so remarkably fine as to escape the sight: among the most elaborate works of numerous other artists it had all the appearance of a blank space; and yet by that very fact it attracted the notice of every one, and was held in higher estimation than any other painting there.

It was a custom with Apelles, to which he most tenaciously adhered, never to let any day pass, however busy he might be, without exercising himself by tracing some outline or other; a practice which has now passed into a proverb. It was also a practice with him, when he had completed a work, to exhibit it to the view of the passers-by in some exposed place; while he himself, concealed behind the picture, would listen to the criticisms that were passed upon it; it being his opinion that the judgment of the public was

preferable to his own, as being the more discerning of the two. It was under these circumstances, they say, that he was censured by a shoemaker for having represented the shoes with one shoe-string too little. The next day, the shoemaker, quite proud at seeing the former error corrected, thanks to his advice, began to criticize the leg; upon which Apelles, full of indignation, popped his head out, and reminded him that a shoemaker should give no opinion beyond the shoes, a piece of advice which has equally passed into a proverbial saying. In fact, Apelles was a person of great amenity of manners, a circumstance which rendered him particularly agreeable to Alexander the Great, who would often come to his studio. He had forbidden himself, by public edict, as already stated, to be represented by any other artist. On one occasion, however, when the prince was in his studio, talking a great deal about painting without knowing anything about it, Apelles quietly begged that he would quit the sub- ject, telling him that he would get laughed at by the boys who were there grinding the colours: so great was the influence which he rightfully possessed over a monarch, who was otherwise of an irascible temperament. And yet, irascible as he was, Alexander conferred upon him a very signal mark of the high estimation in which he held him; for having, in his admiration of her extraordinary beauty, engaged Apelles to paint Pancaste undraped, the most beloved of all his concubines, the artist while so engaged, fell in love with her; upon which, Alexander, perceiving this to be the case, made him a present of her, thus showing himself, though a great king in courage, a still greater one in self-command, this action redounding no less to his honour than any of his victories. For in thus conquering himself, not only did he sacrifice his passions in favour of the artist, but even his affections as well; uninfluenced, too, by the feelings which must have possessed his favourite in thus passing at once from the arms of a monarch to those of a painter. Some persons are of opinion that Pancaste was the model of Apelles in his painting of Venus Anadyomene.

It was Apelles too, who, courteous even to his rivals, first established the reputation of Protogenes at Rhodes. Held as he was in little estimation by his own fellow-countrymen, a thing that generally is the case, Apelles enquired of him what price he set upon certain

finished works of his, which he had on hand. Upon Protogenes mentioning some very trifling sum or other, Apelles made him an offer of fifty talents, and then circulated a report that he was buying these works in order to sell them as his own. By this contrivance, he aroused the Rhodians to a better appreciation of the merits of their artist, and only consented to leave the pictures with them upon their offering a still larger price.

He painted portraits, too, so exactly to the life, that a fact with which we are made acquainted by the writings of Apion the grammarian seems altogether incredible. One of those persons, he says, who divine events by the traits of the fea- tures, and are known as "metoposcopi," was enabled, by an examination of his portraits, to tell the year of their death, whether past or future, of each person represented. Apelles had been on bad terms with Ptolemæus in former times, when they formed part of the suite of Alexander. After Ptolemæus had become king of Egypt, it so happened that Apolles was driven by the violence of a tempest to Alexandria. Upon this, some of his rivals fraudulently suborned a jester, who was attached to the court, to carry him an invitation to dine with the king. Accordingly, Apelles attended; upon which Ptolemæus was highly indignant, and, summoning before him his stewards of the household, requested that the artist would point out the one that had given him the invitation. Thus challenged, Apelles seized a piece of quenched charcoal that lay in the fire-place, and traced a likeness upon the wall, with such exactness, that the king, the moment he began it, recognized the features as those of the jester. He also painted a portrait of King Antigonus; and as that monarch was blind of one eye, he invented a method of concealing the defect. With this object, he painted him in profile, in order that what in reality was wanting to the person might have the semblance of being wanting to the picture rather, he making it his care to show that side of the face only which he could show without any defect. Among his works, too, there are some figures representing persons at the point of death; but it is not easy to say which of his productions are of the highest order of excellence.

His Venus Rising from the Sea, known as the Venus Anadyomene, was consecrated by the late Emperor Augustus in the

Temple of his father Cæsar; a work which has been cele- brated in certain Greek lines, which, though they have out- lived it, have perpetuated its fame. The lower part of the picture having become damaged, no one could be found to repair it; and thus did the very injury which the picture had sustained, redound to the glory of the artist. Time, however, and damp at last effaced the painting, and Nero, in his reign, had it replaced by a copy, painted by the hand of Dorotheus. Apelles also commenced another Venus for the people of Cos, which would have outshone even the former one; but death invidiously prevented its completion, nor could any one be found to complete the work in conformity with the sketches of the outline. He painted also, in the Temple of Diana at Ephesus, Alexander the Great wielding the Thunderbolts, a picture for which he received twenty talents of gold. The fingers have all the appearance of projecting from the surface, and the lightning seems to be darting from the picture. And then, too, let the reader bear in mind that all these works were executed by the aid of four colours only. The price paid in golden coin for this picture was ascertained by weight, there being no specific sum agreed upon.

He also painted a Procession of the Megabyzus, the priest of Diana at Ephesus; and a Clitus on Horseback, hastening to the combat, his Armour-bearer handing him his helmet at his command. How many times he painted Alexander and Philip, it would be quite superfluous to attempt to enumerate. At Samos, there is a Habron by him, that is greatly admired; at Rhodes a Menander, king of Caria, and an Ancæus; at Alexandria, a Gorgosthenes, the Tragedian; and at Rome, a Castor and Pollux, with figures of Victory and Alexander the Great, and an emblematical figure of War with her hands tied behind her, and Alexander seated in a triumphal car; both of which pictures the late Emperor Augustus, with a great degree of moderation and good taste, consecrated in the most frequented parts of his Forum: the Emperor Claudius, however, thought it advisable to efface the head of Alexander in both pictures, and substitute likenesses of his predecessor Augustus. It is by his hand too, it is generally supposed, that the Hercules, with the face averted, now in the Temple of Anna, was painted; a picture in which, one of the greatest difficulties in the art, the face, though hidden, may be said to

be seen rather than left to the imagination. He also painted a figure of a naked Hero, a picture in which he has challenged Nature herself.

There exists too, or did exist, a Horse that was painted by him for a pictorial contest; as to the merits of which, Apelles appealed from the judgment of his fellow-men to that of the dumb quadrupeds. For, finding that by their intrigues his rivals were likely to get the better of him, he had some horses brought, and the picture of each artist successively shown to them. Accordingly, it was only at the sight of the horse painted by Apelles that they began to neigh; a thing that has always been the case since, whenever this test of his artistic skill has been employed. He also painted a Neoptolemus on horse-back, fighting with the Persians; an Archeläus, with his Wife and Daughter; and an Antigonus on foot, with a cuirass on, and his horse led by his side. Connoisseurs in the art give the preference, before all other works of his, to his paintings of King Archeläus on horseback, and of Diana in the midst of a throng of Virgins performing a sacrifice; a work in which he would appear to have surpassed the lines of Homer descriptive of the same subject. He also portrayed some things, which in reality do not admit of being portrayed — thunder, lightning, and thunderbolts, in pictures which are known by the respective names of Bronte, Astrape, and Ceraunobolia.

His inventions, too, in the art of painting, have been highly serviceable to others; but one thing there was in which no one could imitate him. When his works were finished, he used to cover them with a black varnish, of such remarkable thinness, that while by the reflection it gave more vivacity to the colours, and preserved them from the contact of dust and dirt, its existence could only be detected by a person when close enough to touch it. In addition to this, there was also this other great advantage attending it: the brightness of the colours was softened thereby, and harmonized to the sight, looking as though they had been viewed from a distance, and through a medium of specular-stone; the contrivance, by some indescribable means, giving a sombreness to colours which would otherwise have been too florid.

One of the contemporaries of Apelles was Aristides of Thebes; the first of all the painters to give full expression to the mind and passions of man, known to the Greeks us ἤθη, as well as to the

mental perturbations which we experience: he was somewhat harsh, however, in his colours. There is a picture by him of a Captured City, in which is represented an infant crawling toward the breast of its wounded mother, who, though at the point of death, has all the appearance of being aware of it, and of being in dread lest the child should suck blood in place of milk from her exhausted breast: this picture Alexander the Great ordered to be transferred to Pella, his native place. Aristides also painted a Battle with the Persians, a picture which contained one hundred figures, for each of which he was paid at the rate of ten minæ by Mnason, the tyrant of Elatea. He also painted Chariots with four horses in full career; a Suppliant, which almost speaks, Huntsmen with game; Leontion, the mistress of Epicurus; the Anapauomenc, a damsel pining to death from love for her brother; a Father Liber also, and an Artamene, two fine pictures now to be seen in the Temple of Ceres at Rome; a Tragedian and a Child, in the Temple of Apollo, a picture which has lost its beauty, owing to the unskilfulness of the painter to whom M. Junius, the prætor, entrusted the cleaning of it, about the period of the Apollinarian Games. There was also to be seen, in the Temple of Faith, in the Capitol, a picture of his, representing an Aged Man giving instructions to a Child on the lyre. He executed also a painting of an Invalid, upon which endless encomiums have been lavished. Indeed, so great was the excellence of this artist, that King Attalus, it is said, purchased one picture of his at the price of one hundred talents.

At the same period flourished Protogenes, as already stated. He was a native of Caunus, a place held in subjection by the Rhodians. Great poverty in his early days, and extreme application to his art, were the causes of his comparative unproductiveness. It is not known with certainty from whom he received his instruction in the art: indeed some say that he was only a ship-decorator down to his fiftieth year; a proof of which, it is asserted, is the fact, that in decorating the Propylæum of the Temple of Minerva, situate in one of the most celebrated spots in Athens, where he has painted the fine picture of Paralus and Hammonias, known by some as the Nausicaa, he has added in the side pieces of the picture, by painters called "parerga," several small ships of war; wishing thereby to show in

what department that skill had first manifested itself which had thus reached the citadel of Athens, the scene of his glory. Of all his compositions, however, the palm has been awarded to his Ialysus, now at Rome, consecrated in the Temple of Peace there. So long as he was at work upon it, he lived, it is said, upon nothing but soaked lupines; by which means he at once appeased both hunger and thirst, and avoided all risk of blunting his perception by too delicate a diet. In order to protect this picture against the effects of ill-usage and old age, he painted it over four times, so that when an upper coat might fail, there would be an under one to succeed it. There is in this picture the figure of a dog, which was completed in a very remarkable manner, inasmuch as accident had an equal share with design in the execution of it. The painter was of opinion that he had not given the proper expression to the foam at the mouth of the animal, panting for breath, as it was represented; while, with all other parts of the picture, a thing extremely difficult with him, he was perfectly satisfied. The thing that displeased him was, the evident traces of art in the execution of it, touches which did not admit of any diminution, and yet had all the appearance of being too laboured, the effect produced being far removed from his conception of the reality: the foam, in fact, bore the marks of being painted, and not of being the natural secretion of the animal's mouth. Vexed and tormented by this dilemma, it being his wish to depict truth itself, and not something that only bore a semblance of truth, he effaced it again and again, changed his pencil for another, and yet by no possibility could satisfy himself. At last, quite out of temper with an art, which, in spite of him, would still obtrude itself, he dashed his sponge against the vexatious spot; when behold: the sponge replaced the colours that it had just removed, exactly in accordance with his utmost wishes, and thus did chance represent Nature in a painting.

Following his example, Nealces, it is said, succeeded in representing the foam at a horse's mouth; for on one occasion, when engaged in painting a man holding in a pair of horses and soothing them with his voice, he also dashed his sponge against the picture, with the view of producing a like effect.

It was on account of this Ialysus, which he was apprehensive of destroying, that King Demetrius forbore to set fire to the only side of

the city of Rhodes by which it was capable of being taken; and thus, in his anxiety to spare a picture, did he lose his only opportunity of gaining a victory. The dwelling of Protogenes at this period was situate in a little garden in the suburbs, or in other words, in the midst of the camp of Demetrius. The combats that were taking place made no difference whatever to the artist, and in no way interrupted his proceeding with the works which he had commenced; until at last he was summoned before the king, who enquired how he could have the assurance thus to remain without the walls. "Because I know," was his answer, "that you are waging war with the Rhodians, and not with the arts." Upon this, the king, delighted at having the opportunity of protecting the hand which he had thus spared, ordered a guard to be placed at his disposal for the especial purpose of his protection. In order, too, that he might not distract the artist's attention by sending for him too often, he would often go, an enemy albeit, to pay him a visit, and, abandoning his aspirations for victory, in the midst of arms and the battering down of walls, would attentively examine the compositions of the painter. Even to this day, the story is still attached to the picture which he was then engaged upon, to the effect, that Protogenes painted it beneath the sword. It is his Satyr, known as the "Anapauomenos;" in whose hand, to mark the sense of security that he felt, the painter has placed a pair of pipes.

Protogenes executed also, a Cydippe; a Tlepolemus; a portrait of Philiscus, the tragic poet, in an attitude of meditation; an Athlete; a portrait of King Antigonus, and one of the mother of Aristotle. It was this philosopher too, who advised him to paint the exploits of Alexander the Great, as being certain to be held in everlasting remembrance. The impulse, however, of his natural disposition, combined with a certain artistic caprice, led him in preference to adopt the various subjects which have just been mentioned. His last works were representations of Alexander and the god Pan. He also executed some figures in bronze, as already stated.

At the same period also, lived Asclepiodorus, who was greatly admired by Apelles for his proportions. The tyrant Mnason paid him, for his picture of the Twelve Gods, at the rate of thirty minæ for each divinity. This same Mnason also paid Theomnestus twenty minæ for

each of his Heroes.

In addition to these, it is only proper to mention Nicomachus, the son and disciple of Aristiæus. He painted a Rape of Proserpina, a picture that was formerly in the Temple of Minerva in the Capitol, above the shrine of Juventas. Another picture of his was to be seen also in the Capitol, placed there by the Roman general Plancus, a Victory soaring aloft in a chariot: he was the first painter who represented Ulysses wearing the pileus. He painted also an Apollo and Diana; the Mother of the Gods seated on a Lion; the fine picture of the Bacchantes, with Satyrs moving stealthily towards them; and a Scylla, now at Rome in the Temple of Peace. No painter ever worked with greater rapidity than Nicomachus; indeed it is said, that on one occasion having entered into an engagement with Aristratus, the tyrant of Sicyon, to paint within a given time the monument which he was raising to the memory of the poet Telestis, the artist only arrived a few days before the expiration of the term; upon which, the tyrant was so angry that he threatened to punish him: however, in the few days that were left, Nicomachus, to the admiration of all, completed the work, with equal promptitude and success. Among his pupils, were his brother Ariston, his son Aristides, and Philoxenus of Eretria, who painted for King Cassander a picture representing one of the battles between Alexander and Darius, a work which may bear comparison with any. He also painted a picture in grotesque, representing Three Sileni at their revels. Imitating the celerity of execution displayed by his master, he introduced a more sketchy style of painting, executed in a comparatively off-hand manner.

To these artists Nicophanes has also been added, an elegant and finished painter, to whom for gracefulness few can be compared, but for a severe and tragic style far inferior to Zeuxis or Apelles. Perseus also belongs to this period, a pupil of Apelles, who dedicated to him his work on painting. Aristides of Thebes had for pupils his sons Niceros and Ariston. By the latter of these artists, there is a Satyr crowned with a chaplet and holding a goblet: two of his pupils were Antorides and Euphranor, of the latter of whom we shall have to make mention again.

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CHAP. 37.

VARIOUS OTHER KINDS OF PAINTING.

We must now, however, make some mention of those artists who acquired fame by the pencil in an inferior style of painting. Among these was Piræicus, inferior to few of the painters in skill. I am not sure that he did not do injustice to himself by the choice of his subjects, seeing that, although he adopted an humble walk, he still attained in that walk the highest reputation. His subjects were barbers' shops, cobblers' stalls, jackasses, eatables, and the like, and to these he was indebted for his epithet of "Ithyparographos." His paintings, however, are exquisitely pleasing, and have sold at higher prices than the very largest works of many masters.

On the other hand again, as Varro tells us, a single picture by Serapio covered the whole space of the balustrades, beneath the Old Shops, where it was exhibited. This artist was very successful in painting stage-scenery, but was unable to depict the human form. Dionysius, on the contrary, painted nothing but men, and hence it was that he had the surname of "Anthropographos." Callicles also painted some small pictures, and Calates executed some small works in the comic style. Both of these styles were adopted by Antiphilus; who painted a very fine Hesione, and a Philip and Alexander with Minerva, now in the School of the Porticos of Octavia. In the Portico of Philippus, also, there is a Father Liber by him; an Alexander when a child; and an Hippolytus alarmed at the Bull, which is rushing upon him: and in the Portico of Pompeius we have his Cadmus and Europa. On the other hand, again, he painted a figure in a ridiculous costume, known jocosely as the Gryllus; and hence it is that pictures of this class are generally known as "Grylli." Antiphilus was a native of Egypt, and received instruction in the art from Ctesidemus.

It would not be right to pass in silence the painter of the Temple at Ardea, the more particularly as he was honoured with the citizenship at that place, and with the following inscription in verse upon one of the paintings which he executed there:

“These paintings, worthy of this worthy place,
Temple of Juno, queen, and wife of Jove,
Plautius Marcus, from Alalia, made.
May Ardea now and ever praise him for his skill.”

These lines are written in ancient Latin characters.

Ludius too, who lived in the time of the late Emperor Augustus, must not be allowed to pass without some notice; for he was the first to introduce the fashion of covering the walls of our houses with most pleasing landscapes, representing villas, porticos, ornamental gardening, woods, groves, hills, fishponds, canals, rivers, sea-shores, and anything else one could desire; varied with figures of persons walking, sailing, or proceeding to their villas, on asses or in carriages. Then. too, there are others to be seen fishing, fowling, or gathering in the vintage. In some of his decorations there are fine villas to be seen, and roads to them across the marshes, with women making bargains to be carried across on men’s shoulders, who move along slipping at every step and tottering beneath their load; with numberless other subjects of a similar nature, redolent of mirth and of the most amusing ingenuity. It was this artist, too, who first decorated our uncovered edifices with representations of maritime cities, a subject which produces a most pleasing effect, and at a very trifling expense.

But as for fame, that has been reserved solely for the artists who have painted pictures; a thing that gives us all the more reason to venerate the prudence displayed by the men of ancient times. For with them, it was not the practice to decorate the walls of houses, for the gratification of the owners only; nor did they lavish all their resources upon a dwelling which must of necessity always remain a fixture in one spot, and admits of no removal in case of conflagration. Protogenes was content with a cottage in his little garden; Apelles had no paintings on the plaster of his walls; it not being the fashion in their day to colour the party-walls of houses from top to bottom. With all those artists, art was ever watchful for the benefit of whole cities only, and in those times a painter was regarded as the common property of all.

Shortly before the time of the late Emperor Augustus, Arellius

was in high esteem at Rome; and with fair reason, had he not profaned the art by a disgraceful piece of profanity; for, being always in love with some woman or other, it was his practice, in painting goddesses, to give them the features of his mistresses; hence it is, that there were always some figures of prostitutes to be seen in his pictures. More recently, lived Amulius, a grave and serious personage, but a painter in the florid style. By this artist there was a Minerva, which had the appearance of always looking at the spectators, from whatever point it was viewed. He only painted a few hours each day, and then with the greatest gravity, for he always kept the toga on, even when in the midst of his implements. The Golden Palace of Nero was the prison-house of this artist's productions, and hence it is that there are so few of them to be be seen elsewhere.

Next in repute to him were Cornelius Pinus and Attius Priscus, who painted the Temple of Honour and that of Virtue, on their restoration by the Emperor Vespasianus Augustus. Priscus approaches more closely to the ancient masters.

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CHAP. 38. (11.)

AN EFFECTUAL WAY OF PUTTING A STOP TO THE SINGING OF BIRDS.

I must not omit here, in reference to painting, a celebrated story that is told about Lepidus. During the Triumvirate, when he was entertained by the magistrates of a certain place, he had lodgings given him in a house that was wholly surrounded with trees. The next day, he complained to them in a threatening tone, that he had been unable to sleep for the singing of the birds there. Accordingly, they had a dragon painted, on pieces of parchment of the greatest length that could possibly be obtained, and surrounded the grove with it; a thing that so terrified the birds, it is said, that they became silent at once; and hence it was that it first became known how this object could be attained.

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CHAP. 39.

ARTISTS WHO HAVE PAINTED IN ENCAUSTICS OR WAX, WITH EITHER THE CESTRUM OR THE PENCIL.

It is not agreed who was the inventor of the art of painting in wax and in encaustic. Some think that it was a discovery of the painter Aristides, and that it was afterwards brought to perfection by Praxiteles: but there are encaustic paintings in existence, of a somewhat prior date to them, those by Polygnotus, for example, and by Nicanor and Arcesilaüs, natives of Paros. Elasippus too, has inscribed upon a picture of his at Ægina, the word ἐνέχαεν; a thing that he certainly could not have done, if the art of encaustic painting had not been then invented.

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CHAP. 40.

THE FIRST INVENTORS OF VARIOUS KINDS OF PAINTING. THE GREATEST DIFFICULTIES IN THE ART OF PAINTING. THE SEVERAL VARIETIES OF PAINTING. THE FIRST ARTIST THAT PAINTED CEILINGS. WHEN ARCHED ROOFS WERE FIRST PAINTED. THE MARVELLOUS PRICE OF SOME PICTURES.

It is said, too, that Pamphilus, the instructor of Apelles, not only painted in encaustic, but also instructed Pausias of Sicyon in the art, the first who rendered himself distinguished in this branch. Pausias was the son of Bryetes, by whom he was originally instructed in the art of painting. He retouched also with the pencil some walls at Thespiæ, then undergoing repair, which had formerly been painted by Polygnotus. Upon instituting a comparison, however, it was considered that he was greatly inferior, this kind of painting not being in his line. It was he, too, who first thought of painting ceilings; nor had it been the practice before his day to use this kind of decoration for arched roofs. He painted many small pictures also, miniatures of children more particularly; a thing which, according to the interpretation put upon it by his rivals, was owing to the peculiarly slow process of encaustic painting. The consequence was, that being determined to give a memorable proof of his celerity of execution, he completed a picture in the space of a single day, which was thence called the "Hemeresios," representing the portrait of a child.

In his youth, he was enamoured of Glycera, his fellow-townswoman, the first inventor of chaplets; and in his rivalry of the skill shown by her, he achieved so much success in the encaustic art, as to reproduce the almost numberless tints displayed by flowers. At a later period, he painted her, seated, with a chaplet on, and thus produced one of the very finest of his pictures; known as the "Stephaneplocos" by some, and as the "Stephanopolis" by others; from the circumstance that Glycera had supported herself in her poverty by selling these chaplets. A copy of this picture, usually known as an "apographon," was purchased by L. Lucullus at Athens, during the festival of the Dionysia, at the price of two talents.

Pausias also painted some large pictures, a Sacrifice of Oxen, for instance, which used to be seen in the Portico of Pom- peius. In this painting he invented several improvements, which many artists have since imitated, but none with the same success. Although in the picture it was particularly his desire to give an impression of the length of the ox, he painted it with a front view and not sideways, and still has caused the large dimensions of the animal to be fully understood. And then too, whereas all other painters colour in white such parts as they wish to have the appearance of being prominent, and in black such portions as are intended to remain in the back-ground, he has painted the whole of the ox of a black colour, and has shown the dimensions of the body which throws the shadow by the medium of the shadow itself; thus evincing a wonderful degree of skill in showing relief upon a coat painted with a single colour, and conveying an impression of uniform solidity upon a broken ground. It was at Sicyon also that Pausias passed his life, a city which for a long time continued to be the native place of painting. Ultimately, all the paintings belonging to that place were sold by public auction for the discharge of the debts owing by the city, and were transferred to Rome in the ædileship of Scaurus.

Next to him, in the hundred and fourth Olympiad, Euphranor, the Isthmian, distinguished himself far beyond all others, an artist who has been already mentioned in our account of the statuaries. He executed some colossal figures also, and some statues in marble, and he chased some drinking-vessels; being studious and laborious in the highest degree, excellent in every branch, and at all times equal to himself. This artist seems to have been the first to represent heroes with becoming dignity, and to have paid particular attention to symmetry. Still, however, in the generality of instances, he has made the body slight in proportion to the head and limbs. He composed some treatises also upon symmetry and colours. His works are, an Equestrian Combat; the Twelve Gods; and a Theseus; with reference to which he remarked that the Theseus of Parrhasius had been fed upon roses, but his own upon beef. There are also at Ephesus some famous pictures by him; an Ulysses, in his feigned madness, yoking together an ox and a horse; Men, in an attitude of meditation, wearing the pallium; and a Warrior, sheathing his sword.

At the same time, also, flourished Cydias; for whose picture of the Argonautæ the orator Hortensius paid one hundred and forty-four thousand sesterces, and had a shrine constructed expressly for its reception on his estate at Tusculum. There was also Antidotus, a pupil of Euphranor, by whom there is, at Athens, a Combatant armed with a shield; a Wrestler, also; and a Trumpeter, a work which has been considered a most exquisite production.

Antidotus, as a painter, was more careful in his works than prolific, and his colouring was of a severe style. His principal glory was his having been the instructor of Nicias of Athens; who was a most careful painter of female portraits, and a strict observer of light and shade, making it his especial care that the figures in his pictures should appear in the boldest relief. His works are, a Nemea, which was brought from Asia to Rome by Silanus, and was placed in the Curia, as already stated; a Father Liber, in the Temple of Concord; a Hyacinthus, which the Emperor Augustus was so delighted with, that he took it away with him after the capture of Alexandria; for which reason also it was consecrated in the Temple of Augustus by the Emperor Tiberius; and a Danaë. At Ephesus, there is a tomb by him of a megabyzus, or priest of the Ephesian Diana; and at Athens a representation of the Necyomantea of Homer; which last he declined to sell to King Attalus for sixty talents, and in preference, so rich was he, made a present of it to his own native place. He also executed some large pictures, among which there are a Calypso, an Io, an Andromeda, a very fine Alexander, in the Porticos of Pompeius, and a Calypso, seated. To this painter also there are some pictures of cattle attributed, and in his dogs he has been remarkably successful. It was this Nicias, with reference to whom, Praxiteles, when asked with which of all his works in marble he was the best pleased, made answer, “Those to which Nicias has set his hand,” so highly did he esteem the colouring of that artist. It has not been satisfactorily ascertained whether it is this artist or another of the same name that some writers have placed in the hundred and twelfth Olympiad.

With Nicias has been compared, and indeed sometimes preferred to him, Athenion of Maronea, a pupil of Glaucion of Corinth. In his colouring he is more sombre than Nicias, and yet, with all his sombreness, more pleasing; so much so indeed, that in his paintings

shines forth the extensive knowledge which he possessed of the art. He painted, in the Temple at Eleusis, a Phylarchus; and at Athens, a family group, which has been known as the "Syngenicon;" an Achilles also, concealed in a female dress, and Ulysses detecting him; a group of six whole-length figures, in one picture; and, a work which has contributed to his fame more than any other, a Groom leading a Horse. Indeed, if he had not died young, there would have been no one comparable to Athenion in painting.

Heraclides, too, of Macedon, had some repute as an artist. At first he was a painter of ships, but afterwards, on the capture of King Perseus, he removed to Athens; where at the same period was also Metrodorus, who was both a painter and a philosopher, and of considerable celebrity in both branches. Hence it was, that when L. Paulus Æmilius, after the conquest of Perseus, requested the Athenians to send him the most esteemed philosopher for the education of his children, and a painter to represent his triumph, they made choice of Metrodorus, declaring that he was eminently suited for either purpose; a thing which Paulus admitted to be the case.

Timomachus of Byzantium, in the time of the Dictator Cæsar, painted an Ajax and a Medea, which were placed by Cæsar in the Temple of Venus Genetrix, having been purchased at the price of eighty talents; the value of the Attic talent being, according to M. Varro, equivalent to six thousand denarii. An Orestes, also by Timomachus, an Iphigenia in Tauris, and a Lecythion, a teacher of gymnastics, are equally praised; a Noble Family also; and Two Men clothed in the pallium, and about to enter into conversation, the one standing, the other in a sitting posture. It is in his picture, however of the Gorgon, that the art appears to have favoured him most highly.

Aristolaüs, the son and pupil of Pausias, was one of the painters in a more severe style: there are by him an Epaminondas, a Pericles, a Medea, a Theseus, an emblematical picture of the Athenian People, and a Sacrifice of Oxen. Some persons, too, are pleased with the careful style of Nicophanes, who was also a pupil of Pausias; a carefulness, however, which only artists can appreciate, as in other respects he was harsh in his colours, and too lavish of sil; as in his picture, for example, of Æsculapius with his daughters, Hygia, Ægle, and Panacea, his Jason, and his Sluggard, known as the "Ocnos," a

man twisting a rope at one end as an ass gnaws it at the other. As to Socrates, his pictures are, with good reason, universally esteemed.

Having now mentioned the principal painters in either branch, I must not pass in silence those who occupy the next rank. Aristoclides decorated the Temple of Apollo at Delphi. Antiphilus is highly praised for his picture of a Boy blowing a Fire, which illumines an apartment handsomely furnished, and throws a light upon the features of the youth; a Spinning-room, with women plying their respective tasks; and a King Ptolemæus hunting. But his most famous picture is his Satyr, clad in a panther's skin, and known as the "Aposcopeuon." Aristophon has painted an Ancæus wounded by the Boar, with Astypale, the sharer of his grief; and a picture with numerous figures, representing Priam, Helena, Credulity, Ulysses, Dphobus, and Guile. Androbius has painted a Scyllus cutting away the anchors of the Persian fleet: and Artemon a Danaë, with Robbers in admiration; a Queen Stratonice; and a Hercules and Deianira. But the finest of all this artist's works are those now in the buildings of Octavia; a Hercules ascending to heaven, with the sanction of the gods, from his funeral pile upon Mount Œta in Doris; and the story of Laomedon and his bargain with Hercules and Neptune. Alcimachus has painted Dioxippus, who was victorious in the pancratium at Olympia, without raising the dust; a victory known to the Greeks as being gained "aconiti." Cœnus painted pedigrees.

Ctesilochus, a pupil of Apelles, was famous for a burlesque picture of his representing Jupiter in labour with Bacchus, with a mitra on his head, and crying like a woman in the midst of the goddesses, who are acting as midwives. Cleon distinguished himself by his Cadmus; and Ctesidemus, by his Capture of Œchalia and his Laodamia.

Ctesicles became notorious for the insult which he offered to Queen Stratonice; for, upon failing to meet with an honourable reception from her, he painted her, romping with a fisherman, for whom, according to common report, she had conceived an ardent affection. After exhibiting this picture in the harbour at Ephesus, he at once set sail and escaped: the queen, however, would not allow of its removal, the likenesses of the two figures being so admirably expressed. Cratinus, the comic writer, painted at Athens, in the

Pompeion there.

Of Eutychides, there is a Victory guiding a chariot drawn by two horses. Eudorus is famous for his dramatic scenery; he executed some statues in bronze also. By Hippys there is a Neptune and Victory. Habron painted a picture of Friendship and Concord, and several figures of divinities; Leontiscus, an Aratus with the trophies of victory, and a Singing-girl; Leon, a portrait of Sappho; and Nearchus, a Venus attended by Cupids and Graces, and a Hercules, sorrowing and repentant at the sad results of his madness. Nealces, a remarkably ingenious and inventive artist, painted a Venus. On one occasion, when he had to represent a naval engagement between the Persians and Egyptians, wishing it to be understood that it took place on the river Nilus, the waters of which are similar in appearance to those of the sea, he employed an emblem to disclose that which would not admit of expression by art; for he painted an ass drinking on the shore, and a crocodile lying in wait for him.

Œnias has painted a Family Group; Philiscus, a Painter's Studio, with a boy blowing the fire; Phalerion, a Scylla; Simonides, an Agatharchus and a Mnemosyne; Simus, a youth reposing, a Fuller's Shop, a person celebrating the Quinquatria, and a Nemesis of great merit. By Theorus there is a Man Anointing himself; a picture of the Murder of Ægisthus and Clytæmnestra by Orestes; and a representation of the Trojan War, in a series of paintings, now at Rome, in the Porticos of Philippus: a Cassandra also, in the Temple of Concord; a Leontium, the mistress of Epicurus, in an attitude of meditation; and a King Demetrius. Theon has painted the Frenzy of Orestes, and a Thamyras playing on the lyre; Tauriscus, a Discobolus, a Clytæmnestra, a Pan in miniature, a Polynices claiming the sovereignty, and a Capaneus.

In speaking of these artists, I must not omit to mention one memorable circumstance: Erigonus, who was colour-grinder to the painter Nealces, himself made such progress in the art as to leave a very celebrated pupil, Pasias, the brother of Ægineta, the modeller. It is also a very singular fact, and one well deserving of remark, that the last works of these artists, their unfinished paintings, in fact, are held in greater admiration than their completed works; the Iris of Aristides, for instance, the Tyndaridæ of Nicomachus, the Medea of

Timomachus, and the Venus of Apelles, already mentioned. For in such works as these, we not only see the outline depicted, and the very thoughts of the artist expressed, but have the composition additionally commended to our notice by the regrets which we must necessarily feel on finding the hand that commenced it arrested by death.

There are still some other artists, who, though by no means without reputation, can only be noticed here in a summary manner: Aristocydes; Anaxander; Aristobulus of Syria; Arcesilas, son of Tisicrates; Corœbos, a pupil of Nicomachus; Charmantides, a pupil of Euphranor; Dionysodorus of Colophon; Dicæogenes, a contemporary of King Demetrius; Euthymides; Heraclides of Macedon; Milo of Soli, a pupil of the statuary Pyromachus; Mnasitheus of Sicyon; Mnasitimus, the son and pupil of Aristonidas; Nessus, son of Habron; Polemon of Alexandria; Theodorus of Samos, and Stadieus, pupils of Nicosthenes; and Xeno of Sicyon, a pupil of Neocles.

There have been some female painters also. Timarete, the daughter of Micon, painted a Diana at Ephesus, one of the very oldest panel-paintings known. Irene, daughter and pupil of the artist Cratinus, painted a figure of a girl, now at Eleusis, a Calypso, an Aged Man, the juggler Theodorus, and Alcisthenes the dancer. Aristarete, daughter and pupil of Nearchus, painted an Æsculapius. Iaia of Cyzicus, who always remained single, painted at Rome, in the youth of M. Varro, both with the brush, and with the graver, upon ivory, her subjects being female portraits mostly. At Naples, there is a large picture by her, the portrait of an Old Woman; as also a portrait of herself, taken by the aid of a mirror. There was no painter superior to her for expedition; while at the same time her artistic skill was such, that her works sold at much higher prices than those of the most celebrated portrait-painters of her day, Sopolis namely, and Dionysius, with whose pictures our galleries are filled. One Olympias painted also, but nothing is known relative to her, except that she had Autobulus for a pupil.

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CHAP. 41.

ENCAUSTIC PAINTING.

In ancient times there were but two methods of encaustic painting, in wax and on ivory, with the cestrum or pointed graver. When, however, this art came to be applied to the painting of ships of war, a third method was adopted, that of melting the wax colours and laying them on with a brush, while hot. Painting of this nature, applied to vessels, will never spoil from the action of the sun, winds, or salt water.

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CHAP. 42.

THE COLOURING OF TISSUES.

In Egypt, too, they employ a very remarkable process for the colouring of tissues. After pressing the material, which is white at first, they saturate it, not with colours, but with mordents that are calculated to absorb colour. This done, the tissues, still unchanged in appearance, are plunged into a cauldron of boiling dye, and are removed the next moment fully coloured. It is a singular fact, too, that although the dye in the pan is of one uniform colour, the material when taken out of it is of various colours, according to the nature of the mordents that have been respectively applied to it: these colours, too, will never wash out. Thus the dye-pan, which under ordinary circum- stances, no doubt, would have made but one colour of several, if coloured tissues had been put into it, is here made to yield several colours from a single dye. At the same moment that it dyes the tissues, it boils in the colour; and it is the fact, that material which has been thus submitted to the action of fire becomes stouter and more serviceable for wear, than it would have been if it had not been subjected to the process

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CHAP. 43. (12.)

THE INVENTORS OF THE ART OF MODELLING.

On painting we have now said enough, and more than enough; but it will be only proper to append some accounts of the plastic art. Butades, a potter of Sicyon, was the first who invented, at Corinth, the art of modelling portraits in the earth which he used in his trade. It was through his daughter that he made the discovery; who, being deeply in love with a young man about to depart on a long journey, traced the profile of his face, as thrown upon the wall by the light of the lamp. Upon seeing this, her father filled in the outline, by compressing clay upon the surface, and so made a face in relief, which he then hardened by fire along with other articles of pottery. This model, it is said, was preserved in the Nymphæum at Corinth, until the destruction of that city by Mummius. Others, again, assert that the first inventors of the plastic art were Rhœcus and Theodorus, at Samos, a considerable period before the expulsion of the Bacchiadæ from Corinth: and that Damaratus, on taking to flight from that place and settling in Etruria, where he became father of Tarquinius, who was ultimately king of the Roman people, was accompanied thither by the modellers Euchir, Diopus, and Eugrammus, by whose agency the art was first introduced into Italy.

Butades first invented the method of colouring plastic compositions, by adding red earth to the material, or else modelling them in red chalk: he, too, was the first to make masks on the outer edges of gutter-tiles upon the roofs of buildings; in low relief, and known as “prostypa” at first, but afterwards in high relief, or “ectypa.” It was in these designs, too, that the ornaments on the pediments of temples originated; and from this invention modellers first had their name of “plastæ.”

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CHAP. 44.

WHO WAS THE FIRST TO MOULD FIGURES IN IMITATION OF THE FEATURES OF LIVING PERSONS, OR OF STATUES.

The first person who expressed the human features by fitting a mould of plaster upon the face, and then improving it by pouring melted wax into the cast, was Lysistratus of Sicyon, brother of Lysippus, already mentioned. It was he, in fact, who first made it his study to give a faithful likeness; for before his time, artists only thought how to make their portraits as handsome as possible. The same artist, too, was the first who thought of making models for his statues; a method which afterwards became so universally adopted, that there could be neither figure nor statue made without its model in clay. Hence it would appear, that the art of modelling in clay is more ancient than that of moulding in bronze.

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CHAP. 45.

THE MOST FAMOUS MODELLERS.

The most celebrated modellers were Damophilus and Gorgasus, who were painters as well. These artists adorned with their works, in both kinds, the Temple of Ceres, in the Circus Maximus at Rome; with an inscription in Greek, which stated that the decorations on the right-hand were the workmanship of Damophilus, and those on the left, of Gorgasus. Varro says that, before the construction of this temple, everything was Tuscan in the temples; and that, when the temple was afterwards repaired, the painted coatings of the walls were cut away in tablets and enclosed in frames, but that the figures on the pediments were dispersed. Chalcosthenes, too, executed at Athens some works in unbaked earth, on the spot which, from his manufactory, has since obtained the name of "Ceramicus."

M. Varro states that he knew an artist at Rome, Possis by name, who executed fruit, grapes, and fish, with such exactness, that it was quite impossible, by only looking at them, to distinguish them from the reality. He speaks very highly also of Arcesilaüs, who was on terms of intimacy with Lucius Lucullus, and whose models in plaster used to sell at a higher rate, among artists themselves, than the works of others. He informs us, also, that it was by this modeller that the Venus Genetrix in the Forum of Cæsar was executed, it having been erected before completion, in the great haste that there was to consecrate it; that the same artist had made an agreement with Lucullus to execute a figure of Felicity, at the price of sixty thousand sesterces, the completion of which was prevented by their death; and that Octavius, a Roman of equestrian rank, being desirous of a model for a mixing-bowl, Arcesilaüs made him one in plaster, at the price of one talent.

Varro praises Pasiteles also, who used to say, that the plastic art was the mother of chasing, statuary, and sculpture, and who, excellent as he was in each of these branches, never executed any work without first modelling it. In addition to these particulars, he states that the art of modelling was anciently cultivated in Italy,

Etruria in particular; and that Volcanius was summoned from Veii, and entrusted by Tarquinius Priscus with making the figure of Jupiter, which he intended to consecrate in the Capitol; that this Jupiter was made of clay, and that hence arose the custom of painting it with minium; and that the four-horse chariot, so often mentioned, upon the pediment of the temple, was made of clay as well. We learn also from him, that it was by the same artist that the Hercules was executed, which, even to this day, is named at Rome from the material of which it is composed. Such, in those times, were the most esteemed statues of the gods; and small reason have we to complain of our forefathers for worshipping such divinities as these; for in their day there was no working of gold and silver — no, not even in the service of the gods.

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CHAP. 46.

WORKS IN POTTERY.

Statues of this nature are still in existence at various places. At Rome, in fact, and in our municipal towns, we still see many such pediments of temples; wonderful too, for their workmanship, and, from their artistic merit and long duration, more deserving of our respect than gold, and certainly far less baneful. At the present day even, in the midst of such wealth as we possess, we make our first libation at the sacrifice, not from murrhine vases or vessels of crystal, but from ladles made of earthenware.

Bounteous beyond expression is the earth, if we only consider in detail her various gifts. To omit all mention of the cereals, wine, fruits, herbs, shrubs, medicaments, and metals, bounties which she has lavished upon us, and which have already passed under our notice, her productions in the shape of pottery alone, would more than suffice, in their variety, to satisfy our domestic wants; what with gutter-tiles of earthenware, vats for receiving wine, pipes for conveying water, conduits for supplying baths, baked tiles for roofs, bricks for foundations, the productions, too, of the potter's wheel; results, all of them, of an art, which induced King Numa to establish, as a seventh company, that of the makers of earthenware.

Even more than this, many persons have chosen to be buried in coffins made of earthenware; M. Varro, for instance, who was interred, in true Pythagorean style, in the midst of leaves of myrtle, olive, and black poplar; indeed, the greater part of mankind make use of earthen vases for this purpose. For the service of the table, the Samian pottery is even yet held in high esteem; that, too, of Arretium in Italy, still maintains its high character; while for their cups, and for those only, the manufactories of Surrentum, Asta, Pollentia, Saguntum in Spain, and Pergamus in Asia, are greatly esteemed.

The city of Tralles, too, in Asia, and that of Mutina in Italy, have their respective manufactures of earthenware, and even by this branch of art are localities rendered famous; their productions, by the aid of the potter's wheel, becoming known to all countries, and

conveyed by sea and by land to every quarter of the earth. At Erythræ, there are still shown, in a temple there, two amphoræ, that were consecrated in consequence of the singular thinness of the material: they originated in a contest between a master and his pupil, which of the two could make earthenware of the greatest thinness. The vessels of Cos are the most highly celebrated for their beauty, but those of Adria are considered the most substantial.

In relation to these productions of art, there are some instances of severity mentioned: Q. Coponius, we find, was condemned for bribery, because he made present of an amphora of wine to a person who had the right of voting. To make luxury, too, conduce in some degree to enhance our estimation of earthenware, "tripatinium," as we learn from Fenestella, was the name given to the most exquisite course of dishes that was served up at the Roman banquets. It consisted of one dish of murænæ, one of lupi, and a third of a mixture of fish. It is clear that the public manners were then already on the decline; though we still have a right to hold them preferable to those of the philosophers even of Greece, seeing that the representatives of Aristotle, it is said, sold, at the auction of his goods, as many as seventy dishes of earthenware. It has been already stated by us, when on the subject of birds, that a single dish cost the tragic actor Æsopus one hundred thousand sesterces; much to the reader's indignation, no doubt; but, by Hercules! Vitellius, when emperor, ordered a dish to be made, which was to cost a million of sesterces, and for the preparation of which a furnace had to be erected out in the fields! luxury having thus arrived at such a pitch of excess as to make earthenware even sell at higher prices than murrhine vessels. It was in reference to this circumstance, that Mucianus, in his second consulship, when pronouncing one of his perorations, reproached the memory of Vitellius with his dishes as broad as the Pomptine Marsh; not less deserving to be execrated than the poisoned dish of Asprenas, which, according to the accusation brought against him by Cassius Severus, caused the death of one hundred and thirty guests.

These works of artistic merit have conferred celebrity on some cities even, Rhegium for example, and Cumæ. The priests of the Mother of the gods, known as the Galli, deprive themselves of their

virility with a piece of Samian pottery, the only means, if we believe M. Cælius, of avoiding dangerous results. He it was, too, who recommended, when inveighing against certain abominable practices, that the person guilty of them should have his tongue cut out, in a similar manner; a reproach which would appear to have been levelled by anticipation against this same Vitellius.

What is there that human industry will not devise? Even broken pottery has been utilized; it being found that, beaten to powder, and tempered with lime, it becomes more solid and durable than other substances of a similar nature; forming the cement known as the "Signine" composition, so extensively employed for even making the pavements of houses.

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CHAP. 47. (13.)

VARIOUS KINDS OF EARTH. THE PUTEOLAN DUST, AND OTHER EARTHS OF WHICH CEMENTS LIKE STONE ARE MADE.

But there are other resources also, which are derived immediately from the earth. Who, indeed, cannot but be surprised at finding the most inferior constituent parts of it, known as "dust" only, on the hills about Puteoli, forming a barrier against the waves of the sea, becoming changed into stone the moment of its immersion, and increasing in hardness from day to day — more particularly when mixed with the cement of Cumæ? There is an earth too, of a similar nature found in the districts about Cyzicus; but there, it is not a dust, but a solid earth, which is cut away in blocks of all sizes, and which, after being immersed in the sea, is taken out transformed into stone. The same thing may be seen also, it is said, in the vicinity of Cassandrea; and at Cnidos, there is a spring of fresh water which has the property of causing earth to petrify within the space of eight months. Between Oropus and Aulis, every portion of the land upon which the sea encroaches becomes transformed into solid rock.

The finer portion of the sand of the river Nilus is not very different in its properties from the dust of Puteoli; not, indeed, that it is used for breaking the force of the sea and withstanding the waves, but only for the purpose, forsooth, of subduing the body for the exercises of the palestra! At all events, it was for this purpose that it used to be brought over for Patrobius, a freedman of the Emperor Nero. I find it stated also, that Craterus, Leonnatus, and Meleager, generals of Alexander the Great, had this sand transported along with their munitions of war. But I forbear to enlarge any further upon this subject; or indeed, by Hercules! upon those preparations of earth and wax of which the ceromata are made, so much employed by our youth in their exercises of the body, at the cost of all vigour of the mind.

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CHAP. 48. (14.)

FORMACEAN WALLS.

And then, besides, have we not in Africa and in Spain walls of earth, known as “formaceoan” walls? from the fact that they are moulded, rather than built, by enclosing earth within a frame of boards, constructed on either side. These walls will last for centuries, are proof against rain, wind, and fire, and are superior in solidity to any cement. Even at this day, Spain still beholds watch-towers that were erected by Hannibal, and turrets of earth placed on the very summits of her mountains. It is from the same source, too, that we derive the substantial materials so well adapted for forming the earth-works of our camps and embankments against the impetuous violence of rivers. What person, too, is unacquainted with the fact, that partitions are made of hurdles coated with clay, and that walls are constructed of unbaked bricks?

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CHAP. 49.

WALLS OF BRICK. THE METHOD OF MAKING BRICKS.

Earth for making bricks should never be extracted from a sandy or gravelly soil, and still less from one that is stony; but from a stratum that is white and cretaceous, or else impregnated with red earth. If a sandy soil must be employed for the purpose, it should at least be male sand, and no other. The spring is the best season for making bricks, as at midsummer they are very apt to crack. For building, bricks two years old are the only ones that are approved of; and the wrought material of them should be well macerated before they are made.

There are three different kinds of bricks; the Lydian, which is in use with us, a foot-and-a-half in length by a foot in breadth; the tetradoron; and the pentadoron; the word "doron" being used by the ancient Greeks to signify the palm — hence, too, their word "doron" meaning a gift, because it is the hand that gives. — These last two kinds, therefore, are named respectively from their being four and five palms in length, the breadth being the same. The smaller kind is used in Greece for private buildings, the larger for the construction of public edifices. At Pitane, in Asia, and in the cities of Maxilua and Calentum in Farther Spain, there are bricks made, which float in water, when dry; the material being a sort of pumice-earth, extremely good for the purpose when it can be made to unite. The Greeks have always preferred walls of brick, except in those cases where they could find silicious stone for the purposes of building: for walls of this nature will last for ever, if they are only built on the perpendicular. Hence it is, that the Greeks have built their public edifices and the palaces of their kings of brick; the wall at Athens, for example, which faces Mount Hymettus; the Temples of Jupiter and Hercules at Patræ, although the columns and architraves in the interior are of stone; the palace of King Attalus at Tralles; the palace of Crœsus at Sardes, now converted into an asylum for aged persons; and that of King Mausolus at Halicarnassus; edifices, all of them, still in existence.

Muræna and Varro, in their ædileship, had a fine fresco painting, on the plaster of a wall at Lacedæmon, cut away from the bricks, and transported in wooden frames to Rome, for the purpose of adorning the Comitium. Admirable as the work was of itself, it was still more admired after being thus transferred. In Italy also there are walls of brick, at Arretium and Mevania. At Rome, there are no buildings of this description, because a wall only a foot-and-a-half in thickness would not support more than a single story; and by public ordinance it has been enacted that no partition should exceed that thickness; nor, indeed, does the peculiar construction of our party-walls admit of it.

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CHAP. 50. (15.)

SULPHUR, AND THE SEVERAL VARIETIES OF IT: FOURTEEN REMEDIES.

Let thus much be deemed sufficient on the subject of bricks. Among the other kinds of earth, the one of the most singular nature, perhaps, is sulphur, an agent of great power upon other substances. Sulphur is found in the Æolian Islands, between Sicily and Italy, which are volcanic, as already stated. But the finest sulphur of all, is that which comes from the Isle of Melos. It is obtained also in Italy, upon the range of hills in the territories of Neapolis and Campania, known as the Leucogæi: when extracted from the mines there, it is purified by the agency of fire.

There are four kinds of sulphur; the first of which is "live" sulphur, known as "apyron" by the Greeks, and found in solid masses, or in other words, in blocks. This, too, is the only sulphur that is extracted in its native state, the others being found in a state of liquescence, and requiring to be purified by being boiled in oil. This kind is green and transparent, and is the only sulphur that is used for medicinal purposes. A second kind is known as the "glebaceous" sulphur, and is solely employed in the workshops of the fullers. The third kind, also, is only used for a single purpose, that of fumigating wool, a process which contributes very greatly to making the wool white and soft; "egula" is the name given to it. The fourth kind is used in the preparation of matches more particularly.

In addition to these several uses, sulphur is of such remarkable virtue, that if it is thrown upon the fire it will at once detect, by the smell, whether or not a person is subject to epilepsy. Anaxilaüs used to employ this substance by way of pastime: putting sulphur in a cup of wine, with some hot coals beneath, he would hand it round to the guests, the light given by it, while burning, throwing a ghastly paleness like that of death upon the face of each. Its properties are calorific and maturative, in addition to which, it disperses abscesses on the body: hence it is that it is used as an ingredient in plasters and emollient poultices. Applied to the loins and kidneys, with grease,

when there are pains in those parts, it is marvellously effectual as a remedy. In combination with turpentine, it removes lichens on the face, and leprosy, the preparation being known as “harpax,” from the celerity with which it acts upon the skin; for which reason it ought to be removed every now and then. Employed as an electuary, it is good for asthma, purulent expectorations, and stings inflicted by scorpions. Live sulphur, mixed with nitre, and then bruised with vinegar and applied, causes morphew to disappear, and destroys nits in the hair; in combination, too, with sandarach and vinegar, it is good for diseases of the eyelids.

Sulphur has its place among our religious ceremonies, being used as a fumigation for purifying houses. Its virtues are also to be perceived in certain hot mineral waters; and there is no substance that ignites more readily, a proof that there is in it a great affinity to fire. Lightning and thunder are attended with a strong smell of sulphur, and the light produced by them is of a sulphureous complexion.

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CHAP. 51.

BITUMEN, AND THE SEVERAL VARIETIES OF IT; TWENTY-SEVEN REMEDIES.

Nearly approaching to the nature of sulphur is that of bitumen, which in some places assumes the form of a slime, and in others that of an earth; a slime, thrown up, as already stated, by a certain lake in Judæa, and an earth, found in the vicinity of Sidon, a maritime town of Syria. In both these states, it admits of being thickened and condensed. There is also a liquid bitumen, that of Zacynthus, for example, and the bitumen that is imported from Babylon; which last kind is also white: the bitumen, too, of Apollonia is liquid. All these kinds, in Greek, have the one general name of "pissasphaltos," from their strong resemblance to a compound of pitch and bitumen. There is also found an unctuous liquid bitumen, resembling oil, in a spring at Agrigentum, in Sicily, the waters of which are tainted by it. The inhabitants of the spot collect it on the panicles of reeds, to which it very readily adheres, and make use of it for burning in lamps, as a substitute for oil, as also for the cure of itch-scab in beasts of burden.

Some authorities include among the bitumens, naphtha, a substance which we have already mentioned in the Second Book; but the burning properties which it possesses, and its susceptibility of igniting, render it quite unfit for use. Bitumen, to be of good quality, should be extremely brilliant, heavy, and massive; it should also be moderately smooth, it being very much the practice to adulterate it with pitch. Its medi- cinal properties are similar to those of sulphur, it being naturally astringent, dispersive, contractive, and agglutinating: ignited, it drives away serpents by the smell. Babylonian bitumen is very efficacious, it is said, for the cure of cataract and albugo, as also of leprosy, lichens, and pruriginous affections. Bitumen is employed, too, in the form of a liniment, for gout; and every variety of it is useful for making bandolines for eyelashes that are refractory and impede the sight. Applied topically with nitre, it is curative of tooth-ache, and, taken internally, with wine, it alleviates chronic coughs and difficulty of respiration. It is administered in a similar manner for

dysentery, and is very good for arresting looseness of the bowels. Taken internally with vinegar, it dissolves and brings away coagulated blood. It modifies pains also in the loins and joints, and, applied with barley-meal, it forms a peculiar kind of plaster, to which it has given its name. It stanches blood also, heals wounds, and unites the sinews when severed. Bitumen is administered for quartan fevers, in doses of one drachma to an equal quantity of hedyosmos, the whole kneaded up with one obolus of myrrh. The smell of burnt bitumen detects a tendency to epilepsy, and, applied to the nostrils with wine and castoreum, it dispels suffocations of the uterus. Employed as a fumigation, it acts as a check upon procidence of the uterus, and, taken internally with wine, it has the effect of an emmenagogue.

Another use that is made of it, is for coating the inside of copper vessels, it rendering them proof against the action of fire. It has been already stated that bitumen was formerly employed for staining copper and coating statues. It has been used, too, as a substitute for lime; the walls of Babylon, for instance, which are cemented with it. In the smithies they are in the habit of varnishing iron and heads of nails with it, and of using it for many other purposes as well.

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CHAP. 52.

ALUMEN, AND THE SEVERAL VARIETIES OF IT; THIRTY-EIGHT REMEDIES.

Not less important, or indeed very dissimilar, are the uses that are made of alumen; by which name is understood a sort of brine which exudes from the earth. Of this, too, there are several kinds. In Cyprus there is a white alumen, and another kind of a darker colour. The difference, however, in their colour is but trifling in reality, though the uses made of them are very dissimilar; the white liquid alumen being employed for dyeing wool of bright colours, and the black, on the other hand, for giving wool a tawny or a sombre tint. Gold, too, is purified by the agency of black alumen. Every kind of alumen is a compound of slime and water, or in other words, is a liquid product exuding from the earth; the concretion of it commencing in winter, and being completed by the action of the summer sun. That portion of it which is the first matured, is the whitest in appearance.

The countries which produce this substance, are Spain, Ægypt, Armenia, Macedonia, Pontus, Africa, and the islands of Sardinia, Melos, Lipara, and Strongyle: the most esteemed, however, is that of Egypt, the next best being the produce of Melos. Of this last kind there are also two varieties, the liquid alumen, and the solid. Liquid alumen, to be good, should be of a limpid, milky, appearance: when rubbed between the fingers it should be free from grit, and productive of a slight sensation of heat. The name given to it is "phorimon." The mode of detecting whether or not it has been adulterated, is by the application of pomegranate-juice; for if genuine, it will turn black on combining with the juice. The other, or solid alumen, is pale and rough in ap- pearance, and turns black on the application of nut-galls; for which reason it is known by the name of "paraphoron."

Liquid alumen is naturally astringent, indurative, and corrosive: used in combination with honey, it heals ulcerations of the mouth, pimples, and pruriginous eruptions. The remedy, when thus used, is employed in the bath, the proportions being two parts of honey to one of alumen. It has the effect, also, of checking and dispersing

perspiration, and of neutralizing offensive odours of the arm-pits. It is taken too, in the form of pills, for affections of the spleen, and for the purpose of carrying off blood by the urine: incorporated with nitre and melanthium, it is curative of itch-scab.

There is one kind of solid alumen, known to the Greeks as "schiston," which splits into filaments of a whitish colour; for which reason some have preferred giving it the name of "trichitis." It is produced from the mineral ore known to us as "chalcitis," from which copper is also produced, it being a sort of exudation from that mineral, coagulated into the form of scum. This kind of alumen is less desiccative than the others, and is not so useful as a check upon bad humours of the body. Used, however, either in the form of a liniment or of an injection, it is highly beneficial to the ears; as also for ulcerations of the mouth, and for tooth-ache, if retained with the saliva in the mouth. It is employed also as a serviceable ingredient in compositions for the eyes, and for the generative organs in either sex. The mode of preparing it is to roast it in crucibles, until it has quite lost its liquid form.

There is another variety of alumen also, of a less active nature, and known as "strongyle;" which is again subdivided into two kinds; the fungous, which easily dissolves in any liquid, and is looked upon as altogether worthless; and the porous, which is full of small holes like a sponge, and in pieces of a globular form, more nearly approaching white alumen in appearance. It has a certain degree, too, of unctuousness, is free from grit, friable, and not apt to blacken the fingers. This last kind is calcined by itself upon hot coals, unmixed with any other substance, until it is entirely reduced to ashes.

The best kind of all, however, is that called "melinum," as coming from the Isle of Melos, as already mentioned; none being more effectual for acting as an astringent, staining black, and indurating, and none assuming a closer consistency. It removes granulations of the eye-lids, and, in a calcined state, is still more efficacious for checking defluxions of the eyes: in this last form, too, it is employed for the cure of pruriginous eruptions on the body. Whether taken internally, or employed externally, it arrests discharges of blood; and if it is applied with vinegar to a part from which the hair has been first removed, it will change into a soft down the hair which replaces

it. The leading property of every kind of alumen is its remarkable astringency, to which, in fact, it is indebted for its name with the Greeks. It is for this property that the various kinds are, all of them, so remarkably good for the eyes. In combination with grease, they arrest discharges of blood; and they are employed in a similar manner for checking the spread of putrid ulcers, and for removing sores upon the bodies of infants.

Alumen has a desiccative effect upon dropsical eruptions; and, in combination with pomegranate juice, it removes diseases of the ears, malformed nails, indurations resulting from cicatrization, hangnails, and chilblains. Calcined, with vinegar or nut-galls, in equal proportions, it is curative of phagedænic ulcers; and, in combination with extracted juice of cabbage, of leprosy. Used in the proportion of one part of alumen to two of salt, it arrests the progress of serpiginous eruptions; and an infusion of it in water destroys lice and other parasitical insects that infest the hair. Employed in a similar manner, it is good for burns; and, in combination with the serous part of pitch, for furfuraceous eruptions on the body. It is used also as an injection for dysentery, and, employed in the form of a gargle, it braces the uvula and tonsillary glands. For all those maladies which we have men- tioned as being treated with the other kinds of alumen, that imported from Melos, be it understood, is still more efficacious. As to the other uses that are made of it for industrial purposes, such as preparing hides and wool, for example, they have been mentioned already.

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CHAP. 53. (16.)

SAMIAN EARTH: THREE REMEDIES.

In succession to these, we shall now have to speak of various other kinds of earth which are made use of in medicine.

Of Samian earth there are two varieties; one known as "collyrium," the other by the name of "aster." To be in perfection, the first kind should be fresh, remarkably smooth, and glutinous to the tongue; the second being of a more solid consistency, and white. They are both prepared for use by being calcined and then rinsed in water, some persons giving the preference to the first. They are both of them useful for discharges of blood from the mouth, and are employed as an ingredient in plasters of a desiccative nature. They are used also in the preparation of ophthalmic compositions.

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CHAP. 54.

THE VARIOUS KINDS OF ERETRIA.

Of eretria, or Eretrian earth, there are also the same number of varieties; one white, and the other of an ashy colour, this last being preferred in medicine. To be good, this earth should be of a soft consistency, and when rubbed upon copper it should leave a violet tint. The virtues of cretria in a medicinal point of view, and the methods of using it, have been already mentioned in our description of the pigments.

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CHAP. 55.

THE METHOD OF WASHING EARTHS FOR MEDICINAL PURPOSES.

All these earths — for we will take the present opportunity of mentioning it — are well washed in water, and then dried in the sun; after which, they are again triturated in water, and left to settle: this done, they are divided into tablets. They are usually boiled in earthen vessels, which are well shaken every now and then.

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CHAP. 56.

CHIAN EARTH; THREE REMEDIES. SELINUSIAN EARTH; THREE REMEDIES. PNIGITIS; NINE REMEDIES. AMPELITIS; FOUR REMEDIES.

Among the medicinal substances, there is the white earth of Chios also, the properties of which are the same as those of Samian earth. It is used more particularly as a cosmetic for the skin of females; the Selinusian earth being also employed for a similar purpose. This last is of a milk-white colour, and melts very rapidly in water: dissolved in milk, it is employed for whitening the plaster coats on walls. Pnigitis is very similar to Eretrian earth, only that it is found in larger masses, and is of a glutinous consistency. Its effects are similar to those produced by Cimolian earth, but are not so energetic.

Ampelitis is an earth which bears a strong resemblance to bitumen. The test of its goodness is its dissolving in oil, like wax, and preserving its black colour when submitted to the action of fire. Its properties are emollient and repercussive; for which reason, it is used in medicinal compositions, those known as “calliblephara,” more particularly, and in preparations for dyeing the hair.

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CHAP. 57. (17.)

CRETACEOUS EARTHS USED FOR SCOURING CLOTH. CIMOLIAN EARTH; NINE REMEDIES. SARDINIAN EARTH. UMBRIAN EARTH. SAXUM.

Of cretaceous earths there are several varieties; and among them, two kinds of Cimolian earth, employed in medicine, the one white and the other inclining to the tint of purpurissum. Both kinds, moistened with vinegar, have the effect of dispersing tumours and arresting defluxions. They are curative also of inflammatory swellings and imposthumes of the parotid glands; and, applied topically, they are good for affections of the spleen and pustules on the body. With the addition of aphronitrum, oil of cypros, and vinegar, they reduce swellings of the feet, care being taken to apply the lotion in the sun, and at the end of six hours to wash it off with salt and water. In combination with wax and oil of cypros, Cimolian earth is good for swellings of the testes.

Cretaceous earths, too, are of a cooling tendency, and, applied to the body in the form of a liniment, they act as a check upon excessive perspiration: taken with wine, in the bath, they remove pimples on the body. The most esteemed of all these earths is that of Thessaly: it is found also in the vicinity of Bubon in Lycia.

Cimolian earth is used also for another purpose, that of scouring cloth. As to the kind which is brought from Sardinia, and is known as "sarda," it is used for white tissues only, and is never employed for coloured cloths. Indeed, this last is held in the lowest estimation of all the Cimolian earths; whereas, that of Umbria is more highly esteemed, as also the kind generally known as "saxum." It is a property of this last to increase in weight by maceration, and it is by weight that it is usually sold, Sardinian earth being sold by measure. Umbrian earth is only used for giving lustre to cloths.

It will not be deemed out of place to give some further account here of this process, there being still in existence the Metilian Law, relative to fullers; an enactment which C. Flaminius and L. Æmilius, in their censorship, had passed by the people, so attentive to

everything were our ancestors. The following then is the method employed in preparing cloth: it is first washed in an infusion of Sardinian earth, and is then exposed to a fumigation with sulphur. This done, it is scoured with Cimolian earth, when the cloth has been found to be of a genuine colour; it being very soon detected when it has been coloured with spurious materials, by its turning black and the colours becoming dispersed by the action of the sulphur. Where the colours are genuine and rich, they are softened by the application of Cimolian earth; which brightens and freshens them also when they have been rendered sombre by the action of the sulphur. Saxum is better for white tissues, after the application of sulphur, but to coloured cloths it is highly injurious. In Greece they use Tymphæan gypsum in place of Cimolian earth.

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CHAP. 58.

ARGENTARIA. NAMES OF FREEDMEN WHO HAVE EITHER RISEN TO POWER THEMSELVES, OR HAVE BELONGED TO MEN OF INFLUENCE.

There is another cretaceous earth, known as "argentaria," from the brightness which it imparts to silver. There is also the most inferior kind of chalk; which was used by the ancients for tracing the line of victory in the Circus, and for marking the feet of slaves on sale, that were brought from beyond sea. Such, for instance, were Publilius Lochius, the founder of our mimic scenes; his cousin, Manilius Antiochus, the first cultivator of astronomy; and Staberius Eros, our first grammarian; all three of whom our ancestors saw brought over in the same ship

(18.) But why mention these names, recommended as they are by the literary honours which they acquired? Other instances too, Rome has beheld of persons rising to high positions from the slave-market; Chrysogonus, for example, the freedman of Sylla; Amphion, the freedman of Q. Catulus; the man who was the keeper of Lucullus; Demetrius, the freedman of Pompeius, and Auge, the freedwoman of Demetrius, or else of Pompeius himself, as some have supposed; Hipparchus, the freedman of M. Antonius; as also, Menas and Menecrates, freedmen of Sextus Pompeius, and many others as well, whom it would be superfluous to enumerate, and who have enriched themselves at the cost of Roman blood, and the licence that results from proscription.

Such is the mark that is set upon those droves of slaves which we see on sale, such the opprobrium thrown upon them by a capricious fortune ! And yet, some of these very men have we beheld in the enjoyment of such power and influence, that the senate itself has decreed them — at the command of Agrippina, wife of the Emperor Claudius — the decorations even of the prætorship: all but honoured with the fasces and their laurels, in fact, and sent back in state to the very place from which they originally came, with their feet whitened with the slave-dealer's chalk!

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CHAP. 59. (19.)

THE EARTH OF GALATA; OF CLYPEA; OF THE BALEARES; AND OF EBUSUS.

In addition to these, there are various other kinds of earth, endowed with peculiar properties of their own, and which have been already mentioned on former occasions. We may, however, take the present opportunity of again remarking the following properties. The earth of the island of Galata and of the vicinity of Clypea, in Africa, is fatal to scorpions; and that of the Balearic Islands and of Ebusus kills serpents.

SUMMARY. — Remedies, narratives, and observations, nine hundred and fifty-six.

ROMAN AUTHORS QUOTED. — Messala the Orator, the Elder Messala, Fenestella, Atticus, M. Varro, Verrius, Cornelius Nepos, Deculo, Mucianus, Melissus, Vitruvius, Cassius Severus Longulanus, Fabius Vestalis, who wrote on Painting.

FOREIGN AUTHORS QUOTED. — Pasiteles, Apelles, Melanthius Asclepiodorus, Euphranor, Heliodorus, who wrote on the Votive Offerings of the Athenians, Metrodorus, who wrote on Architecture, Democritus, Theophrastus, Apion the grammarian, who wrote on the Medicines derived from Metals, Nymphodorus, Iollas, Apollodorus, Andreas, Heraclides, Diagoras, Botrys, Archidemus, Dionysius, Aristogenes, Democles, Mnesides, Xenocrates the son of Zeno, Theomnestus.

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BOOK XXXVI. THE NATURAL HISTORY OF STONES.

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CHAP. 1. (1.)

LUXURY DISPLAYED IN THE USE OF VARIOUS KINDS OF MARBLE.

IT now remains for us to speak of stones, or, in other words, the leading folly of the day; to say nothing at all of our taste for gems and amber, crystal and murrhine vases. For everything of which we have previously treated, down to the present Book, may, by some possibility or other, have the appearance of having been created for the sake of man: but as to the mountains, Nature has made those for herself, as a kind of bulwark for keeping together the bowels of the earth; as also for the purpose of curbing the violence of the rivers, of breaking the waves of the sea, and so, by opposing to them the very hardest of her materials, putting a check upon those elements which are never at rest. And yet we must hew down these mountains, forsooth, and carry them off; and this, for no other reason than to gratify our luxurious inclinations: heights which in former days it was reckoned a miracle even to have crossed!

Our forefathers regarded as a prodigy the passage of the Alps, first by Hannibal, and, more recently, by the Cimbri: but at the present day, these very mountains are cut asunder to yield us a thousand different marbles, promontories are thrown open to the sea, and the face of Nature is being everywhere reduced to a level. We now carry away the barriers that were destined for the separation of one nation from another; we construct ships for the transport of our marbles; and, amid the waves, the most boisterous element of Nature, we convey the summits of the mountains to and fro: a thing, however, that is even less unpardonable than to go on the search amid the regions of the clouds for vessels with which to cool our draughts, and to excavate rocks, towering to the very heavens, in order that we may have the satisfaction of drinking from ice! Let each reflect, when he hears of the high prices set upon these things, when he sees these ponderous masses carted and carried away, how many there are whose life is passed far more happily without them. For what utility or for what so-called pleasure do mortals make themselves the agents, or, more truly speaking, the victims of such undertakings,

except in order that others may take their repose in the midst of variegated stones? Just as though too, the shades of night, which occupy one half of each man's existence, would forbear to curtail these imaginary delights.

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CHAP. 2.

WHO WAS THE FIRST TO EMPLOY MARBLE IN PUBLIC BUILDINGS.

Indeed, while making these reflections, one cannot but feel ashamed of the men of ancient times even. There are still in existence censorial laws, which forbid the kernels in the neck of swine to be served at table, dormice too, and other things too trifling to mention: and yet there has been no law passed, forbidding marble to be imported, or the seas to be traversed in search of it!

(2.) It may possibly be observed, that this was, because marble was not then introduced. Such, however, is not the fact; for in the ædileship of M. Scaurus, three hundred and sixty columns were to be seen imported; for the decorations of a temporary theatre, too, one that was destined to be in use for barely a single month. And yet the laws were silent thereon; in a spirit of indulgence for the amusements of the public, no doubt. But then, why such indulgence? or how do vices more insidiously steal upon us than under the plea of serving the public? By what other way, in fact, did ivory, gold, and precious stones, first come into use with private individuals?

Can we say that there is now anything that we have reserved for the exclusive use of the gods? However, be it so, let us admit of this indulgence for the amusements of the public; but still, why did the laws maintain their silence when the largest of these columns, pillars of Lucullan marble, as much as eight-and-thirty feet in height, were erected in the atrium of Scaurus? a thing, too, that was not done privately or in secret; for the contractor for the public sewers compelled him to give security for the possible damage that might be done in the carriage of them to the Palatium. When so bad an example as this was set, would it not have been advisable to take some precautions for the preservation of the public morals? And yet the laws still preserved their silence, when such enormous masses as these were being carried past the earthenware pediments of the temples of the gods, to the house of a private individual!

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CHAP. 3. (3.)

WHO WAS THE FIRST TO ERECT COLUMNS OF FOREIGN MARBLE AT ROME.

And yet it cannot be said that Scaurus, by way of a first essay in vice, took the City by surprise, in a state of ignorance and totally unguarded against such evils as these. Already had L. Crassus, the orator, he who was the first to possess pillars of foreign marble, and in this same Palatium too, received from M. Brutus, on the occasion of a dispute, the nickname of the "Palatine Venus," for his indulgence in this kind of luxury. The material, I should remark, was Hymettian marble, and the pillars were but six in number, and not exceeding some twelve feet in height. Our forefathers were guilty of this omission, no doubt, because morals were universally contaminated; and, seeing that things which had been interdicted had been forbidden in vain, they preferred the absence of laws to laws that were no better than a dead letter. These particulars and others in the sequel will show that we are so far improved; for who is there at the present day that has, in his atrium, any such massive columns as these of Scaurus?

But before proceeding to treat of the several varieties of this material, it will be as well to mention the various artists, and the degrees of estimation in which they are held, who have worked in marble. We will, therefore, proceed to review the sculptors who have flourished at different periods.

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CHAP. 4. (4.)

THE FIRST ARTISTS WHO EXCELLED IN THE SCULPTURE OF MARBLE, AND THE VARIOUS PERIODS AT WHICH THEY FLOURISHED. THE MAUSOLEUM IN CARIA. THE MOST CELEBRATED SCULPTORS AND WORKS IN MARBLE, TWO HUNDRED AND TWENTY-FIVE IN NUMBER.

The first artists who distinguished themselves in the sculpture of marble, were Dipœnus and Scyllis, natives of the Isle of Crete. At this period the Medians were still in power, and Cyrus had not begun to reign in Persia; their date being about the fiftieth Olympiad. They afterwards repaired to Sicyon, a state which for a length of time was the adopted country of all such pursuits as these. The people of Sicyon had made a contract with them for the execution of certain statues of the gods; but, before completing the work, the artists complained of some injustice being done them, and retired to Ætolia. Immediately upon this, the state was afflicted with sterility and famine, and dreadful consternation was the result. Upon enquiry being made as to a remedy for these evils, the Pythian Apollo made answer, that Dipœnus and Scyllis must complete the statues of the gods; an object which was attained at the cost of great concessions and considerable sums of money. The statues were those of Apollo, Diana, Hercules, and Minerva; the last of which was afterwards struck by lightning.

(5.) Before these artists were in existence, there had already appeared Melas, a sculptor of the Isle of Chios; and, in succession to him, his son Micciades, and his grandson Archermus; whose sons, Bupalus and Athenis, afterwards attained the highest eminence in the art. These last were contemporaries of the poet Hipponax, who, it is well known, lived in the sixtieth Olympiad. Now, if a person only reckons, going upwards from their time to that of their great-grandfather, he will find that the art of sculpture must have necessarily originated about the commencement of the era of the Olympiads. Hipponax being a man notorious for his ugliness, the two artists, by way of joke, exhibited a statue of him for the ridicule of the public. Indignant at this, the poet emptied upon them all the bitterness of his verses; to such an extent indeed, that, as some

believe, they were driven to hang themselves in despair. This, however, is not the fact; for, at a later period, these artists executed a number of statues in the neighbouring islands; at Delos for example, with an inscription subjoined to the effect, that Chios was rendered famous not only by its vines but by the works of the sons of Archermus as well. The people of Lasos still show a Diana that was made by them; and we find mention also made of a Diana at Chios, the work of their hands: it is erected on an elevated spot, and the features appear stern to a person as he enters, and joyous as he departs. At Rome, there are some statues by these artists on the summit of the Temple of the Palatine Apollo, and, indeed, in most of the buildings that were erected by the late Emperor Augustus. At Delos and in the Isle of Lesbos there were formerly some sculptures by their father to be seen. Ambracia too, Argos, and Cleonæ, were filled with productions of the sculptor Dipœnus.

All these artists, however, used nothing but the white marble of the Isle of Paros, a stone which was known as "lychnites" at first, because, according to Varro, it was cut in the quarries by lamplight. Since their time, many other whiter marbles have been discovered, and very recently that of the quarries of Luna. With reference to the marble of Paros, there is one very marvellous circumstance related; in a single block that was split with wedges, a figure of Silenus made its appearance.

We must not omit to remark, that the art of sculpture is of much more ancient date than those of painting and of statuary in bronze; both of which commenced with Phidias, in the eighty-third Olympiad, or in other words, about three hundred and thirty-two years later. Indeed, it is said, that Phidias himself worked in marble, and that there is a Venus of his at Rome, a work of extraordinary beauty, in the buildings of Octavia. A thing, however, that is universally admitted, is the fact that he was the instructor of Alcamenes, the Athenian, one of the most famous among the sculptors. By this last artist, there are numerous statues in the temples at Athens; as also, without the walls there, the celebrated Venus, known as the Aphroditeἐν χήποις, a work to which Phidias himself, it is said, put the finishing hand. Another disciple also of Phidias was Agoracritus of Paros, a great favourite with his master,

on account of his extremely youthful age; and for which reason, it is said, Phidias gave his own name to many of that artist's works. The two pupils entering into a contest as to the superior execution of a statue of Venus, Alcamenes was successful; not that his work was superior, but because his fellow-citizens chose to give their suffrages in his favour in preference to a stranger. It was for this reason, it is said, that Agoracritus sold his statue, on the express condition that it should never be taken to Athens, and changed its name to that of Nemesis. It was accordingly erected at Rhamnus, a borough of Attica, and M. Varro has considered it superior to every other statue. There is also to be seen in the Temple of the Great Mother, in the same city, another work by Agoracritus.

Among all nations which the fame of the Olympian Jupiter has reached, Phidias is looked upon, beyond all doubt, as the most famous of artists: but to let those who have never even seen his works, know how deservedly he is esteemed, we will take this opportunity of adducing a few slight proofs of the genius which he displayed. In doing this, we shall not appeal to the beauty of his Olympian Jupiter, nor yet to the vast proportions of his Athenian Minerva, six and twenty cubits in height, and composed of ivory and gold; but it is to the shield of this last statue that we shall draw attention; upon the convex face of which he has chased a combat of the Amazons, while, upon the concave side of it, he has represented the battle between the Gods and the Giants. Upon the sandals again, we see the wars of the Lapithæ and Centaurs, so careful has he been to fill every smallest portion of his work with some proof or other of his artistic skill. To the story chased upon the pedestal of the statue, the name of the "Birth of Pandora" has been given; and the figures of new-born gods to be seen upon it are no less than twenty in number. The figure of Victory, in particular, is most admirable, and connoisseurs are greatly struck with the serpent and the sphinx in bronze lying beneath the point of the spear. Let thus much be said incidentally in reference to an artist who can never be sufficiently praised; if only to let it be understood that the richness of his genius was always equal to itself, even in the very smallest details.

When speaking of the statuaries, we have already given the period at which Praxiteles flourished; an artist, who, in the glory which he

acquired by his works in marble, surpassed even himself. There are some works of his in the Ceramicus at Athens; but, superior to all the statues, not only of Praxiteles, but of any other artist that ever existed, is his Cnidian Venus; for the inspection of which, many persons before now have purposely undertaken a voyage to Cnidos. The artist made two statues of the goddess, and offered them both for sale: one of them was represented with drapery, and for this reason was preferred by the people of Cos, who had the choice; the second was offered them at the same price, but, on the grounds of propriety and modesty, they thought fit to choose the other. Upon this, the Cnidians purchased the rejected statue, and immensely superior has it always been held in general estimation. At a later period, King Nicomedes wished to purchase this statue of the Cnidians, and made them an offer to pay off the whole of their public debt, which was very large. They preferred, however, to submit to any extremity rather than part with it; and with good reason, for by this statue Praxiteles has perpetuated the glory of Cnidos. The little temple in which it, is placed is open on all sides, so that the beauties of the statue admit of being seen from every point of view; an arrangement which was favoured by the goddess herself, it is generally believed. Indeed, from whatever point it is viewed, its execution is equally worthy of admiration. A certain individual, it is said, became enamoured of this statue, and, concealing himself in the temple during the night, gratified his lustful passion upon it, traces of which are to be seen in a stain left upon the marble.

There are also at Cnidos some other statues in marble, the productions of illustrious artists; a Father Liber by Bryaxis, another by Scopas, and a Minerva by the same hand: indeed, there is no greater proof of the supreme excellence of the Venus of Praxiteles than the fact that, amid such productions as these, it is the only one that we generally find noticed. By Praxiteles, too, there is a Cupid, a statue which occasioned one of the charges brought by Cicero against Verres, and for the sake of seeing which persons used to visit Thespiæ: at the present day, it is to be seen in the Schools of Octavia. By the same artist there is also another Cupid, without drapery, at Parium, a colony of the Propontis; equal to the Cnidian Venus in the fineness of its execution, and said to have been the object of a similar

outrage. For one Alcetas, a Rhodian, becoming deeply enamoured of it, left upon the marble similar traces of the violence of his passion.

At Rome there are, by Praxiteles, a Flora, a Triptolemus, and a Ceres, in the Gardens of Servilius; statues of Good Success and Good Fortune, in the Capitol; as also some Mænades, and figures known as Thyiades and Caryatides; some Sileni, to be seen in the memorial buildings of Asinius Pollio, and statues of Apollo and Neptune.

Cephisodotus, the son of Praxiteles, inherited his father's talent. There is, by him, at Pergamus, a splendid Group of Wrestlers, a work that has been highly praised, and in which the fingers have all the appearance of being impressed upon real flesh rather than upon marble. At Rome there are by him, a Latona, in the Temple of the Palatium; a Venus, in the buildings that are memorials of Asinius Pollio; and an Æsculapius, and a Diana, in the Temple of Juno situate within the Porticos of Octavia.

Scopas rivals these artists in fame: there are by him, a Venus and a Pothos, statues which are venerated at Samothrace with the most august ceremonials. He was also the sculptor of the Palatine Apollo; a Vesta seated, in the Gardens of Servilius, and represented with two Bends around her, a work that has been highly praised; two similar Bends, to be seen upon the buildings of Asinius Pollio; and some figures of Canephori in the same place. But the most highly esteemed of all his works, are those in the Temple erected by Cneius Domitius, in the Flaminian Circus; a figure of Neptune himself, a Thetis and Achilles, Nereids seated upon dolphins, cetaceous fishes, and sea-horses, Tritons, the train of Phor- cus, whales, and numerous other sea-monsters, all by the same hand; an admirable piece of workmanship, even if it had taken a whole life to complete it. In addition to the works by him already mentioned, and others of the existence of which we are ignorant, there is still to be seen a colossal Mars of his, seated, in the Temple erected by Brutus Callæcus, also in the Flaminian Circus; as also, a naked Venus, of anterior date to that by Praxiteles, and a production that would be quite sufficient to establish the renown of any other place.

At Rome, it is true, it is quite lost sight of amid such a vast multitude of similar works of art: and then besides, the inattention to

these matters that is induced by such vast numbers of duties and so many items of business, quite precludes the generality of persons from devoting their thoughts to the subject. For, in fact, the admiration that is due to this art, not only demands an abundance of leisure, but requires that profound silence should reign upon the spot. Hence it is, that the artist is now forgotten, who executed the statue of Venus that was dedicated by the Emperor Vespasianus in his Temple of Peace, a work well worthy of the high repute of ancient times. With reference, too, to the Dying Children of Niobe, in the Temple of the Sosian Apollo, there is an equal degree of uncertainty, whether it is the work of Scopas or of Praxiteles. So, too, as to the Father Janus, a work that was brought from Egypt and dedicated in his Temple by Augustus, it is a question by which of these two artists it was made: at the present day, however, it is quite hidden from us by the quantity of gold that covers it. The same question, too, arises with reference to the Cupid brandishing a Thunderbolt, now to be seen in the Curia of Octavia: the only thing, in fact, that is affirmed with any degree of certainty respecting it, is, that it is a likeness of Alcibiades, who was the handsomest man of his day. There are, too, in the Schools of Octavia, many other highly attractive works, the authors of which are now unknown: four Satyrs, for example, one of which carries in his arms a Father Liber, robed in the palla; another similarly supports the Goddess Libera; a third is pacifying a child who is crying; and a fourth is giving a child some water to drink, from a cup; two Zephyrs also, who agitate their flowing drapery with their breath. No less is the uncertainty that prevails as to the authors of the statues now to be seen in the Septa; an Olympus and Pan, and a Charon and Achilles; and yet their high reputation has caused them to be deemed valuable enough for their keepers to be made answerable for their safety at the cost of their lives.

Scopas had for rivals and contemporaries, Bryaxis, Timotheus, and Leochares, artists whom we are bound to mention together, from the fact that they worked together at the Mausoleum; such being the name of the tomb that was erected by his wife Artemisia in honour of Mausolus, a petty king of Caria, who died in the second year of the hundred and seventh Olympiad. It was through the exertions of these artists more particularly, that this work came to be reckoned one of

the Seven Wonders of the World. The circumference of this building is, in all, four hundred and forty feet, and the breadth from north to south sixty-three, the two fronts being not so wide in extent. It is twenty-five cubits in height, and is surrounded with six-and-thirty columns, the outer circumference being known as the "Pteron." The east side was sculptured by Scopas, the north by Bryaxis, the south by Timotheus, and the west by Leochares; but, before their task was completed, Queen Artemisia died. They did not leave their work, however, until it was finished, considering that it was at once a memorial of their own fame and of the sculptor's art: and, to this day even, it is undecided which of them has excelled. A fifth artist also took part in the work; for above the Pteron there is a pyramid erected, equal in height to the building below, and formed of four and twenty steps, which gradually taper upwards towards the summit; a platform, crowned with a representation of a four-horse chariot by Pythis. This addition makes the total height of the work one hundred and forty feet.

There is at Rome, by Timotheus, a Diana, in the Temple of Apollo in the Palatium, the head of which has been replaced by Avianius Evander. A Hercules, too, by Menestratus, is greatly admired; and there is a Hecate of his at Ephesus, in the Temple of Diana there, behind the sanctuary. The keepers of the temple recommend persons, when viewing it, to be careful of their eyes, so remarkably radiant is the marble. No less esteemed, too, are the statues of the Graces, in the Propylæum at Athens; the workmanship of Socrates the sculptor, a different person from the painter of that name, though identical with him in the opinion of some. As to Myron, who is so highly praised for his works in bronze, there is by him at Smyrna, An Old Woman Intoxicated, a work that is held in high estimation.

Asinius Pollio, a man of a warm and ardent temperament, was determined that the buildings which he erected as memorials of himself should be made as attractive as possible; for here we see groups representing, Nymphs carried off by Centaurs, a work of Arcesilas: the Thespiades, by Cleomenes: Oceanus and Jupiter, by Heniochus: the Appiades, by Stephanus: Hermerotes, by Tauriscus, not the chaser in silver, already mentioned, but a native of Tralles: a Jupiter Hospitalis by Papylus, a pupil of Praxiteles: Zethus and

Amphion, with Dirce, the Bull, and the halter, all sculptured from a single block of marble, the work of Apollonius and Tauriscus, and brought to Rome from Rhodes. These two artists made it a sort of rivalry as to their parentage, for they declared that, although Apollodorus was their natural progenitor, Menecrates would appear to have been their father. In the same place, too, there is a Father Liber, by Eutychides, highly praised. Near the Portico of Octavia, there is an Apollo, by Philiscus of Rhodes, placed in the Temple of that God; a Latona and Diana also; the Nine Muses; and another Apollo, without drapery. The Apollo holding the Lyre, in the same temple, was executed by Timarchides. In the Temple of Juno, within the Porticos of Octavia, there is a figure of that goddess, executed by Dionysius, and another by Polycles, as also other statues by Praxiteles. This Polycles, too, in conjunction with Dionysius, the son of Timarchides, made the statue of Jupiter, which is to be seen in the adjoining temple. The figures of Pan and Olympus Wrestling, in the same place, are by Heliodorus; and they are considered to be the next finest group of this nature in all the world. The same artist also executed a Venus at the Bath, and Polycharmus another Venus, in an erect posture.

By the honourable place which the work of Lysias occupies, we may see in what high esteem it was held by the late Emperor Augustus, who consecrated it in honour of his father Octavius, in the Palatium, placing it on an arch within a small temple, adorned with columns: it is the figure of a four-horse chariot, with an Apollo and Diana, all sculptured from a single block. I find it stated, also, that the Apollo by Calamis, the chaser already mentioned, the Pugilists by Dercylides, and the statue of Callisthenes the historian, by Amphistratus, all of them now in the Gardens of Servilius, are works highly esteemed.

Beyond these, there are not many sculptors of high repute; for, in the case of several works of very great excellence, the number of artists that have been engaged upon them has proved a considerable obstacle to the fame of each, no individual being able to engross the whole of the credit, and it being impossible to award it in due proportion to the names of the several artists combined. Such is the case with the Laocoön, for example, in the palace of the Emperor

Titus, a work that may be looked upon as preferable to any other production of the art of painting or of statuary. It is sculptured from a single block, both the main figure as well as the children, and the serpents with their marvellous folds. This group was made in concert by three most eminent artists, Agesander, Polydorus, and Athenodorus, natives of Rhodes. In similar manner also, the palaces of the Cæsars, in the Palatium, have been filled with most splendid statuary, the work of Craterus, in conjunction with Pythodorus, of Polydeuces with Hermoläus, and of another Pythodorus with Artemon; some of the statues, also, are by Aphrodisius of Tralles, who worked alone. The Pantheon of Agrippa has been decorated by Diogenes of Athens, and the Caryatides, by him, which form the columns of that temple, are looked upon as master-pieces of excellence: the same, too, with the statues that are placed upon the roof, though, in consequence of the height, they have not had an opportunity of being so well appreciated.

Without glory, and excluded from every temple, is the statue of Hercules, in honour of whom the Carthaginians were accustomed to sacrifice human victims every year: it stands upon the ground before the entrance of the Portico of the Nations. There were erected, too, near the Temple of Felicity, the statues of the Thespian Muses; of one of which, according to Varro, Junius Pisciculus, a Roman of equestrian rank, became enamoured. Pasiteles, too, speaks in terms of high admiration of them, the artist who wrote five Books on the most celebrated works throughout the world. Born upon the Grecian shores of Italy, and presented with the Roman citizenship granted to the cities of those parts, Pasiteles constructed the ivory statue of Jupiter which is now in the Temple of Metellus, on the road to the Campus Martius. It so happened, that being one day at the Docks, where there were some wild beasts from Africa, while he was viewing through the bars of a cage a lion which he was engaged in drawing, a panther made its escape from another cage, to the no small danger of this most careful artist. He executed many other works, it is said, but we do not find the names of them specifically mentioned.

Arcesilaüs, also, is an artist highly extolled by Varro; who states that he had in his possession a Lioness in marble of his, and Winged

Cupids playing with it, some holding it with cords, and others making it drink from a horn, the whole sculptured from a single block: he says, also, that the fourteen figures around the Theatre of Pompeius, representing different Nations, are the work of Coponius.

I find it stated that Canachus, an artist highly praised among the statuaries in bronze, executed some works also in marble. Saurus, too, and Batrachus must not be forgotten, Lacedæmonians by birth, who built the temples enclosed by the Porticos of Octavia. Some are of opinion that these artists were very wealthy men, and that they erected these buildings at their own expense, expecting to be allowed to inscribe their names thereon; but that, this indulgence being refused them, they adopted another method of attaining their object. At all events, there are still to be seen, at the present day, on the spirals of the columns, the figures of a lizard and a frog, emblematical of their names. In the Temple of Jupiter by the same artists, the paintings, as well as all the other ornaments, bear reference to the worship of a goddess. The fact is, that when the temple of Juno was completed, the porters, as it is said, who were entrusted with the carriage of the statues, made an exchange of them; and, on religious grounds, the mistake was left uncorrected, from an impression that it had been by the intervention of the divinities themselves, that this seat of worship had been thus shared between them. Hence it is that we see in the Temple of Juno, also, the ornaments which properly pertain to the worship of Jupiter.

Some minute works in marble have also gained reputation for their artists: by Myrmecides, there was a four-horse chariot, so small that it could be covered, driver and all, by the wings of a fly; and by Callicrates, some ants, in marble, the feet and other limbs of which were so fine as to escape the sight.

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CHAP. 5. (6.)

AT WHAT PERIOD MARBLE WAS FIRST USED IN BUILDINGS.

This must suffice for the sculptors in marble, and the works that have gained the highest repute; with reference to which subject it occurs to me to remark, that spotted marbles were not then in fashion. In making their statues, these artists used the marble of Thasos also, one of the Cyclades, and of Lesbos, this last being rather more livid than the other. The poet Menander, in fact, who was a very careful enquirer into all matters of luxury, is the first who has spoken, and that but rarely, of variegated marbles, and, indeed, of the employment of marble in general. Columns of this material were at first employed in temples, not on grounds of superior elegance, (for that was not thought of, as yet), but because no material could be found of a more substantial nature. It was under these circumstances, that the Temple of the Olympian Jupiter was commenced at Athens, the columns of which were brought by Sylla to Rome, for the buildings in the Capitol.

Still, however, there had been a distinction drawn between ordinary stone and marble, in the days of Homer even. The poet speaks in one passage of a person being struck down with a huge mass of marble; but that is all; and when he describes the abodes of royalty adorned with every elegance, besides brass, gold, electrum, and silver, he only mentions ivory. Variegated marbles, in my opinion, were first discovered in the quarries of Chios, when the inhabitants were building the walls of their city; a circumstance which gave rise to a facetious repartee on the part of M. Cicero. It being the practice with them to show these walls to everybody, as something magnificent; “I should admire them much more,” said he, “if you had built them of the stone used at Tibur.” And, by Hercules! the art of painting never would have been held in such esteem, or, indeed, in any esteem at all, if variegated marbles had been held in admiration.

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CHAP. 6.

WHO WERE THE FIRST TO CUT MARBLE INTO SLABS, AND AT WHAT PERIOD.

I am not sure whether the art of cutting marble into slabs, is not an invention for which we are indebted to the people of Caria. The most ancient instance of this practice, so far as I know of, is found in the palace of Mausolus, at Halicarnassus, the walls of which, in brick, are covered with marble of Proconnesus. Mausolus died in the second year of the hundred and seventh Olympiad, being the year of Rome, 403.

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CHAP. 7.

WHO WAS THE FIRST TO ENCRUST THE WALLS OF HOUSES AT ROME WITH MARBLE.

The first person at Rome who covered the whole of the walls of his house with marble, according to Cornelius Nepos, was Mamurra, who dwelt upon the Cælian Hill, a member of the equestrian order, and a native of Formiæ, who had been præfect of the engineers under C. Cæsar in Gaul. Such was the individual, that nothing may be wanting to the indignity of the example, who first adopted this practice; the same Mamurra, in fact, who has been so torn to pieces in the verses of Catullus of Verona. Indeed, his own house proclaimed more loudly than Catullus could proclaim it, that he had come into possession of all that Gallia Comata had had to possess. For Nepos adds, as well, that he was the first to have all the columns of his house made of nothing but solid marble, and that, too, marble of Carystus or of Luna.

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CHAP. 8.

AT WHAT PERIOD THE VARIOUS KINDS OF MARBLE CAME INTO USE AT ROME.

M. Lepidus, who was consul with Q. Catulus, was the first to have the lintels of his house made of Numidian marble, a thing for which he was greatly censured: he was consul in the year of Rome, 676. This is the earliest instance that I can find of the introduction of Numidian marble; not in the form of pillars, however, or of slabs, as was the case with the marble of Carystus, above-mentioned, but in blocks, and that too, for the comparatively ignoble purpose of making the thresholds of doors. Four years after this Lepidus, L. Lucullus was consul; the same person who gave its name, it is very evident, to the Lucullan marble; for, taking a great fancy to it, he introduced it at Rome. While other kinds of marble are valued for their spots or their colours, this marble is entirely black. It is found in the island of Melos, and is pretty nearly the only marble that has taken its name from the person who first introduced it. Among these personages, Scaurus, in my opinion, was the first to build a theatre with walls of marble: but whether they were only coated with slabs of marble or were made of solid blocks highly polished, such as we now see in the Temple of Jupiter Tonans, in the Capitol, I cannot exactly say: for, up to this period, I cannot find any vestiges of the use of marble slabs in Italy.

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CHAP. 9.

THE METHOD OF CUTTING MARBLE INTO SLABS. THE SAND USED IN CUTTING MARBLE.

But whoever it was that first invented the art of thus cutting marble, and so multiplying the appliances of luxury, he displayed considerable ingenuity, though to little purpose. This division, though apparently effected by the aid of iron, is in reality effected by sand; the saw acting only by pressing upon the sand within a very fine cleft in the stone, as it is moved to and fro.

The sand of Æthiopia is the most highly esteemed for this purpose; for, to add to the trouble that is entailed, we have to send to Æthiopia for the purpose of preparing our marble — aye, and as far as India even; whereas in former times, the severity of the Roman manners thought it beneath them to repair thither in search of such costly things even as pearls! This Indian sand is held in the next highest degree of estimation, the Æthiopian being of a softer nature, and better adapted for dividing the stone without leaving any roughness on the surface; whereas the sand from India does not leave so smooth a face upon it. Still, however, for polishing marble, we find it recommended to rub it with Indian sand calcined. The sand of Naxos has the same defect; as also that from Coptos, generally known as "Egyptian" sand.

The above were the several varieties of sand used by the ancients in dividing marble. More recently, a sand has been discovered that is equally approved of for this purpose; in a certain creek of the Adriatic Sea, which is left dry at low water only; a thing that renders it not very easy to be found. At the present day, however, the fraudulent tendencies of our workers in marble have emboldened them to use any kind of river-sand for the purpose; a mischief which very few employers rightly appreciate. For, the coarser the sand, the wider is the division made in the stone, the greater the quantity of material consumed, and the more extensive the labour required for polishing the rough surface that is left; a result of which is that the slabs lose so much more in thickness. For giving the last polish to

marble, Thebaic stone is considered well adapted, as also porous stone, or pumice, powdered fine.

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CHAP. 10. (7.)

STONE OF NAXOS. STONE OF ARMENIA.

For polishing marble statues, as also for cutting and giving a polish to precious stones, the preference was long given to the stone of Naxos, such being the name of a kind of touchstone that is found in the Isle of Cyprus. More recently, however, the stones imported from Armenia for this purpose have displaced those of Naxos.

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CHAP. 11.

THE MARBLES OF ALEXANDRIA.

The marbles are too well known to make it necessary for me to enumerate their several colours and varieties; and, indeed, so numerous are they, that it would be no easy task to do so. For what place is there, in fact, that has not a marble of its own? In addition to which, in our description of the earth and its various peoples, we have already made it our care to mention the more celebrated kinds of marble. Still, however, they are not all of them produced from quarries, but in many instances lie scattered just beneath the surface of the earth; some of them the most precious even, the green Lacedæmonian marble, for example, more brilliant in colour than any other; the Augustan also; and, more recently, the Tiberian; which were first discovered, in the reigns respectively of Augustus and Tiberius, in Egypt. These two marbles differ from ophites in the circumstance that the latter is marked with streaks which resemble serpents in appearance, whence its name. There is also this difference between the two marbles themselves, in the arrangement of their spots: the Augustan marble has them undulated and curling to a point; whereas in the Tiberian the streaks are white, not involved, but lying wide asunder.

Of ophites, there are only some very small pillars known to have been made. There are two varieties of it, one white and soft, the other inclining to black, and hard. Both kinds, it is said, worn as an amulet, are a cure for head-ache, and for wounds inflicted by serpents. Some, too, recommend the white ophites as an amulet for phrenitis and lethargy. As a counter-poison to serpents, some persons speak more particularly in praise of the ophites that is known as “tephrias,” from its ashy colour. There is also a marble known as “memphites,” from the place where it is found, and of a nature somewhat analogous to the precious stones. For medicinal purposes, it is triturated and applied in the form of a liniment, with vinegar, to such parts of the body as require cauterizing or incision; the flesh becoming quite benumbed, and thereby rendered insensible to pain.

Porphyrites, which is another production of Egypt, is of a red colour: the kind that is mottled with white blotches is known as "leptospsephos." The quarries there are able to furnish blocks of any dimensions, however large. Vitrasius Pollio, who was steward in Egypt for the Emperor Claudius, brought to Rome from Egypt some statues made of this stone; a novelty which was not very highly approved of, as no one has since followed his example. The Egyptians, too, have discovered in Æthiopia the stone known as "basanites;" which in colour and hardness resembles iron, whence the name that has been given to it. A larger block of it has never been known than the one forming the group which has been dedicated by the Emperor Vespasianus Augustus in the Temple of Peace. It represents the river Nilus with sixteen children sporting around it, symbolical of the sixteen cubits, the extreme height to which, in the most favourable seasons, that river should rise. It is stated, too, that in the Temple of Serapis at Thebes, there is a block not unlike it, which forms the statue of Memnon there; remarkable, it is said, for emitting a sound each morning when first touched by the rays of the rising sun.

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CHAP. 12.

ONYX AND ALABASTRITES; SIX REMEDIES.

Our forefathers imagined that onyx was only to be found in the mountains of Arabia, and nowhere else; but Sudines was aware that it is also found in Carmania. Drinking-vessels were made of it at first, and then the feet of beds and chairs. Cornelius Nepos relates that great was the astonishment, when P. Lentulus Spinther exhibited amphoræ made of this material, as large as Chian wine-vessels in size; "and yet, five years after," says he, "I saw columns of this material, no less than two-and-thirty feet in height." At a more recent period again, some change took place with reference to this stone; for four small pillars of it were erected by Cornelius Balbus in his Theatre as something quite marvellous: and I myself have seen thirty columns, of larger size, in the banquetting-room which Callistus erected, the freedman of Claudius, so well known for the influence which he possessed.

(8.) This stone is called "alabastrites" by some, and is hollowed out into vessels for holding unguents, it having the reputation of preserving them from corruption better than anything else. In a calcined state, it is a good ingredient for plaisters. It is found in the vicinity of Thebes in Egypt and of Damascus in Syria, that of Damascus being whiter than the others. The most esteemed kind, however, is that of Carmania, the next being the produce of India, and then, those of Syria and Asia. The worst in quality is that of Cappadocia, it being utterly destitute of lustre. That which is of a honey colour is the most esteemed, covered with spots curling in whirls, and not transparent. Alabastrites is considered defective, when it is of a white or horn colour, or approaching to glass in appearance.

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CHAP. 13.

LYGDINUS; CORALLITIC STONE; STONE OF ALABANDA; STONE OF THEBAIS; STONE OF SYENE.

Little inferior to it for the preservation of unguents, in the opinion of many, is the stone, called "lygdinus," that is found in Paros, and never of a larger size than to admit of a dish or goblet being made of it. In former times, it was only imported from Arabia, being remarkable for its extreme whiteness.

Great value is placed also upon two other kinds of stone, of quite a contrary nature; corallitic stone, found in Asia, in blocks not more than two cubits in thickness, and of a white some-what approaching that of ivory, and in some degree resembling it; and Alabandic stone, which, on the other hand, is black, and is so called from the district which produces it: though it is also to be found at Miletus, where, however, it verges somewhat more upon the purple. It admits of being melted by the action of fire, and is fused for the preparation of glass.

Thebaic stone, which is sprinkled all over with spots like gold, is found in Africa, on the side of it which lies adjacent to Egypt; the small hones which it supplies being peculiarly adapted, from their natural properties, for grinding the ingredients used in preparations for the eyes. In the neighbourhood of Syene, too, in Thebais, there is a stone found that is now known as "syenites," but was formerly called "pyrrhopœcilon."

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CHAP. 14.

OBELISKS.

Monarchs, too, have entered into a sort of rivalry with one another in forming elongated blocks of this stone, known as "obelisks," and consecrated to the divinity of the Sun. The blocks had this form given to them in resemblance to the rays of that luminary, which are so called in the Egyptian language.

Mesphres, who reigned in the City of the Sun, was the first who erected one of these obelisks, being warned to do so in a dream: indeed, there is an inscription upon the obelisk to this effect; for the sculptures and figures which we still see engraved thereon are no other than Egyptian letters.

At a later period other kings had these obelisks hewn. Sesosthes erected four of them in the above-named city, forty-eight cubits in height. Rhamsesis, too, who was reigning at the time of the capture of Troy, erected one, a hundred and forty cubits high. Having quitted the spot where the palace of Mnevis stood, this monarch erected another obelisk, one hundred and twenty cubits in height, but of prodigious thickness, the sides being no less than eleven cubits in breadth. (9.) It is said that one hundred and twenty thousand men were employed upon this work; and that the king, when it was on the point of being elevated, being apprehensive that the machinery employed might not prove strong enough for the weight, with the view of increasing the peril that might be entailed by due want of precaution on the part of the workmen, had his own son fastened to the summit; in order that the safety of the prince might at the same time ensure the safety of the mass of stone. It was in his admiration of this work, that, when King Cambyses took the city by storm, and the conflagration had already reached the very foot of the obelisk, he ordered the fire to be extinguished; he entertaining a respect for this stupendous erection which he had not entertained for the city itself.

There are also two other obelisks, one of them erected by Zmarres, and the other by Phius; both of them without inscriptions, and forty-eight cubits in height. Ptolemæus Philadelphus had one

erected at Alexandria, eighty cubits high, which had been prepared by order of King Necthebis: it was without any inscription, and cost far more trouble in its carriage and elevation, than had been originally expended in quarrying it. Some writers inform us that it was conveyed on a raft, under the inspection of the architect Satyrus; but Callixenus gives the name of Phœnix. For this pur- pose, a canal was dug from the river Nilus to the spot where the obelisk lay; and two broad vessels, laden with blocks of similar stone a foot square, the cargo of each amounting to double the size, and consequently double the weight, of the obelisk, were brought beneath it; the extremities of the obelisk remaining supported by the opposite sides of the canal. The blocks of stone were then removed, and the vessels, being thus gradually lightened, received their burden. It was erected upon a basis of six square blocks, quarried from the same mountain, and the artist was rewarded with the sum of fifty talents. This obelisk was placed by the king abovementioned in the Arsinoœum, in testimony of his affection for his wife and sister Arsinoë. At a later period, as it was found to be an inconvenience to the docks, Maximus, the then præfect of Egypt, had it transferred to the Forum there, after removing the summit for the purpose of substituting a gilded point; an intention which was ultimately abandoned.

There are two other obelisks, which were in Cæsar's Temple at Alexandria, near the harbour there, forty-two cubits in height, and originally hewn by order of King Mesphres. But the most difficult enterprise of all, was the carriage of these obelisks by sea to Rome, in vessels which excited the greatest admiration. Indeed, the late Emperor Augustus consecrated the one which brought over the first obelisk, as a lasting memorial of this marvellous undertaking, in the docks at Puteoli; but it was destroyed by fire. As to the one in which, by order of the Emperor Caius, the other obelisk had been transported to Rome, after having been preserved for some years and looked upon as the most wonderful construction ever beheld upon the seas, it was brought to Ostia, by order of the late Emperor Claudius; and towers of Puteolan earth being first erected upon it, it was sunk for the construction of the harbour which he was making there. And then, besides, there was the necessity of constructing other vessels to carry these obelisks up the Tiber; by which it became

practically ascer- tained, that the depth of water in that river is not less than that of the river Nilus.

The obelisk that was erected by the late Emperor Augustus in the Great Circus, was originally quarried by order of King Semenpserteus, in whose reign it was that Pythagoras visited Egypt. It is eighty-five feet and three quarters in height, exclusive of the base, which is a part of the same stone. The one that he erected in the Campus Martius, is nine feet less in height, and was originally made by order of Sesothis. They are both of them covered with inscriptions, which interpret the operations of Nature according to the philosophy of the Egyptians.

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CHAP. 15. (10.)

THE OBELISK WHICH SERVES AS A DIAL IN THE CAMPUS MARTIUS.

The one that has been erected in the Campus Martius has been applied to a singular purpose by the late Emperor Augustus; that of marking the shadows projected by the sun, and so measuring the length of the days and nights. With this object, a stone pavement was laid, the extreme length of which corresponded exactly with the length of the shadow thrown by the obelisk at the sixth hour on the day of the winter solstice. After this period, the shadow would go on, day by day, gradually decreasing, and then again would as gradually increase, correspondingly with certain lines of brass that were inserted in the stone; a device well deserving to be known, and due to the ingenuity of Facundus Novus, the mathematician. Upon the apex of the obelisk he placed a gilded ball in order that the shadow of the summit might be con- densed and agglomerated, and so prevent the shadow of the apex itself from running to a fine point of enormous extent; the plan being first suggested to him, it is said, by the shadow that is projected by the human head. For nearly the last thirty years, however, the observations derived from this dial have been found not to agree: whether it is that the sun itself has changed its course in consequence of some derangement of the heavenly system; or whether that the whole earth has been in some degree displaced from its centre, a thing that, I have heard say, has been. remarked in other places as well; or whether that some earthquake, confined to this city only, has wrenched the dial from its original position; or whether it is that in consequence of the inundations of the Tiber, the foundations of the mass have subsided, in spite of the general assertion that they are sunk as deep into the earth as the obelisk erected upon them is high.

(11.) The third obelisk at Rome is in the Vaticanian Circus, which was constructed by the Emperors Caius and Nero; this being the only one of them all that has been broken in the carriage. Nuncoreus, the son of Sesoses, made it: and there remains another by him, one hundred cubits in height, which, by order of an oracle, he

consecrated to the Sun, after having lost his sight and recovered it.

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CHAP. 16. (12.)

MARVELLOUS WORKS IN EGYPT. THE PYRAMIDS.

We must make some mention, too, however cursorily, of the Pyramids of Egypt, so many idle and frivolous pieces of ostentation of their resources, on the part of the monarchs of that country. Indeed, it is asserted by most persons, that the only motive for constructing them, was either a determination not to leave their treasures to their successors or to rivals that might be plotting to supplant them, or to prevent the lower classes from remaining unoccupied. There was great vanity displayed by these men in constructions of this description, and there are still the remains of many of them in an unfinished state. There is one to be seen in the Nome of Arsinoïtes; two in that of Memphites, not far from the Labyrinth, of which we shall shortly have to speak; and two in the place where Lake Mœris was excavated, an immense artificial piece of water, cited by the Egyptians among their wondrous and memorable works: the summits of the pyramids, it is said, are to be seen above the water.

The other three pyramids, the renown of which has filled the whole earth, and which are conspicuous from every quarter to persons navigating the river, are situate on the African side of it, upon a rocky sterile elevation. They lie between the city of Memphis and what we have mentioned as the Delta, within four miles of the river, and seven miles and a-half from Memphis, near a village known as Busiris, the people of which are in the habit of ascending them.

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CHAP. 17.

THE EGYPTIAN SPHINX.

In front of these pyramids is the Sphinx, a still more wondrous object of art, but one upon which silence has been observed, as it is looked upon as a divinity by the people of the neighbourhood. It is their belief that King Harmaïs was buried in it, and they will have it that it was brought there from a distance. The truth is, however, that it was hewn from the solid rock; and, from a feeling of veneration, the face of the monster is coloured red. The circumference of the head, measured round the forehead, is one hundred and two feet, the length of the feet being one hundred and forty-three, and the height, from the belly to the summit of the asp on the head, sixty-two.

The largest Pyramid is built of stone quarried in Arabia: three hundred and sixty thousand men, it is said, were employed upon it twenty years, and the three were completed in seventy-eight years and four months. They are described by the following writers: Herodotus, Euhemerus, Duris of Samos, Aristagoras, Dionysius, Artemidorus, Alexander Polyhistor, Butoridas, Antisthenes, Demetrius, Demoteles, and Apion. These authors, however, are disagreed as to the persons by whom they were constructed; accident having, with very considerable justice, consigned to oblivion the names of those who erected such stupendous memorials of their vanity. Some of these writers inform us that fifteen hundred talents were expended upon radishes, garlic, and onions alone.

The largest Pyramid occupies seven jugera of ground, and the four angles are equidistant, the face of each side being eight hundred and thirty-three feet in length. The total height from the ground to the summit is seven hundred and twenty-five feet, and the platform on the summit is sixteen feet and a-half in circuit. Of the second Pyramid, the faces of the four sides are each seven hundred and fifty-seven feet and a-half in length. The third is smaller than the others, but far more prepossessing in appearance: it is built of Æthiopian stone, and the face between the four corners is three hundred and sixty-three feet in extent. In the vicinity of these erections, there are

no vestiges of any buildings left. Far and wide there is nothing but sand to be seen, of a grain somewhat like a lentil in appearance, similar to that of the greater part of Africa, in fact.

The most difficult problem is, to know how the materials for construction could possibly be carried to so vast a height. According to some authorities, as the building gradually advanced, they heaped up against it vast mounds of nitre and salt; which piles were melted after its completion, by introducing beneath them the waters of the river. Others, again, maintain, that bridges were constructed, of bricks of clay, and that, when the pyramid was completed, these bricks were distributed for erecting the houses of private individuals. For the level of the river, they say, being so much lower, water could never by any possibility have been brought there by the medium of canals. In the interior of the largest Pyramid there is a well, eighty-six cubits deep, which communicates with the river, it is thought. The method of ascertaining the height of the Pyramids and all similar edifices was discovered by Thales of Miletus; he measuring the shadow at the hour of the day at which it is equal in length to the body projecting it.

Such are the marvellous Pyramids; but the crowning marvel of all is, that the smallest, but most admired of them — that we may feel no surprise at the opulence of the kings — was built by Rhodopis, a courtesan! This woman was once the fellow-slave of Æsopus the philosopher and fabulist, and the sharer of his bed; but what is much more surprising is, that a courtesan should have been enabled, by her vocation, to amass such enormous wealth.

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CHAP. 18.

THE PHAROS.

There is another building, too, that is highly celebrated; the tower that was built by a king of Egypt, on the island of Pharos, at the entrance to the harbour of Alexandria. The cost of its erection was eight hundred talents, they say; and, not to omit the magnanimity that was shown by King Ptolemæus on this occasion, he gave permission to the architect, Sostratus of Cnidos, to inscribe his name upon the edifice itself. The object of it is, by the light of its fires at night, to give warning to ships, of the neighbouring shoals, and to point out to them the entrance of the harbour. At the present day, there are similar fires lighted up in numerous places, Ostia and Ravenna, for example. The only danger is, that when these fires are thus kept burning without intermission, they may be mistaken for stars, the flames having very much that appearance at a distance. This architect ‘is the first person that built a promenade upon arches; at Cnidos, it is said.

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CHAP. 19. (13.)

LABYRINTHS.

We must speak also of the Labyrinths, the most stupendous works, perhaps, on which mankind has expended its labours; and not for chimerical purposes, merely, as might possibly be supposed.

There is still in Egypt, in the Nome of Heracleopolites, a labyrinth, which was the first constructed, three thousand six hundred years ago, they say, by King Petesuchis or Tithöes: although, according to Herodotus, the entire work was the production of no less than twelve kings, the last of whom was Psammetichus. As to the purpose for which it was built, there are various opinions: Demoteles says that it was the palace of King Moteris, and Lyceas that it was the tomb of Mœris, while many others assert that it was a building consecrated to the Sun, an opinion which mostly prevails.

That Dædalus took this for the model of the Labyrinth which he constructed in Crete, there can be no doubt; though he only reproduced the hundredth part of it, that portion, namely, which encloses circuitous passages, windings, and inextricable galleries which lead to and fro. We must not, comparing this last to what we see delineated on our mosaic pavements, or to the mazes formed in the fields for the amusement of children, suppose it to be a narrow promenade along which we may walk for many miles together; but we must picture to ourselves a building filled with numerous doors, and galleries which continually mislead the visitor, bringing him back, after all his wanderings, to the spot from which he first set out. This Labyrinth is the second, that of Egypt being the first. There is a third in the Isle of Lemnos, and a fourth in Italy.

They are all of them covered with arched roofs of polished stone; at the entrance, too, of the Egyptian Labyrinth, a thing that surprises me, the building is constructed of Parian marble, while throughout the other parts of it the columns are of syenites. With such solidity is this huge mass constructed, that the lapse of ages has been totally unable to destroy it, seconded as it has been by the people of Heracleopolites, who have marvellously ravaged a work which they

have always held in abhorrence. To detail the position of this work and the various portions of it is quite impossible, it being sub-divided into regions and præfectures, which are styled nomes, thirty in number, with a vast palace assigned to each. In addition to these, it should contain temples of all the gods of Egypt, and forty statues of Nemesis in as many sacred shrines; besides numerous pyramids, forty ells in height, and covering six aruræ at the base. Fatigued with wandering to and fro, the visitor is sure to arrive at some inextricable crossing or other of the galleries. And then, too, there are banquetting rooms situate at the summit of steep ascents; porticos from which we descend by flights of ninety steps; columns in the interior, made of porphyrites; figures of gods; statues of kings; and effigies of hideous monsters. Some of the palaces are so peculiarly constructed, that the moment the doors are opened a dreadful sound like that of thunder reverberates within: the greater part, too, of these edifices have to be traversed in total darkness. Then again, without the walls of the Labyrinth, there rises another mass of buildings known as the "Pteron;" beneath which there are passages excavated leading to other subterranean palaces. One person, and only one, has made some slight repairs to the Labyrinth; Chæremon, an eunuch of King Necthebis, who lived five hundred years before the time of Alexander the Great. It is asserted, also, that while the arched roofs of squared stone were being raised, he had them supported by beams of thorn boiled in oil.

As for the Cretan Labyrinth, what I have already stated must suffice for that. The Labyrinth of Lemnos is similar to it, only that it is rendered more imposing by its hundred and fifty columns; the shafts of which, when in the stone-yard, were so nicely balanced, that a child was able to manage the wheel of the lathe in turning them. The archi- tects were, Smilis, Rhœcus, and Theodorus, natives of the island, and there are still in existence some remains of it; whereas of the Cretan Labyrinth and of that in Italy not a vestige is left.

As to this last, which Porsena, King of Etruria, erected as his intended sepulchre, it is only proper that I should make some mention of it, if only to show that the vanity displayed by foreign monarchs, great as it is, has been surpassed. But as the fabulousness of the story connected with it quite exceeds all bounds, I shall

employ the words given by M. Varro himself in his account of it:— “Porsena was buried,” says he, “beneath the city of Clusium; in the spot where he had had constructed a square monument, built of squared stone. Each side of this monument was three hundred feet in length and fifty in height, and beneath the base, which was also square, there was an inextricable labyrinth, into which if any one entered without a clew of thread, he could never find his way out. Above this square building there stand five pyramids, one at each corner, and one in the middle, seventy-five feet broad at the base, and one hundred and fifty feet in height. These pyramids are so tapering in their form, that upon the summit of all of them united there rests a brazen globe, and upon that a petasus; from which there hang, suspended by chains, bells, which make a tinkling when agitated by the wind, like what was done at Dodona in former times. Upon this globe there are four other pyramids, each one hundred feet in height; and above them is a single platform, on which there are five more pyramids,” — the height of which Varro has evidently felt ashamed to add; but, according to the Etruscan fables, it was equal to that of the rest of the building. What downright madness this, to attempt to seek glory at an outlay which can never be of utility to any one; to say nothing of exhausting the resources of the kingdom, and after all, that the artist may reap the greater share of the praise!

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CHAP. 20.

HANGING GARDENS. A HANGING CITY.

We read, too, of hanging gardens, and what is even more than this, a hanging city, Thebes in Egypt: it being the practice for the kings to lead forth their armies from beneath, while the inhabitants were totally unconscious of it. This, too, is even less surprising than the fact that a river flows through the middle of the city. If, however, all this had really been the case, there is no doubt that Homer would have mentioned it, he who has celebrated the hundred gates of Thebes.

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CHAP. 21. (14.)

THE TEMPLE OF DIANA AT EPHESUS.

The most wonderful monument of Græcian magnificence, and one that merits our genuine admiration, is the Temple of Diana at Ephesus, which took one hundred and twenty years in building, a work in which all Asia joined. A marshy soil was selected for its site, in order that it might not suffer from earthquakes, or the chasms which they produce. On the other hand, again, that the foundations of so vast a pile might not have to rest upon a loose and shifting bed, layers of trodden charcoal were placed beneath, with fleeces covered with wool upon the top of them. The entire length of the temple is four hundred and twenty-five feet, and the breadth two hundred and twenty-five. The columns are one hundred and twenty-seven in number, and sixty feet in height, each of them presented by a different king. Thirty-six of these columns are carved, and one of them by the hand of Scopas. Chersiphron was the architect who presided over the work.

The great marvel in this building is, how such ponderous Architraves could possibly have been raised to so great a height. This, however, the architect effected by means of bags filled with sand, which he piled up upon an inclined plane until they reached beyond the capitals of the columns; then, as he gradually emptied the lower bags, the architraves insensibly settled in the places assigned them. But the greatest difficulty of all was found, in laying the lintel which he placed over the entrance-doors. It was an enormous mass of stone, and by no possibility could it be brought to lie level upon the jambs which formed its bed; in consequence of which, the architect was driven to such a state of anxiety and desperation as to contemplate suicide. Wearied and quite worn out by such thoughts as these, during the night, they say, he beheld in a dream the goddess in honour of whom the temple was being erected; who exhorted him to live on, for that she herself had placed the stone in its proper position. And such, in fact, next morning, was found to be the case, the stone apparently having come to the proper level by dint of its

own weight. The other decorations of this work would suffice to fill many volumes, but they do not tend in any way to illustrate the works of Nature.

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CHAP. 22. (15.)

MARVELS CONNECTED WITH OTHER TEMPLES.

There still exists, too, at Cyzicus, a temple of polished stone, between all the joints of which the artist has inserted a thread of gold; it being his intention to erect an ivory statue of Jupiter within, with Apollo in marble crowning him. The result is, that the interstices quite glisten with their fine, hair-like threads; and the reflection of the gold, obscured as it is, gently falling upon the statues, besides proclaiming the genius of the artist, heightens their effect, and so teaches us to appreciate the costliness of the work.

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CHAP. 23.

THE FUGITIVE STONE. THE SEVEN-FOLD ECHO. BUILDINGS ERECTED WITHOUT THE USE OF NAILS.

In the same city also, there is a stone, known as the "Fugi- tive Stone;" the Argonautæ, who used it for the purposes of an anchor, having left it there. This stone having repeatedly taken flight from the Prytanæum, the place so called where it is kept, it has been fastened down with lead. In this city also, near the gate which is known as the "Trachia," there are seven towers, which repeat a number of times all sounds that are uttered in them. This phenomenon, to which the name of "Echo," has been given by the Greeks, depends upon the peculiar conformation of localities, and is produced in valleys more particularly. At Cyzicus, however, it is the effect of accident only; while at Olympia, it is produced by artificial means, and in a very marvellous manner; in a portico there, which is known as the "Heptaphonon," from the circumstance that it returns the sound of the voice seven times.

At Cyzicus, also, is the Buleuterium, a vast edifice, constructed without a nail of iron; the raftering being so contrived as to admit of the beams being removed and replaced without the use of stays. A similar thing, too, is the case with the Sublician Bridge at Rome; and this by enactment, on religious grounds, there having been such difficulty experienced in breaking it down when Horatius Cocles defended it.

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CHAP. 24.

MARVELLOUS BUILDINGS AT ROME, EIGHTEEN IN NUMBER.

But it is now time to pass on to the marvels in building displayed by our own City, and to make some enquiry into the resources and experience that we have gained in the lapse of eight hundred years; and so prove that here, as well, the rest of the world has been outdone by us: a thing which will appear, in fact, to have occurred almost as many times as the marvels are in number which I shall have to enumerate. If, indeed, all the buildings of our City are considered in the aggregate, and supposing them, so to say, all thrown together in one vast mass, the united grandeur of them would lead one to suppose that we were describing another world, accumulated in a single spot.

Not to mention among our great works, the Circus Maximus, that was constructed by the Dictator Cæsar, one stadium in width and three in length, and occupying, with the adjacent buildings, no less than four jugera, with room for two hundred and sixty thousand spectators seated; am I not to include in the number of our magnificent constructions, the Basilica of Paulus, with its admirable Phrygian columns; the Forum of the late Emperor Augustus; the Temple of Peace, erected by the Emperor Vespasianus Augustus — some of the finest works that the world has ever beheld — the roofing, too, of the Vote-Office, that was built by Agrippa? not to forget that, before his time, Valerius of Ostia, the architect, had covered in a theatre at Rome, at the time of the public Games celebrated by Libo?

We behold with admiration pyramids that were built by kings, when the very ground alone, that was purchased by the Dictator Cæsar, for the construction of his Forum, cost one hundred millions of sesterces! If, too, an enormous expenditure has its attractions for any one whose mind is influenced by monetary considerations, be it known to him that the house in which Clodius dwelt, who was slain by Milo, was purchased by him at the price of fourteen million eight hundred thousand sesterces! a thing that, for my part, I look upon as

no less astounding than the monstrous follies that have been displayed by kings. And then, as to Milo himself, the sums in which he was indebted, amounted to no less than seventy mil- lions of sesterces; a state of things, to be considered, in my opinion, as one of the most portentous phænomena in the history of the human mind. But it was in those days, too, that old men still spoke in admiration of the vast proportions of the Agger, and of the enormous foundations of the Capitol; of the public sewers, too, a work more stupendous than any; as mountains had to be pierced for their construction, and, like the hanging city which we recently mentioned, navigation had to be carried on beneath Rome; an event which happened in the ædileship of M. Agrippa, after he had filled the office of consul.

For this purpose, there are seven rivers, made, by artificial channels, to flow beneath the city. Rushing onward, like so many impetuous torrents, they are compelled to carry off and sweep away all the sewerage; and swollen as they are by the vast accession of the pluvial waters, they reverberate against the sides and bottom of their channels. Occasionally, too, the Tiber, overflowing, is thrown backward in its course, and discharges itself by these outlets: obstinate is the contest that ensues within between the meeting tides, but so firm and solid is the masonry, that it is enabled to offer an effectual resistance. Enormous as are the accumulations that are carried along above, the work of the channels never gives way. Houses falling spontaneously to ruins, or levelled with the ground by conflagrations, are continually battering against them; the ground, too, is shaken by earthquakes every now and then; and yet, built as they were in the days of Tarquinius Priscus, seven hundred years ago, these constructions have survived, all but unharmed. We must not omit, too, to mention one remarkable circumstance, and all the more remarkable from the fact, that the most celebrated historians have omitted to mention it. Tarquinius Priscus having commenced the sewers, and set the lower classes to work upon them, the laboriousness and prolonged duration of the employment became equally an object of dread to them; and the consequence was, that suicide was a thing of common occurrence, the citizens adopting this method of escaping their troubles. For this evil, however, the king devised a singular remedy, and one that has never been resorted to

either before that time or since: for he ordered the bodies of all who had been thus guilty of self-destruction, to be fastened to a cross, and left there as a spectacle to their fellow - citizens and a prey to birds and wild beasts. The result was, that that sense of propriety which so peculiarly attaches itself to the Roman name, and which more than once has gained a victory when the battle was all but lost, came to the rescue on this occasion as well; though for this once, the Romans were in reality its dupes, as they forgot that, though they felt shocked at the thoughts of such ignominy while alive, they would be quite insensible to any such disgrace when dead. It is said that Tarquinius made these sewers of dimensions sufficiently large to admit of a waggon laden with hay passing along them.

All that we have just described, however, is but trifling when placed in comparison with one marvellous fact, which I must not omit to mention before I pass on to other subjects. In the consulship of M. Lepidus and Q. Catulus, there was not at Rome, as we learn from the most trustworthy authors, a finer house than the one which belonged to Lepidus himself: and yet, by Hercules! within five-and-thirty years from that period, the very same house did not hold the hundredth rank even in the City! Let a person, if he will, in taking this fact into consideration, only calculate the vast masses of marble, the productions of painters, the regal treasures that must have been expended, in bringing these hundred mansions to vie with one that had been in its day the most sumptuous and the most celebrated in all the City; and then let him reflect how that, since that period, and down to the present time, these houses have all of them been surpassed by others without number. There can be no doubt that conflagrations are a punishment inflicted upon us for our luxury; but such are our habits, that in spite of such warnings as these, we cannot be made to understand that there are things in existence more perishable even than man himself.

But there are still two other mansions by which all these edifices have been eclipsed. Twice have we seen the whole City environed by the palaces of the Emperors Caius and Nero; that of the last, that nothing might be wanting to its magnificence, being coated with gold. Surely such palaces as these must have been intended for the abode of those who created this mighty empire, and who left the

plough or their native hearth to go forth to conquer nations, and to return laden with triumphs! men, in fact, whose very fields even occupied less space than the audience-chambers of these palaces.

Indeed, one cannot but help reflecting how trifling a portion of these palaces was equal to the sites which the republic granted to its invincible generals, for the erection of their dwellings. The supreme honour, too, attendant upon these grants — as in the case of P. Valerius Publicola, the first consul with L. Brutus, for his many meritorious services; and of his brother, who twice in one consulship defeated the Sabines — was the permission granted, by the terms of the decree, to have the doors of their houses opening from without, and the gates thrown back upon the public street. Such was the most distinguished privilege accorded in those days to triumphal mansions even!

I will not permit, however, these two Caiuses, or two Neros, to enjoy this glory even, such as it is; for I will prove that these extravagant follies of theirs have been surpassed, in the use that was made of his wealth by M. Scaurus, a private citizen. Indeed, I am by no means certain that it was not the ædileship of this personage that inflicted the first great blow upon the public manners, and that Sylla was not guilty of a greater crime in giving such unlimited power to his stepson, than in the proscription of so many thousands. During his ædileship, and only for the temporary purposes of a few days, Scaurus executed the greatest work that has ever been made by the hands of man, even when intended to be of everlasting duration; his Theatre, I mean. This building consisted of three storeys, supported upon three hundred and sixty columns; and this, too, in a city which had not allowed without some censure one of its greatest citizens to erect six pillars of Hymettian marble. The ground-storey was of marble, the second of glass, a species of luxury which ever since that time has been quite unheard of, and the highest of gilded wood. The lowermost columns, as previously stated, were eight-and-thirty feet in height; and, placed between these columns, as already mentioned, were brazen statues, three thousand in number. The area of this theatre afforded accommodation for eighty thousand spectators; and yet the Theatre of Pompeius, after the City had so greatly increased, and the inhabitants had become so vastly more numerous, was

considered abundantly large, with its sittings for forty thousand only. The rest of the fittings of it, what with Attalic vestments, pictures, and the other stage-properties, were of such enormous value that, after Scaurus had had conveyed to his Tusculan villa such parts thereof as were not required for the enjoyment of his daily luxuries, the loss was no less than three hundred millions of sesterces, when the villa was burnt by his servants in a spirit of revenge.

The consideration of such prodigality as this quite distracts my attention, and compels me to digress from my original purpose, in order to mention a still greater instance of extravagance, in reference to wood. C. Curio, who died during the civil wars, fighting on the side of Cæsar, found, to his dismay, that he could not, when celebrating the funeral games in honour of his father, surpass the riches and magnificence of Scaurus — for where, in fact, was to be found such a stepsire as Sylla, and such a mother as Metella, that bidder at all auctions for the property of the proscribed? Where, too, was he to find for his father, M. Scaurus, so long the principal man in the city, and one who had acted, in his alliance with Marius, as a receptacle for the plunder of whole provinces? — Indeed, Scaurus himself was now no longer able to rival himself; and it was at least one advantage which he derived from this destruction by fire of so many objects brought from all parts of the earth, that no one could ever after be his equal in this species of folly. Curio, consequently, found himself compelled to fall back upon his own resources, and to think of some new device of his own. It is really worth our while to know what this device was, if only to congratulate ourselves upon the manners of the present day, and to reverse the ordinary mode of expression, and term ourselves the men of the olden time.

He caused to be erected, close together, two theatres of very large dimensions, and built of wood, each of them nicely poised, and turning on a pivot. Before mid-day, a spectacle of games was exhibited in each; the theatres being turned back to back, in order that the noise of neither of them might interfere with what was going on in the other. Then, in the latter part of the day, all on a sudden, the two theatres were swung round, and, the corners uniting, brought face to face; the outer frames, too, were removed, and thus an amphitheatre was formed, in which combats of gladiators were

presented to the view; men whose safety was almost less compromised than was that of the Roman people, in allowing itself to be thus whirled round from side to side. Now, in this case, which have we most reason to admire, the inventor or the invention? the artist, or the author of the project? him who first dared to think of such an enterprize, or him who ventured to undertake it? him who obeyed the order, or him who gave it? But the thing that surpasses all is, the frenzy that must have possessed the public, to take their seats in a place which must of necessity have been so unsubstantial and so insecure. Lo and behold! here is a people that has conquered the whole earth, that has subdued the universe, that divides the spoils of kingdoms and of nations, that sends its laws to foreign lands, that shares in some degree the attributes of the immortal gods in common with mankind, suspended aloft in a machine, and showering plaudits even upon its own peril!

This is indeed holding life cheap; and can we, after this, complain of our disasters at Cannæ? How vast the catastrophe that might have ensued! When cities are swallowed up by an earthquake, it is looked upon by mankind as a general calamity; and yet, here have we the whole Roman people, embarked, so to say, in two ships, and sitting suspended on a couple of pivots; the grand spectacle being its own struggle with danger, and its liability to perish at any moment that the overstrained machinery may give way! And then the object, too, of all this — that public favour may be conciliated for the tribune's harangues at a future day, and that, at the Rostra, he may still have the power of shaking the tribes, nicely balanced as they are! And really, what may he not dare with those who, at his persuasion, have braved such perils as these? Indeed, to confess the truth, at the funeral games celebrated at the tomb of his father, it was no less than the whole Roman people that shared the dangers of the gladiatorial combats. When the pivots had now been sufficiently worked and wearied, he gave another turn to his magnificent displays. For, upon the last day, still preserving the form of the amphitheatre, he cut the stage in two through the middle, and exhibited a spectacle of athletes; after which, the stage being suddenly withdrawn on either side, he exhibited a combat, upon the same day, between such of the gladiators as had previously proved victorious. And yet, with all this,

Curio was no king, no ruler of the destinies of a nation, nor yet a person remarkable for his opulence even; seeing that he possessed no resources of his own, beyond what he could realize from the discord between the leading men.

But let us now turn our attention to some marvels which, justly appreciated, may be truthfully pronounced to remain unsurpassed. Q. Marcius Rex, upon being commanded by the senate to repair the Appian Aqueduct, and those of the Anio and Tepula, constructed during his prætorship a new aqueduct, which bore his name, and was brought hither by a channel pierced through the sides of mountains. Agrippa, in his ædileship, united the Marcian with the Virgin Aqueduct, and repaired and strengthened the channels of the others. He also formed seven hundred wells, in addition to five hundred fountains, and one hundred and thirty reservoirs, many of them magnificently adorned. Upon these works, too, he erected three hundred statues of marble or bronze, and four hundred marble columns; and all this in the space of a single year! In the work which he has written in commemoration of his ædileship, he also informs us that public games were celebrated for the space of fifty-nine days, and that one hundred and seventy gratuitous baths were opened. The number of these last at Rome, has increased to an infinite extent since his time.

The preceding aqueducts, however, have all been surpassed by the costly work which was more recently commenced by the Emperor Caius, and completed by Claudius. Under these princes, the Curtian and Cærulean Waters, with the New Anio, were brought from a distance of forty miles, and at so high a level that all the hills were supplied with water, on which the City is built. The sum expended on these works was three hundred and fifty millions of sesterces. If we only take into consideration the abundant supply of water to the public, for baths, ponds, canals, household purposes, gardens, places in the suburbs, and country-houses; and then reflect upon the distances that are traversed, the arches that have been constructed, the mountains that have been pierced, the valleys that have been levelled, we must of necessity admit that there is nothing to be found more worthy of our admiration throughout the whole universe.

Among the most memorable works, too, I, for my own part,

should include another undertaking of the Emperor Claudius, although it was afterwards abandoned in consequence of the hatred borne him by his successor; I mean the channel that was cut through a mountain as an emissary for Lake Fucinus; a work which cost a sum beyond all calculation, and employed a countless multitude of workmen for many years. In those parts where the soil was found to be terreous, it was necessary to pump up the water by the aid of machinery; in other parts, again, the solid rock had to be hewn through. All this, too, had to be done in the midst of darkness within; a series of operations which can only be adequately conceived by those who were witnesses of them, and which no human language can possibly describe.

I pass in silence the harbour that has been formed at Ostia; the various roads, too, that have been cut across mountains; the Tyrrhenian Sea separated by an embankment from Lake Lucrinus; and vast numbers of bridges constructed at an enormous expense. Among the many other marvels, too, of Italy, we are informed by Papirius Fabianus, a most diligent enquirer into the operations of Nature, that the marble there grows in the quarries; and those who work in the quarries assure us that the wounds thus inflicted upon the mountains fill up spontaneously. If such is the fact, luxury has good grounds for hoping that it will never be at a loss for a supply of materials for its gratification.

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CHAP. 25. (16.)

THE MAGNET: THREE REMEDIES

Upon quitting the marbles to pass on to the other more remarkable stones, who can for a moment doubt that the magnet will be the first to suggest itself? For what, in fact, is there endowed with more marvellous properties than this? or in which of her departments has Nature displayed a greater degree of waywardness? She had given a voice to rocks, as already mentioned, and had enabled them to answer man, or rather, I should say, to throw back his own words in his teeth. What is there in existence more inert than a piece of rigid stone? And yet, behold! Nature has here endowed stone with both sense and hands. What is there more stubborn than hard iron? Nature has, in this instance, bestowed upon it both feet and intelligence. It allows itself, in fact, to be attracted by the magnet, and, itself a metal which subdues all other elements, it precipitates itself towards the source of an influence at once mysterious and unseen. The moment the metal comes near it, it springs towards the magnet, and, as it clasps it, is held fast in the magnet's embraces. Hence it is that this stone is sometimes known by the name of "sideritis;" another name given to it being "heraclion." It received its name "magnes," Nicander informs us, from the person who was the first to discover it, upon Ida. It is found, too, in various other countries, as in Spain, for example. Magnes, it is said, made this discovery, when, upon taking his herds to pasture, he found that the nails of his shoes and the iron ferrel of his staff adhered to the ground.

Sotacus describes five different kinds of magnet; the Æthiopian magnet; that of Magnesia, a country which borders on Macedonia, and lies to the right of the road which leads from the town of Bœbe to Iolcos; a third, from Hyettus in Bœotia; a fourth, from Alexandria in Troas; and a fifth, from Magnesia in Asia. The leading distinction in magnets is the sex, male and female, and the next great difference in them is the colour. Those of Magnesia, bordering on Macedonia, are of a reddish black; those of Bœotia are more red than black; and the kind that is found in Troas is black, of the female sex, and

consequently destitute of attractive power. The most inferior, however, of all, are those of Magnesia in Asia: they are white, have no attractive influence on iron, and resemble pumice in appearance. It has been found by experience, that the more nearly the magnet approaches to an azure colour, the better it is in quality. The Æthiopian magnet is looked upon as the best of all, and is purchased at its weight in silver: Zmiris in Æthiopia is the place where it is found, such being the name of a region there, covered with sand.

In the same country, too, the magnet called "hæmatites" is found, a stone of a blood-red colour, and which, when bruised, yields a tint like that of blood, as also of saffron. The hæmatites has not the same property of attracting iron that the ordinary magnet has. The Æthiopian magnet is recognized by this peculiarity, that it has the property, also, of attracting other magnets to it. All these minerals are useful as ingredients in ophthalmic preparations, in certain proportions according to the nature of each: they are particularly good, too, for arresting defluxions of the eyes. Triturated in a calcined state, they have a healing effect upon burns.

In Æthiopia, too, not far from Zmiris, there is a mountain in which the stone called "theamedes" is found, a mineral which repels and rejects all kinds of iron. Of the attractive and repulsive properties of iron, we have spoken more than once.

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CHAP. 26.

STONE OF SCYROS.

In the Isle of Scyros there is a stone, they say, which floats upon water when whole, but which falls to the bottom when broken into fragments.

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CHAP. 27. (17.)

SARCOPHAGUS, OR STONE OF ASSOS: TEN REMEDIES.

At Assos in Troas, there is found a stone of a laminated texture, called “sarcophagus.” It is a well-known fact, that dead bodies, when buried in this stone, are consumed in the course of forty days, with the sole exception of the teeth. According to Mucianus, too, mirrors, body-scrapers, garments, and shoes, that have been buried with the dead, become transformed into stone. In Lycia, and in the East, there are certain stones of a similar nature, which, when attached to the bodies of the living even, corrode the flesh.

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CHAP. 28.

CHERNITES.

Less active in its properties is chernites, a stone which preserves bodies without consuming them, and strongly resembles ivory in appearance: the body of King Darius, they say, was buried in it. The stone that is known as “porus,” is similar to Parian marble in hardness and whiteness, but is not so heavy. Theophrastus mentions also a transparent stone that is found in Egypt, and is similar to stone of Chios in appearance; it is by no means improbable that it may have existed in his time, for stones, we know, disappear, and new kinds are discovered. The stone of Assos, which is saltish to the taste, modifies the attacks of gout, the feet being placed in a vessel made of it for the purpose; in addition to which, in the quarries of this stone, all maladies of the legs disappear, whereas, in mines in general, the legs become affected with disease. “Flower of stone of Assos” is the name given to a soft stone which crumbles into dust, and is found very efficacious in some cases; it resembles red pumice in appearance. In combination with Cyprian wax, this stone is curative of affections of the mamillæ; and, employed with pitch or resin, it disperses scrofulous sores and inflammatory tumours. Used in the form of an electuary, it is good for phthisis, and, with honey, it causes old sores to cicatrize, and consumes proud flesh. It is used, also, for the cure of wounds of an obstinate nature inflicted by animals, and acts as a desiccative upon suppurations. Plaisters, too, are made of it for gout, bean-meal being incorporated with it for the purpose.

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CHAP. 29. (18.)

OSSEOUS STONES. PALM STONES. CORANI. BLACK STONES.

Theophrastus and Mucianus are of opinion that there are certain stones which bring forth other stones. Theophrastus states, also, that a fossil ivory is found, both white and black; that the earth, too, produces bones, and that osseous stones are sometimes found. In the vicinity of Munda in Spain, the place where the Dictator Cæsar defeated Pompeius, there are stones found, which, when broken asunder, bear the impression of palm leaves.

There are some black stones, also, which are held in much the same esteem as the marbles; the Tænarian stone, for example. Varro says that the black stone of Africa is more durable than that of Italy; while, on the other hand, the white corani are harder than Parian marble. He states, also, that the silex of Luna admits of being cut with a saw; that that of Tusculum decrepitates in the fire; that the tawny silex of the Sabine districts, with the addition of oil, will yield a flame even; and that, at Volsinii, molar stones for grinding are found. Among the prodigies that have happened, I find mention made of millstones that have moved of themselves.

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CHAP. 30.

MOLAR STONES. PYRITES; SEVEN REMEDIES.

In no country are the molar stones superior to those of Italy; stones, be it remembered, and not fragments of rock: there are some provinces, too, where they are not to be found at all. Some stones of this class are softer than others, and admit of being smoothed with the whetstone, so as to present all the appearance, at a distance, of ophites. There is no stone of a more durable nature than this; for in general, stone, like wood, suffers from the action, more or less, of rain, heat, and cold. Some kinds, again, become deteriorated by the action of the moon, while others are apt to contract a rust in lapse of time, or to change their white colour when steeped in oil.

(19.) Some persons give this molar stone the name of "pyrites," from the circumstance that it has a great affinity to fire; but there is also another kind of pyrites, of a more porous nature, and another, again, which resembles copper. This last, it is said, is found in the mines, near Acamas, in the Isle of Cyprus; one variety of it being of a silver, another of a golden, colour. There are various methods of melting these stones, some persons fusing them twice, or three times even, in honey, till all the liquid has evaporated; while others, again, calcine them upon hot coals, and, after treating them with honey, wash them like copper.

The medicinal properties which these minerals possess are of a calorific, desiccative, dispersive, and resolvent nature, and, applied topically, they cause indurations to suppurate. They are employed also, in a crude state and pulverized, for the cure of scrofulous sores and boils. Some writers mention another kind of pyrites also. Those among them have the greatest affinity to fire which we distinguish as "live" pyrites. They are the most ponderous of all, and are found remarkably useful for advance-guards when laying out encampments; for, on being struck with a nail or any other kind of stone, they emit a spark, which, received upon sulphur, dried fungus, or leaves, produces a fire almost sooner than it could be named.

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CHAP. 31.

OSTRACITES; FOUR REMEDIES. AMIANTHUS; TWO REMEDIES.

The several varieties of ostracites bear a resemblance to shells. They are used by way of substitute for pumice-stone, for smoothing the skin. Taken in drink, they arrest discharges of blood; and, applied topically with honey, they are curative of ulcerations and pains in the mamillæ.

Amianthus resembles alumen in appearance, and suffers no diminution from the action of fire. This substance effectually counteracts all noxious spells, those wrought by magicians in particular.

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CHAP. 32.

GEODES; THREE REMEDIES.

Geodes is so called from its formation, it containing earth within. It is remarkably beneficial for the eyes, and is used for the cure of diseases of the testes and mamillæ.

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CHAP. 33.

MELITINUS; SIX REMEDIES.

The stone called “melitinus” yields a liquid that is sweet, like honey. Bruised and incorporated with wax, it is curative of pituitous eruptions, spots upon the skin, and ulcerations of the fauces. It removes epinyctis also, and, applied as a pessary, in wool, it alleviates pains in the uterus.

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CHAP. 34.

GAGATES: SIX REMEDIES.

Gagates is a stone, so called from Gages, the name of a town and river in Lycia. It is asserted, too, that at Leucolla the sea throws it up, and that it is found over a space twelve stadia in extent. It is black, smooth, light, and porous, differs but little from wood in appearance, is of a brittle texture, and emits a disagreeable odour when rubbed. Marks made upon pottery with this stone cannot be effaced. When burnt, it gives out a sulphureous smell; and it is a singular fact, that the application of water ignites it, while that of oil quenches it. The fumes of it, burnt, keep serpents at a distance, and dispel hysterical affections: they detect a tendency also to epilepsy, and act as a test of virginity. A decoction of this stone in wine is curative of tooth-ache; and, in combination with wax, it is good for scrofula. The magicians, it is said, make use of gagates in the practice of what they call axinomancy; and they assure us that it will be sure not to burn, if the thing is about to happen as the party desires.

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CHAP. 35.

SPONGITES: TWO REMEDIES.

The stone called “spongites” is found in sponges, and is a marine formation. By some persons it is called “tecolithos,” from the circumstance that it is curative of affections of the bladder. Taken in wine, it breaks and disperses urinary calculi.

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CHAP. 36.

PHRYGIAN STONE.

Phrygian stone is so called from the country which produces it, and is a porous mass like pumice. It is first saturated with wine, and then calcined, the fire being kept up with the bellows till the stone is brought to a red heat; which done, it is quenched in sweet wine. This operation is repeated three times. The only use made of it is for dyeing cloths.

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CHAP. 37. (20.)

HÆMATITES: FIVE REMEDIES. SCHISTOS: SEVEN REMEDIES.

Schistos and hæmatites have a certain affinity between them. The latter is found in mines, and, when burnt, has just the colour of minium. It is calcined in the same manner as Phrygian stone, but is not quenched in wine. Adulterations of it are detected by the appearance of red veins in it, and by its comparative friability. It is marvellously useful as an application for bloodshot eyes, and, taken internally, it acts as a check upon female discharges. To patients vomiting blood, it is administered in combination with pomegranate-juice. It is very efficacious also for affections of the bladder; and it is taken with wine for the cure of wounds inflicted by serpents.

In all these cases the stone called “schistos” is efficacious, though not in so high a degree as the other; the most serviceable being that which resembles saffron in colour. Applied with woman’s milk, it is particularly useful for arresting discharges from the corners of the eyes, and it is also very serviceable for reducing procidence of those organs. Such, at least, is the opinion of the authors who have most recently written on the subject.

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CHAP. 38.

ÆTHIOPIC HÆMATITES. ANDRODAMAS; TWO REMEDIES. ARABIAN HÆMATITES. MILTITES OR HEPATITES. ANTHRACITES.

Sotacus, one of the most ancient writers, says, that there are five kinds of hæmatites, in addition to the magnet so called. He gives the preference among them to that of Æthiopia, a very useful ingredient in ophthalmic preparations and the compositions which he calls "panchresta," and good for the cure of burns. The second, he says, is called "androdamas," of a black colour, remarkable for its weight and hardness, to which it owes its name, in fact, and found in Africa more particularly. It attracts silver, he says, copper, and iron, and is tested with a touchstone made of basanites. It yields a liquid the colour of blood, and is an excellent remedy for diseases of the liver. The third kind that he mentions is the hæmatites of Arabia, a mineral of equal hardness, and which with difficulty yields, upon the water-whetstone, a liquid sometimes approaching the tint of saffron. The fourth kind, he says, is known as "hepa- tites," while raw, and as "miltites" when calcined; a substance good for burns, and more efficacious than rubrica for all the purposes for which that mineral is employed. The fifth variety is schistos; a substance which, taken internally, arrests hæmorrhoidal discharges. Upon the same authority, it is recommended to take any kind of hæmatites, fasting, in doses of three drachmæ, triturated in oil, for affections of the blood.

The same author mentions also a kind of schistos which has no affinity to hæmatites, and to which he gives the name of "anthracites," It is a native of Africa, he says, and is of a black colour. When rubbed upon a water-whetstone, it yields a black colour on the side which has adhered to the earth, and, on the opposite side, a saffron tint. He states also that it is a useful ingredient in ophthalmic preparations.

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CHAP. 39. (21)

AËTITES. TAPHIUSIAN STONE. CALLIMUS.

The stone called aëtites has a great reputation, in consequence of the name which it bears. It is found in the nests of eagles, as already mentioned in our Tenth Book. There are always two of these stones found together, they say, a male stone and a female; and without them, it is said, the various eagles that we have described would be unable to propagate. Hence it is, too, that the young of the eagle are never more than two in number. There are four varieties of the aëtites: that of Africa is soft and diminutive, and contains in the interior — in its bowels as it were — a sweet, white, argillaceous earth. It is friable, and is generally thought to be of the female sex. The male stone, on the other hand, which is found in Arabia, is hard, and similar to a nut-gall in appearance; or else of a reddish hue, with a hard stone in the interior. The third kind is a stone found in the Isle of Cyprus, and resembles those of Africa in appearance, but is larger and flat, while the others are of a globular form: it contains a sand within, of a pleasing colour, and mixed with small stones; being so soft itself as to admit of being crushed between the fingers.

The fourth variety is known as the Taphiusian aëtites, and is found near Leucas, at Taphiusa, a locality which lies to the right as you sail from Ithaca towards Cape Leucas. It is met with in the beds of rivers there, and is white and round; having another stone in the interior, the name given to which is “callimus:” none of the varieties of aëtites have a smoother surface than this. Attached to pregnant women or to cattle, in the skins of animals that have been sacrificed, these stones act as a preventive of abortion, care being taken not to remove them till the moment of parturition; for otherwise procidence of the uterus is the result. If, on the other hand, they are not removed at the moment when parturition is about to ensue, that operation of Nature cannot be effected.

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CHAP. 40.

SAMIAN STONE: EIGHT REMEDIES.

Samian stone comes from the same island which produces the earth in praise of which we have spoken already. It is useful for giving a polish to gold, and it is employed medicinally for the treatment of ulcerations of the eyes, combined with milk in manner already described. It is good, too, for watery discharges of a chronic nature, from the eyes. Taken internally, it is useful for affections of the stomach, and it has the effect of dispelling vertigo and restoring the spirits when depressed. Some writers are of opinion that this stone may be administered with advantage for epilepsy and strangury; and it is employed as an ingredient in the restoratives known as “acopa.” The test of its purity is its weight and its whiteness. Some persons will have it that, worn as an amulet, it acts as a preventive of abortion.

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CHAP. 41.

ARABIAN STONE; SIX REMEDIES.

Arabian stone resembles ivory in appearance; and in a calcined state it is employed as a dentifrice. It is particularly useful for the cure of hæmorrhoidal swellings, applied either in lint or by the aid of linen pledgets.

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CHAP. 42.

PUMICE; NINE REMEDIES.

And here, too, I must not omit to give some account of pumice. This name is very generally given, it is true, to those porous pieces of stone, which we see suspended in the erections known as "musæa," with the view of artificially giving them all the appearance of caverns. But the genuine pumice-stones, that are in use for imparting smoothness to the skin of females, and not females only, but men as well, and, as Catullus says, for polishing books, are found of the finest quality in the islands of Melos and Nisyros and in the Æolian Isles. To be good, they should be white, as light as possible, porous and dry in the extreme, friable, and free from sand when rubbed.

Considered medicinally, pumice is of a resolvent and desiccative nature; for which purpose it is submitted to calcination, no less than three times, on a fire of pure charcoal, it being quenched as often in white wine. It is then washed, like cadmia, and, after being dried, is put by for keeping, in a place as free from damp as possible. In a powdered state, pumice is used in ophthalmic preparations more particularly, and acts as a lenitive detergent upon ulcerations of the eyes. It also makes new flesh upon cicatrizations of those organs, and removes all traces of the marks. Some prefer, after the third calcination, leaving the pumice to cool, and then triturating it in wine. It is employed also as an ingredient in emollient poultices, being extremely useful for ulcerations on the head and generative organs; dentifrices, too, are prepared from it. According to Theophrastus, persons when drinking for a wager are in the habit of taking powdered pumice first; but they run great risk, he says, if they fail to swallow the whole draught of wine at once; it being of so refrigerative a nature that grape-juice will absolutely cease to boil if pumice is put into it.

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CHAP. 43. (22.)

STONES FOR MORTARS USED FOR MEDICINAL AND OTHER PURPOSES. ETESIAN STONE. THEBAIC STONE. CHALAZIAN STONE.

Authors, too, have paid some attention to the stones in use for mortars, not only those employed for the trituration of drugs and pigments, but for other purposes as well. In this respect they have given the preference to Etesian stone before all others, and, next to that, to Thebaic stone, already mentioned as being called "pyrrhopœcilon," and known as "psaranus" by some. The third rank has been assigned to chrysites, a stone nearly allied to Chalazian stone. For medicinal purposes, however, basanites has been preferred, this being a stone that remits no particles from its surface.

Those stones which yield a liquid, are generally looked upon as good for the trituration of ophthalmic preparations; and hence it is, that the Æthiopian stone is so much in request for the purpose. Tænarian stone, they say, Phœnician stone, and hæmatites, are good for the preparation of those medicinal compositions in which saffron forms an ingredient; but they also speak of another Tænarian stone, of a dark colour, which, like Parian stone, is not so well adapted for medicinal purposes. We learn from them, too, that Egyptian alabastrites, or white ophites, from the virtues inherent in them, are considered still better adapted for these purposes than the kinds last mentioned. It is this kind of ophites, too, from which vessels, and casks even, are made.

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CHAP. 44.

STONE OF SIPHNOS. SOFT STONES.

At Siphnos, there is a kind of stone which is hollowed and turned in the lathe, for making cooking-utensils and vessels for keeping provisions; a thing too, that, to my own knowledge, is done with the green stone of Comum in Italy. With reference, however, to the stone of Siphnos, it is a singular fact, that, when heated in oil, though naturally very soft, it becomes hard and black; so great a difference is there in the qualities of stone.

There are some remarkable instances, too, beyond the Alps, of the natural softness of some kinds of stone. In the province of the Belgæ, there is a white stone which admits of being cut with the saw that is used for wood, and with greater facility even. This stone is used as a substitute for roof-tiles and gutter-tiles, and even for the kind of roofing known as the pavonaceous style, if that is preferred. Such are the stones that admit of being cut into thin slabs.

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CHAP. 45.

SPECULAR STONES.

As to specular stone — for this, too, is ranked as one of the stones — it admits of being divided with still greater facility, and can be split into leaves as thin as may be desired. The province of Nearer Spain used formerly to be the only one that furnished it — not, indeed, the whole of that country, but a district extending for a hundred miles around the city of Segobrica But at the present day, Cyprus, Cappadocia, and Sicily, supply us with it; and, still more recently, it has been discovered in Africa: they are all, however, looked upon as inferior to the stone which comes from Spain. The sheets from Cappadocia are the largest in size; but then they are clouded. This stone is to be found also in the territory of Bononia, in Italy; but in small pieces only, covered with spots and encrusted in a bed of silex, there being a considerable affinity, it would appear, in their nature.

In Spain, the specular-stone is extracted from shafts sunk in the earth to a very considerable depth; though it is occasionally to be found just beneath the surface, enclosed in the solid rock, and extracted without difficulty, or else cut away from its bed. In most cases, however, it admits of being dug up, being of an isolated nature, and lying in pieces, like ragstone, but never known as yet to exceed five feet in length. It would appear that this substance is originally a liquid, which, by an animating power in the earth, becomes congealed like crystal; and it is very evident that it is the result of petrifaction, from the fact that, when animals have fallen into the shafts from which it is extracted, the marrow of their bones becomes transformed into stone of a similar nature, by the end of a single winter. In some cases, too, it is found of a black colour: but the white stone has the marvellous property, soft as it is known to be, of resisting the action of the sun and of cold. Nor will it, if it is only protected from accidents, become deteriorated by lapse of time, a thing that is so generally the case with many other kinds of stone that are used for building purposes. The shavings, too, and scales of this stone, have been used of late for another purpose; the Circus

Maximus having been strewed with them at the celebration of the games, with the object of producing an agreeable whiteness.

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CHAP. 46.

PHENGITES.

During the reign of Nero, there was a stone found in Cappadocia, as hard as marble, white, and transparent even in those parts where red veins were to be seen upon it; a property which has obtained for it the name of “phengites.” It was with this stone that Nero rebuilt the Temple of Fortune, surnamed Seia, originally consecrated by King Servius, enclosing it within the precincts of his Golden Palace. Hence it was that, even when the doors were closed, there was light in the interior during the day; not transmitted from without, as would be the case through a medium of specular-stone, but having all the appearance of being enclosed within the building.

In Arabia, too, according to Juba, there is a stone, transparent like glass, which is used for the same purposes as specular-stone.

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CHAP. 47.

WHETSTONES.

We must now pass on to the stones that are employed for handicrafts, and, first of all, whetstones for sharpening iron. Of these stones there are numerous varieties; the Cretan stones having been long held in the highest estimation, and the next best being those of Mount Taygetus, in Laconia; both of which are used as hones, and require oil. Among the water-whetstones, the first rank belonged to those of Naxos, and the second to the stones of Armenia, both of them already mentioned. The stones of Cilicia are of excellent quality, whether used with oil or with water; those of Arsinöe, too, are very good, but with water only. Whetstones have been found also in Italy, which with water give a remarkably keen edge; and from the countries beyond the Alps, we have the whetstones known as "passernices."

To the fourth class belong the hones which give an edge by the agency of human saliva, and are much in use in barbers' shops. They are worthless, however, for all other purposes, in consequence of their soft and brittle nature: those from the district of Laminium, in Nearer Spain, are the best of the kind.

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CHAP. 48.

TOPHUS.

Among the multitude of stones which still remain undescribed, there is tophus; a material totally unsuited for building purposes, in consequence of its perishableness. Still, however, there are some localities which have no other, Carthage, in Africa, for example. It is eaten away by the emanations from the sea, crumbled to dust by the wind, and shattered by the pelting of the rain: but human industry has found the means of protecting walls of houses built of it, with a coating of pitch, as a plaster of lime would corrode it. Hence it is, that we have the well-known saying, “that the Carthaginians use pitch for their houses and lime for their wines,” this last being the method used by them in the preparation of their must.

In the territories of Fidenæ and Alba, in the vicinity of Rome, we find other soft kinds of stone; and, in Umbria and Venetia, there is a stone which admits of being cut with the teeth of a saw. These stones are easy to be worked, and are capable of supporting a considerable weight, if they are only kept sheltered from the weather. Rain, however, frost, and dew, split them to pieces, nor can they resist the humidity of the sea-air. The stone of Tibur can stand everything except heat, which makes it crack.

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CHAP. 49.

THE VARIOUS KINDS OF SILEX..

The black silex is in general the best; but in some localities, it is the red, and occasionally the white; as in the Anician quarries at Tarquinii, near Lake Volsinius, for example, and those at Statonia, the stone of which is proof against fire even. These stones, sculptured for monumental purposes, are subject to no deterioration by lapse of time: moulds, too, are made from them, for the purpose of fusing copper. There is a green silex, also, which offers a most powerful resistance to the action of fire, but is never found in any large quantities, and, in all cases, in an isolated form, and not as a constituent part of solid rock. Of the other kinds, the pale silex is but rarely used for erections: being of globular form, it is not liable to injury, but at the same time it is insecure for building purposes, unless it is well braced and tightly held together. Nor yet does river silex offer any greater security, for it always has the appearance of being wet.

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CHAP. 50.

OTHER STONES USED FOR BUILDING.

When the nature of stone is doubtful, the proper precaution is, to quarry it in summer, and not to use it for building before the end of a couple of years, leaving it in the meantime to be well seasoned by the weather. The slabs which have been damaged will be found to be better suited for the foundations under ground: while those, on the other hand, which have remained uninjured, may be employed with safety, and exposed to the open air even.

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CHAP. 51.

THE VARIOUS METHODS OF BUILDING.

The Greeks construct party-walls, resembling those of brickwork, of hard stone or of silex, squared. This kind of stonework is what they call “isodomon,” it being “pseudisodomon” when the wall is built of materials of unequal dimensions. A third kind of stonework is called “emplecton,” the two exteriors only being made with regularity, the rest of the material being thrown in at random. It is necessary that the stones should lie over one another alternately, in such a way that the middle of one stone meets the point of junction of the two below it; and this, too, in the middle of the wall, if possible; but if not, at all events, at the sides. When the middle of the wall is filled up with broken stones, the work is known as “diatoichon.”

The reticulated kind of building, which is mostly in use at Rome, is very liable to crack. All building should be done by line and rule, and ought to be strictly on the perpendicular.

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CHAP. 52. (23.)

CISTERNS.

Cisterns should be made of five parts of pure, gravelly, sand, two of the very strongest quicklime, and fragments of silex not exceeding a pound each in weight; when thus incorporated, the bottom and sides should be well beaten with iron rammers. The best plan, too, is to have the cisterns double; so that all superfluities may settle in the inner cistern, and the water filter through, as pure as possible, into the outer one.

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CHAP. 53.

QUICK-LIME.

Cato the Censor disapproves of lime prepared from stones of various colours: that made of white stone is the best. Lime prepared from hard stone is the best for building purposes, and that from porous stone for coats of plaster. For both these purposes, lime made from silex is equally rejected. Stone that has been extracted from quarries furnishes a better lime than that collected from the beds of rivers; but the best of all is the lime that is obtained from the molar-stone, that being of a more unctuous nature than the others. It is something truly marvellous, that quick-lime, after the stone has been subjected to fire, should ignite on the application of water!

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CHAP. 54.

THE VARIOUS KINDS OF SAND. THE COMBINATIONS OF SAND WITH LIME.

There are three kinds of sand: fossil sand, to which one-fourth part of lime should be added; river sand; and sea sand; to both of which last, one third of lime should be added. If, too, one third of the mortar is composed of bruised earthenware, it will be all the better. Fossil sand is found in the districts that lie between the Apennines and the Padus, but not in the parts beyond sea.

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CHAP. 55.

DEFECTS IN BUILDING. PLASTERS FOR WALLS.

The great cause of the fall of so many buildings in our City, is, that through a fraudulent abstraction of the lime, the rough work is laid without anything to hold it together. The older, too, the mortar is, the better it is in quality. In the ancient laws for the regulation of building, no contractor was to use mortar less than three months old; hence it is, that no cracks have disfigured the plaster coatings of their walls. These stuccos will never present a sufficiently bright surface, unless there have been three layers of sanded mortar, and two of marbled mortar upon that. In damp localities and places subject to exhalations from the sea, it is the best plan to substitute ground earthenware mortar for sanded mortar. In Greece, it is the practice, first to pound the lime and sand used for plastering, with wooden pestles in a large trough. The test by which it is known that marbled mortar has been properly blended, is its not adhering to the trowel; whereas, if it is only wanted for white-washing, the lime, after being well slaked with water, should stick like glue. For this last purpose, however, the lime should only be slaked in lumps.

At Elis, there is a Temple of Minerva, which was pargetted, they say, by Panænus, the brother of Phidias, with a mortar that was blended with milk and saffron: hence it is, that, even at the present day, when rubbed with spittle on the finger, it yields the smell and flavour of saffron.

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CHAP. 56.

COLUMNS. THE SEVERAL KINDS OF COLUMNS.

The more closely columns are placed together, the thicker they appear to be. There are four different kinds of pillars. Those of which the diameter at the foot is one-sixth part of the height, are called Doric. When the diameter is one-ninth, they are Ionic; and when it is one-seventh, Tuscan. The proportions in the Corinthian are the same as those of the Ionic; but they differ in the circumstance that the Corinthian capitals are of the same height as the diameter at the foot, a thing that gives them a more slender appearance; whereas, in the Ionic column, the height of the capital is only one-third of the diameter at the foot. In ancient times the rule was, that the columns should be one-third of the breadth of the temple in height.

It was in the Temple of Diana, at Ephesus, as originally built, that spirals were first placed beneath, and capitals added: and it was determined that the diameter of the shafts should be one-eighth of their height, and that the spirals should be one-half of the diameter in height, the upper extremity of the shaft being one-seventh less in diameter than the foot. In addition to these columns, there are what are called “Attic” columns, quadrangular, and with equal sides.

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CHAP. 57. (24.)

FIVE REMEDIES DERIVED FROM LIME.

Lime is also employed very extensively in medicine. For this purpose, fresh lime is selected, which has not been slaked with water. Its properties are caustic, resolvent, and attractive; and it prevents serpiginous ulcers from spreading, being incorporated with vinegar and oil of roses, for the purpose. When this has been effected, it is tempered with wax and oil of roses, and applied to promote cicatrization. In combination with honey, and liquid resin, or hogs' lard, lime is curative of sprains and scrofulous sores.

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CHAP. 58.

MALTHA.

Maltha is a cement prepared from fresh lime; lumps of which are quenched in wine, and then pounded with hogs' lard and figs, both of them, mollifying substances. It is the most tenacious of all cements, and surpasses stone in hardness. Before applying the maltha, the substance upon which it is used must be well rubbed with oil.

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CHAP. 59.

gypsum.

Gypsum has a close affinity with limestone, and there are numerous varieties of it. One kind is prepared from a calcined stone, as in Syria, and at Thurii, for example. In Cyprus and at Perrhæbia, gypsum is dug out of the earth, and at Tymphæ it is found just below the level of the soil. The stone that is calcined for this purpose, ought to be very similar to alabastrites, or else of a grain like that of marble. In Syria, they select the hardest stones for the purpose, and calcine them with cow-dung, to accelerate the process. Experience has proved, however, that the best plaster of all is that prepared from specular-stone, or any other stone that is similarly laminated. Gypsum, when moistened, must be used immediately, as it hardens with the greatest rapidity; it admits, however, of being triturated over again, and so reduced to powder. It is very useful for pargetting, and has a pleasing effect when used for ornamental figures and wreaths in buildings.

There is one remarkable fact connected with this substance; Caius Proculeius, an intimate friend of the Emperor Augustus, suffering from violent pains in the stomach, swallowed gypsum, and so put an end to his existence.

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CHAP. 60. (25.)

PAVEMENTS. THE ASAROTOS ŒCOS.

Pavements are an invention of the Greeks, who also practised the art of painting them, till they were superseded by mosaics. In this last branch of art, the highest excellence has been attained by Sosus, who laid, at Pergamus, the mosaic pavement known as the “Asarotos œcos;” from the fact that he there represented, in small squares of different colours, the remnants of a banquet lying upon the pavement, and other things which are usually swept away with the broom, they having all the appearance of being left there by accident. There is a dove also, greatly admired, in the act of drinking, and throwing the shadow of its head upon the water; while other birds are to be seen sunning and pluming themselves, on the margin of a drinking-bowl.

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CHAP. 61.

THE FIRST PAVEMENTS IN USE AT ROME.

The first pavements, in my opinion, were those now known to us as barbaric and subtegulan pavements, a kind of work that was beaten down with the rammer: at least if we may form a judgment from the name that has been given to them. The first diamonded pavement at Rome was laid in the Temple of Jupiter Capitolinus, after the commencement of the Third Punic War. That pavements had come into common use before the Cimbric War, and that a taste for them was very prevalent, is evident from the line of Lucilius —
"With checquered emblems like a pavement marked."

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CHAP. 62.

TERRACE-ROOF PAVEMENTS.

The Greeks have also invented terrace-roof pavements, and have covered their houses with them; a thing that may easily be done in the hotter climates, but a great mistake in countries where the rain is apt to become congealed. In making these pavements, the proper plan is to begin with two layers of boards, running different ways, and nailed at the extremities, to prevent them from warping. Upon this planking a rough-work must be laid, one-fourth of which consists of pounded pottery: and upon this, another bed of rough-work, two-fifths composed of lime, a foot in thickness, and well beaten down with the rammer. The nucleus is then laid down, a bed six fingers in depth; and upon that, large square stones, not less than a couple of fingers in thickness; an inclination being carefully observed, of an inch and a half to every ten feet. This done, the surface is well rubbed down with a polishing stone. The general opinion is, that oak should never be used for the planking, it being so very liable to warp; and it is considered a good plan to cover the boards with a layer of fern or chaff, that they may be the better able to resist the action of the lime. It is necessary, too, before putting down the planking, to underset it with a bed of round pebbles. Wheat-ear tesselated pavements are laid down in a similar manner.

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CHAP. 63.

GRÆCANIC PAVEMENTS.

We must not omit here one other kind of pavement, that known as the “Græcanic.” The ground is well rammed down, and a bed of rough work, or else broken pottery, is then laid upon it. Upon the top of this, a layer of charcoal is placed, well trodden down with a mixture of sand, lime, and ashes; care being taken, by line and rule, to give it a uniform thickness of half a foot. The surface then presents the ordinary appearance of the ground; but if it is well rubbed with the polishing-stone, it will have all the appearance of a black pavement.

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CHAP. 64.

AT WHAT PERIOD MOSAIC PAVEMENTS WERE FIRST INVENTED. AT WHAT PERIOD ARCHED ROOFS WERE FIRST DECORATED WITH GLASS.

Mosaic pavements were first introduced in the time of Sylla; at all events, there is still in existence a pavement, formed of small segments, which he ordered to be laid down in the Temple of Fortune, at Præneste. Since his time, these mosaics have left the ground for the arched roofs of houses, and they are now made of glass. This, however, is but a recent invention; for there can be no doubt that, when Agrippa ordered the earthenware walls of the hot baths, in the Thermæ which he was building at Rome, to be painted in encaustic, and had the other parts coated with pargetting, he would have had the arches decorated with mosaics in glass, if the use of them had been known; or, at all events, if from the walls of the Theatre of Scaurus, where it figured, as already stated, glass had by that time come to be used for the arched roofs of apartments. It will be as well, therefore, to give some account, also, of glass.

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CHAP. 65. (26.)

THE ORIGIN OF GLASS.

In Syria there is a region known as Phœnice, adjoining to Judæa, and enclosing, between the lower ridges of Mount Carmelus, a marshy district known by the name of Cendebia. In this district, it is supposed, rises the river Belus, which, after a course of five miles, empties itself into the sea near the colony of Ptolemaïs. The tide of this river is sluggish, and the water unwholesome to drink, but held sacred for the observance of certain religious ceremonials. Full of slimy deposits, and very deep, it is only at the reflux of the tide that the river discloses its sands; which, agitated by the waves, separate themselves from their impurities, and so become cleansed. It is generally thought that it is the acridity of the sea-water that has this purgative effect upon the sand, and that without this action no use could be made of it. The shore upon which this sand is gathered is not more than half a mile in extent; and yet, for many ages, this was the only spot that afforded the material for making glass.

The story is, that a ship, laden with nitre, being moored upon this spot, the merchants, while preparing their repast upon the sea-shore, finding no stones at hand for supporting their cauldrons, employed for the purpose some lumps of nitre which they had taken from the vessel. Upon its being subjected to the action of the fire, in combination with the sand of the sea-shore, they beheld transparent streams flowing forth of a liquid hitherto unknown: this, it is said, was the origin of glass.

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CHAP. 66.

THE VARIOUS KINDS OF GLASS, AND THE MODE OF MAKING IT.

In process of time, as human industry is ingenious in discovering, it was not content with the combination of nitre, but magnet-stone began to be added as well; from the impression that it attracts liquefied glass as well as iron. In a similar manner, too, brilliant stones of various descriptions came to be added in the melting, and, at last, shells and fossil sand. Some authors tell us, that the glass of India is made of broken crystal, and that, in consequence, there is none that can be compared to it.

In fusing it, light and dry wood is used for fuel, Cyprian copper and nitre being added to the melting, nitre of Ophir more particularly. It is melted, like copper, in contiguous furnaces, and a swarthy mass of an unctuous appearance is the result. Of such a penetrating nature is the molten glass, that it will cut to the very bone any part of the body which it may come near, and that, too, before it is even felt. This mass is again subjected to fusion in the furnace, for the purpose of colouring it; after which, the glass is either blown into various forms, turned in a lathe, or engraved like silver. Sidon was formerly famous for its glass-houses, for it was this place that first invented mirrors.

Such was the ancient method of making glass: but, at the present day, there is found a very white sand for the purpose, at the mouth of the river Volturnus, in Italy. It spreads over an extent of six miles, upon the sea-shore that lies between Cumæ and Liternum, and is prepared for use by pounding it with a pestle and mortar; which done, it is mixed with three parts of nitre, either by weight or measure, and, when fused, is transferred to another furnace. Here it forms a mass of what is called “hammonitrum;” which is again submitted to fusion, and becomes a mass of pure, white, glass. Indeed, at the present day, throughout the Gallic and Spanish provinces even, we find sand subjected to a similar process. In the reign of Tiberius, it is said, a combination was devised which produced a flexible glass; but the manufactory of the artist was

totally destroyed, we are told, in order to prevent the value of copper, silver, and gold, from becoming depreciated. This story, however, was, for a long time, more widely spread than well authentieated. But be it as it may, it is of little consequence; for, in the time of the Emperor Nero, there was a process discovered, by which two small glass cups were made, of the kind called “petroti,” the price of which was no less than six thousand sesterces!

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CHAP. 67.

OBSIAN GLASS AND OBSIAN STONE.

Among the various kinds of glass, we may also reckon Obsian glass, a substance very similar to the stone which Obsius discovered in Æthiopia. This stone is of a very dark colour, and sometimes transparent; but it is dull to the sight, and reflects, when attached as a mirror to walls, the shadow of the object rather than the image. Many persons use it for jewellery, and I myself have seen solid statues in this material of the late Emperor Augustus, of very considerable thickness. That prince consecrated, in the Temple of Concord, as something marvellous, four figures of elephants made of Obsian stone. Tiberius Cæsar, too, restored to the people of Heliopolis, as an object of ceremonial worship, an image in this stone, which had been found among the property left by one of the præfects of Egypt. It was a figure of Menelaüs; a circumstance which goes far towards proving that the use of this material is of more ancient date than is generally supposed, confounded as it is at the present day with glass, by reason of its resemblance. Xenocrates says that Obsian stone is found in India also, and in Samnium in Italy; and that it is a natural product of Spain, upon the coasts which border on the Ocean.

There is an artificial Obsian stone, made of coloured glass for services for the table; and there is also a glass that is red all through, and opaque, known as "hæmatinum." A dead white glass, too, is made, as also other kinds in imitation of murrhine colour, hyacinthine, sapphire, and every other tint: indeed, there is no material of a more pliable nature than this, or better suited for colouring. Still, however, the highest value is set upon glass that is entirely colourless and transparent, as nearly as possible resembling crystal, in fact. For drinking-vessels, glass has quite superseded the use of silver and gold; but it is unable to stand heat unless a cold liquid is poured in first. And yet, we find that globular glass vessels, filled with water, when brought in contact with the rays of the sun, become heated to such a degree as to cause articles of clothing to ignite. When broken, too, glass admits of being joined by the agency

of heat; but it cannot be wholly fused without being pulverized into small fragments, as we see done in the process of making the small checquers, known as “abaculi,” for mosaic work; some of which are of variegated colours, and of different shapes. If glass is fused with sulphur, it will become as hard as stone.

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CHAP. 68. (27.)

MARVELLOUS FACTS CONNECTED WITH FIRE.

Having now described all the creations of human ingenuity, reproductions, in fact, of Nature by the agency of art, it cannot but recur to us, with a feeling of admiration, that there is hardly any process which is not perfected through the intervention of fire. Submit to its action some sandy soil, and in one place it will yield glass, in another silver, in another minium, and in others, again, lead and its several varieties, pigments, and numerous medicaments. It is through the agency of fire that stones are melted into copper; by fire that iron is produced, and subdued to our purposes; by fire that gold is purified; by fire, too, that the stone is calcined, which is to hold together the walls of our houses.

Some materials, again, are all the better for being repeatedly submitted to the action of fire; and the same substance will yield one product at the first fusion, another at the second, and another at the third. Charcoal, when it has passed through fire and has been quenched, only begins to assume its active properties; and, when it might be supposed to have been reduced to annihilation, it is then that it has its greatest energies. An element this, of immense, of boundless power, and, as to which, it is a matter of doubt whether it does not create even more than it destroys!

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CHAP. 69.

THREE REMEDIES DERIVED FROM FIRE AND FROM ASHES.

Fire even has certain medicinal virtues of its own. When pestilences prevail, in consequence of the obscuration of the sun, it is a well-known fact, that if fires are lighted, they are productive of beneficial results in numerous ways. Empedocles and Hippocrates have proved this in several passages.

"For convulsions or contusions of the viscera," says M. Varro — for it is his own words that I use— "let the hearth be your medicine-box; for lie of ashes, taken from thence, mixed with your drink, will effect a cure. Witness the gladiators, for example, who, when disabled at the Games, refresh themselves with this drink." Carbuncle too, a kind of disease which, as already stated, has recently carried off two persons of consular rank, admits of being successfully treated with oak-charcoal, triturated with honey. So true is it that things which are despised even, and looked upon as so utterly destitute of all virtues, have still their own remedial properties, charcoal and ashes for example.

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CHAP. 70.

PRODIGIES CONNECTED WITH THE HEARTH.

I must not omit too, one portentous fact connected with the hearth, and famous in Roman history. In the reign of Tarquinius Priscus, it is said, there appeared upon his hearth a resemblance of the male generative organ in the midst of the ashes. The captive Ocrisia, a servant of Queen Tanaquil, who happened to be sitting there, arose from her seat in a state of pregnancy, and became the mother of Servius Tullius, who eventually succeeded to the throne. It is stated, too, that while the child was sleeping in the palace, a flame was seen playing round his head; the consequence of which was, that it was believed that the Lar of the household was his progenitor. It was owing to this circumstance, we are informed, that the Compitalia, games in honour of the Lares, were instituted.

SUMMARY. — Remedies mentioned, eighty-nine. Facts and narratives, four hundred and thirty-four.

ROMAN AUTHORS QUOTED. — M. Varro, Cælius, Galba, Cincius, Mucianus, Nepos Cornelius, L. Piso, Q. Tubero, Fabius Vestalis, Annius Fetialis, Fabianus, Seneca, Cato the Censor, Vitruvius.

FOREIGN AUTHORS QUOTED. — Theophrastus, Pasiteles, King Juba, Nicander, Sotacus, Sudines, Alexander Polyhistor, Apion, Plistonicus, Duris, Herodotus, Euhemerus, Aristagoras, Dionysius, Artemidorus, Butoridas, Antisthenes, Demetrius, Demoteles, Lyceas.

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BOOK XXXVII. THE NATURAL HISTORY OF PRECIOUS STONES.

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CHAP. 1. (1.)

THE FIRST USE OF PRECIOUS STONES.

THAT nothing may be wanting to the work which I have undertaken, it still remains for me to speak of precious stones: a subject in which the majestic might of Nature presents itself to us, contracted within a very limited space, though, in the opinion of many, nowhere displayed in a more admirable form. So great is the value that men attach to the multiplied varieties of these gems, their numerous colours, their constituent parts, and their singular beauty, that, in the case of some of them, it is looked upon as no less than sacrilege to engrave them, for signets even, the very purpose for which, in reality, they were made. Others, again, are regarded as beyond all price, and could not be valued at any known amount of human wealth; so much so that, in the case of many, it is quite sufficient to have some single gem or other before the eyes, there to behold the supreme and absolute perfection of Nature's work.

We have already stated, to some extent, when speaking on the subject of gold and rings, how the use of precious stones first originated, and from what beginnings this admiration of them has now increased to such an universal passion. According to fabulous lore, the first use of them was suggested by the rocks of Caucasus, in consequence of an unhappy interpretation which was given to the story of the chains of Prometheus: for we are told by tradition, that he enclosed a fragment of this stone in iron, and wore it upon his finger; such being the first ring and the first jewel known.

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CHAP. 2.

THE JEWEL OF POLYCRATES.

With a beginning such as this, the value set upon precious stones increased to such a boundless extent, that Polycrates, the tyrant of Samos, who ruled over the islands and the adjacent shores, when he admitted that his good fortune had been too great, deemed it a sufficient expiation for all this enjoyment of happiness, to make a voluntary sacrifice of a single precious stone; thinking thereby to balance accounts with the inconstancy of fortune, and, by this single cause for regret, abundantly to buy off every ill-will she might entertain. Weary, therefore, of his continued prosperity, he embarked on board a ship, and, putting out to sea, threw the ring which he wore into the waves. It so happened, however, that a fish of remarkable size, one destined for the table of a king, swallowed the jewel, as it would have done a bait; and then, to complete the portentous omen, restored it again to the owner in the royal kitchen, by the ruling hand of a treacherous fortune.

The stone in this ring, it is generally agreed, was a sardonyx, and they still show one at Rome, which, if we believe the story, was this identical stone. It is enclosed in a horn of gold, and was deposited, by the Emperor Augustus, in the Temple of Concord, where it holds pretty nearly the lowest rank among a multitude of other jewels that are preferable to it.

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CHAP. 3.

THE JEWEL OF PYRRBUS.

Next in note after this ring, is the jewel that belonged to another king, Pyrrhus, who was so long at war with the Romans. It is said that there was in his possession an agate, upon which were to be seen the Nine Muses and Apollo holding a lyre; not a work of art, but the spontaneous produce of Nature, the veins in it being so arranged that each of the Muses had her own peculiar attribute.

With the exception of these two jewels, authors make no mention of any others that have been rendered famous. We only find it recorded by them, that Ismenias the flute-player was in the habit of displaying great numbers of glittering stones, a piece of vanity, on his part, which gave occasion to the following story. An emerald, upon which was engraved a figure of Amymone, being offered for sale in the Isle of Cyprus at the price of six golden denarii, he gave orders to purchase it. The dealer however, reduced the price, and returned two denarii; upon which, Ismenias remarked— "By Hercules! he has done me but a bad turn in this, for the merit of the stone has been greatly impaired by this reduction in price."

It seems to have been this Ismenias who introduced the universal practice among musicians of proclaiming their artistic merit by this kind of ostentation. Thus Dionysodorus, for instance, his contemporary and rival, imitated his example, in order that he might not appear to be his inferior in skill; whereas, in reality, he only held the third rank among the musicians of that day. Nicomachus, too, it is said, was the possessor of great numbers of precious stones, though selected with but little taste. In mentioning these illustrations, by way of prelude to this Book, it is by no means improbable that they may have the appearance of being addressed to those, who, piquing themselves upon a similar display, become puffed up with a vanity which is evidently much more appropriate to a performer on the flute.

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CHAP. 4.

WHO WERE THE MOST SKILFUL LAPIDARIES. THE FINEST SPECIMENS OF ENGRAVING ON PRECIOUS STONES.

The stone of the ring which is now shown as that of Polycrates, is untouched and without engraving. In the time of Ismenias, long after his day, it would appear to have become the practice to engrave smaragdi even; a fact which is established by an edict of Alexander the Great, forbidding his portrait to be cut upon this stone by any other engraver than Pyrgoteles, who, no doubt, was the most famous adept in this art. Since his time, Apollonides and Cronius have excelled in it; as also Dioscurides, who engraved a very excellent likeness of the late Emperor Augustus upon a signet, which, ever since, the Roman emperors have used. The Dictator Sylla, it is said, always made use of a seal which represented the surrender of Jugurtha. Authors inform us also, that the native of Intercatia, whose father challenged Scipio Æmilianus, and was slain by him, was in the habit of using a signet with a representation of this combat engraved upon it; a circumstance which gave rise to the well-known joke of Stilo Præconinus, who naively enquired, what he would have done if Scipio had been the person slain?

The late Emperor Augustus was in the habit, at first, of using the figure of a Sphinx for his signet; having found two of them, among the jewels of his mother, that were perfectly alike. During the Civil Wars, his friends used to employ one of these signets, in his absence, for sealing such letters and edicts as the circumstances of the times required to be issued in his name; it being far from an unmeaning pleasantry on the part of those who received these missives, that the Sphinx always brought its enigmas with it. The frog, too, on the seal of Mæcenas, was held in great terror, by reason of the monetary imposts which it announced. At a later period, with the view of avoiding the sarcasms relative to the Sphinx, Augustus made use of a signet with a figure upon it of Alexander the Great.

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CHAP. 5.

THE FIRST DACTYLIOTHECÆ AT ROME.

A collection of precious stones bears the foreign name of “dactyliotheca.” The first person who possessed one at Rome was Scaurus, the step-son of Sylla; and, for a long time, there was no other such collection there, until at length Pompeius Magnus consecrated in the Capitol, among other donations, one that had belonged to King Mithridates; and which, as M. Varro and other authors of that period assure us, was greatly superior to that of Scaurus. Following his example, the Dictator Cæsar consecrated six dactyliothecæ in the Temple of Venus Genetrix; and Marcellus, the son of Octavia, presented one to the Temple of the Palatine Apollo.

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CHAP. 6.

JEWELS DISPLAYED AT ROME IN THE TRIUMPH OF POMPEIUS MAGNUS.

But it was this conquest by Pompeius Magnus that first introduced so general a taste for pearls and precious stones; just as the victories, gained by L. Scipio and Cneius Manlius, had first turned the public attention to chased silver, Attalic tissues, and banquetting-couches decorated with bronze; and the conquests of L. Mummius had brought Corinthian bronzes and pictures into notice.

(2.) To prove more fully that this was the case, I will here give the very words of the public Registers with reference to the triumphs of Pompeius Magnus. On the occasion of his third triumph, over the Pirates and over the Kings and nations of Asia and Pontus that have been already enumerated in the Seventh Book of this work, M. Piso and M. Messala being consuls, on the day before the calends of October, the anniversary of his birth, he displayed in public, with its pieces, a chess-board, made of two precious stones, three feet in width by two in length — and to leave no doubt that the resources of Nature do become exhausted, I will here observe, that no precious stones are to be found at the present day, at all approaching such dimensions as these; as also that there was upon this board a moon of solid gold, thirty pounds in weight! — three banquetting-couches; vessels for nine waiters, in gold and precious stones; three golden statues of Minerva, Mars, and Apollo; thirty-three crowns adorned with pearls; a square mountain of gold, with stags upon it, lions, and all kinds of fruit, and surrounded with a vine of gold; as also a musæum, adorned with pearls, with an horologe upon the top of it.

There was a likeness also in pearls of Pompeius himself, his noble countenance, with the hair thrown back from the forehead, delighting the eye. Yes, I say, those frank features, so venerated throughout all nations, were here displayed in pearls! the severity of our ancient manners being thus subdued, and the display being more the triumph of luxury than the triumph of conquest. Never, most assuredly, would Pompeius have so long maintained his surname of “Magnus”

among the men of that day, if on the occasion of his first conquest his triumph had been such as this. Thy portrait in pearls, O Magnus! those resources of prodigality, that have been discovered for the sake of females only! Thy portrait in pearls, refinements in luxury, which the Roman laws would not have allowed thee to wear even! And was it in this way that thy value must be appreciated? Would not that trophy have given a more truthful likeness of thee which thou hadst erst erected upon the Pyrenæan mountain heights? Assuredly such a portrait as this had been no less than a downright ignominy and disgrace, were we not bound to behold in it a menacing presage of the anger of the gods, and to see foreshadowed thereby the time when that head, now laden with the wealth of the East, was to be displayed, severed from the body.

But in other respects, how truly befitting the hero was this triumph! To the state, he presented two thousand millions of sesterces; to the legati and quæstors who had exerted themselves in defence of the sea coast, he gave one thousand millions of sesterces; and to each individual soldier, six thousand sesterces. He has rendered, however, comparatively excusable the Emperor Caius, who, in addition to other femmine luxuries, used to wear shoes adorned with pearls; as also the Emperor Nero, who used to adorn his sceptres with masks worked in pearls, and had the couches, destined for his pleasures, made of the same costly materials. Nay, we have no longer any right, it would seem, to censure the employment of drinking-cups adorned with precious stones, of various other articles in daily use that are similarly enriched, and of rings that sparkle with gems: for what species of luxury can there be thought of, that was not more innocent in its results than this on the part of Pompeius?

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CHAP. 7.

AT WHAT PERIOD MURRHINE VESSELS WERE FIRST INTRODUCED AT ROME. INSTANCES OF LUXURY IN REFERENCE TO THEM.

It was the same conquest, too, that first introduced murrhine vessels at Rome; Pompeius being the first to dedicate, at the conclusion of this triumph, vases and cups, made of this material, in the Temple of Jupiter Capitolinus: a circumstance which soon brought them into private use, waiters, even, and eating-utensils made of murrhine being in great request. This species of luxury, too, is daily on the increase, a single cup, which would hold no more than three sextarii, having been purchased at the price of seventy thousand sesterces. A person of consular rank, who some years ago used to drink out of this cup, grew so passionately fond of it, as to gnaw its edges even, an injury, however, which has only tended to enhance its value: indeed there is now no vessel in murrhine that has ever been estimated at a higher figure than this. We may form some opinion how much money this same personage swallowed up in articles of this description, from the fact that the number of them was so great, that, when the Emperor Nero deprived his children of them, and they were exposed to public view, they occupied a whole theatre to themselves, in the gardens beyond the Tiber; a theatre which was found sufficiently large even, for the audience that attended on the occasion when Nero rehearsed his musical performances before his appearance in the Theatre of Pompeius. It was at this exhibition, too, that I saw counted the broken fragments of a single cup, which it was thought proper to preserve in an urn and display, I suppose, with the view of exciting the sorrows of the world, and of exposing the cruelty of fortune; just as though it had been no less than the body of Alexander the Great himself!

T. Petronius, a personage of consular rank, intending, from his hatred of Nero, to disinherit the table of that prince, broke a murrhine basin, which had cost him no less than three hundred thousand sesterces. But Nero himself, as it was only proper for a prince to do, surpassed them all, by paying one million of sesterces for a single

cup: a fact well worthy of remembrance, that an emperor, the father of his country, should have drunk from a vessel of such costly price!

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CHAP. 8.

THE NATURE OF MURRHINE VESSELS.

Murrhine vessels come from the East, in numerous localities of which, remarkable for nothing else, they are to be found. It is in the empire of the Parthians, more particularly, that they are met with, though those of the very finest quality come to us from Carmania. It is generally thought that these vessels are formed of a moist substance, which under ground becomes solidified by heat. In size they never ex- ceed a small waiter, and, as to thickness, they rarely admit of being used as drinking-cups, so large as those already mentioned. The brightness of them is destitute of strength, and it may be said that they are rather shining than brilliant. But the chief merit of them is the great variety of their colours, and the wreathed veins, which, every here and there, present shades of purple and white, with a mixture of the two; the purple gradually changing, as it were, to a fiery red, and the milk-white assuming a ruddy hue. Some persons praise the edges of these vessels more particularly, with a kind of reflection in the colours, like those beheld in the rain-bow. Others, again, are more pleased with them when quite opaque, it being considered a demerit when they are at all transparent, or of a pallid hue. The appearance, too, of crystals in them is highly prized, and of spots that look like warts; not prominent, but depressed, as we mostly see upon the human body. The perfume, too, of which they smell, is looked upon as an additional recommendation.

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CHAP. 9.

THE NATURE OF CRYSTAL.

It is a diametrically opposite cause to this that produces crystal, a substance which assumes a concrete form from excessive congelation. At all events, crystal is only to be found in places where the winter snow freezes with the greatest intensity; and it is from the certainty that it is a kind of ice, that it has received the name which it bears in Greek. The East, too, sends us crystal, there being none preferred to the produce of India. It is to be found, also, in Asia, that of the vicinity of Alabanda, Orthosia, and the neighbouring mountains, being held in a very low degree of esteem. In Cyprus, also, there is crystal, but that found upon the Alpine heights in Europe is, in general, more highly valued. According to Juba, there is crystal in a certain island of the Red Sea, opposite the coast of Arabia, called "Necron;" as, also, in another neighbouring island which produces the precious stone known as the "topazus;" where a block of crystal was extracted, he says, by Pythagoras, the præfect of King Ptolemaæus, no less than a cubit in length.

Cornelius Bocchus informs us that in Lusitania, there have been blocks of crystal found, of extraordinary weight, in sinking shafts in the Ammiensian mountains there, to a water-level for the supply of wells. It is a marvellous fact, stated by Xenocrates of Ephesus, that in Asia and in the Isle of Cyprus, crystal is turned up by the plough; it having been the general belief that it is never to be found in terreous soils, and only in rocky localities. That is much more probable which the same Xenocrates tells us, when he says that the mountain streams often bring down with them fragments of crystal. Sudines says, that crystal is only to be found in localities that face the south, a thing that is known to be really the fact: indeed, it is never found in humid spots, however cold the climate may be, even though the rivers there freeze to the very bottom. Rain-water and pure snow are absolutely necessary for its formation, and hence it is, that it is unable to endure heat, being solely employed for holding liquids that are taken cold. From the circumstance of its being hexagonal and hexahedral, it is

not easy to penetrate this substance; and the more so, as the pyramidal terminations do not always have the same appearance. The polish on its faces is so exquisite, that no art can possibly equal it.

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CHAP. 10.

LUXURY DISPLAYED IN THE USE OF CRYSTAL. REMEDIES DERIVED FROM CRYSTAL.

The largest block of crystal that has ever been beheld by us, is the one that was consecrated by Julia Augusta in the Capitol, and which weighed about one hundred and fifty pounds. Xenocrates speaks of having seen a vase of crystal, which held one amphora, and we find other writers mentioning a vessel from India which held four sextarii. For my own part, I can positively say, that there is crystal amid the crags of the Alps, so difficult of access, that it is usually found necessary to be suspended by ropes in order to extract it. Persons who are experienced in the matter detect its presence by certain signs and indications.

Crystal is subject to numerous defects, sometimes presenting a rough, solder-like, substance, or else clouded by spots upon it; while occasionally it contains some hidden humour within, or is traversed by hard and brittle knurrs, which are known as "salt grains." Some crystal, too, has a red rust upon it, while, in other instances, it contains filaments that look like flaws, a defect which artists conceal by engraving it. But where crystals are entirely free from defect, they are preferred uncut; in which case, they are known as "acenteta," and have the colour, not of foam, but of limpid water. In the last place, the weight of crystals is a point which is taken into consideration.

I find it stated by medical men that the very best cautery for the human body is a ball of crystal acted upon by the rays of the sun. This substance, too, has been made the object of a mania; for, not many years ago, a mistress of a family, who was by no means very rich, gave one hundred and fifty thousand sesterces for a single basin made of crystal. Nero, on receiving tidings that all was lost, in the excess of his fury, dashed two cups of crystal to pieces; this being his last act of vengeance upon his fellow-creatures, preventing any one from ever drinking again from these vessels. Crystal, when broken, cannot by any possibility be mended. Vessels in glass have been brought to a marvellous degree of resemblance to crystal; and yet,

wonderful to say, they have only tended to enhance the value of crystal, and in no way to depreciate it.

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CHAP. 11.

AMBER: THE MANY FALSEHOODS THAT HAVE BEEN TOLD ABOUT IT.

Next in rank among the objects of luxury, we have amber; an article which, for the present, however, is in request among women only. All these three last-mentioned substances hold the same rank, no doubt, as precious stones; the two former for certain fair reasons; crystal, because it is adapted for taking cool drinks, and murrhine vessels, for taking drinks that are either hot or cold. But as for amber, luxury has not been able, as yet, to devise any justification for the use of it. This is a subject which affords us an excellent opportunity of exposing some of the frivolities and falsehoods of the Greeks; and I beg that my readers will only have patience with me while I do so, it being really worth while, for our own practical improvement, to become acquainted with the marvellous stories which they have promulgated respecting amber.

After Phaëthon had been struck by lightning, his sisters, they tell us, became changed into poplars, which every year shed their tears upon the banks of the Eridanus, a river known to us as the "Padus." To these tears was given the name of "electrum," from the circumstance that the Sun was usually called "elector." Such is the story, at all events, that is told by many of the poets, the first of whom were, in my opinion, Æschylus, Philoxenus, Euripides, Satyrus, and Nicander; and the falsity of which is abundantly proved upon the testimony of Italy itself. Those among the Greeks who have devoted more attention to the subject, have spoken of certain islands in the Adriatic Sea, known as the "Electrides," and to which the Padus, they say, carries down electrum. It is the fact, however, that there never were any islands there so called, nor, indeed, any islands so situate as to allow of the Padus carrying down anything in its course to their shores. As to Æschylus placing the Eridanus in Iberia, or, in other words, in Spain, and giving it the name of Rhodanus; and as to Euripides and Apollonius representing the Rhodanus and the Padus as discharging themselves by one common mouth on the shores of the Adriatic; we can forgive them all the more readily for

knowing nothing about amber when they betray such monstrous ignorance of geography.

Other writers, again, who are more guarded in their assertions, have told us, though with an equal degree of untruthfulness, that, at the extremity of the Adriatic Gulf, upon certain inaccessible rocks there, there are certain trees which shed their gum at the rising of the Dog-Star. Theophrastus has stated that amber is extracted from the earth in Liguria; Chares, that Phaëthon died in the territory of Hammon, in Æthiopia, where there is a temple of his and an oracle, and where amber is produced; Philemon, that it is a fossil substance, and that it is found in two different localities in Scythia, in one of which it is of a white and waxen colour, and is known as "electrum;" while in the other it is red, and is called "sualiternicum." Demostratus calls amber "lyncurion," and he says that it originates in the urine of the wild beast known as the "lynx;" that voided by the male producing a red and fiery substance, and that by the female an amber of a white and less pronounced colour: he also informs us that by some persons it is called "langurium," and that in Italy, there are certain wild beasts known as "languri." Zenothemis, how- ever, calls these wild beasts "langæ," and gives the banks of the river Padus as their locality. Sudines says, that it is a tree in reality, that produces amber, and that, in Etruria, this tree is known by the name of "lynx;" an opinion which is also adopted by Metrodorus. Sotacus expresses a belief that amber exudes from certain stones in Britannia, to which he gives the name of "electrides." Pytheas says that the Gutones, a people of Germany, inhabit the shores of an æstuary of the Ocean called Mentonomon, their territory extending a distance of six thousand stadia; that, at one day's sail from this territory, is the Isle of Abalus, upon the shores of which, amber is thrown up by the waves in spring, it being an excretion of the sea in a concrete form; as, also, that the inhabitants use this amber by way of fuel, and sell it to their neighbours, the Teutones. Timæus, too, is of the same belief, but he has given to the island the name of Basilia.

Philemon says that electrum does not yield a flame. Nicias, again, will have it, that it is a liquid produced by the rays of the sun; and that these rays, at the moment of the sun's setting, striking with the greatest force upon the surface of the soil, leave upon it an unctuous

sweat, which is carried off by the tides of the Ocean, and thrown up upon the shores of Germany. He states, also, that in Egypt it is similarly produced, and is there called "sacal;" that it is found in India, too, where it is held as a preferable substitute for frankincense; and that in Syria the women make the whirls of their spindles of this substance, and give it the name of "harpax," from the circumstance that it attracts leaves towards it, chaff, and the light fringe of tissues. According to Theochrestus, amber is thrown up by the tides of the Ocean, at the foot of the Pyrenæan range; an opinion adopted also by Xenocrates. Asarubas, who has written the most recently upon these subjects, and is still living, informs us, that near the shores of the Atlantic is Lake Cephisis, known to the Mauri by the name of "Electrum;" and that when this lake is dried up by the sun, the slime of it produces amber, which floats upon the surface. Mnaseas speaks of a locality in Africa called Sicyon, and of a river Crathis there, which discharges itself from a lake into the Ocean, the banks of which are frequented by birds which he calls "meleagrides" and "penelopes:" it is here that, according to him, electrum is produced, in manner above mentioned. Theomenes says that near the Greater Syrtis are the Gardens of the Hesperides, and Lake Electrum: on the banks, he says, are poplars, from the summits of which amber falls into the water below, where it is gathered by the maidens of the Hesperides.

Ctesias asserts that there is in India a river called Hypobarus, a word which signifies "bearer of all good things;" that this river flows from the north into the Eastern Ocean, where it discharges itself near a mountain covered with trees which produce electrum; and that these trees are called "siptachoræ," the meaning of which is "intense sweetness." Mithridates says, that off the shores of Germany there is an island called "Serita," covered with a kind of cedar, from which amber falls upon the rocks. According to Xenocrates, this substance is called, in Italy, not only "succinum," but "thieum" as well, the Scythian name of it, for there also it is to be found, being "sacrium:" others, he says, are of opinion that it is a product of Numidia. But the one that has surpassed them all is Sophocles, the tragic poet; a thing that indeed surprises me, when I only consider the surpassing gravity of his lofty style, the high repute that he enjoyed in life, his elevated

position by birth at Athens, his various exploits, and his high military command. According to him, amber is produced in the countries beyond India, from the tears that are shed for Meleager, by the birds called "meleagrides!" Who can be otherwise than surprised that he should have believed such a thing as this, or have hoped to persuade others to believe it? What child, too, could possibly be found in such a state of ignorance as to believe that birds weep once a year, that their tears are so prolific as this, or that they go all the way from Greece, where Meleager died, to India to weep? "But then," it will be said, "do not the poets tell many other stories that are quite as fabulous?" Such is the fact, no doubt, but for a person seriously to advance such an absurdity with reference to a thing so common as amber, which is imported every day and so easily proves the mendacity of this assertion, is neither more nor less than to evince a supreme contempt for the opinions of mankind, and to assert with impunity an intolerable falsehood.

(3.) There can be no doubt that amber is a product of the islands of the Northern Ocean, and that it is the substance by the Germans called "glæsum;" for which reason the Romans, when Germanicus Cæsar commanded the fleet in those parts, gave to one of these islands the name of Glæsaria, which by the barbarians was known as Austeravia. Amber is produced from a marrow discharged by trees belonging to the pine genus, like gum from the cherry, and resin from the ordinary pine. It is a liquid at first, which issues forth in considerable quantities, and is gradually hardened by heat or cold, or else by the action of the sea, when the rise of the tide carries off the fragments from the shores of these islands. At all events, it is thrown up upon the coasts, in so light and voluble a form that in the shallows it has all the appearance of hanging suspended in the water. Our forefathers, too, were of opinion that it is the juice of a tree, and for this reason gave it the name of "succinum:" and one great proof that it is the produce of a tree of the pine genus, is the fact that it emits a pine-like smell when rubbed, and that it burns, when ignited, with the odour and appearance of torch-pine wood.

Amber is imported by the Germans into Pannonia, more particularly; from whence the Veneti, by the Greeks called Eneti, first brought it into general notice, a people in the vicinity of

Pannonia, and dwelling on the shores of the Adriatic Sea. From this it is evident how the story which connects it with the Padus first originated; and at the present day we see the female peasantry in the countries that lie beyond that river wearing necklaces of amber, principally as an ornament, no doubt, but on account of its remedial virtues as well; for amber, it is generally believed, is good for affections of the tonsillary glands and fauces, the various kinds of water in the vicinity of the Alps being apt to produce disease in the human throat.

From Carnuntum in Pannonia, to the coasts of Germany from which the amber is brought, is a distance of about six hundred miles, a fact which has been only very recently ascertained; and there is still living a member of the equestrian order, who was sent thither by Julianus, the manager of the gladiatorial exhibitions for the Emperor Nero, to procure a supply of this article. Traversing the coasts of that country and visiting the various markets there, he brought back amber, in such vast quantities, as to admit of the nets, which are used for protecting the podium against the wild beasts, being studded with amber.

The arms too, the litters, and all the other apparatus, were, on one day, decorated with nothing but amber, a different kind of display being made each day that these spectacles were exhibited. The largest piece of amber that this personage brought to Rome was thirteen pounds in weight.

That amber is found in India too, is a fact well ascertained. Archelaüs, who reigned over Cappadocia, says that it is brought from that country in the rough state, and with the fine bark still adhering to it, it being the custom there to polish it by boiling it in the grease of a sucking-pig. One great proof that amber must have been originally in a liquid state, is the fact that, owing to its transparency, certain objects are to be seen within, ants for example, gnats, and lizards. These, no doubt, must have first adhered to it while liquid, and then, upon its hardening, have remained enclosed within.

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CHAP. 12.

THE SEVERAL KINDS OF AMBER: THE REMEDIES DERIVED FROM IT.

There are several kinds of amber. The white is the one that has the finest odour; but neither this nor the wax-coloured amber is held in very high esteem. The red amber is more highly valued; and still more so, when it is transparent, without presenting too brilliant and igneous an appearance. For amber, to be of high quality, should present a brightness like that of fire, but not flakes resembling those of flame. The most highly esteemed amber is that known as the "Falernian," from its resemblance to the colour of Falernian wine; it is perfectly transparent, and has a softened, transparent, brightness. Other kinds, again, are valued for their mellowed tints, like the colour of boiled honey in appearance. It ought to be known, however, that any colour can be imparted to amber that may be desired, it being sometimes stained with kid-suet and root of alkanet; indeed, at the present day, amber is dyed purple even. When a vivifying heat has been imparted to it by rubbing it between the fingers, amber will attract chaff, dried leaves, and thin bark, just in the same way that the magnet attracts iron. Pieces of amber, steeped in oil, burn with a more brilliant and more lasting flame than pith of flax.

So highly valued is this as an object of luxury, that a very diminutive human effigy, made of amber, has been known to sell at a higher price than living men even, in stout and vigorous health. This single ground for censure, however, is far from being sufficient; in Corinthian objects of vertu, it is the copper that recommends them, combined with silver and gold; and in embossed works it is the skill and genius of the artist that is so highly esteemed. We have already said what it is that recommends vessels of murrhine and of crystal; pearls, too, are of use for wearing upon the head, and gems upon the fingers. In the case of all other luxuries, in fact, it is either a spirit of ostentation or some utility that has been discovered in them that pleads so strongly in their behalf; but in that of amber we have solely the consciousness that we are enjoying a luxury, and nothing more.

Domitius Nero, among the other portentous extravagances of his life, bestowed this name upon the ringlets of his wife Poppæa, and, in certain verses of his, he has even gone so far as to call them "succini." As fine names, too, are never wanting for bodily defects, a third tint has been introduced of late for hair among our ladies, under the name of "amber-colour."

Amber, however, is not without its utility in a medicinal point of view; though it is not for this reason that the women are so pleased with it. It is beneficial for infants also, attached to the body in the form of an amulet; and, according to Callistratus, it is good for any age, as a preventive of delirium and as a cure for strangury, either taken in drink or attached as an amulet to the body. This last author, too, has invented a new variety of amber; giving the name of "chryselectrum" to an amber of a golden colour, and which presents the most beautiful tints in the morning. This last kind attracts flame, too, with the greatest rapidity, and, the moment it approaches the fire, it ignites. Worn upon the neck, he says, it is a cure for fevers and other diseases, and, triturated with honey and oil of roses, it is good for maladies of the ears. Beaten up with Attic honey, it is good for dimuess of sight; and the powder of it, either taken by itself or with gum mastich in water, is remedial for diseases of the stomach. Amber, too, is greatly in request for the imitation of the transparent precious stones, amethystos in particular: for, as already stated, it admits of being dyed of every colour.

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CHAP. 13.

LYNCURIUM: TWO ASSERTED REMEDIES.

The pertinacity that has been displayed by certain authors compels me to speak of lyncurium next; for even those who maintain that it is not a variety of amber, still assure us that it is a precious stone. They assert, too, that it is a product of the urine of the lynx and of a kind of earth, the animal covering up the urine the moment it has voided it, from a jealousy that man should gain possession of it; a combination which hardens into stone. The colour of it, they inform us, like that of some kinds of amber, is of a fiery hue, and it admits, they say, of being engraved. They assert, too, that this substance attracts to itself not only leaves or straws, but thin plates of copper even or of iron; a story which Theophrastus even believes, on the faith of a certain Diocles.

For my own part, I look upon the whole of these statements as untrue, and I do not believe that in our time there has ever been a precious stone seen with such a name as this. I regard, too, the assertions that have been made as to its medicinal properties, as equally false; to the effect that, taken in drink, it disperses urinary calculi, and that, taken in wine, or only looked at, it is curative of jaundice.

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CHAP. 14.

THE VARIOUS PRECIOUS STONES, CLASSIFIED ACCORDING TO THEIR PRINCIPAL COLOURS.

We will now proceed to speak of the various kinds of precious stones, the existence of which is generally admitted, beginning with those which are the most highly esteemed. Nor shall we content ourselves with doing this only; but, with the view of consulting the general welfare of mankind, we shall also refute the infamous lies that have been promulgated by the magicians: for it is with reference to precious stones, more particularly, that they have circulated most of their fabulous stories, stepping, under that most alluring guise of ascertaining remedial virtues, beyond all bounds, and entering the region of the marvellous.

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CHAP. 15. (4.)

ADAMAS: SIX VARIETIES OF IT. TWO REMEDIES.

The substance that possesses the greatest value, not only among the precious stones, but of all human possessions, is adamas; a mineral which, for a long time, was known to kings only, and to very few of them. Such was the name given to a nodosity of gold, sometimes, though but rarely, found in the mines, in close proximity with gold, and only there to be found, it was thought. The ancients supposed that adamas was only to be discovered in the mines of Æthiopia, between the Temple of Mercury and the island of Meroë; and they have informed us that it was never larger than a cucumber-seed, or differing at all from it in colour.

At the present day, for the first time, there are no less than six different varieties of it recognized. The Indian adamas is found, not in a stratum of gold, but in a substance of a kindred nature to crystal; which it closely resembles in its transparency and its highly polished hexangular and hexahedral form. In shape it is turbinated, running to a point at either extremity, and closely resembling, marvellous to think of, two cones united at the base. In size, too, it is as large even as a hazel-nut. Resembling that of India, is the adamas of Arabia, which is found in a similar bed, but not so large in size. Other varieties have a pallid hue like that of silver, and are only to be found in the midst of gold of the very finest quality. These stones are tested upon the anvil, and will resist the blow to such an extent, as to make the iron rebound and the very anvil split asunder. Indeed its hardness is beyond all expression, while at the same time it quite sets fire at defiance and is incapable of being heated; owing to which indomitable powers it is, that it has received the name which it derives from the Greek.

One kind, about as large as a grain of millet in size, has been called “cenchros,” and another, that is found in the gold mines at Philippi, is known as the “Macedonian” adamas: this last is about as large as a cucumber-seed in size. We next come to the Cyprian adamas, so called from its being found in the Isle of Cyprus: it is of a

colour somewhat inclining to that of copper, but, in reference to its medicinal virtues, of which we shall have to make further mention, it is the most efficacious of them all. Next in succession to this we have siderites, a stone which shines like iron, and is more ponderous than any of the others, but differs in its properties from them all. For it breaks when struck by the hammer, and admits of being perforated by other kinds of adamas; a thing which is the case, also, with that of Cyprus: in short, these two are degenerate stones, and only bear the name of "adamas" for the purpose of enhancing their value.

Now with reference to those affinities and repugnances which exist between certain objects, known to the Greeks as "sympathia" and "antipathia," phænomena to which we have endeavoured to draw attention thoughout these books, they nowhere manifest themselves with greater distinctness than here. This indomitable power, in fact, which sets at nought the two most violent agents in Nature, fire, namely, and iron, is made to yield before the blood of a he-goat. The blood, however must be no otherwise than fresh and warm; the stone, too, must be well steeped in it, and then subjected to repeated blows: and even then, it is apt to break both anvils and hammers of iron, if they are not of the very finest temper. To what spirit of research, or to what accident, are we indebted for this discovery? or what conjecture can it have been, that first led man to experiment upon a thing of such extraordinary value as this, and that, too, with the most unclean of all animals? Surely a discovery, such as this, must have been due solely to the munificence of the gods, and we must look for the reason of it in none of the elementary operations of Nature, but wholly in her will.

When, by good fortune, this stone does happen to be broken, it divides into fragments so minute as to be almost imperceptible. These particles are held in great request by engravers, who enclose them in iron, and are enabled thereby, with the greatest facility, to cut the very hardest substances known. So great is the antipathy borne by this stone to the magnet, that when placed near, it will not allow of its attracting iron; or if the magnet has already attracted the iron, it will seize the metal and drag it away from the other. Adamas, too, overcomes and neutralizes poisons, dispels delirium, and banishes groundless perturbations of the mind; hence it is that some have

given it the name of “ananchites.” Metrodorus of Scepsis is the only author, that I know of, who says that this stone is found also in Germany, and in the island of Basilia, where amber is found. He says, too, that this is preferable to the stone of Arabia; but can there be any doubt that his statement is incorrect?

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CHAP. 16.

SMARAGDUS.

Next in esteem with us are the pearls of India and Arabia, of which we have already spoken in the Ninth Book, when treating of the marine productions.

(5.) The third rank, for many reasons, has been given to the smaragdus. Indeed there is no stone, the colour of which is more delightful to the eye; for whereas the sight fixes itself with avidity upon the green grass and the foliage of the trees, we have all the more pleasure in looking upon the smaragdus, there being no green in existence of a more intense colour than this. And then, besides, of all the precious stones, this is the only one that feeds the sight without satiating it. Even when the vision has been fatigued with intently viewing other objects, it is refreshed by being turned upon this stone; and lapidaries know of nothing that is more gratefully soothing to the eyes, its soft green tints being wonderfully adapted for assuaging lassitude, when felt in those organs.

And then, besides, when viewed from a distance, these stones appear all the larger to the sight, reflecting as they do, their green hues upon the circumambient air. Neither sunshine, shade, nor artificial light effects any change in their appearance; they have always a softened and graduated brilliancy; and transmitting the light with facility, they allow the vision to penetrate their interior; a property which is so pleasing, also, with reference to water. In form they are mostly concave, so as to re-unite the rays of light and the powers of vision: and hence it is, that it is so universally agreed upon among mankind to respect these stones, and to forbid their surface to be engraved. In the case, however, of the stones of Scythia and Egypt, their hardness is such, that it would be quite impossible to penetrate them. When the surface of the smaragdus is flat, it reflects the image of objects in the same manner as a mirror. The Emperor Nero used to view the combats of the gladiators upon a smaragdus.

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CHAP. 17.

TWELVE VARIETIES OF THE SMARAGDUS.

Of this stone there are no less than twelve different kinds; of which the finest is the Scythian smaragdus, so called from the country where it is found. None of them has a deeper colour than this, or is more free from defects: indeed, in the same degree that the smaragdus is superior to other precious stones, the Scythian smaragdus is superior to the other varieties. Next in esteem to this, as also in locality, is the smaragdus of Bactriana. These stones are collected, it is said, in the fissures of rocks, when the Etesian winds prevail; a period at which the earth that covers them is removed, and the stones are detected by their brightness, the sands being greatly agitated by the action of the winds. These last, however, are much inferior, they say, to those of Scythia in size. The third rank is held by the stones of Egypt, which are extracted from the hills in the vicinity of Coptos, a city of Thebais.

All the other kinds are found in copper-mines, and hence it is that, of these varieties, the smaragdus of Cyprus holds the highest rank. The merit of them consists in their clear colour, which has nothing thin or diluted in it, but presents a rich and humid transparency, closely resembling the tints of the sea, in fact. Hence it is that these stones are at once diaphanous and shining, or, in other words, reflect their colours and allow the vision to penetrate within. They say that in this island, upon the tomb of a petty king named Hermias, near the fisheries there, there was formerly a lion in marble, with eyes made of smaragdi; the brilliancy of which penetrated the sea to such a degree, as to alarm the tunnies and put them to flight: a novel circumstance, which for a long time excited wonder in the fishermen, till at last the stones in the statue were changed for others.

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CHAP. 18.

DEFECTS IN THE SMARAGDUS.

It will be only proper, too, seeing that the prices of these stones are so exorbitant, to point out their defects. Some defects, no doubt, are common to all of them, while others, again, like those found in the human race, are peculiar only to those of a certain country. Thus, for example, the stones of Cyprus are not all green alike, and in the same smaragdus some parts are more or less so than others, the stone not always preserving that uniform deep tint which characterizes the smaragdus of Scythia. In other instances, a shadow runs through the stone, and the colour becomes dulled thereby; the consequence of which is, that its value is depreciated; and even more so, when the colour is thin and diluted.

In consequence of the defects in these stones, they have been divided into several classes. Some of them are obscure, and are then known as "blind" stones; some have a certain density, which impairs their transparency; others, again, are mottled, and others covered with a cloud. This cloud, however, is altogether different from the shadow above mentioned; for it is a defect which renders the stone of a whitish hue, and not of a transparent green throughout; presenting, as it does, in the interior or upon the surface, a certain degree of whiteness which arrests the vision. Other defects, again, in these stones, are filaments, salt-like grains, or traces of lead ore, faults which are mostly common to them all.

Next after the kinds above described, the smaragdus of Æthiopia is held in high esteem; being found, as Juba tells us, at a distance of twenty-five days' journey from Coptos. These are of a bright green, but are seldom to be met with perfectly clear or of an uniform colour. Democritus includes in this class the stones that are known as "herminei," and as "Persian" stones; the former of which are of a convex, massive shape, while the latter are destitute of transparency, but have an agreeable, uniform colour, and satisfy the vision without allowing it to penetrate them; strongly resembling, in this respect, the eyes of cats and of panthers, which are radiant without being

diaphanous. In the sun, he says, they lose their brilliancy, but they are radiant in the shade, the brightness of them being seen at a greater distance than in the case of other stones. One other fault, too, in all these stones is, that they often have a colour like that of honey or rancid oil, or else are clear and transparent, but not green.

These defects exist in the smaragdi of Attica, more particularly, which are found in the silver-mines there, at a place known by the name of Thoricos. These last are never so massive as the others, and are always more pleasing to the sight when viewed from a distance: lead ore, too, is often to be detected in them, or, in other words, they have a leaden appearance when looked at in the sun. One peculiarity in them is, that some of them become impaired by age, gradually lose their green colour, and are even deteriorated by exposure to the sun. Next to the stones of Attica come those of Media, a variety which presents the most numerous tints of all, and sometimes approaches sapphiros in colour. These stones are wavy, and represent various natural objects, such as poppy-heads, for example, birds, the young of animals, and feathers: all of them appear naturally of a green colour, but become improved by the application of oil. No stones of this species are of a larger size than these.

I am not aware that any of these stones are still in existence at Chalcedon, the copper mines of that locality being now exhausted: but be this as it may, they were always the smallest in size and the most inferior in value. Brittle, and of a colour far from distinctly pronounced, they resembled in their tints the feathers that are seen in the tail of the peacock or on the necks of pigeons. More or less brilliant, too, according to the angle at which they were viewed, they presented an appearance like that of veins and scales. There was another defect, also, peculiar to these stones, known as "sarcion," from the circumstance that a kind of flesh appeared to attach itself to the stone. The mountain near Chalcedon, where these stones were gathered, is still known by the name of "Smaragdites." Juba informs us that a kind of smaragdus, known as "cloras," is used in Arabia as an ornament for buildings, as also the stone which by the people of Egypt is called "alabastrites." On the same authority, too, we learn that there are several varieties of the smaragdus in the neighbouring mountains, and that stones like those of Media are found in Mount

Taygetus, as also in Sicily.

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CHAP. 19.

THE PRECIOUS STONE CALLED TANOS. CHALCOSMA-RAGDOS.

Among the smaragdi is also included the precious stone known as "tanos." It comes from Persia, and is of an unsightly green, and of a soiled colour within. There is the chalcosmaragdos also, a native of Cyprus, the face of which is mottled with coppery veins. Theophrastus relates that he had found it stated in the Egyptian histories, that a king of Babylon once sent to the king of Egypt a smaragdus four cubits in length by three in breadth. He informs us, also, that in a temple of Jupiter in Egypt there was an obelisk made of four smaragdi, forty cubits in length, and four in breadth at one extremity, and two at the other. He says, too, that at the period at which he wrote, there was in the Temple of Hercules at Tyrus a large column made of a single smaragdus; though very possibly it might only be pseudo-smaragdus, a kind of stone not uncommonly found in Cyprus, where a block had been discovered, composed, one half of smaragdus, and one half of jasper, and the liquid in which had not as yet been entirely transformed. Apion, surnamed "Plistonices," has left a very recent statement, that there was still in existence, in his time, in the Labyrinth of Egypt, a colossal statue of Serapis made of a single smaragdus, nine cubits in height.

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CHAP. 20.

BERYLS: EIGHT VARIETIES OF THEM. DEFECTS IN BERYLS.

Beryls, it is thought, are of the same nature as the smaragdus, or at least closely analogous. India produces them, and they are rarely to be found elsewhere. The lapidaries cut all beryls of an hexagonal form; because the colour, which is deadened by a dull uniformity of surface, is heightened by the reflection resulting from the angles. If they are cut in any other way, these stones have no brilliancy whatever. The most esteemed beryls are those which in colour resemble the pure green of the sea; the chrysoberyl being next in value, a stone of a somewhat paler colour, but approaching a golden tint. Closely allied to this last in its brilliancy, but of a more pallid colour, and thought by some to constitute a separate genus, is chrysoprasus. In the fourth rank are reckoned the hyacinthine beryls; and in the fifth, those known as "aëroides." Next, we have the wax-coloured beryls, and, after them, the oleaginous beryls, so called from the resemblance of their colour to that of oil. Last of all, there are the stones which closely resemble crystal in appearance; mostly disfigured by spots and filaments, and of a poor, faint, colour as well; all of them so many imperfections in the stone.

The people of India are marvellously fond of beryls of an elongated form, and say that these are the only precious stones they prefer wearing without the addition of gold: hence it is that, after piercing them, they string them upon the bristles of the elephant. It is generally agreed, however, that those stones should not be perforated which are of the finest quality; and in this case they only enclose the extremities of them in studs of gold. They prefer, too, cutting the beryls in a cylindrical form, instead of setting them as precious stones; an elongated shape being the one that is most highly esteemed. Some are of opinion that beryls are naturally angular, and that when pierced they become improved in colour; the white substance being thus removed that lies within, and their brilliancy heightened by the reflection of the gold in which they are set; or, at all events, their transparency being increased by this diminution in

their thickness. In addition to the defects already mentioned, and which are pretty nearly the same as those to which the smaragdus is subject, beryls are affected with cloudy spots, like those on the finger-nails in appearance. In our own part of the world, it is thought that they are sometimes found in the countries that lie in the vicinity of Pontus. The people of India, by colouring crystal, have found a method of imitating various precious stones, beryls in particular.

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CHAP. 21. (6.)

OPALS: SEVEN VARIETIES OF THEM.

Opals are at once very similar to, and very different from, beryls, and only yield to the smaragdus in value. India, too, is the sole parent of these precious stones, thus completing her glory as being the great producer of the most costly gems. Of all precious stones, it is opal that presents the greatest difficulties of description, it displaying at once the piercing fire of carbunculus, the purple brilliancy of amethystos, and the sea-green of smaragdus, the whole blended together and refulgent with a brightness that is quite incredible. Some authors have compared the effect of its refulgence to that of the colour known as Armenian pigment, while others speak of it as resembling the flame of burning sulphur, or of flame fed with oil. In size, the opal is about as large as a hazel-nut, and, with reference to it, there is a remarkable historical anecdote related. For there is still in existence a stone of this class, on account of which Antonius proscribed the senator Nonius, son of the Nonius Struma, whom the poet Catullus was so displeased at seeing in the curule chair, and grandfather of the Servilius Nonianus, who in our own times was consul. On being thus proscribed, Nonius took to flight, carrying with him, out of all his wealth, nothing but this ring, the value of which, it is well known, was estimated at two millions of sesterces. How marvellous must have been the cruelty, how marvellous the luxurious passion of Antonius, thus to proscribe a man for the possession of a jewel! and no less marvellous must have been the obstinacy of Nonius, who could thus dote upon what had been the cause of his proscription; for we see the very brutes even tear off the portion of their body for the sake of which they know their existence to be imperilled, and so redeem themselves by parting with it.

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CHAP. 22.

DEFECTS IN OPALS: THE MODES OF TESTING THEM.

Defects in opal are, a colour inclining to that of the flower called heliotropium, or to that of crystal or of hailstones; saltlike grains intervening; roughness on the surface; or sharp points, presenting themselves to the eye. There is no stone that is imitated by fraudulent dealers with more exactness than this, in glass, the only mode of detecting the imposition being by the light of the sun. For when a false opal is held between the finger and thumb, and exposed to the rays of that luminary, it presents but one and the same transparent colour throughout, limited to the body of the stone: whereas the genuine opal offers various refulgent tints in succession, and reflects now one hue and now another, as it sheds its luminous brilliancy upon the fingers.

This stone, in consequence of its extraordinary beauty, has been called "pæderos" by many authors; and some who make a distinct species of it, say that it is the same as the stone that in India is called "sangenon." These last-mentioned stones, it is said, are found in Egypt also, Arabia, and, of very inferior quality, in Pontus. Galatia, too, is said to produce them, as also Thasos and Cyprus. The finest in quality of them have all the beauty of opal, but they are of a softer brilliancy, and are mostly rough on the surface. Their colour is a mixture of sky-blue and purple, and the green hues of the smaragdus are wanting: those, too, are preferred, which have their brilliancy deepened by a vinous hue, rather than those which have their colours diluted, as it were, with water.

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CHAP. 23.

SARDONYX; THE SEVERAL VARIETIES OF IT. DEFECTS IN THE SARDONYX.

Thus far we have spoken in reference to the stones, which, it is generally agreed, belong to the highest rank; in obedience, more particularly, to a decree that has been passed by the ladies to that effect. There is less certainty with respect to those upon which the men as well have been left to form a judgment; seeing that the value of each stone depends more particularly upon the caprice of the individual and the rivalry that exists in reference thereto; as, for example, when Claudius Cæsar was so much in the habit of wearing the smaragdus and the sardonyx. The first Roman who wore a sardonyx, according to Demostratus, was the elder Africanus, since whose time this stone has been held in very high esteem at Rome: for which reason, we shall give it the next place after the opal. By sardonyx, as the name itself indicates, was formerly understood a sarda with a white ground beneath it, like the flesh beneath the human finger-nail; both parts of the stone being equally transparent. Such, according to Ismenias, Demostratus, Zenothemis, and Sotacus, is the sardonyx of India; the last two giving the name of "blind" sardonyx to all the other stones of this class which are not transparent, and which have now entirely appropriated the name to themselves. For, at the present day, the Arabian sardonyx presents no traces whatever of the Indian sarda, it being a stone that has been found to be characterized by several different colours of late; black or azure for the base, and vermilion, surrounded with a line of rich white, for the upper part, not without a certain glimpse of purple as the white passes into the red.

We learn from Zenothemis that in his time these stones were not held by the people of India in any high esteem, although they are found there of so large a size as to admit of the hilts of swords being made of them. It is well known, too, that in that country they are exposed to view by the mountain-streams, and that in our part of the world they were formerly valued from the fact that they are nearly

the only ones among the engraved precious stones that do not bring away the wax when an impression is made. The consequence is, that our example has at last taught the people of India to set a value upon them, and the lower classes there now pierce them even, to wear them as ornaments for the neck; the great proof, in fact, at the present day, of a sardonyx being of Indian origin. Those of Arabia are remarkable for their marginal line of brilliant white, of considerable breadth, and not glistening in hollow fissures in the stone or upon the sides, but shining upon the very surface, at the margin, and supported by a ground intensely black beneath. In the stones of India, this ground is like wax in colour, or else like cornel, with a circle also of white around it. In some of these stones, too, there is a play of colours like those of the rainbow, while the surface is redder even than the shell of the sea-locust.

Those stones which are like honey in appearance, or of a fæculent colour — such being the name given to one defect in them — are generally disapproved of. They are rejected also when the white zone blends itself with the other colours, and its limits are not definitely marked; or if, in like manner, it is irregularly intersected by any other colour; it being looked upon as an imperfection if the regularity of any one of the colours is interrupted by the interposition of another. The sardonyx of Armenia is held in some esteem, but the zone round it is of a pallid hue.

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CHAP. 24.

ONYX: THE SEVERAL VARIETIES OF IT.

We must give some account also of onyx, because of the name which it partly shares in common with sardonyx. This name, though in some places given to a marble, is here used to signify a precious stone. Sudines says, that in this stone there is a white portion which resembles the white of the human-finger nail, in addition to the colours of chrysolithos, sarda, and iaspis. According to Zenothemis, there are numerous varieties of the Indian onyx, the fiery-coloured, the black, and the cornel, with white veins encircling them, like an eye as it were, and in some cases running across them obliquely. Sotacus mentions an Arabian onyx, which differs from the rest; that of India, according to him, presenting small flames, each surrounded by one or more white zones; in a manner altogether different from the Indian sardonyx, which presents a series of white specks, while in this case it is one continuous circle. The Arabian onyx, on the other hand, is black, he says, with a white zone encircling it.

Satyrus says, that there is an onyx in India of a flesh colour, partly resembling carbuneulus, and partly chrysolithos and amethystos; a variety, however, which he altogether disapproves of. The real onyx, according to him, has numerous veins of variegated colours, interspersed with others of a milk-white hue; the shades of which, as they pass into one another, produce a tint which surpasses all description, and blends itself into one harmonious whole, of a most beautiful appearance.

Not unlike sardonyx, too, is sarda, a stone which also has, in part, a kindred name with it; but before passing on to it, we must first take some notice of all those precious stones which have a brilliancy like that of flame.

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CHAP. 25. (7.)

CARBUNCULUS: TWELVE VARIETIES OF IT.

In the first rank among these is carbunculus, so called from its resemblance to fire; though in reality it is proof against the action of that element: hence it is that some persons call these stones "acaustoi." There are various kinds of carbunculus, the Indian and the Garamantic, for example, which last has been also called the Carchedonian, in compliment to the former opulence of Great Carthage. To these are added the Æthiopian and the Alabandic stones, the latter of which are found at Orthosia in Caria, but are cut and polished at Alabanda. In addition to this, each kind is subdivided into the male carbunculus and the female, the former of which is of a more striking brilliancy, the brightness of the latter being not so strong. In the male varieties too, we see some in which the fire is clearer than in others; while some, again, are of a darker hue, or else have their brilliancy more deeply seated, and shine with a more powerful lustre than others when viewed in the sun.

The most highly esteemed, however, is the amethyst-coloured stone, the fire at the extremity of which closely approaches the violet tint of amethystos: next in value to which, are the stones known as "syrtites," radiant with a wavy, feathery, refulgence. They are found more particularly, it is said, where the reflection is most powerful of the rays of the sun. Satyrus says that the carbunculus of India has no lustre, that it is mostly soiled, and that in all cases its brilliancy is of a tawny complexion. The Æthiopian stones, he says, are dense, emit no lustre, and burn with a concentrated flame. According to Callistratus, the refulgence of this stone should be of a whitish hue, and, when placed upon a table, it should heighten by its lustre other stones placed near it that are clouded at the edge. Hence it is, that many writers speak of this stone as the white carbunculus, while the Indian stone, with its comparatively feeble lustre, is known by the name of " lignyzon." The Carchedonian stones, they say, are of much smaller size than the others; but those of India admit of being hollowed out, and making vessels that will hold as much as one

sextarius even.

According to Archelaüs, the Carchedonian carbunculus is of a more swarthy appearance than the others, but, when exposed to the light of the fire or sun, and viewed obliquely, the brilliancy of it is much more intense than that of the rest. He says, too, that this stone, when overshadowed by a roof, has a purple tint; that when viewed in the open air, it is of a flame colour; and that, when exposed to the rays of the sun, it scintillates. He states also that wax, if sealed with these stones, in the shade even, will melt. Many authors have asserted that the Indian stones are paler than the Carchedonian, and that, quite the converse of these last, they are all the less brilliant when viewed obliquely; as also, that in the male Carchedonian stone there are luminous points like stars within, while, in the case of the female stone, the whole of its refulgence is thrown beyond it. The stones of Alabanda too, it is said, are darker than the other kinds, and rough on the surface. In the vicinity also of Miletus, there are stones of this description found in the earth, resembling those of Alabanda in colour, and proof against the action of fire.

According to Theophrastus, these stones are to be found also at Orchomenus in Arcadia and in the Isle of Chios; the former of which are of a darker hue, and are used for making mirrors. He says too, that at Trœzen they are found of various colours and mottled with white spots, those found at Corinth being of a more pallid, whitish, hue. He states also, that they are sometimes imported from Massilia. Bocchus informs us in his writings, that these stones are extracted from the ground at Olisipo; at the cost of great labour, however, in consequence of the parched, argillaceous, nature of the soil.

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CHAP. 26.

DEFECTS IN CARBUNCULUS, AND THE MODE OF TESTING IT.

Nothing is more difficult than to distinguish the several varieties of this stone, so great an opportunity do they afford to artistic skill of compelling them to reflect the colours of substances placed beneath. It is possible, they say, to heighten the brilliancy of dull stones, by steeping them for fourteen days in vinegar, this adventitious lustre being retained by them as many months. They are counterfeited, too, with great exactness in glass; but the difference may be detected with the touchstone; the same being the case also with other artificial stones, as the material is always of a softer nature and comparatively brittle. When thus tested by the stone, hard knots, too, are detected in them; and the weight of the glass counterfeit is always less. In some cases, too, they present small blisters within, which shine like silver.

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CHAP. 27.

ANTHRACITIS.

There is also a fossil stone found in Thesprotia, known as “anthracitis,” and resembling a burning coal in appearance. Those who have stated that it is a native also of Liguria, are mistaken, in my opinion, unless perhaps it was to be found there in their time. Some of these stones, they say, are surrounded with a vein of white. Like those which we have mentioned above, they have a fiery colour, but there is this peculiarity in them, that when thrown into the fire they have all the appearance of becoming quenched and deadened; while, on the other hand, if they are drenched with water, they become doubly glowing.

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CHAP. 28.

SANDASTROS. SANDARESOS.

Of a kindred nature, too, is sandastros, known as "garamantites" by some: it is found in India, at a place of that name, and is a product also of the southern parts of Arabia. The great recommendation of it is, that it has all the appearance of fire placed behind a transparent substance, it burning with star-like scintillations within, that resemble drops of gold, and are always to be seen in the body of the stone, and never upon the surface. There are certain religious associations, too, connected with this stone, in consequence of the affinity which it is supposed to bear with the stars; these scintillations being mostly, in number and arrangement, like the constellations of the Pleiades and Hyades; a circumstance which had led to the use of it by the Chaldæi in the ceremonials which they practise.

Here, too, the male stones are distinguished from the female, by their comparative depth of colour and the vigorousness of the tints which they impart to objects near them: indeed the stones of India, it is said, quite dim the sight by their brilliancy. The flame of the female sandastros is of a more softened nature, and may be pronounced to be lustrous rather than brilliant. Some prefer the stone of Arabia to that of India, and say that this last bears a considerable resemblance to a smoke-coloured chrysolithos. Ismenias asserts that sandastros, in consequence of its extreme softness, will not admit of being polished, a circumstance which makes it sell all the dearer: other writers, again, call these stones "sandrisitæ." One point upon which all the authorities are agreed is, that the greater the number of stars upon the stone, the more costly it is in price.

The similarity of the name has sometimes caused this stone to be confounded with that known as "sandaresos," and which Nicander calls "sandaserion," and others "sandaseron." Some, again, call this last-mentioned stone "sandastros," and the former one "sandaresos." The stone that is thus mentioned by Nicander, is a native of India as well as the other, and likewise takes its name from the locality where it is found. The colour of it is that of an apple, or of green oil, and no

one sets any value on it.

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CHAP. 29.

LYCHNIS: FOUR VARIETIES OF IT.

To the same class of flame-coloured stones belongs that known as “lychnis;” so called from its lustre being height- ened by the light of the lamp, under which circumstances its tints are particularly pleasing. It is found in the vicinity of Orthosia, throughout the whole of Caria, and in the neighbouring localities; but the most approved stones are those that come from India. Some writers have given the name of “deadened” carbunculus to a lychnis of second-rate quality, and similar in colour to the flower known as the “flower of Jove.” I find other varieties also mentioned, one with a purple radiance, and another of a scarlet tint. It is asserted, too, that these stones, when heated or rubbed between the fingers, will attract chaff and filaments of paper.

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CHAP. 30.

CARCHEDONIA.

Carchedonia, too, is said to have the same property, though far inferior in value to the stones already mentioned. It is found in the mountains among the Nasamones, being produced, the natives think, by showers sent for the purpose from heaven. These stones are found by the light of the moon, more particularly when at full: in former days, Carthage was the entrepô for them. Archelaüs speaks of a brittle variety being found in the vicinity of Thebes also, in Egypt, full of veins, and similar to dying embers in appearance. I find it stated, too, that in former times, drinking-vessels used to be made of this stone and of lychnis: all these kinds of stone, however, offer the most obstinate resistance to the graver, and, if used for seals, are apt to bring away a part of the wax.

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CHAP. 31.

SARDA : FIVE VARIETIES OF IT.

Sarda, on the other hand, is remarkably useful for this purpose; a stone which shares its name, in part, with sardonyx. It is a common stone, and was first found at Sardes, but the most esteemed kind is that of the vicinity of Babylon. When certain quarries are being worked, these stones are found, adhering, like a kind of heart, to the interior of the rock. This mineral, however, is said to be now extinct in Persia; though it is to be found in numerous other localities, Paros and Assos, for example.

In India there are three varieties of this stone; the red sarda, the one known as “pionia,” from its thickness, and a third kind, beneath which they place a ground of silver tinsel. The Indian stones are transparent, those of Arabia being more opaque. There are some found also in the vicinity of Leucas in Epirus, and in Egypt, which have a ground placed beneath them of leaf gold. In the case of this stone, too, the male stone shines with a more attractive brilliancy than the female, which is of a thicker substance, and more opaque. Among the ancients there was no precious stone in more common use than this; at all events, it is this stone that is made so much parade of in the comedies of Menander and Philemon. No one, too, among the transparent stones is tarnished more speedily by exposure to moisture than this; though of all liquids, it is oil that acts the most readily upon it. Those stones which are like honey in colour, are generally disapproved of, and still more so, when they have the complexion of earthenware.

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CHAP. 32. (8.)

TOPAZOS: TWO VARIETIES OF IT.

Topazos is a stone that is still held in very high estimation for its green tints: indeed, when it was first discovered, it was preferred to every other kind of precious stone. It so happened that some Troglodytic pirates, suffering from tempest and hunger, having landed upon an island off the coast of Arabia known as Cytis, when digging there for roots and grass, discovered this precious stone: such, at least, is the opinion expressed by Archelaüs. Juba says that there is an island in the Red Sea called "Topazos," at a distance of three hundred stadia from the main land; that it is surrounded by fogs, and is often sought by navigators in consequence; and that, owing to this, it received its present name, the word "topazin" meaning "to seek," in the language of the Troglodytæ. He states also, that Philon, the king's præfect, was the first to bring these stones from this island; that, on his presenting them to Queen Berenice, the mother of the second Ptolemæus, she was wonderfully pleased with them; and that, at a later period, a statue, four cubits in height, was made of this stone, in honour of Arsinoë, the wife of Ptolemæus Philadelphus, it being consecrated in the temple known as the "Golden Temple."

The most recent writers say that this stone is found also in the vicinity of Alabastrum, a city of Thebais, and they distinguish two varieties of it, the prasoïdes and the chrysopteron; which last is similar to chrysoprasus, all the shades of it tending, more or less, to resemble the colouring principle of the leek. Topazos is the largest of all the precious stones, and is the only one among those of high value that yields to the action of the file, the rest being polished by the aid of stone of Naxos. It admits, too, of being worn by use.

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CHAP. 33.

CALLAINA.

With this stone we must also couple another, which resembles it more closely in appearance than in value, the stone known as "callaina," and of a pale green colour. It is found in the countries that lie at the back of India, among the Phycari, namely, who inhabit Mount Caucasus, the Sacæ, and the Dahæ. It is remarkable for its size, but is covered with holes and full of extraneous matter; that, however, which is found in Carmania is of a finer quality, and far superior. In both cases, however, it is only amid frozen and inaccessible rocks that it is found, protruding from the surface, like an eye in appearance, and slightly adhering to the rock; not as though it formed an integral part of it, but with all the appearance of having been attached to it. People so habituated as they are to riding on horseback, cannot find the energy and dexterity requisite for climbing the rocks to obtain the stones, while, at the same time, they are quite terrified at the danger of doing so. Hence it is, that they attack the stones with slings from a distance, and so bring them down, moss and all. It is with this stone that the people pay their tribute, and this the rich look upon as their most graceful ornament for the neck. This constitutes the whole of their wealth, with some, and it is their chief glory to recount how many of these stones they have brought down from the mountain heights since the days of their childhood. Their success, however, is extremely variable; for while some, at the very first throw, have brought down remarkably fine specimens, many have arrived at old age without obtaining any.

Such is the method of procuring these stones; their form being given them by cutting, a thing that is easily effected. The best of them have just the colour of smaragdus, a thing that proves that the most pleasing property in them is one that belongs of right to another stone. Their beauty is heightened by setting them in gold, and there is no stone to which the contrast of the gold is more becoming. The finest of them lose their colour by coming in contact with oil, unguents, or undiluted wine even; whereas those of a poorer quality

preserve their colour better. There is no stone, too, that is more easily counterfeited in glass. Some writers say, that this stone is to be found in Arabia also, in the nest of the bird known as the “melancoryphus.”

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CHAP. 34.

PRASIUS; THREE VARIETIES OF IT.

There are numerous other kinds also of green stones. To the more common class belongs prasius; one variety of which is disfigured with spots like blood, while another kind is marked with three streaks of white. To all these stones chrysoprasus is preferred, which is also similar to the colouring matter of the leek, but varies in tint between topazos and gold. This stone is found of so large a size as to admit of drinking- boats even being made of it, and is cut into cylinders very frequently.

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CHAP. 35.

NILION.

India, which produces these stones, produces nilion also, a stone that differs from the last in its dull, diminished lustre, which, when steadily looked upon, soon fades from the sight. Sudines says that it is to be found also in the Siberus, a river of Attica. In appearance it resembles a smoke-coloured topazos, or, in some cases, a topazos with a tint like honey. According to Juba, Æthiopia produces it, upon the shores of the river known to us as the Nilus; to which circumstance, he says, it owes its name.

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CHAP. 36.

MOLOCHITIS.

Molochitis is not transparent, being of a deeper green, and more opaque than smaragdus; its name is derived from the mallow, which it resembles in colour. It is highly esteemed for making seals, and it is endowed by Nature with medicinal properties which render it a preservative for infants against certain dangers which menace them. This stone is a native of Arabia.

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CHAP. 37.

IASPIS; FOURTEEN VARIETIES OF IT. DEFECTS FOUND IN IASPIS.

Iaspis, too, is green, and often transparent; a stone which, if surpassed by many others, still retains the renown which it acquired in former times. Many countries produce this stone: that of India is like smaragdus in colour; that of Cyprus is hard, and of a full sea-green; and that of Persia is sky-blue, whence its name, "aërizusa." Similar to this last is the Caspian iaspis. On the banks of the river Thermodon the iaspis is of an azure colour; in Phrygia, it is purple; and in Cappadocia of an azure purple, sombre, and not refulgent. Amisos sends us an iaspis like that of India in colour, and Chalcedon, a stone of a turbid hue.

But it is of less consequence to distinguish the several localities that furnish it, than it is to remark upon the degrees of excellence which they present. The best kind is that which has a shade of purple, the next best being the rose-coloured, and the next the stone with the green colour of the smaragdus; to each of which the Greeks have given names according to their respective tints. A fourth kind, which is called by them "boria," resembles in colour the sky of a morning in autumn; this, too, will be the same that is known as "aërizusa." There is an iaspis also which resembles sarda in appearance, and another with a violet tint. Not less numerous, too, are the other kinds that are left undescribed; but they are all blue to a fault, or else resemble crystal in appearance, or the tints of the myxa plum. There is the terebenthine-coloured iaspis also; improperly so called, in my opinion, as it has all the appearance of being a composition of numerous gems of this description.

The best of these stones are set in an open bezel, the gold of which only embraces the margins of the stone, leaving the upper and lower surfaces uncovered. One great defect in them is a subdued lustre, and a want of refulgence when viewed from a distance. Grains also like salt appear within the stone, and all the other defects which are common to precious stones in general. Sometimes they are imitated in glass; a fraud, however, which may be easily detected,

from the material throwing out its refulgence, instead of concentrating it within itself. To this class also belongs the stone called “sphragis,” which is only reckoned as belonging to the domain of precious stones, from the circumstance that it is the best of all for making signets.

(9.) Throughout all the East, it is the custom, it is said, to wear iaspis by way of amulet. The variety of this stone which resembles smaragdus in colour is often found with a white line running transversely through the middle; in which case it is known as “monogrammos:” when it is streaked with several lines, it is called “polygrammos.” Here, too, I may take the opportunity of exposing the falsehoods of the magicians, who pretend that this stone is beneficial for persons when speaking in public. There is a stone also that is formed of iaspis and onyx combined, and is known as “iasponyx.” Sometimes this stone has a clouded appearance; sometimes it has spots upon the surface like snow; and sometimes it is stellated with red spots. One kind resembles salt of Megara in appearance, and another is known as capnias, and looks as if it had been smoked. We have seen in our day an iaspis fifteen inches in length, of which a figure of Nero was made, armed with a cuirass.

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CHAP. 38.

CYANOS; THE SEVERAL VARIETIES OF IT.

We must also give a separate account of cyanos, a name which, until very recently, was given to a species of iaspis, on account of its cærulean colour. The best kind is that of Scythia, the next best being the produce of Cyprus, and, last of all, that of Egypt. An artificial kind is much in use, that is prepared by dyeing other substances; and this invention is looked upon as one of the great glories of the kings of Egypt, the name of the king who first discovered it being still preserved in their annals. This stone, too, is divided into male and female, and sometimes it has the appearance of being powdered with a golden dust, in much the same way as sapphiros.

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CHAP. 39.

SAPPHIROS.

For sapphiros, too, is refulgent with spots like gold. It is also of an azure colour, though sometimes, but rarely, it is purple; the best kind being that which comes from Media. In no case, however, is this stone diaphanous; in addition to which, it is not suited for engraving when intersected with hard particles of a crystalline nature. Those among them that have the colour of cyanos are generally thought to be the male stones.

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CHAP. 40.

AMETHYSTOS; FOUR VARIETIES OF IT. SOCONDION. SAPENOS. PHARANITIS. APHRODITES BLEPHARON, ANTEROS, OR PÆDEROS.

We will now commence with another class of precious stones, those of a purple colour, or whose tints are derived from purple. To the first rank belongs the amethystos of India; a stone which is also found in the part of Arabia that adjoins Syria and is known as Petra, as also in Lesser Armenia, Egypt, and Galatia; the very worst of all, and the least valued, being those of Thasos and Cyprus. The name which these stones bear, originates, it is said, in the peculiar tint of their brilliancy, which, after closely approaching the colour of wine, passes off into a violet without being fully pronounced; or else, according to some authorities, in the fact that in their purple there is something that falls short of a fiery colour, the tints fading off and inclining to the colour of wine.

All these stones are transparent and of an agreeable violet colour, and are easy to engrave. Those of India have in perfection the very richest shades of purple, and it is to attain this colour that the dyers in purple direct all their endeavours; it presenting a fine mellowed appearance to the eye, and not dazzling the sight, as in the case with the colours of the carbunculus. Another variety approaches more nearly the hyacinth in colour: the people of India call this tint "socon," and the stone itself "socondion." A third stone of this class is of a more diluted colour, and is known as "sapenos," being identical with "pharanitis," so called from a country on the frontiers of Arabia that produces it. Of a fourth kind, the colour is like that of wine; and in a fifth it borders very closely upon that of crystal, the purple gradually passing off into white. This last kind is but little valued; for a fine amethyst should always have, when viewed sideways and held up to the light, a certain purple refulgence, like that of carbunculus, slightly inclining to a tint of rose.

Some prefer giving these stones the name of "pæderos" or of "anteros," while to many they are known as "Venus' eyelid," a name which would seem to be particularly appropriate to the colour and

general appearance of the gem. The falsehoods of the magicians would persuade us that these stones are preventive of inebriety, and that it is from this that they have derived their name. They tell us also, that if we inscribe the names of the sun and moon upon this stone, and then wear it suspended from the neck, with some hair of the cynocephalus and feathers of the swallow, it will act as a preservative against all noxious spells. It is said too, that worn in any manner, this stone will ensure access to the presence of kings; and that it will avert hail and the attacks of locusts, if a certain prayer is also repeated which they mention. They make similar promises, too, in reference to the smaragdus, if graven with the figure of an eagle or of a scarabæus: statements which, in my opinion, they cannot have committed to writing without a feeling of contempt and derision for the rest of mankind.

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CHAP. 41.

HYACINTHOS.

Very different from this stone is hyacinthos, though partaking of a colour that closely borders upon it. The great difference between them is, that the brilliant violet which is so refulgent in the amethystos, is diluted in the other stone. Though pleasing at first sight, its beauty fades before the eye is satiated; indeed, so far is it from satisfying the sight, that it almost wholly fails to attract the eye, its lustre disappearing more rapidly than the tints of the flower known by the same name.

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CHAP. 42.

CHRYSOLITHOS: SEVEN VARIETIES OF IT.

Æthiopia, which produces hyacinthos, produces chrysolithos also, a transparent stone with a refulgence like that of gold. The stones of India are the most highly esteemed, as also those found among the Tibareni, provided these last are not of a mottled hue. The worst in quality are those of Arabia, the colour of them being turbid and mottled, and their brilliancy interrupted by cloudy spots: even too, when they happen to be limpid, they have all the appearance of being full, as it were, of a peculiar dust. The best stones are those which, when placed by the side of gold, impart to it a sort of whitish hue, and so give it the appearance of silver. When this is the case, they are set in a bezel that is open on either side; but when the stone is of inferior quality, a ground of aurichalcum is placed beneath.

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CHAP. 43.

CHRYSELECTRUM.

Though it has now altogether gone out of use for jewellery, there is a precious stone known as “chryselectrum,” the colour of which inclines to that of amber; but only when viewed by a morning light. The stones of Pontus are known by their lightness. Some of them are hard and reddish, while others, again, are soft and of a soiled appearance. According to Bocchus, these stones are found in Spain as well; in a spot where, according to him, fossil crystal has been discovered, in sinking to the water-level for wells. He tells us also that he once saw a chrysolithos twelve pounds in weight.

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CHAP. 44.

LEUCOCHRYSOS: FOUR VARIETIES OF IT.

There is also a stone known as “leucochrysos,” with a white vein running across it. To this class, too, belongs capnias; a stone also which resembles glass in appearance; and another which reflects a tint like that of saffron. These stones are imitated in glass, to such a degree of perfection, that it is impossible to distinguish them by the eye. The touch, however, detects the difference, the imitation being not so cold as the real stone.

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CHAP. 45.

MELICHRYSOS. XUTHON.

To this class also belongs melichrysos, a stone which has all the appearance of pure honey, seen through transparent gold. India produces these stones, and, although hard, they are very brittle, but not unpleasing to the sight. The same country, too, produces xuthon, a stone much used by the lower classes there.

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CHAP. 46.

PÆDEROS, SANGENON, OR TENITES.

At the very head of the white stones is pæderos; though it may still be questionable to which of the colours it in reality belongs. As to the name, it has been so much bandied about among other precious stones of conspicuous beauty, that it has quite assumed the privilege of being a synonymous term for all that is charming to the eye. Still, however, there is one stone in particular which fully merits all the commendation that might be expected for a stone with so prepossessing a name: for in itself it reunites the transparency of crystal, the peculiar green of the sky, the deep tints of purple, and a sort of bright reflex, like that of a golden-coloured wine; a reflex, indeed, that is always the last to meet the eye, but is always crowned with the lustrous hues of purple. The stone, in fact, has all the appearance of having been bathed in each of these tints, individually, and yet in the whole of them at once. There is no precious stone either that has a clearer water than this, or that presents a more pleasing sweetness to the eye.

Pæderos of the finest quality comes from India, where it is known as "sangenon;" the next best being that of Egypt, called "tenites." That of third-rate quality is found in Arabia, but it is rough upon the surface. Next, we have the stone of Pontus, the radiance of which is softer than in that of Thasos, which, in its turn, is of a more mellowed colour than the stones of Galatia, Thrace, and Cyprus. The defects com- monly found in these stones are, a want of brilliancy, a confusion with colours which do not properly belong to them, and the other imperfections which are found in stones in general.

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CHAP. 47.

ASTERIA.

Next among the white stones is “asteria,” a gem which holds its high rank on account of a certain peculiarity in its nature, it having a light enclosed within, in the pupil of an eye as it were. This light, which has all the appearance of moving within the stone, it transmits according to the angle of inclination at which it is held; now in one direction, and now in another. When held facing the sun, it emits white rays like those of a star, and to this, in fact, it owes its name. The stones of India are very difficult to engrave, those of Carmania being preferred.

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CHAP. 48.

ASTRION.

Of a similar white radiance is the stone that is known as “astrion,” closely resembling crystal in its nature, and found in India and upon the coasts of Pallene. In the centre of it there shines internally a brilliant star, with a refulgence like that of the moon when full. Some will have it that this stone receives its name from the fact that, when held opposite to the stars, it absorbs the light they emit and then returns it. The finest stones, they say, are those of Carmania, there being none more entirely free from all defects. They add, also, that a stone of inferior quality is known as “ceraunia,” and that, in the worst of all, the light is very similar to that given by a lamp.

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CHAP. 49.

ASTRIOTES.

Astriotes, too, is a stone that is highly esteemed, and Zoroaster, they say, has sung its wondrous praises as an adjunct of the magic art.

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CHAP. 50.

ASTROBOLOS.

Sudines says, that astrobolos resembles the eye of a fish in appearance, and that it has a radiant white refulgence when viewed in the sun.

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CHAP. 51.

CERAUNIA; FOUR VARIETIES OF IT.

Among the white stones also, there is one known as “ceraunia,” which absorbs the brilliancy of the stars. It is of a crystalline formation, of a lustrous azure colour, and is a native of Carmania. Zenothemis admits that it is white, but asserts that it has the figure of a blazing star within. Some of them, he says, are dull, in which case it is the custom to steep them for some days in a mixture of nitre and vinegar; at the end of which period the star makes its appearance, but gradually dies away by the end of as many months.

Sotacus mentions also two other varieties of ceraunia, one black and the other red; and he says that they resemble axes in shape. Those which are black and round, he says, are looked upon as sacred, and by their assistance cities and fleets are attacked and taken: the name given to them is “bætyli,” those of an elongated form being known as “ceraunіæ.” They make out also that there is another kind, rarely to be met with, and much in request for the practices of magic, it never being found in any place but one that has been struck by lightning.

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CHAP. 52.

IRIS; TWO VARIETIES OF IT.

The next name mentioned by these authors is that of the stone called "iris;" which is found, in a fossil state, in a certain island of the Red Sea, forty miles distant from the city of Berenice. It is partly composed of crystal, and hence it is that some have called it "root of crystal." It takes its name "iris" from the properties which it possesses; for, when struck by the rays of the sun in a covered spot, it projects upon the nearest walls the form and diversified colours of the rainbow; continually changing its tints, and exciting admiration by the great variety of colours which it presents. That it is hexahedral in form, like crystal, is generally agreed; but some say that it is rough on the sides and of unequal angles; and that, when exposed to a full sun, it disperses the rays that are thrown upon it, while at the same time, by throwing out a certain brightness before it, it illumines all objects that may happen to be adjacent. The stone, however, as already stated, only presents these colours when under cover; not as though they were in the body of the stone itself, but, to all appearance, as if they were the result of the reflected light upon the surface of the wall. The best kind is the one that produces the largest arcs, with the closest resemblance to the rainbow.

"Iritis" is the name of another stone, similar to the last in all other respects, but remarkable for its extreme hardness. Horus says, in his writings, that this stone, calcined and triturated, is a remedy for the bite of the ichneumon, and that it is a native of Persia.

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CHAP. 53.

LEROS.

The stone called “leros” is similar in appearance, but does not produce the same effects. It is a crystal, with streaks of white and black running across it.

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CHAP. 54.

ACHATES; THE SEVERAL VARIETIES OF IT. ACOPOS; THE REMEDIES DERIVED FROM IT. ALABASTRITIS; THE REMEDIES DERIVED FROM IT. ALECTORIA. ANDRODAMAS. ARGYRODAMAS. ANTIPATHES. ARABICA. AROMATITIS. ASBESTOS. ASPISATIS. ATIZÖE. AUGETIS. AMPHIDANES OR CHRYSOCOLLA. APHRODISIACA. APSYCTOS. ÆGYPTILLA.

Having now described the principal precious stones, classified according to their respective colours, I shall proceed to mention the rest of them in their alphabetical order.

(10.) Achates was a stone formerly in high esteem, but now held in none. It was first found in Sicily, near a river of that name; but has since been discovered in numerous other localities. In size it exceeds any other stones of this class, and the varieties of it are numerous, the name varying accordingly. Thus, for example, we have iaspachates, cerachates, smaragdachates, hæmachates, leucachates, dendrachates, marked with small shrubs, as it were; autachates, which when burnt has a smell like that of myrrh; and coralloachates, spotted all over, like sapphiros, with drops of gold, and commonly found in Crete, where it is also known as "sacred" achates. This last, it is thought, is good for wounds inflicted by spiders and scorpions; a property which I could really believe to belong to the stones of Sicily, for, the moment they breathe the air of that province, scorpions lose their venom.

The stones, too, that are found in India are possessed of similar properties, and of other great and marvellous properties as well; for they present the appearance in them of rivers, woods, beasts of burden, and forms even, like ivy and the trappings of horses. Medical men, too, make grinding-hones of these stones, and indeed the very sight of them is beneficial for the eyes: held in the mouth, they allay thirst. Those found in Phrygia have no green in them, and those of Thebes in Egypt are destitute of red and white veins. These last are good as a counterpoison to the venom of the scorpion, and the stones of Cyprus are held in similar repute. Some persons set the highest value upon those stones which present a transparency like that of

glass. They are found also in Trachinia, in the vicinity of Mount Œta, upon Mount Parnassus, in the Isle of Lesbos, in Messene, where they resemble the flowers that grow in the hedges, and at Rhodes.

The magicians make other distinctions in reference to these stones: those, they tell us, which have spots upon them like the spots on the lion's skin, are efficacious as a protection against scorpions; and in Persia, they say, these stones are used, by way of fumigation, for arresting tempests and hurricanes, and for stopping the course of rivers, the proof of their efficacy being their turning the water cold, if thrown into a boiling cauldron. To be duly efficacious, they must be attached to the body with hairs from a lion's mane. The hair, however, of the hyæna is held in abomination for this purpose, as being a promoter of discord in families. The stone that is of an uniform colour renders athletes invincible, they say; the way of testing it is to throw it, along with colouring matter, into a pot full of oil; after being kept for a couple of hours gently on the boil, if genuine, it will impart an uniform colour of vermilion to the mixture.

Acopos is a stone like nitre in appearance, porous, and starred with drops of gold: gently boiled with oil and applied as an unguent, it relieves lassitude, if we choose to believe it. Alabastritis is a stone which comes from Alabastron in Egypt and Damascus in Syria: it is of a white colour, spotted with various other tints. Calcined with fossil salt and pulverized, it is a cure for affections of the mouth and teeth, it is said. Alectoria is the name given to a stone that is found in the crop of poultry, like crystal in appearance, and about as large as a bean in size; Milo of Crotona, some will have it, was thought to be in the habit of carrying this stone about him, a thing that rendered him invincible in his athletic contests. Andradamas has the shining colour of silver, like adamas; it is always quadrangular, like small cubes in shape. The magicians are of opinion that it was thus named from the fact that it subdues anger and violence in man. Whether argyrodamas is the same stone or not, authors do not inform us. Antipathes is a black stone, and not transparent: the mode of testing it, is by boiling it in milk, to which, if genuine, it imparts a colour like that of myrrh. A person might probably expect to find some extraordinary virtues in this stone, seeing that, among so many other substances possessed of antipathetic properties, it is the only one that bears this name. The

magicians will have it that it possesses the power of counteracting fascinations.

Arabica is a stone which closely resembles ivory in appearance, and, indeed, might easily be taken for it, were it not for its superior hardness: persons who have this stone about them, it is thought, will experience a cure of diseases of the sinews. Aromatitis, too, is a stone that is found in Arabia, as also in the vicinity of Phiræ in Egypt: it is always full of small stones, and like myrrh in colour and smell, a thing that makes it much in request with ladies of rank. Asbestos is found in the mountains of Areadia, and is of an iron colour. Democritus informs us that aspisatis is a native of Arabia, that it is of a fiery colour, and that patients should wear it attached to the body with camels' dung; he says, too, that it is found in the nests of certain birds in Arabia. The same writer also mentions another stone of this name, that is found at Leucopetra in the same country, of a silver colour, radiant, and an excellent preservative against delirium. In India, he says, and on Mount Acidane in Persia, there is a stone found that is known as "atizoë of a silver lustre, three fingers in length, like a lentil in shape, possessed of a pleasant smell, and considered necessary by the Magi at the consecration of a king. Augetis is thought by many to be identical with callaina. Amphidanes, which is also known as "chrysocolla," is a stone found in that part of India where the ants throw up gold, and in it there are certain square pieces, like gold in appearance. The nature of this stone, it is asserted, is similar to that of the magnet; in addition to which, it is said to have the property of increasing gold.

Aphrodisiaca is a stone of a reddish white colour. Apsyctos, when heated by fire, retains the warmth so long as seven days; it is black and ponderous, and is streaked with red veins. It is good too, it is thought, as a preservative against cold. According to Iacchus, Ægyptilla is a kind of white and black sarda, intersected with veins; but the stone commonly known by that name is black at the lower part, and azure on the surface. It takes its name from the country that produces it.

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CHAP. 55.

BALANITES. BATRACHITIS. BAPTES. BELI OCULUS. BELUS. BAROPTENUS OR BARIPPE. BOTRYITIS. BOSTRYCHITIS. BUCARDIA. BRONTEA. BOLOS.

Of balamites there are two kinds, the one of a greenish hue, and the other like Corinthian bronze in appearance; the former comes from Coptos, and the latter from Troglodytica. They are both of them intersected by a flame-like vein, which runs through the middle. Coptos, too, sends us batrachitis; one kind of which is like a frog in colour, another has the tint of ebony, and a third is blackish inclining to red. Baptes is a soft stone, and of a most excellent smell. Beli oculus is a stone of a whitish hue, surrounding a black pupil in the middle, which shines amid a lustre like that of gold. This stone, in consequence of its singular beauty, has been consecrated to the deity held in the highest veneration by the people of Assyria. According to Democritus, there is also a stone called belus, and found at Arbela; it is about the size of a walnut, and looks like glass. Baroptenus or barippe is black, and covered with knots of a white and blood-red colour: the use of it as an amulet is avoided, as being apt to produce monstrosities.

Botryitis is sometimes black and sometimes purple-red, and resembles a bunch of grapes in form, when making its first appearance. Zoroaster says, that bostrychitis is a stone which is more like the hair of females than anything else. Bucardia resembles an ox-heart in appearance, and is only found at Babylon. Brontea is a stone like the head of a tortoise, which falls with thunder, it is supposed: if too, we are to believe what is said, it has the property of quenching the fire in objects that have been struck by lightning. Bolos is the name of a stone found in Iberia, similar to a clod of earth in appearance.

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CHAP. 56.

CADMITIS. CALLAIS. CAPNITIS. CAPPADOCIA. CALLAICA. CATOCHITIS. CATOPTRITIS. CEPITIS OR CEPOLATITIS. CERAMITIS. CINÆDIA. CERITIS. CIRCOS. CORSOÏDES. CORALLOACHATES. CORALLIS. CRATERITIS. CROCALLIS. CYITIS. CHALCOPHONOS. CHELIDONIA. CHELONIA. CHELONITIS. CHLORITIS. CHOASPITIS. CHRYSOLAMPIS. CHRYSOPIS. CEPONIDES.

Cadmitis differs only from the stone that is known as ostracitis in being sometimes surrounded with blisters of an azure colour. Callais is like sapphires in colour, only that it is paler and more closely resembles the tint of the water near the sea-shore in appearance. Capnitis, in the opinion of some, is a peculiar species of stone: it is covered with numerous spiral streaks, of a smoky colour, as already stated in the appropriate place. Cappadocia is a native of Phrygia, and resembles ivory in appearance. Callaica is the name given to a stone like a clouded callaina; a number of them are always found united, it is said. Catochitis is a stone found in Corsica, of larger size than the other precious stones; and of a more wonderful nature, if the story is true, that it retains the hand like gum, when placed upon it. Catoptritis is found in Cappadocia, and, from its whiteness, reflects figures like a mirror. Cepitis or cepolatitis is a white stone, with veins upon it uniting together. Ceramitis has a colour like that of earthenware.

Cinædia is a stone found in the brain of a fish of a corresponding name. It is white and oblong, and possessed of marvellous virtues, if we are to put faith in what is said, that it announces before-hand whether the sea will be tranquil or stormy. Ceritis is a stone like wax: circos resembles the plumage of the hawk: corsoides is like white hair in appearance. Coralloachates is very similar to coral, marked with drops of gold; and corallis, a native of India and Syene, resembles minium in appearance. Crateritis is in colour a medium between chrysolithos and amber, and is remarkable for its hardness. Crocallis is a gem like the cherry in its tints. Cyitis is a stone found in the vicinity of Coptos; it is white, and to all appearance has an embryo stone within, the rattling of which may be heard on shaking

it. Chalcophonos is a black stone, but when struck it clinks like brass: tragic actors are recommended to carry it about them. Of chelidonia there are two varieties, both resembling the swallow in colour: one of them is purple on one side, and the other is purple besprinkled with black spots. Chelonia is the eye of the Indian tortoise, and is the most marvellous of all the stones, if we believe the lying stories told by the magicians. For, according to them, this stone, placed upon the tongue after rinsing the mouth with honey, will ensure power of divination, if this is done at full moon or new moon, for one whole day. If, however, this plan is adopted while the moon is on the increase, the power of divination will be acquired before sun-rise only, and if upon other days, from the first hour to the sixth.

Chelonitis, too, is a stone that resembles the tortoise in appearance, and the many virtues of which are talked of for calming storms and tempests. As to the one that has all the appearance of being sprinkled with spots of gold, if thrown with a scarabæus into boiling water, it will raise a tempest, they say. Chloritis is a stone of a grass-green colour: according to the magicians, it is found in the crop of the motacilla, being engendered with the bird. They recommend also that it should be set in iron, for the purpose of working certain portentous marvels which they promise, as usual. Choaspitis is a stone so called from the river Choaspes, of a brilliant, golden colour mixed with green. Chrysolampis is a native of Æthiopia, and is pale by day, but of a fiery lustre by night. Chrysopis has all the appearance of gold. Ceponides is found at Atarna, a borough, and once a city, of Æolis. It is transparent, presents numerous tints, and has sometimes the appearance of glass, sometimes of crystal, and sometimes of iaspis. Indeed, the stones of this kind that are tarnished even, are possessed of such singular brilliancy as to reflect objects like a mirror.

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CHAP. 57.

DAPHNEA. DIADOCHOS. DIPHYES. DIONYSIAS. DRACONITIS.

Daphnea is mentioned by Zoroaster as curative of epilepsy. Diadochos is a stone that resembles the beryl. Of diphyes there are two kinds, the white and the black, male and female, with a line dividing the characteristics of either sex. Dionysias is hard and black, and covered with red spots. Triturated in water, this stone imparts to it the flavour of wine, and it is generally thought to be a preservative against intoxication. Draconitis or dracontia is a stone produced from the brain of the dragon; but unless the head of the animal is cut off while it is alive, the stone will not assume the form of a gem, through spite on the part of the serpent, when finding itself at the point of death: hence it is that, for this purpose, the head is cut off when it is asleep.

Sotacus, who tells us that he once saw a stone of this kind in the possession of a king, says that persons go in search of it in a chariot drawn by two horses; and that, the moment they see the serpent, they strew narcotic drugs in its way, and then cut off its head when asleep. According to him, this stone is white and pellucid, and admits of no polishing or engraving.

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CHAP. 58.

ENCARDIA OR ARISTE. ENORCHIS. EXEBENUS. ERYTHALLS. EROTYLOS. AMPHICOMOS, OR HIEROMNEMON. EUMECES. EUMITHRES. EUPETALOS. EUREOS. EUROTIAS. EUSEBES. EPIMELAS.

The stone encardia is also called "ariste." There are three varieties of it; one of a black colour, with a figure in relief upon it like a heart: a second of a green colour, and like a heart in shape; and a third, with a black heart upon it, the rest of the stone being white. Enorchis is a white stone, the fragments of which, when it is split asunder, resemble the testes in shape. Exebenus, Zoroaster tells us, is a white, handsome stone, employed by goldsmiths for polishing gold. Erythallis, though a white stone, assumes a red hue when viewed at an inclined angle. Erotyles, also known as "amphicomos" and "hieromnemon," is highly praised by Democritus for its use in the art of divination.

Eumeces is a stone of Bactriana, like silex in appearance; placed beneath the head, it produces visions in the night of an oracular description. Eumithres is called by the Assyrians "gem of Belus," the most sacred of all their gods; it is of a leek-green colour, and greatly in request for superstitious purposes. Eupetalos is a stone that has four different tints, azure, fiery, vermilion, and apple-colour. Eureos is similar to an olive-stone in form, streaked like a shell, and moderately white. Eurotias has all the appearance of concealing its black colour beneath a coat of mould. Eusebes is the stone, it is said, of which the seat was made in the Temple of Hercules at Tyrus, from which the pious [only] could raise themselves without difficulty. Epimelas is a white gem, with a black hue reflected from its surface.

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CHAP. 59.

GALAXIAS. GALACTITIS, LEUCOGÆA, LEUCOGRAPRITIS, OR SYNNEPHITIS. GALLAICA. GASSINADE. GLOSSOPETRA. GORGONIA. GONIAÆA.

Galaxias, by some called "galactitis," is a stone that closely resembles those next mentioned, but is interspersed with veins of blood-red or white. Galactitis is of the uniform colour of milk; other names given to it are, leucogæa, leucographitis, and synnephitis, and, when pounded in water, both in taste and colour it marvellously resembles milk. This stone promotes the secretion of the milk in nursing women, it is said; in addition to which, attached to the neck of infants, it produces saliva, and it dissolves when put into the mouth. They say, too, that it deprives persons of their memory: it is in the rivers Nilus and Acheloüs that it is produced. Some persons give the name of "galactitis" to a smaragdus surrounded with veins of white. Gallaica is a stone like argyrodamas, but of a somewhat more soiled appearance; these stones are found in twos and threes clustered together. The people of Media send us gassinade, a stone like orobus in colour, and sprinkled with flowers, as it were: it is found at Arbela. This stone, too, conceives, it is said; a fact which it admits when shaken; the conception lasting for a period of three months. Glossopetra, which resembles the human tongue, is not engendered, it is said, in the earth, but falls from the heavens during the moon's eclipse; it is considered highly necessary for the purposes of selenomancy. To render all this however, still more incredible, we have the evident untruthfulness of one assertion made about it, that it has the property of silencing the winds. Gorgonia is nothing but a coral, which has been thus named from the circumstance that, though soft in the sea, it afterwards assumes the hardness of stone: it has the property of counteracting fascinations, it is said. Goniæa, it is asserted, and with the same degree of untruthfulness, ensures vengeance upon our enemies.

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CHAP. 60.

HELIOTROPIUM. HEPILESTITIS. HERMUAIDOION. HEXLCONTALITROS. HIERACITIS. HAMMITIS. HAMMONIS CORNU. HORMISCION. HYÆNIA. HÆMATITIS.

Heliotropium is found in Æthiopia, Africa, and Cyprus: it is of a leek-green colour, streaked with blood-red veins. It has been thus named, from the circumstance that, if placed in a vessel of water and exposed to the full light of the sun, it changes to a reflected colour like that of blood; this being the case with the stone of Æthiopia more particularly. Out of the water, too, it reflects the figure of the sun like a mirror, and it discovers eclipses of that luminary by showing the moon passing over its disk. In the use of this stone, also, we have a most glaring illustration of the impudent effrontery of the adepts in magic, for they say that, if it is combined with the plant heliotropium, and certain incantations are then repeated over it, it will render the person invisible who carries it about him.

Hephæsititis also, though a radiant stone, partakes of the properties of a mirror in reflecting objects. The mode of testing it is to put it into boiling water, which should immediately become cold. If exposed to the rays of the sun, it should instantly cause dry fuel to ignite: Corycus is the place where it is found. Hermuaidoion is so called from the resemblance to the male organs which it presents, on a ground that is sometimes white, sometimes black, and sometimes of a pallid hue, with a circle surrounding it of a golden colour. Hexecontalithos receives its name from the numerous variety of colours which, small as it is, it presents: it is found in Troglodytica. Hieracitis is entirely covered with mottled streaks, resembling a kite's feathers alternately with black. Hammitis is similar in appearance to the spawn of fish: there is also one variety of it which has all the appearance of being composed of nitre, except that it is remarkably hard. Hammonis cornu is reckoned among the most sacred gems of Æthiopia; it is of a golden colour, like a ram's horn in shape, and ensures prophetic dreams, it is said.

Hormiscion is one of the most pleasing stones to the sight; it is of

a fiery colour, and emits rays like gold, tipped at the extremity with a whitish light. Hyænia is derived from the eyes of the hyæna, it is said, the animal being hunted to obtain it; placed beneath the tongue, if we believe the story, it will enable a person to prophesy the future. Hæmatitis, of the very finest quality, comes from Æthiopia, but it is found in Arabia and Africa as well. It is a stone of a blood-red colour, and we must not omit to mention the assurance given [by the magicians], that the possession of it reveals treacherous designs on the part of the barbarians. Zachalias of Babylon, in the books which he dedicated to King Mithridates, attributing the destinies of man to certain properties innate in precious stones, is not content with vaunting the merits of this stone as curative of diseases of the eyes and liver, but recommends it also as ensuring success to petitions addressed to kings. He also makes it play its part in lawsuits and judg- ments, and even goes so far as to say that it is highly beneficial to be rubbed with it on the field of battle. There is another stone of the same class, called “menui” by the people of India, and “xanthos” by the Greeks: it is of a whitish, tawny colour.

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CHAP. 61.

IDÆI DACTYLI. ICTERIAS. JOVIS GEMMA. INDICA. ION.

The stones called Idæi dactyli, and found in Crete, are of an iron colour, and resemble the human thumb in shape. The colour of icterias resembles that of livid skin, and hence it is that it has been thought so excellent a remedy for jaundice. There is also another stone of this name, of a still more livid colour; while a third has all the appearance of a leaf. This last is broader than the others, almost imponderous, and streaked with livid veins. A fourth kind again is of the same colour, but blacker, and marked all over with livid veins. Jovis gemma is a white stone, very light, and soft: another name given to it is “drosolithos.” Indica retains the name of the country that produces it: it is a stone of a reddish colour, and yields a purple liquid when rubbed. There is another stone also of this name, white, and of a dusty appearance. Ion is an Indian stone, of a violet tint: it is but rarely, however, that it is found of a deep, full, colour.

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CHAP. 62

LEPIDOTIS. LESBIAS. LEUCOPHTHALMOS. LEUCOPŒCILOS. LIBANOCHRUS. LIMONIATIS. LIPAREA. LYSIMACHOS. LEUCOCHRYSOS.

Lepidotis is a stone of various colours, and resembles the scales of fish in appearance. Lesbias, so called from Lesbos which produces it, is a stone found in India as well. Leucophthalmos, which in other respects is of a reddish hue, presents all the appearance of an eye, in white and black. Leucopœcilos is white, variegated with drops of vermilion of a golden hue. Libanochrus strongly resembles frankincense, and yields a liquid like honey. Limoniatis would appear to be the same as smaragdus; and all that we find said about liparea is, that employed in the form of a fumigation, it allures all kinds of wild beasts. Lysimachos resembles Rhodian marble, with veins of gold: in polishing it, it is reduced very considerably in size, in order to remove all defects. Leucochrysos is a kind of chrysolithos interspersed with white.

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CHAP. 63.

MEMNONIA. MEDIA. MECONITIS. MITHRAX, MOROCHTHOS. MORMORION OR PROMNION. MURRHITIS. MYRMECIAS. MYRSINITIS. MESOLEUCOS. MESOMELAS.

What kind of stone memnonia is, we do not find mentioned. Medea is a black stone, said to have been discovered by the Medea of fable: it has veins of a golden lustre, and yields a liquid like saffron in colour and with a vinous flavour. Meconitis strongly resembles poppies. Mithrax comes from Persia and the mountains of the Red Sea: it is of numerous colours, and reflects various tints when exposed to the sun. Morochthos is a stone of a leek-green colour, from which a milk exudes. Mormorion is a transparent stone from India, of a deep black colour, and known also as "promnion." When it has a mixture of the colour of carbunculus, it is from Alexandria; and when it shares that of sarda, it is a native of Cyprus. It is found also at Tyrus and in Galatia; and, according to Xenocrates, it has been discovered at the foot of the Alps. These stones are well adapted for cutting in relief. Murrhitis has just the colour of myrrh, and very little of the appearance of a gem: it has the odour also of an unguent, and smells like nard when rubbed. Myrmecias is black, and has excrescences upon it like warts. Myrsinitis has a colour like that of honey, and the smell of myrtle. "Mesoleucos" is the name given to a stone when a white line runs through the middle; and when a black vein intersects any other colour, it is called "mesomelas."

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CHAP. 64.

NASAMONITIS. NEBRITIS. NIPPARENE.

Nasamonitis is a blood-red stone, marked with black veins. Nebritis, a stone sacred to Father Liber, has received its name from its resemblance to a nebris. There is also another stone of this kind, that is black. Nipparene bears the name of a city and people of Persia, and resembles the teeth of the hippopotamus.

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CHAP. 65.

OICA. OMBRIA OR NOTIA. ONOCARDIA. ORITIS OR SIDERITIS. OSTRACIAS. OSTRITIS. OPHICARDELON. OBSIAN STONE.

Oica is the barbarian name given to a stone which is pleasing for its colours, black, reddish yellow, green, and white. Ombria, by some called notia," falls with showers and lightning, much in the same manner as ceraunia and brontea, the properties of which it is said to possess. There is a statement also, that if this stone is placed upon altars it will prevent the offerings from being consumed. Onocardia is like kermesberry in appearance, but nothing further is said about it. Oritis, by some called "sideritis," is a stone of globular form, and proof against the action of fire. Ostracias, or ostracitis, is a testaceous stone, harder than ceramitis, and similar in all respects to achates, except that the latter has an unctuous appearance when polished: indeed, so remarkably hard is ostritis, that with fragments of it other gems are engraved. Ostritis receives its name from its resemblance to an oyster-shell. Ophicardelon is the barbarian name for a stone of a black colour, terminated by a white line on either side. Of Obsian stone we have already spoken in the preceding Book. There are gems, too, of the same name and colour, found not only in Æthiopia and India, but in Samnium as well, and, in the opinion of some, upon the Spanish shores that lie towards the Ocean.

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CHAP. 66.

PANCHRUS. PANGONUS. PANEROS OR PANERASTOS. PONTICA; FOUR VARIETIES OF IT. PHLOGINOS OR CHRYSITIS. PHŒNICITIS. PHYCITIS. PERILEUCOS. PÆANITIS OR GÆANIS.

Panchrus is a stone which displays nearly every colour. Pangonus is no longer than the finger: the only thing that prevents it from being taken for a crystal, is, its greater number of angles. What kind of stone paneros is, Metrodorus does not inform us; but he gives some lines, by no means without elegance, that were written upon this stone by Queen Timaris, and dedicated to Venus; from which we have reason to conclude that certain fecundating virtues were attributed to it. By some writers it is called panerastos. Of the stone called "pontica" there are numerous varieties: one is stellated, and presents either blood-red spots, or drops like gold, being reckoned in the number of the sacred stones. Another, in place of stars, has streaks of the same colour, and a fourth presents all the appearance of mountains and valleys.

Phloginos, also called "chrysitis," strongly resembles Attic ochre, and is found in Egypt. Phœnicitis is a stone so called from its resemblance to a date. Phycitis receives its name from its resemblance to sea-weed. Perileucos is the name given to a gem, in which a white colour runs down from the margin of the stone to the base. Pæanitis, by some called "gæanis," conceives, it is said, and is good for females at the time of parturition: this stone is found in Macedonia, near the monument of Tiresias there, and has all the appearance of congealed water.

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CHAP. 67.

SOLIS GEMMA. SAGDA. SAMOTHRACIA. SAURITIS. SARCITIS. SELENITIS. SIDERITIS. SIDEROPŒCILOS. SPONGITIS. SYNODONTITIS. SYRTITIS. SYRINGITIS.

Solis gemma is white, and, like the luminary from which it takes its name, emits brilliant rays in a circular form. Sagda is found by the people of Chaldæa adhering to ships, and is of a leek-green colour. The Isle of Samothrace gives its name to a stone which it produces, black and imponderous, and similar to wood in appearance. Sauritis is found, they say, in the belly of the green lizard, cut asunder with a reed. Sarcitis is a stone, like beef in appearance. Selenitis is white and transparent, with a reflected colour like that of honey. It has a figure within it like that of the moon, and reflects the face of that luminary, if what we are told is true, according to its phases, day by day, whether on the wane or whether on the increase: this stone is a native of Arabia, it is thought. Sideritis is a stone like iron, the presence of which in lawsuits creates discord. Sideropœcilos, which is a variety of the same stone, is a native of Æthiopia, and is covered with variegated spots.

Spongitis has its name from its resemblance to sponge. Synodontitis is a stone found in the brain of the fish known as "synodus." Syrtitis is a stone that used formerly to be found on the shores of the Syrtes, though now it is found on the coasts of Lucania as well: it is of a honey colour, with a reflected tint of saffron, and contains stars of a feeble lustre within. Syringitis is hollow throughout, like the space between the two joints in a straw.

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CHAP. 68.

TRICHRUS. THELYRRHIZOS. THELYCARDIOS OR MULC. THRACIA; THREE VARIETIES OF IT. TEPHRITIS. TECOLITHOS.

Trichrus comes from Africa: it is of a black colour, but yields three different liquids, black at the lower part, blood- red in the middle, and of an ochre colour at the top. Thelyrrhizos is of an ashy or russet colour, but white at the lower part. Thelycardios is like a heart in colour, and is held in high esteem by the people of Persia, in which country it is found: the name given to it by them is “mule.” Of thracia there are three varieties; a green stone, one of a more pallid colour, and a third with spots like drops of blood. Tephritis is crescent-shaped, with horns like those of the new moon, but it is of an ashy colour. Tecolithos has all the appearance of an olive stone: it is held in no estimation as a gem, but a solution of it will break and expel urinary calculi.

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CHAP. 69.

VENERIS CRINES. VEIENTANA.

Veneris crines is the name given to a stone that is remarkably black and shining, with an appearance like red hair within. Veientana is an Italian stone, found at Veii: it is black, divided by a line of white.

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CHAP. 70.

ZATHENE. ZMILAMPIS. ZORANISCÆA.

Zathene, according to Democritus, is a native of Media. It is like amber in colour, and, if beaten up with palm-wine and saffron, it will become soft like wax, yielding a very fragrant smell. Zmilampis is found in the river Euphrates: it resembles marble of Proconnesus in appearance, and is of a seagreen colour within. Zoraniscæa is found in the river Indus: it is a stone used by magicians, it is said, but I find no further particulars relative to it.

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CHAP. 71. (11.)

PRECIOUS STONES WHICH DERIVE THEIR NAMES FROM VARIOUS PARTS OF THE HUMAN BODY. HEPATITIS. STEATITIS. ADADUNEPHROS. ADADUOPHTHALMOS. ADADUDACTYLOS. TRIOPHTHALMOS.

There is also another method of classifying stones; according to the resemblance which they bear to various other objects. Thus, for example, the different parts of the body give the following names to stones: — Hepatitis is so called from the liver; and steatitis from its resemblance to the fat of various animals. Adadunephros, adaduophthalmos, and adadudactylos, mean “kidney of Adad,” “eye of Adad,” and “finger of Adad,” a god of the Syrians so called. Triophthalmos is a stone found in conjunction with onyx, which resembles three human eyes at once.

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CHAP. 72.

PRECIOUS STONES WHICH DERIVE THEIR NAMES FROM ANIMALS. CARCINIAS. ECHITIS. SCORPITIS. SCARITIS. TRIGLITIS. ÆGOPHTHALMOS. HYOPHTHALMOS. GERANITIS. HIERACITIS. AETITIS. MYRMECITIS. CANTHARIAS. LYCOPHTHALMOS. TAOS. TIMICTONIA.

Other stones, again, derive their names from various animals. Carcinias is so called from the colour of the sea-crab; echitis, from the colour of the viper; scorpitis, from either the colour or the shape of the scorpion; scaritis, from the fish called scarus; triglitis, from the sur-mullet; ægophthalmos, from the eye of the goat; hyophthalmos, from the eye of the swine; geranitis, from the neck of the crane; hieracitis, from the neck of the hawk; and aëtitis, from the colour of the whitetailed eagle. Myrmecitis presents the appearance of an ant crawling within, and cantharias, of a scarabæus. Lycophthalmos is a stone of four different colours; on the exterior it is ruddy and blood-red, and within it is black, surrounded with a line of white, closely resembling the eye of the wolf in every respect. Taos is a stone with colours like those of the peacock. Timictonia, I find, is the name of a stone, like the asp in colour.

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CHAP. 73.

PRECIOUS STONES WHICH DERIVE THEIR NAMES FROM OTHER OBJECTS. HAMMOCHRYSOS. CENCHRITIS. DRYITIS. CISSITIS. NARCISSITIS. CYAMIAS. PYREN. PHŒNICITIS. CHALAZIAS. PYRITIS. POLYZONOS. ASTRAPÆA. PHLOGITIS. ANTHEACITIS. ENHYGROS. POLYTHRIX. LEONTIOS. PAEDALIOS. DROSOLITHOS. MELICHRUS. MELICHLOROS, CROCIAS. POLIAS. SPARTOPOLIAS. RHODITIS. CHALCITIS. SYCITIS. BOSTRYCHITIS. CHERNITIS. ANANCITIS. SYNOCHITIS. DENDRITIS.

Hammochrysos resembles sand in appearance, but sand mixed with gold. Cenchritis has all the appearance of grains of millet scattered here and there. Dryitis resembles the trunk of a tree, and burns like wood. Cissitis, upon a white, transparent surface, has leaves of ivy running all over it. Narcissitis is distinguished by veins on the surface, and has a smell like that of the narcissus. Cyamias is a black stone, but when broken, produces a bean to all appearance. Pyren is so called from its resemblance to an olive-stone: in some cases it would appear to contain the back-bone of a fish. Phœnicitis resembles a palm-date in form. Chalazias resembles a hailstone, both in form and colour: it is as hard as adamant, so much so, indeed, that in the fire even it retains its coolness, it is said. Pyritis, though a black stone, burns the fingers when rubbed by them. Polyzonos is a black stone traversed by numerous zones of white.

Astrapæa has rays like flashes of lightning, running across the middle on a ground of white or blue. In phlogitis, there is, to all appearance, a flame burning within, but not reaching the surface of the stone. In anthracitis, there are sometimes sparks, to all appearance, flying to and fro. Enhygros is always perfectly round, smooth, and white; but when it is shaken a liquid is heard to move within, just like the yolk within an egg. Polythrix presents the appearance of hair upon a green surface; but it causes the hair to fall off, it is said. Leontios and pardalios are names given to stones, from their resemblance to the skin of the lion and panther. Drosolithos has received its name from its colour. Melichrus is a honey-coloured stone, of which there are several varieties. Melichloros is a stone of

two colours, partly honey-coloured, partly yellow. Crocias is the name given to a stone which reflects a colour like that of saffron; polias, to a stone resembling white hair in colour; and spartopolias, to a stone more thinly sprinkled with white.

Rhoditis is like the rose in colour, chalcitis resembles copper, and sycitis is in colour like a fig. Bostrychitis is covered with branches of a white or blood-red colour, upon a ground of black; and chernitis has, on a stony surface, a figure like that of two hands grasping each other. Anancitis is used in hydromancy, they say, for summoning the gods to make their appearance; and synochitis, for detaining the shades from below when they have appeared. If white dendritis is buried beneath a tree that is being felled, the edge of the axe will never be blunted, it is asserted. There are many other stones also, of a still more outrageously marvellous nature, to which, admitted as it is that they are stones, barbarous names have been given: we have refuted, however, a quite sufficient number of these portentous lies already.

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CHAP. 74. (12.)

PRECIOUS STONES THAT SUDDENLY MAKE THEIR APPEARANCE. COCHLIDES.

New species of precious stones are repeatedly brought into existence, and fresh ones are found all at once, destitute of names. Thus, for example, there was a stone formerly discovered in the gold-mines of Lampsacus, which, on account of its extraordinary beauty, was sent to King Alexander, as we learn from Theophrastus. Cochlides, too, which are now so common, are rather artificial productions than natural, and in Arabia there have been found vast masses of them; which are boiled, it is said, in honey, for seven days and nights without intermission. By doing this, all earthy and faulty particles are removed; after which, the mass, thus cleansed and purified, is adorned by the ingenuity of artists with variegated veins and spots, and cut into such shapes as may be most to the taste of purchasers. Indeed, these articles, in former times, were made of so large a size, that they were employed in the East as frontals for the horses of kings, and as pendants for their trappings.

All precious stones in general are improved in brilliancy by being boiled in honey, Corsican honey more particularly; but acrid substances are in every respect injurious to them. As to the stones which are variegated, and to which new colours are imparted by the inventive ingenuity of man, as they have no name in common use, they are usually known by that of "physis;" a name which claims for them, as it were, that admiration which we are more ready to bestow upon the works of Nature. But really, these artificial stones have names without end, and I could never think of recounting the infinite series of them, coined as they have been by the frivolous tendencies of the Greeks.

Having already described the more noble gems, and indeed those of inferior quality which are found among the stones that are held in high esteem, I must content myself with knowing that I have pointed out those kinds which are the most deserving of mention. It will be as well, however, for the reader to bear in mind, that, according to the

varying number of the spots and inequalities on their surface, according to the numerous intersections of lines and their multiplied tints and shades, the names of precious stones are subject to repeated changes; the material itself, for the most part, remaining just the same.

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CHAP. 75.

THE VARIOUS FORMS OF PRECIOUS STONES.

We will now make some observations in reference to precious stones in general, following therein the opinions that have been expressed by various authors. Stones with a level surface are preferred to those which are concave or protuberant on the face. An oblong shape is the one that is most approved of, and, next to that, the lenticular form, as it is called. After this, the stone with a plane surface and circular is admired, those which are angular being held in the least esteem. There is considerable difficulty in distinguishing genuine stones from false; the more so, as there has been discovered a method of transforming genuine stones of one kind into false stones of another. Sardonyx, for example, is imitated by cementing together three other precious stones, in such a way that no skill can detect the fraud; a black stone being used for the purpose, a white stone, and one of a vermilion colour, each of them, in its own way, a stone of high repute. Nay, even more than this, there are books in existence, the authors of which I forbear to name, which give instructions how to stain crystal in such a way as to imitate smaragdus and other transparent stones, how to make sardonyx of sarda, and other gems in a similar manner. Indeed, there is no kind of fraud practised, by which larger profits are made.

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CHAP. 76. (13.)

THE METHODS OF TESTING PRECIOUS STONES.

On the contrary, we will make it our business to point out the methods of detecting these false stones, seeing that it is only proper to put luxury even on its guard against fraud. In addition to the particulars which we have already given, when treating of each individual kind of precious stone, it is generally agreed that transparent stones should be tested by a morning light, or even, if necessary, so late as the fourth hour, but never after that hour. The modes of testing stones are numerous: first, by their weight, the genuine stone being the heavier of the two; next, by their comparative coolness, the genuine stone being cooler than the other to the mouth; and, next to that, by their substance; there being blisters perceptible in the body of the fictitious stone, as well as a certain roughness on the surface; filaments, too, an unequal brilliancy, and a brightness that falls short before it reaches the eye. The best mode of testing is to strike off a fragment with an iron saw; but this is a thing not allowed by the dealers, who equally refuse to let their gems be tested by the file. Dust of Obsian stone will not leave a mark upon the surface of a genuine stone: but where the gem is artificial, every mark that is made will leave a white scratch upon it. In addition to this, there is such a vast diversity in their degrees of hardness, that some stones do not admit of being engraved with iron, and others can only be cut with a graver blunted at the edge. In all cases, however, precious stones may be cut and polished by the aid of adamas; an operation which may be considerably expedited by heating the graver. The rivers which produce precious stones, are the Acesinus and the Ganges; and, of all countries, India is the most prolific of them.

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CHAP. 77.

A COMPARATIVE VIEW OF NATURE AS SHE APPEARS IN DIFFERENT COUNTRIES. THE COMPARATIVE VALUES OF THINGS.

Having now treated of all the works of Nature, it will be as well to take a sort of comparative view of her several productions, as well as the countries which supply them. Throughout the whole earth, then, and wherever the vault of heaven extends, there is no country so beautiful, or which, for the productions of Nature, merits so high a rank as Italy, that ruler and second parent of the world; recommended as she is by her men, her women, her generals, her soldiers, her slaves, her superiority in the arts, and the illustrious examples of genius which she has produced. Her situation, too, is equally in her favour; the salubrity and mildness of her climate; the easy access which she offers to all nations; her coasts indented with so many harbours; the propitious breezes, too, that always prevail on her shores; advantages, all of them, due to her situation, lying, as she does, midway between the East and the West, and extended in the most favourable of all positions. Add to this, the abundant supply of her waters, the salubrity of her groves, the repeated intersections of her mountain ranges, the comparative innocuousness of her wild animals, the fertility of her soil, and the singular richness of her pastures.

Whatever there is that the life of man ought not to feel in want of, is nowhere to be found in greater perfection than here; the cereals, for example, wine, oil, wool, flax, tissues, and oxen. As to horses, there are none, I find, preferred to those of Italy for the course; while, for mines of gold, silver, copper, and iron, so long as it was deemed lawful to work them, Italy was held inferior to no country whatsoever. At the present day, teeming as she is with these treasures, she contents herself with lavishing upon us, as the whole of her bounties, her various liquids, and the numerous flavours yielded by her cereals and her fruits. Next to Italy, if we except the fabulous regions of India, I would rank Spain, for my own part, those districts, at least, that lie in the vicinity of the sea. She is parched and

sterile in one part, it is true; but where she is at all productive, she yields the cereals in abundance, oil, wine, horses, and metals of every kind. In all these respects, Gaul is her equal, no doubt; but Spain, on the other hand, outdoes the Gallic provinces in her spartum and her specular stone, the products of her desert tracts, in her pigments that minister to our luxuries, in the ardour displayed by her people in laborious employments, in the perfect training of her slaves, in the robustness of body of her men, and in their general resoluteness of character.

As to the productions themselves, the greatest value of all, among the products of the sea, is attached to pearls: of objects that lie upon the surface of the earth, it is crystals that are most highly esteemed: and of those derived from the interior, adamas, smaragdus, precious stones, and murrhine, are the things upon which the highest value is placed. The most costly things that are matured by the earth, are the kermes-berry and laser; that are gathered from trees, nard and Seric tissues; that are derived from the trunks of trees, logs of citrus-wood; that are produced by shrubs, cin- namon, cassia, and amomum; that are yielded by the juices of trees or of shrubs, amber, opobalsamum, myrrh, and frankincense; that are found in the roots of trees, the perfumes derived from costus. The most valuable products furnished by living animals, on land, are the teeth of elephants; by animals in the sea, tortoise-shell; by the coverings of animals, the skins which the Seres dye, and the substance gathered from the hair of the she-goats of Arabia, which we have spoken of under the name of "ladanum;" by creatures that are common to both land and sea, the purple of the murex. With reference to the birds, beyond plumes for warriors' helmets, and the grease that is derived from the geese of Commagene, I find no remarkable product mentioned. We must not omit, too, to observe, that gold, for which there is such a mania with all mankind, hardly holds the tenth rank as an object of value, and silver, with which we purchase gold, hardly the twentieth!

HAIL to thee, Nature, thou parent of all things! and do thou deign to show thy favour unto me, who, alone of all the citizens of Rome, have, in thy every department, thus made known thy praise.

SUMMARY. — Facts, narratives, and observations, one thousand three hundred.

ROMAN AUTHORS QUOTED. — M. Varro, the Register of the Triumphs, Mæcenas, Iacchus, Cornelius Bocchus.

FOREIGN AUTHORS QUOTED. — King Juba, Xenocrates the son of Zeno, Sudines, Æschylus, Philoxenus, Euripides, Nicander, Satyrus, Theophrastus, Chares, Philemon, Demostratus, Zenothemis, Metrodorus, Sotacus, Pytheas, Timæus the Sicilian, Nicias, Theochrestus, Asarubas, Mnaseas, Theomenes, Ctesias, Mithridates, Sophocles, King Archelaüs, Callistratus, Democritus, Ismenias, Olympicus, Alexander Polyhistor, Apion, Horus, Zoroaster, Zachalias.

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CHAP. 9. (5.)
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CHAP. 14. (6.)
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CHAP. 29.
CHAP. 30. (8.)
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CHAP. 46. (9.)
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CHAP. 59. (10).
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CHAP. 67. (11.)
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The Latin Text

Xanten, North Rhine-Westphalia state of Germany, located in the district of Wesel — Pliny spent the latter years of his military service as a cavalry commander in the Castra Vetera, a large permanent base of the Germania Inferior.

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PREFACE

libros naturalis historiae, novicium camenis quiritium tuorum opus, natos apud me proxima fetura licentiore epistula narrare constitui tibi, iucundissime imperator; sit enim haec tui praefatio, verissima, dum maximi consenescit in patre. “namque tu solebas nugas esse aliquid meas putare,” ut obiter emolliam catullum conterraneum meum (agnoscis et hoc castrense verbum): ille enim, ut scis, permutatis prioribus syllabis duriusculum se fecit quam volebat existimari, a veraniolis suis et fabullis. simul ut hac mea petulantia fiat quod proxime non fieri questus es in alia procaci epistula nostra, ut in quaedam acta exeat sciantque omnes quam ex aequo tecum vivat imperium. triumphalis et censorius tu sexiesque consul ac tribuniciae potestatis particeps et, quod his nobilius fecisti, dum illud patri pariter et equestri ordini praestas, praefectus praetorii eius omniaque haec rei publicae es: nobis quidem qualis in castrensi contubernio, nec quicquam in te mutavit fortunae amplitudo, nisi ut prodesse tantundem posses et velles. itaque cum ceteris in veneratione tui pateant omnia alia, nobis ad colendum te familiarius audacia sola superest: hanc igitur tibi imputabis et in nostra culpa tibi ignosces. perfricui faciem nec tamen profeci, quoniam alia via occurris ingens et longius etiam summoves ingenii fascibus. fulgurare in nullo umquam verius dicta vis eloquentiae, tribunicia potestas facundiae. quanto tu ore patris laudes tonas! quanto fratris amas! quantus in poetica es! o magna fecunditas animi! quem ad modum fratrem quoque imitareris excogitasti.

sed haec quis possit intrepidus aestimare subiturus ingenii tui iudicium, praesertim lacessitum neque enim similis est condicio publicantium et nominatim tibi dicantium. tum possem dicere: ‘quid ista legis, imperator humili vulgo scripta sunt, agricolarum, opificum turbae, denique studiorum otiosis. quid te iudicem facis cum hanc operam condicerem, non eras in hoc albo. maiorem te sciebam, quam ut descensurum huc putarem.’ praeterea est quaedam publica etiam eruditorum reiectio. utitur illa et m. tullius extra omnem ingenii aleam positus et, quod miremur, per advocatum defenditur: “nec doctissimis. manium persium haec legere nolo, iunium congium

volo." quod si hoc lucilius, qui primus condidit stili nasum, dicendum sibi putavit, cicero mutuandum, praesertim cum de re publica scriberet, quanto nos causatius ab aliquo iudice defendimur sed haec ego mihi nunc patrocinia ademi nuncupatione, quoniam plurimum refert, sortiatur aliquis iudicem an eligat, multumque apparatus interest apud invitatum hospitem et oblatum. cum apud catonem, illum ambitus hostem et repulsis tamquam honoribus inemptis gaudentem, flagrantibus comitiis pecunias deponerent candidati, hoc se facere, quod tum pro innocentia ex rebus humanis summum esset, profitebantur. inde illa nobilis m. ciceronis suspiratio: "o te felicem, m. porci, a quo rem inprobam petere nemo audet!" cum tribunos appellaret l. scipio asiaticus, inter quos erat gracchus, hoc adtestabatur vel inimico iudici se probari posse. adeo summum quisque causae suae iudicem facit quemcumque, cum eligit. unde provocatio appellatur. te quidem in excelsissimo generis humani fastigio positum, summa eloquentia, summa eruditione praeditum, religiose adiri etiam a salutantibus scio, et ideo curant, quae tibi dicantur ut digna sint. verum dis lacte rustici multaeque gentes et mola litant salsa qui non habent tura, nec ulli fuit vitio deos colere quoquo modo posset.

meae quidem temeritati accessit hoc quoque, quod levioris operae hos tibi dedicavi libellos. nam nec ingenii sunt capaces, quod alioqui in nobis perquam mediocre erat, neque admittunt excessus aut orationes sermonesve aut casus mirabiles vel eventus varios, iucunda dictu aut legentibus blanda sterili materia: rerum natura, hoc est vita, narratur, et haec sordidissima sui parte ac plurimarum rerum aut rusticis vocabulis aut externis, immo barbaris etiam, cum honoris praefatione ponendis. praeterea iter est non trita auctoribus via nec qua peregrinari animus expetat. nemo apud nos qui idem temptaverit, nemo apud graecos qui unus omnia ea tractaverit. magna pars studiorum amoenitates quaerimus; quae vero tractata ab aliis dicuntur inmensae subtilitatis, obscuris rerum tenebris premuntur. ante omnia attingenda quae graeci τῆς ἐγκυκλίου παιδείας vocant, et tamen ignota aut incerta ingeniis facta; alia vero ita multis prodita, ut in fastidium sint adducta. res ardua vetustis novitatem dare, novis auctoritatem, obsoletis nitorem, obscuris lucem, fastiditis gratiam, dubiis fidem, omnibus vero naturam et naturae sua omnia. itaque

etiam non assecutis voluisse abunde pulchrum atque magnificum est.

equidem ita sentio, peculiarem in studiis causam eorum esse, qui difficultatibus victis utilitatem iuvandi praetulerint gratiae placendi, idque iam et in aliis operibus ipse feci et profiteor mirari me t. livium, auctorem celeberrimum, in historiarum suarum, quas repetit ab origine urbis, quodam volumine sic orsum: “iam sibi satis gloriae quaesitum, et potuisse se desidere, ni animus inquies pasceretur opere.” profecto enim populi gentium victoris et romani nominis gloriae, non suae, composuisse illa decuit. maius meritum esset operis amore, non animi causa, perseverasse et hoc populo romano praestitisse, non sibi. [xx] rerum dignarum cura - quoniam, ut ait domitius piso, thesauros oportet esse, non libros - lectione voluminum circiter [ii], quorum pauca admodum studiosi attingunt propter secretum materiae, ex exquisitis auctoribus centum inclusimus xxxvi voluminibus, adiectis rebus plurimis, quas aut ignoraverant priores aut postea invenerat vita. nec dubitamus multa esse quae et nos praeterierint. homines enim sumus et occupati officiis subsicivisque temporibus ista curamus, id est nocturnis, ne quis vestrum putet his cessatum horis. dies vobis inpendimus, cum somno valetudinem computamus, vel hoc solo praemio contenti, quod, dum ista, ut ait M. Varro, musinamur, pluribus horis vivimus. profecto enim vita vigilia est. quibus de causis atque difficultatibus nihil auso promittere hoc ipsum tu praestas, quod ad te scribimus. haec fiducia operis, haec est indicatura. multa valde pretiosa ideo videntur, quia sunt templis dicata.

vos quidem omnes, patrem, te fratremque, diximus opere iusto, temporum nostrorum historiam orsi a fine aufidii. ubi sit ea, quaeres. iam pridem peracta sancitur et alioqui statutum erat heredi mandare, ne quid ambitioni dedisse vita iudicaretur. proinde occupantibus locum faveo, ego vero et posteris, quos scio nobiscum decertaturos, sicut ipsi fecimus cum prioribus. argumentum huius stomachi mei habebis quod in his voluminibus auctorum nomina praetexui. est enim benignum, ut arbitror, et plenum ingenui pudoris fateri per quos profeceris, non ut plerique ex iis, quos attigi, fecerunt. scito enim conferentem auctores me deprehendisse a iuratissimis ex proximis veteres transcriptos ad verbum neque nominatos, non illa vergiliana virtute, ut certarent, non tulliana simplicitate, qui de re publica

platonis se comitem profitetur, in consolatione filiae “crantorem”, inquit, “sequor,” item panaetium de officiis, quae volumina ediscenda, non modo in manibus cotidie habenda, nosti. obnoxii profecto animi et infelicis ingenii est deprehendi in furto malle quam mutuum reddere, cum praesertim sors fiat ex usura.

inscriptionis apud graecos mira felicitas: κηρίον inscripsere, quod volebant intellegi favum, alii κέρας ... ᾽αμαλθείας, quod copiae cornu, ut vel lactis gallinacei sperare possis in volumine haustum; iam ἴα, ... μοῦσαι, πανδέκται, ἐγχειρίδια, λειμών, πίναξ, σχεδίων: inscriptiones, propter quas vadimonium deseri possit; at cum intraveris, di deaeque, quam nihil in medio invenies! nostri graviores antiquitatium, exemplorum artiumque, facetissimi lucubrationum, puto quia bibaculus erat et vocabatur. paulo minus asserit Varro in satiris suis sesculixe et flextabula. apud graecos desiit nugari diodorus et βιβλιοθήκης historiam suam inscripsit. apion quidem grammaticus - hic quem tiberius caesar cymbalum mundi vocabat, cum propriae famae tympanum potius videri posset -immortalitate donari a se scripsit ad quos aliqua componebat. me non paenitet nullum festiviorem excogitasse titulum et, ne in totum videar graecos insectari, ex illis mox velim intellegi pingendi fingendique conditoribus, quos in libellis his invenies absoluta opera et illa quoque, quae mirando non satiamur, pendenti titulo inscripsisse, ut “Apelles faciebat” aut “polyclitus”, tamquam inchoata semper arte et inperfecta, ut contra iudiciorum varietates superesset artifici regressus ad veniam velut emendaturo quicquid desideraretur, si non esset interceptus. quare plenum verecundiae illud, quod omnia opera tamquam novissima inscripsere et tamquam singulis fato adempti. tria non amplius, ut opinor, absolute traduntur inscripta “ille fecit”, quae suis locis reddam. quo apparuit summam artis securitatem auctori placuisse, et ob id magna invidia fuere omnia ea.

ego plane meis adici posse multa confiteor, nec his solis, sed et omnibus quos edidi, ut obiter caveam istos homeromastigas (ita enim verius dixerim), quoniam audio et stoicos et dialecticos epicureosque - nam de grammaticis semper expectavi - parturire adversus libellos, quos de grammatica edidi, et subinde abortus facere iam decem annis, cum celerius etiam elephanti pariant. ceu vero nesciam adversus theophrastum, hominem in eloquentia tantum, ut nomen

divinum inde invenerit, scripsisse etiam feminam, et proverbium inde natum suspendio arborem eligendi. non queo mihi temperare quo minus ad hoc pertinentia ipsa censorii catonis verba ponam, ut appareat etiam catoni de militari disciplina commentanti, qui sub africano, immo vero et sub Hannibale didicisset militare et ne africanum quidem ferre potuisset, qui imperator triumphum reportasset, paratos fuisse istos, qui obtrectatione alienae scientiae famam sibi aucupantur: “quid enim” ait in eo volumine, “scio ego, quae scripta sunt si palam proferantur, multos fore qui vitilitigent, sed ii potissimum, qui verae laudis expertes sunt. eorum ego orationes sivi praeterfluere.” nec plancus inlepide, cum diceretur asinius pollio orationes in eum parare, quae ab ipso aut libertis post mortem planci ederentur, ne respondere posset: “cum mortuis non nisi larvas luctari.” quo dicto sic repercussit illas, ut apud eruditos nihil impudentius iudicetur. ergo securi etiam contra vitilitigatores, quos cato eleganter ex vitiis et litigatoribus composuit - quid enim illi aliud quam litigant aut litem quaerunt - , exequemur reliqua propositi. quia occupationibus tuis publico bono parcendum erat, quid singulis contineretur libris, huic epistulae subiunxi summaque cura, ne legendos eos haberes, operam dedi. tu per hoc et aliis praestabis ne perlegant, sed, ut quisque desiderabit aliquid, id tantum quaerat et sciat quo loco inveniat. hoc ante me fecit in litteris nostris valerius soranus in libris, quos ἐποπτίδων inscripsit.

LIBER I

libro ii continentvr an finitus sit mundus et an unus de forma eius de motu eius. cur mundus dicatur de elementis de deo de siderum errantium natura de lunae et solis defectibus. de nocte de magnitudine siderum quae quis invenerit in observatione caelesti de lunae motu errantium motus et luminum canonica quare eadem altiora, alias propiora videantur catholica siderum errantium quae ratio colores eorum mutet solis motus. dierum inaequalitatis ratio quare fulmina iovi adsignentur intervalla siderum de sideribus musica de mundo geometrica de repentinis sideribus. de cometis. natura et situs et genera eorum hipparchea de sideribus agnoscendis de caelestibus prodigiis per exempla historica lampades, bolides trabes caelestes, chasma caeli de caeli coloribus de flamma caelesti de coronis caelestibus de circulis repentinis plures soles plures lunae dierum modo noctibus lux clipei ardentes ostentum caeli semel notatum de discursu stellarum de stellis quae castores vocantur de ae +re de statis tempestatibus

de caniculae ortu

vis temporum anni stata de incertis tempestatibus. de imbribus et quare lapidibus pluat de tonitribus et fulgetris qua ratione echo reddatur. ventorum genera, naturae, observationes ecnephias, typhon turbines, presteres, vertices, alia prodigiosa genera tempestatum de fulminibus

quibus in terris non cadant

et quare

genera fulgurum et miracula

etrusca observatio in iis et

romana

de fulminibus evocandis

catholica fulgurum

quae numquam feriantur lacte pluisse, sanguine, carne, ferro, lana, lateribus coctis portenta de lapidibus caelo cadentibus. anaxagorea de his arcus caelestis natura grandinis, nivis, pruinae, nebulae, roris. nubium imagines proprietates caeli in locis natura terrae de forma eius an sint antipodes. quomodo aqua terrae innexa. quae ratio

fluminum an circumdatus terrae oceanus quae portio terrae habitetur mediam esse mundi terram de obliquitate zonarum de inaequalitate climatum ubi eclipses non appareant et quare quae ratio diurnae lucis in terris gnomonica de ea re ubi et quando nullae umbrae, ubi bis anno. ubi in contrarium umbrae ferantur ubi longissimi dies, ubi brevissimi de primo horologio quo modo observentur dies differentia gentium ad rationem mundi de terrae motibus. de terrae hiatibus. signa motus futuri auxilia contra motus futuros portenta terrarum semel tradita miracula terrae motus quibus locis maria recesserint. insularum enascentium ratio quae et quibus temporibus enatae sint quas terras interruperint maria quae insulae continenti adiunctae sint quae terrae in totum mari permutatae quae terrae ipsae se minuerint urbes haustae mari de spiraculis de terris semper trementibus. de insulis semper fluctuantibus quibus locis non inpluat acervata terrarum miracula qua ratione aestus maris accedant et recedant ubi aestus extra rationem idem faciant miracula maris

quae potentia lunae ad ter

rena et marina

quae solis

quare salsum mare

ubi altissimum mare mirabilia fontium et fluminum ignium et aquarum iuncta miracula

de maltha

de naphtha

quae loca semper ardeant ignium per se miracula terrae universae mensura harmonica mundi ratio summa: res et historiae et observationes ccccxvii

ex avctoribvs M. Varrone. sulpicio gallo. tito caesare imperatore. q. tuberone. tullio tirone. l. pisone. t. livio. cornelio nepote. seboso. caelio antipatro. fabiano. antiate. muciano. caecina qui de etrusca disciplina. tarquitio qui item. iulio aquila qui item. sergio plauto.

externis hipparcho. timaeo. sosigene. petosiri. nechepso. pythagoricis. posidonio. anaximandro. epigene. eudoxo. democrito. critodemo. thrasyllo. serapione gnomonico. euclide. coerano philosopho. dicaearcho. archimede. onesicrito. eratosthene. pythea. herodoto. aristotele. ctesia. artemidoro ephesio. isidoro characeno. theopompo.

l. iii continentvr situs, gentes, maria, oppida, portus, montes, flumina, mensurae, populi qui sunt aut fuerunt baeticae hispaniae citerioris narbonensis provinciae italiae usque locros

tiberis, roma

insularum lxiiii, in his

baliarium

corsicae

sardiniae

siciliae italiae locris usque ravennam de pado italiae trans padum histriae alpium et gentium alpinarum illyrici, liburniae dalmatiae noricorum pannoniae moesiae insularum ionii et hadriatici summa: oppida et gentes ... summa: flumina clara ... summa: montes clari ... summa: insulae ... summa: quae intercidere oppida aut gentes ... summa: res et historiae et observationes ...

ex avctoribvs turranio gracile. cornelio nepote. t. livio. catone censorio. m. agrippa. M. Varrone. Divo Augusto. Varrone atacino. antiate. hygino. l. vetere. pomponio mela. curione patre. caelio. arruntio. seboso. licinio muciano. fabricio tusco. l. ateio. ateio capitone. verrio flacco. l. pisone. gelliano. valeriano.

externis artemidoro. alexandro polyhistore. thucydide. theophrasto. isidoro. theopompo. metrodoro scepsio. callicrate. xenophonte lampsaceno. diodoro syracusano. nymphodoro. calliphane. timagene.

l. iiii continentvr situs, gentes, maria, oppida, portus, montes, flumina, mensurae, populi qui sunt aut fuerunt epiri achaiae graeciae thessaliae magnesiae macedoniae thraciae insularum ante eas terras, inter quas

creta

euboea

cyclades

sporades hellesponti, ponti, maeotidis daciae, sarmatiae, scythiae insularum ponti germaniae insularum in gallico oceano xcvi, quas inter britannia belgicae galliae lugdunensis galliae aquitanicae galliae citerioris hispaniae ab oceano lusitaniae insularum in mari atlantico universae europae mensura summa: oppida et gentes ... summa:

flumina clara ... summa: montium clari ... summa: insulae ... summa: quae intercidere oppida aut gentes ... summa: res et historiae et observationes ...

ex avctoribvs catone censorio. M. Varrone. m. agrippa. Divo Augusto. Varrone atacino. cornelio nepote. hygino. l. vetere. mela pomponio. licinio muciano. fabricio tusco. ateio capitone. ateio philologo.

externis polybio. hecataeo. hellanico. damaste. eudoxo. dicaearcho. timosthene. eratosthene. ephoro. cratete grammatico. serapione antiochense. callimacho. artemidoro. apollodoro. agathocle. timaeo siculo. myrsilo. alexandro polyhistore. thucydide. dosiade. anaximandro. philistide mallote. dionysio. aristide. callidemo. menaechmo. aglaosthene. anticlide. heraclide. philemone. xenophonte. pythea. isidoro. philonide. xenagora. astynomo. staphylo. aristocrito. metrodoro. cleobulo. posidonio.

l. v continentvr situs, gentes, maria, oppida, portus, montes, flumina, mensurae, populi qui sunt aut fuerunt mauretaniarum numidiae africae syrtium cyrenaicae insularum circa africam aversorum africae aegypti

chorae, thebaidis, nili arabiae quae est ad mare aegyptium idumaeae, syriae, palaestines, samariae iudaeae phoenices syriae coeles, syriae antiochiae euphratis ciliciae et iunctarum gentium isauricae, omanadum pisidiae lycaoniae pamphyliae tauri montis lyciae cariae ioniae aeolidis troadis et iunctarum gentium insularum ante asiam ccxii. in iis

cypri

rhodi, coi

sami

chii

lesbi hellespontus, mysia phrygia galatia et iunctae gentes bithynia summa: oppida et gentes ... summa: flumina clara ... summa: montium clari ... summa: insulae cxviii summa: quae intercidere oppida aut gentes ... summa: res et historiae et observationes ...

ex avctoribvs agrippa. suetonio paulino. M. Varrone. Varrone atacino. cornelio nepote. hygino. l. vetere. mela. domitio corbulone.

licinio muciano. claudio caesare. arruntio. livio filio. seboso. actis triumphorum.

externis iuba rege. hecataeo. hellanico. damaste. dicaearcho. baetone. timosthene. philonide. xenagora. astynomo. staphylo. dionysio. aristotele. aristocrito. ephoro. eratosthene. hipparcho. panaetio. serapione antiocheno. callimacho. agathocle. polybio. timaeo mathematico. herodoto. myrsilo. alexandro polyhistore. metrodoro. posidonio qui περίπλουν aut περιήγησιν. sotade. pyrrandro. aristarcho sicyonio. eudoxo. antigene. callicrate. xenophonte lampsaceno. diodoro syracusano. hannone. himilcone. nymphodoro. calliphane. artemidoro. megasthene. isidoro. cleobulo. aristocreonte.

l. vi continentvr situs, gentes, maria, oppida, portus, montes, flumina, mensurae, populi qui sunt aut fuerunt ponti, mariandynorum paphlagonum cappadocum themiscyrena regio et in ea gentes. heniochi regio colica et gentes. achaeorum gentes. ceterae eodem tractu gentes bosporus cimmerius maeotis. gentes circa maeotim armenia minor, armenia maior cyrus fluvius, araxes fluvius albania, hiberia et iunctae portae caucasiae insulae in ponto gentes a scythico oceano caspium et hyrcanium mare adiabene media, portae caspiae gentes circa hyrcanium mare scytharum gentes situs ab oceano eoo. seres indi

ganges

indus taprobane ariani et iunctae gentes navigationes in indiam carmania sinus persicus parthorum regna mesopotamia

tigris arabia sinus maris rubri trogodytice aethiopia insulae aethiopici maris de insulis fortunatis terrae per mensuras conparatae digestio terrarum in parallelos et umbras pares summa: oppida mcxcv summa: gentes dlxxvi summa: flumina clara cxv summa: montes clari xxxviii summa: insulae cviii summa: quae intercidere oppida aut gentes xcv summa: res et historiae et observationes mmccxiiii.

ex avctoribvs m. agrippa. M. Varrone. Varrone atacino. cornelio nepote. hygino. l. vetere. mela pomponio. domitio corbulone. licinio muciano. claudio caesare. arruntio. seboso. fabricio tusco. t. livio

filio. seneca. nigidio.

externis iuba rege. hecataeo. hellanico. damaste. eudoxo. dicaearcho. baetone. timosthene. patrocle. demodamante. clitarcho. eratosthene. alexandro magno. ephoro. hipparcho. panaetio. callimacho. artemidoro. apollodoro. agathocle. polybio. timaeo siculo. alexandro polyhistore. isidoro. amometo. metrodoro. posidonio. onesicrito. nearcho. megasthene. diogneto. aristocreonte. bione. dalione. simonide minore. basile. xenophonte lampsaceno.

l. viii continentvr de elephantis

de sensu eorum

quando primum iuncti

de docilitate eorum

mirabilia in factis eorum

de natura ferarum ad peri

cula sua intellegenda

quando primum in italia visi

elephanti

pugnae eorum

quibus modis capiantur

quibus domentur

de partu eorum et reliqua

natura

ubi nascantur. discordia

eorum et draconum de sollertia animalium de draconibus mirae magnitudines serpentium de scythicis animalibus. de septentrionalibus, de bisontibus, uris alce, achli, bonaso de leonibus

quomodo gignantur

quae genera eorum

quae propria naturae

quis primus leontomachiam

romae, quis plurimos in

ea leones donaverit

quis primus romanorum

iunxerit. mirabilia in leo

num factis a dracone agnitus et servatus de pantheris

senatusconsultum et leges
de africanis. quis primus
romae africanas et quando;

quis plurimas de tigribus. quando primum romae visa tigris. de natura earum fetu capto de camelis. genera eorum de camelopardali. quando primum romae visa de chama. de cephis de rhinocerote de lynce et sphingibus. de crocottis. de cercopithecis aethiopiae terrestria animalia item indiae. bestia visu interficiens de basiliscis serpentibus de lupis. unde fabula versipellium serpentium genera de ichneumone de crocodilo de scinco de hippopotamio quis primus ostenderit eum romae et crocodilum medicinae ab animalibus repertae prognostica periculorum ex animalibus gentes ab animalibus sublatae de hyaenis de corocottis. de mantichoris de onagris de aquaticis et iisdem terrestribus

de fibris, de lutris. de vitulo

marino, de stellionibus de cervis de chamaeleonte de reliquis colorem mutantibus, tarandro, lycaone, thoe de hystrice de ursis. de fetu eorum de muribus ponticis et alpinis irenaceis leontophono. lynces meles, sciuri de cocleis de lacertis canum natura

exempla eorum circa domi
nos. qui proeliorum causa
canes habuerint.
de generatione eorum
contra rabiem remedia equorum natura
de ingeniis equorum. mira
bilia quadrigarum.
generatio equorum

vento concipientes de asinis. generatio in his mularum natura et reliquorum iumentorum de bubus

generatio eorum.
apis in aegypto pecorum natura
generatio eorum. genera la
nae et colorum

genera vestium caprarum natura et generatio suum item de feris subus. quis primus vivaria bestiarum instituerit de simiis de leporum generibus de semiferis animalibus quae quibus locis animalia non sint ubi et quae advenis tantum noceant. ubi et quae indigenis tantum

summa: res et historiae et observationes dcclxxxvii.

ex avctoribvs muciano. procilio. verrio flacco. l. pisone. cornelio valeriano. catone censorio. fenestella. trogo. actis. columella. vergilio. Varrone. lucilio. metello scipione. cornelio celso. nigidio. trebio nigro. pomponio mela. mamilio sura.

externis iuba rege. polybio. herodoto. antipatro. aristotele. demetrio physico. democrito. theophrasto. euanthe. scopa qui Ὀλυμπιονίκας. hierone rege. attalo rege. philometore rege. ctesia. duride. philisto. archyta. phylarcho. amphilocho athenaeo. anaxipoli thasio. apollodoro lemnio. aristophane milesio. antigono cymaeo. agathocle chio. Apollonio pergameno. aristandro athenaeo. bacchio milesio. bione solense. chaerea athenaeo. diodoro prieneo. dione colophonio. epigene rhodio. euagone thasio. euphronio athenaeo. hegesia maroneo. menandris prieneo et heracleote. Menecrate poeta. androtione qui de agricultura scripsit. aeschrione qui item. lysimacho qui item. dionysio qui magonem transtulit. diophane qui ex dionysio epitomas fecit. archelao rege. nicandro.

l. ix continentvr aquatilium naturae. quare maxima in mari animalia indici maris beluae quae in quoque oceano maximae de tritonum et nereidum figuris. de elephantorum marinorum figuris de balaenis, de orcis an spirent pisces, an dormiant de delphinis

quos amaverint

quibus in locis societate

cum hominibus piscentur

alia circa eos mira de thyrsionibus de testudinibus

quae genera aquatilium tes

tudinum et quo modo ca

piantur

quis primus testudinem se

care instituerit digestio aquatilium per species de vitulis marinis sive phocis. quae pilo careant et quo modo pariant quot genera piscium qui maximi pisces cordylae, pelamydes, thynni. membratim ex his salsura. apolecti, cybia amiae, scombri qui non sint pisces in ponto. qui intrent, qui alia redeant quare pisces extra aquam exiliant. gladius piscis esse auguria ex piscibus in quo genere piscium mares

non sint qui calculum in capite habeant. qui lateant hieme. qui hieme non capiantur nisi statis diebus qui aestate lateant. qui siderentur pisces de mugile de acipensere de lupo, de asello de scaro, de mustela mullorum genera. sargus mirabilia piscium pretia non ubique eadem genera placere cenitari de branchis. de squamis vocales et sine branchis pisces qui in terram exeant. tempora capturae digestio piscium in figuras corporum. rhomborum et passerum differentia. de longis piscibus de piscium pinnis et natandi ratione anguillae murenae planorum piscium genera echeneis. effectus eius qui pisces colorem mutent de hirundine. de pisce qui noctibus lucet. de cornuta. de dracone marino de piscibus sanguine carentibus. qui pisces molles appellentur de saepia. de lolligine. de pectunculis. qui volent extra aquam de polypis

de navigatore polypo de navigatore nauplio crusta intecti

de locustis

cancrorum genera. de pino

tere. de echinis. de coc

leis. de pectinibus

concharum genera quanta luxuriae materia mari sit de margaritis

quomodo nascantur et ubi

quomodo inveniantur

quae genera unionum

quae observanda in iis. quae

natura eorum

exempla circa eos

quando primum in usum

venerint romae muricum natura

de purpuris

quae nationes purpurae

quomodo ex his lanae tin

guantur

quando purpurae usus ro

mae, quando lati clavi et

praetextae

de conchyliatis vestibus

de amethysto tinguendo, de

tyrio, de hysgino, de cocco de pina et pinotere de sensu

aquatilium. torpedo, pastinaca, scolopendrae, glanis. de ariete pisce de iis quae tertiam naturam habent animalium et fruticum. de urticis de spongeis. quae genera earum et ubi nascantur. animal esse eas de caniculis de iis quae silicea testa cluduntur. quae sine sensu ullo in mari. de reliquis sordium animalibus de venenatis marinis de morbis piscium de generatione eorum

mira generationum
qui intra se et ova pariant
et animal
quorum in partu rumpatur
venter, dein coeat
qui volvas habeant. qui

ipsi se ineant quae longissima vita piscium quis primus vivaria piscium instituerit. de ostreis quis murenarum vivaria instituerit. insignia piscinarum quis primus coclearum vivaria instituerit pisces terreni de muribus in nilo quo modo capiantur anthiae pisces de stellis marinis de dactylorum miraculis de inimicitiis inter se aquatilium et amicitiis summa: res et historiae et observationes dcl.

ex avctoribvs turranio gracile. trogo. maecenate. alfio flavo. cornelio nepote. laberio mimographo. fabiano. fenestella. muciano. aelio stilone. seboso. melisso. seneca. Cicerone. macro aemilio. messala corvino. trebio nigro. nigidio.

externis aristotele. archelao rege. callimacho. democrito. theophrasto. thrasyllo. hegesidemo. sudine. alexandro

polyhistore.

l. x continentvr volucrum naturae. de struthocamelo phoenice aquilarum genera natura earum quando legionum signa esse coeperint de aquila quae in rogum virginis se misit vultur avis sanqualis. inmusulus accipitres

buteo
in quibus locis societate acci
pitres et homines aucupen
tur
quae avis sola a suo genere
interimatur. quae avis sin

gula ova pariat milui digestio avium per genera de inauspicatis avibus. cornices quibus mensibus non sint inauspicatae de corvis de bubone aves quarum vita aut notitia intercidit quae a cauda nascantur de noctuis de pico martio de iis quae uncos ungues habent de iis quae digitos habent

de pavonibus

quis primus pavonem cibi

causa occiderit. quis farcire

instituerit

de gallinaceis

quo modo castrentur. de gal

linaceo locuto de ansere quis primus iecur anserinum instituerit de commageno chenalopeces, chenerotes, tetraones, otides grues de ciconiis de palmipede reliquo genere

de oloribus de avibus peregrinis quae veniunt

coturnices, glottides, cychra

mus, otus de avibus nostris quae discedunt, et quo abeant

hirundines, turdi, merulae,

sturni de avibus quae plumas amittunt in occultatione

turtur, palumbis quae avium perennes, quae semestres, quae trimestres.

galguli, upupae memnonides meleagrides seleucides ibis quae quibus locis aves non sint quae mutent colorem et vocem

de oscinum genere

de luscinis

de melancoryphis.

erithaci, phoenicuri

oenanthe, chlorio tempus avium geniturae halcyones. dies earum navigabiles de reliquo aquaticarum genere sollertia avium in nidis

hirundinum opera mira. ri

pariae

acanthyllis

merops. de perdicibus de columbis. opera earum mirabilia et pretia differentiae volatus avium et incessus apodes sive cypseli de pastu avium. caprimulgi, platea de ingeniis avium.

carduelis, taurus, anthus de avibus quae locuntur

psittaci

picae glandares
propter corvum loquentem
seditio populi romani diomediae quae animalia nihil discant de potu avium. de porphyrione himantopodes de pastu avium
onocrotali de peregrinis avibus.
phalerides, phasianae, numi
dicae
phoenicopteri, attagenae,
phalacrocoraces, pyrrhoco
races, lagopodes de novis avibus. bibiones de fabulosis avibus qui gallinas farcire instituerint, quique hoc primi consules vetuerint quis primus aviaria instituerit.
de aesopi patina generatio avium
quae praeter aves ova gig
nant
ovorum genera et naturae
vitia et remedia incuban
tium
augustae ex ovis augurium
quales gallinae optimae
morbi earum et remedia
ardeolarum genera
quae sint ova urina, quae
cynosura, quae hypenemia.
quo modo optime serven
tur ova quae volucrum sola animalia pariat et lacte nutriat quae terrestrium ova pariant. serpentium generatio terrestrium omnium generatio
quae sit animalium in uteris
positio
quorum animalium origo ad
huc incerta sit
de salamandris
quae nascantur ex non geni
tis. quae nata nihil gignant.
in quibus neuter sexus sit de sensibus animalium
tactus omnibus esse. item

gustatus. quibus visus prae
cipuus, quibus odoratus, qui
bus auditus. de talpis. an
ostreis auditus
qui ex piscibus clarissime
audiant
qui ex piscibus maxime
odorentur diversitas animalium in pastu
quae venenis vivant,
quae terra. quae fame aut
siti non intereant de diversitate potus quae inter se dissideant amicitiam animalium esse et affectus animalium. exempla affectus serpentium de somno animalium quae somnient summa: res et historiae et observationes dccxciiii.

ex avctoribvs manilio. cornelio valeriano. actis. umbricio meliore. masurio sabino. antistio labeone. trogo. cremutio. M. Varrone. macro aemilio. melisso. muciano. nepote. fabio pictore. t. lucretio. cornelio celso. horatio. deculone. hygino. sasernis. nigidio. mamilio sura.

externis homero. phemonoe. philemone. boetho qui ὀρνιθογονιαν. hyla qui de auguriis. aristotele. theophrasto. callimacho. aeschylo. hierone rege. philometore rege. archyta tarentino. amphilocho atheniense. anaxipoli thasio. apollodoro lemnio. aristophane milesio. antigono cymaeo. agathocle chio. Apollonio pergameno. aristandro athenaeo. bacchio milesio. bione solense. chaerea atheniense. diodoro prieneo. dinone colophonio. democrito. diophane nicaeense. epigene rhodio. euagone thasio. euphronio athenaeo. iuba. androtione qui de agricultura. aeschrione qui item. lysimacho qui item. dionysio qui magonem transtulit. diophane qui ex dionysio epitomas fecit. nicandro. onesicrito. phylarcho. hesiodo.

l. xi continentvr insectorum animalium genera. subtilitas in his rebus naturae an spirent. an habeant sanguinem de corpore eorum de apibus
qui ordo in opere earum
quid sit in eo commosis.
quid sit pissoceros. quid
sit propolis

quid erithace sive sandaraca
sive cerinthos
ex quibus floribus opera
fiant
apium studio capti
de fucis
quae natura mellis
quae optima mella
quae genera mellis in sin
gulis locis
quomodo probentur. de erice
sive tetralice sive sisyro
quomodo apes generent
quae regum in iis ratio
aliquando et laetum omen
esse examinum
genera apium
de morbis apium
quae inimica apibus
de continendis apibus
de reparandis de vespis, crabronibus. quae animalia ex alieno suum faciant de bombyce assyria
de bombyliis, necydalis.
quae prima invenerit bom
bycinam vestem
de bombyce coa. quo modo
conficiatur coa vestis de araneis
qui ex iis texant. quae mate
riae natura ad texendum
generatio araneorum de scorpionibus de stellionibus de cicadis. sine ore esse et sine exitu cibi de pinnis insectorum de scarabaeis. lampyrides. reliqua scarabaeorum generis de locustis de formicis chrysallides, asilus, papiliones de iis animalibus quae ex ligno aut in ligno nascuntur sordium hominis animalia. quod animal minimum. aestatis animalia animal cui cibi exitus non sit tineae, cantharides, culices. nivis animal ignium animal, pyrallis sive pyrotocum hemerobion animalium omnium per singula membra naturae et

historiae quae apices habeant, quae cristas cornuum genera. quibus mobilia de capitibus. quibus nulla de capillo de ossibus capitis de cerebro de auribus. quae aures non habeant. quae sine auribus et sine foraminibus audiant de facie. de fronte. de superciliis de oculis

quae sine oculis animalia.

quae singulos tantum oculos

habeant

de diversitate oculorum

quae ratio visus. noctu

videntes

de natura pupillae. quae non

coniveant. quibus eruti oculi

renascantur

de palpebris

quibus non sint, quibus ab

altera tantum parte sint

quibus genae non sint de malis de naribus buccis, labris, mento, maxillis de dentibus

quae genera eorum.

quibus non utraque parte

sint, quibus cavi

de serpentium dentibus. de

veneno earum.

cui volucri dentes

mirabilia dentium

aetas ruminantium ab iis de lingua quae sine ea. de ranarum sono. de palato de tonsillis. uva, epiglossis. arteriae, gula cervix, collum, spina guttur, fauces, stomachus de corde

sanguine, animo

quibus maxima corda, qui

bus minima, quibus bina

quando in extis aspici coepta de pulmone quibus maximus, quibus minimus. quibus nihil aliud quam pulmo intus. quae causa velocitatis animalium de iocinere

de capite extorum. harus

picum circa id observationes.

quibus animalibus et in

quibus locis bina iocinera
de felle
ubi et quibus geminum.
quibus animalium non sit.
quibus animalium aliubi
quam in iocinere
quae vis eius
quibus crescat cum luna et
decrescat iocur.
haruspicum circa ea obser
vationes et prodigia mira praecordia. risus natura de ventre. quibus nullus. quae sola vomant lactes, hillae, alvus, colon. quare quaedam insatiabilia animalia de omento. de splene. quibus animalium non sint de renibus ubi quaterni animalibus. quibus nulli pectus, costae vesica. quibus animalium non sit. ilia. de membranis uterus. de locis. de volvis. de suum volva, sumine quae adipem, quae sebum habeant. de natura utriusque. quae non pinguescant de medullis. quibus non sint de ossibus. de spinis. quibus nec ossa nec spinae. cartilagines de nervis. quae sine nervis arteriae, venae
quae nec venas nec arterias
habeant.
de sanguine. de sudore
quorum celerrime sanguis
spissetur, quorum non coeat.
quibus crassissimus, quibus
tenuissimus, quibus nullus
quibus certis temporibus
anni nullus
an in sanguine principatus de tergore de pilis et vestitu tergoris. quibus os intus et pedes subtus hirti de mammis quae volucrum mammas habeant. notabilia animalium in uberibus de lacte
quod solum animal sugat
in cursu.
de colostris. de caseis. ex
quibus non fiant.
de coagulo.
genera alimenti ex lacte

genera caseorum differentiae membrorum hominis a reliquis animalibus

de bracchiis, de digitis

de simiarum similitudine

de unguibus

de genibus et poplitibus

in quibus membris corporis

humani religio

varices

de gressu. de pedibus et

cruribus

de ungulis

volucrum pedes

pedes animalium a binis

ad centenos.

de pumilionibus

de genitalibus.

de hermaphroditis

de testibus.

trium generum semiviri

de caudis

de vocibus animalium

de agnascentibus membris vitalitatis et morum notae ex membris hominum de anima. de victu quae veneno pasta ipsa non pereant et gustata necent quibus de causis homo non concoquat de remediis cruditatium quem ad modum corpulentia contingat quem ad modum minuatur quae gustu famem et sitim sedent summa: res et historiae et observationes mmdcc.

ex avctoribvs M. Varrone. hygino. scrofa. saserna. celso cornelio. aemilio macro. vergilio. columella. iulio aquila qui de etrusca disciplina scripsit. tarquitio qui item. umbricio meliore qui item. catone censorio. domitio calvino. trogo. melisso. fabiano. muciano. nigidio. mamilio. oppio.

externis aristotele. democrito. neoptolemo qui μελιτουργικά. aristomacho qui item. Philisco qui item. nicandro. Menecrate. dionysio qui magonem transtulit. empedocle. callimacho. attalo rege. apollodoro qui de bestiis venenatis. hippocrate. herophilo. erasistrato.

asclepiade. themisone. posidonio stoico. menandris prieneo et heracleote. euphronio athenaeo. theophrasto. hesiodo. philometore rege.

l. xii continentvr arborum naturae. honor earum de peregrinis arboribus platanus

quando primum in italiam

et unde

natura earum

miracula ex iis

chamaeplatani. quis primus viridiaria tondere instituerit malum assyrium. quo modo seratur indiae arbores

quando primum hebenus

romae visa.

quae genera eius

spina indica

ficus indica

indicarum arborum formae

sine nominibus.

liniferae indorum arbores.

arbor pala. pomum ariera

piperis arbores.

genera piperis. bregma.

zingiberi sive zimpiberi

caryophyllon. lycium sive

pyxacanthum chironium

machir

saccaron arbores arianae gentis, item gedrosiae, item hyrcaniae item bactriae. bdellium sive brochum sive malachan sive maldacum. scordasti. in omnibus odoribus aut condimentis dicuntur adulterationes, experimenta, pretia persidis arbores persici maris insularum arbores. gossypinum arbor cynas arbor. ex quibus arboribus lintea in oriente fiant quo in loco arborum nullis folia decidant quibus modis constent arborum fructus de costo de nardo. differentiae eius xii asaron amomum, amomis cardamomum de turifera regione

de arboribus, quae tus
ferunt
quae natura turis et quae
genera de murra
de arboribus quae ferunt
eam

natura et genera murrae de mastiche de ladano, storbo enhaemo bratus arbor stobrum arbor de felicitate arabiae de cinnamo, cinnamomo, xylocinnamo casia cancamum, tarum serichatum, gabalium myrobalanus phoenicobalanus de calamo odorato de iunco odorato hammoniacum sphagnos cypros aspalathos sive erysisceptron maron de balsamo, opobalsamo, xylobalsamo styrax galbanum de panace spondylion de malobathro de omphacio bryon, oenanthe, massaris elate vel spathe cinnamum comacum summa: res et historiae et observationes cccclxviiii.

ex avctoribvs M. Varrone. muciano. vergilio. fabiano. seboso. pomponio mela. fabio proculo. hygino. trogo. claudio caesare. cornelio nepote. sextio nigro qui graece de medicina scripsit. cassio hemina. l. pisone. tuditano. antiate.

externis theophrasto. herodoto. callisthene. isigono. clitarcho. anaximene. duride. nearcho. onesicrito. polyclito. olympiodoro. diogneto. nicobule. anticlide. charete mytilenaeo. menaechmo. dorotheo athenaeo. lyco. antaeo. ephippo. dinone. adimanto. ptolemaeo lagi. marsya macedone. zoilo item. democrito. amphilocho. aristomacho. alexandro polyhistore. iuba. apollodoro qui de odoribus. heraclide medico. botrye medico. archedemo item. dionysio item. democle item. euphrone item. mneside item. diagora item. iolla item. heraclide tarentino. xenocrate ephesio.

l. xiv continentvr frugiferae arbores. de vitium natura quibus modis serantur. de uvarum natura et cura vitium et uvarum genera xci insignia culturae et vinearum de inventione mulsi vina generosa l vina generosa transmarina xxxviii de vino opimiano notabilia circa apothecas de natura vini vini salsi genera vii de passi et hepsematum et dulcium generibus xvii secundari vini genera iii quam nuper coeperint vina generosa in italia de vino observationes a romulo rege

quibus vinis usi antiqui quando primum vini quattuor genera apposita ex labrusca usus v qui frigidissimus natura sucus vini fictici genera lxvi hydromeli sive apomeli sive melicraton oxymeli vini prodigiosa genera xii quibus vinis ad sacra uti fas non sit quibus generibus musta condiant

de pice, resinis de vasis vinariis de aceto. de faece de cellis de ebrietate ex aqua et frugibus vini vim fieri summa: res et historiae et observationes dx.

ex avctoribvs cornelio valeriano. vergilio. celso. catone censorio. sasernis patre et filio. scrofa. M. Varrone. d. silano. fabio pictore. trogo. hygino. flacco verrio. graecino. attico iulio. columella. masurio sabino. fenestella. tergilla. maccio plauto. fabio dossenno. scaevola. l. aelio. ateio capitone. cotta messalino. l. pisone. pompeio lenaeo. fabiano. sextio nigro. vibio rufino.

externis hesiodo. theophrasto. aristotele. democrito. hierone rege. philometore rege. attalo rege. archyta. xenophonte. amphilocho athenaeo. anaxipoli thasio. apollodoro lemnio. aristophane milesio. antigono cymaeo. agathocle chio. Apollonio pergameno. aristandro athenaeo. bacchio milesio. bione solense. chaerea atheniense. cheresto item. diodoro prieneo. dinone colophonio. epigene rhodio. euagone thasio. euphronio athenaeo. androtione qui de agricultura scripsit. aeschrione qui item. lysimacho qui item. dionysio qui magonem transtulit. diophane qui ex dionysio epitomas fecit. asclepiade medico. erasistrato item. commiade qui de conditura vini scripsit. aristomacho qui item. hicesio qui item. themisone medico. onesicrito. iuba rege.

l. xv continentvr naturae frugiferarum arborum. de olea
quamdiu apud graecos tan
tum fuerit.
quando primum in italia,
hispania, africa esse coe
perit
de oleo. nationes et boni
tates olei
quae natura olivae et olei

incipientis
olivarum genera xv
de natura olei
cultura olearum. de servan
dis olivis. quo modo facien
dum oleum
olei fictici genera xlviii.
cici arbor sive croto sive
sibi sive sesamon
de amurca pomorum omnium genera et natura
nucum pinearum genera iiii
struthiorum genera iiii
cotoneorum genera iiii
punicorum genera viiii
persicorum genera vii
prunorum genera xii
de persea
malorum genera xxx
quo quaeque tempore ex
terna poma venerint in
italiam et unde
quae novissime
pirorum genera xli
de insitorum varietate et
fulgurum piatione
de pomis servandis et uvis
ficorum genera xxviiii
de ficis historica
de caprificatione
mespilae genera iii
sorvorum genera iiii
nucum genera viiii
castanearum genera viii
siliquae
de carnosis pomis.
de moris
de unedone

acinorum naturae
bacarum naturae
cerasorum genera viiii
corna. lentisci
sucorum differentiae xiii myrtus
historica de myrto
genera eius xi laurus. genera eius xiii summa: res et historiae et observationes dxx.

ex avctoribvs fenestella. fabiano. vergilio. cornelio valeriano. celso. catone censorio. sasernis patre et filio. scrofa. M. Varrone. d. silano. fabio pictore. trogo. hygino. flacco verrio. graecino. attico iulio. columella. masurio sabino. tergilla. cotta messalino. l. pisone. pompeio lenaeo. maccio plauto. fabio dossenno. scaevola. l. aelio. ateio capitone. sextio nigro. vibio rufino.

externis hesiodo. theophrasto. aristotele. democrito. hierone rege. philometore rege. attalo rege. archyta. xenophonte. amphilocho athenaeo. anaxipoli thasio. apollodoro lemnio. aristophane milesio. antigono cymaeo. agathocle chio. Apollonio pergameno. aristandro athenaeo. bacchio milesio. bione solense. chaerea athenaeo. cheresto item. diodoro prieneo. dinone colophonio. epigene rhodio. euagone thasio. euphronio athenaeo. androtione qui de agricultura scripsit. aeschrione qui item. lysimacho qui item. dionysio qui magonem transtulit. diophane qui ex dionysio epitomas fecit. asclepiade medico. erasistrato item. commiade qui de conditura vini scripsit. aristomacho qui item. hicesio qui item. themisone medico. onesicrito. iuba rege.

l. xvi continentvr silvestrium arborum naturae. gentes sine arbore miracula in septentrionali regione arborum de glandiferis
de civica corona
de coronarum origine
qui frondea corona donati
glandium genera xiii
de fago
de reliquis glandibus
de carbone

de galla
quam multa praeter glan
dem ferant eaedem arbores
cachrys
coccum

agaricum quarum arborum cortices in usu de scandulis de pinu pinastro picea, abiete larice, taeda taxo quibus modis fiat pix liquida. quo modo cedrium fiat quibus modis spissa pix fiat. quibus coquatur resina zopissa quarum arborum materiae in pretio

fraxini genera iiii
tiliae genera ii
aceris genera x
bruscum, molluscum, sta
phylodendron
buxi genera iii
ulmorum genera vi arborum natura per situs
quae montanae
quae campestres
quae siccaneae
quae aquaticae

quae communes divisio generum quibus folia non decidant. de rhododendro quibus non omnia folia cadant. quibus in locis nulli arborum de natura foliorum cadentium quibus foliorum varii colores. populorum genera iii quorum foliorum figura mutetur quae folia versentur omnibus annis foliorum e palmis cura et usus foliorum mirabilia ordo naturae in satis quae arbores numquam floreant de iuniperis de conceptu arborum. de germinatione. de partu quo ordine floreant de cornu. quo quaeque tempore ferant anniferae. in triennium ferentes quae fructum non ferant quae infelices existimentur quae facillime perdant fructum aut florem quae ubique non ferant quo modo quaeque ferant quibus fructus ante quam folium nascatur biferae. triferae quae celerrime senescant quae tardissime. praecoces fructus. serotini in quibus plura rerum genera gignantur crataegum differentiae arborum per corpora et ramos

lotos sive faba graeca
de ramis
cortice

radicibus arbores quae sponte resurrexerint quibus modis sponte nascantur arbores naturae differentiae non omnia ubique generantis

ubi quae non nascantur

de cupressis nasci saepe ex terra quae ante nata non sint de hedera. genera eius xx smilax de aquaticis

de calamis. harundinum

genera xxviii

de sagittariis et

scriptoriis et

fistulatoriis calamis

de orchomenia harundine

et aucupatoria et piscatoria

de vinitoria harundine

de alno

de salice, genera eius viii

quae praeter salicem ad

ligando utilia

de scirpis, candelis, cannis,

tegulo

de sabucis, de rubis de arborum sucis de natura materiarum de arboribus caedendis de magnitudine arborum de materiis architectonica de sappino igniaria e ligno quae cariem non sentiant, quae rimam historica de perpetuitate materiarum teredinum genera de materiis fabrilia de glutinanda materia de laminis sectilibus arborum durantium vetustas

ab africano priore sata

in urbe roma d annorum

arbor

ab urbe condita arbores

vetustiores urbe in subur

banis

ab agamemnone satae ar

bores

a primo anno belli troiani

arbores

ab ili appellatione arbores

apud troiam antiquiores

bello troiano
item argis
ab hercule satae
ab apolline satae
arbor antiquior quam athe

nae quae genera arborum minume durent arbores ex eventu nobiles quae sedem nascendi suam non habeant quae in arboribus vivant et in terra nasci non possint. genera earum viiii cassytas, hyphear, stelis, hippophaeston de visci et similium natura de visco faciendo summa: res et historiae et observationes mcxxxv

ex avctoribvs M. Varrone. fetiale. nigidio. cornelio nepote. hygino. masurio. catone. muciano. l. pisone. trogo. calpurnio basso. cremutio. sextio nigro. cornelio boccho. vitruvio. graecino.

externis alexandro polyhistore. hesiodo. theophrasto. democrito. homero. timaeo mathematico.

l. xvii continentvr sativarum arborum naturae. arborum pretia mirabilia caeli natura ad arbores quam partem caeli spectare vineae debeant qualis terra optima de terrae, qua graeci, britanniae et galliae laetant, generibus viii de cineris usu de fimo quae sata uberiorem terram faciant, quae urant quibus modis fimo utendum quibus modis arbores serantur semine nascentia quae numquam degenerent plantis nascentia avolsione nascentia et surculo de seminariis. de transferendis seminariis de ulmis serendis de scrobibus de intervallis arborum de umbra de stillicidiis quae tarde crescant, quae celeriter propagine nascentia de insitione

quo modo inventa sit
genera insitionum
inoculatio
emplastratio

de vite inserenda ramo nascentia quae taleis et quo modo serantur olearum cultura operum surcularium per tempora anni digestio de ablaqueandis et adcumulandis de salicto harundineta de ceteris ad perticas et palos caeduis vinearum ratio et arbustorum ne uvae ab animalibus infestentur morbi arborum prodigia ex arboribus medicinae arborum

quo modo rigandum
mirabilia de riguis
de scariphatione
quo modo circumforan
dum
castratio arborum
caprificatio
quae putationis
quae stercorationis vitia ar
boribus
medicamenta summa: res et historiae et observationes mccclxxx

ex avctoribvs cornelio nepote. catone censorio. M. Varrone. celso. vergilio. hygino. sasernis patre et filio. scrofa. calpurnio basso. trogo. aemilio macro. graecino. columella. attico iulio. fabiano. mamilio sura. dessio mundo. c. epidio. l. pisone.

externis hesiodo. theophrasto. aristotele. democrito. theopompo. hierone rege. philometore rege. attalo rege. archelao rege. archyta. xenophonte. amphilocho atheniense. anaxipoli thasio. apollodoro lemnio. aristophane milesio. antigono cymaeo. agathocle chio. Apollonio pergameno. bacchio milesio. bione solense. chaerea atheniense. cheresto item. diodoro prieneo. dinone colophonio. epigene rhodio. euagone thasio. euphronio athenaeo. androtione qui de agricultura scripsit. aeschrione qui item. lysimacho qui item. dionysio qui magonem transtulit. diophane qui ex dionysio epitomas fecit. aristandro qui de portentis scripsit.

l. xviii continentvr naturae frugum. antiquorum studium in agricultura quae prima romae corona. de spicea corona de iugero quotiens et quibus temporibus fuerit summa vilitas annonae qui inlustres de agricultura scripserint quae observanda in agro parando de villarum positione praecepta antiquorum de agro colendo genera frugum naturae per genera frumenti
de farre
tritico
hordeo
polenta

ptisana
trago
amylo
siligine, similagine
arinca sive olyra
semine sive zea
de reliquis in oriente gene
ribus
de pisturis
de sesima
de erysimo sive irione
de hormino
milio
panico
de fermentis
panis faciendi ratio et gene
ra
quando pistorum initium
romae de leguminibus

faba

ciceris genera
faseoli
pisum
de rapis
napis
lupino pabularia

vicia

ervum
silicia
secale sive asia
farrago
de ocino. ervilia
medica de avena. morbi frugum remedia quid in quoque terrae

generum debeat seri diversitas gentium in sationibus vomerum genera ratio arandi de occando, runcando, sariendo. de cratitione de summa fertilitate soli ratio saepius anno serendi idem arvum stercoratio seminum probatio quantum ex quoque genere frumenti in iugero serendum de temporibus serendi

digestio siderum in dies

et notae terrestres rerum

in agro agendarum quid quoque mense in agro fieri oporteat

de papavere

de faeno

causae sterilitatium et re

media

de messibus

de frumento servando

de vindemia et autumni

operibus lunaris ratio ventorum ratio limitatio agrorum prognostica

a sole

a luna

stellis

tonitribus

nubibus

nebulis

ignibus terrestribus

aquis

ab ipsis tempestatibus

ab animalibus aquatilibus

a volucribus

a quadrupedibus summa: res et historiae et observationes mmlx

ex avctoribvs masurio sabino. cassio hemina. verrio flacco. l. pisone. cornelio celso. turranio gracile. d. silano. M. Varrone. catone censorio. scrofa. sasernis patre et filio. domitio calvino. hygino. vergilio. trogo. ovidio. graecino. columella. tuberone. l. tarutio qui graece de astris scripsit. caesare dictatore qui item. sergio plauto. sabino fabiano. M. Cicerone. calpurnio basso. ateio capitone. mamilio sura. attio qui praxidicam scripsit.

externis hesiodo. theophrasto. aristotele. democrito. hierone rege.

philometore rege. attalo rege. archelao rege. archyta. xenophonte. amphilocho athenaeo. anaxipoli thasio. apollodoro lemnio. aristophane milesio. antigono cymaeo. agathocle chio. Apollonio pergameno. aristandro athenaeo. bacchio milesio. bione solense. chaerea atheniense. cheresto item. diodoro prieneo. dinone colophonio. epigene rhodio. euagone thasio. euphronio athenaeo. androtione qui de agricultura scripsit. aeschrione qui item. lysimacho qui item. dionysio qui magonem transtulit. diophane qui ex dionysio epitomas fecit. thalete. eudoxo. philippo. callippo. dositheo. parmenisco. metone. critone. oenopide. conone. euctemone. harpalo. hecataeo. anaximandro. sosigene. hipparcho. arato. zoroastre. archibio.

l. xx continentvr medicinae ex iis quae in hortis seruntur. cucumere silvestri xxvi elaterio xxvii anguino cucumere sive erratico v cucumere sativo viiii pepone xi cucurbita silvestri sompho i colocynthide xiii rapis viiii rapo silvestri i napis sive bunio sive buniade v raphano sativo xliii armoracia i pastinaca hibisco sive plistolochia sive moloche agria xi staphylino sive pastinaca erratica xxii gingidio i sisere xi sile xii inula xi caepa xxvii porro sectivo xxxii porro capitato xxxviiii alio lxi lactuca xlii caprina iiii caesapo i isati i lactuca silvatica vii hieracia xvii beta xxiiii limonio sive neuroide iiii intubo quae ambubaia iiii cichorio sive chresto sive pancratio xii hedypnoide iiii seris generibus ii medicinae vii brassica lxxxvii cyma brassica silvestri xxvii lapsana i marina brassica i scilla xxiiii bulbis xxx bulbine i. bulbo vomitorio asparago sativo xvii corruda sive ormino sive libyco xxiiii apio xvii apiastro sive melissophyllo olusatro sive hipposelino xi oreoselino ii. heleoselino i petroselino i. buselino i ocimo xxviii eruca xii nasturcio xlii ruta lxxxiiii mentastro xx menta xli puleio xxv puleio silvestri xviiii nepeta viiii cumino xvi cumino silvestri xxvi ami x cappari xviii ligustico sive panace iii cunila bubula v cunila gallinacea sive origano v cunilagine viii cunila molli ii libanotide ii cunila sativa iii cunila montana vii piperitide sive siliquastro v origano oniti sive prasio vi tragorigano viiii origano heraclio, generum iii, medicinae xxx lepidio iii git sive melanthio xxiii aneso sive aniceto lxi aneto

viiii sacopenio sive sagapeno xiii papavere albo ii papavere nigro viii de sopore. de opio. contra potiones quas ἀνωδύνους et ληξιπυρέτους et πεπτικὰς et κοιλιακὰς vocant papavere silvestri ii. meconio papavere rhoea ii papaver e ceratiti sive glaucio sive paralio v papavere heraclio sive aphrode ii. διὰ κωδυῶν papavere tithymalo sive paralio iii quo modo sucus herbarum colligendus porcilaca xlv. pepli xlv coriandro xxi atriplice xiiii malva malope xlvi malva malache i malva althaea sive plistolochia xviiii lapatho silvestri sive oxalide sive lapatho canterino sive rumice i oxylapatho vii hydrolapatho ii hippolapatho vi lapatho sativo xxi bulapatho i sinapi, generum iii, medicinae xlviii adarca xlviii marrubio sive prasio sive linostropho sive philopaede sive philochare xxviiii serpyllo xviii sisymbrio sive thymbraeo xiii lini semine xxvii blito vi meo athamantico sive athamanico vii feniculo xxiii hippomaratho sive myrsineo v cannabi vii ferula viii carduo sive scolymo vi theriacae conpositio summa: medicinae et historiae et observationes mdcvi

ex avctoribvs catone censorio. M. Varrone. pompeio lenaeo. c. valgio. hygino. sextio nigro qui graece scripsit. iulio basso qui item. celso. antonio castore.

externis democrito. theophrasto. orpheo. menandro qui βιόχρηστα scripsit. pythagora. nicandro. medicis hippocrate. chrysippo. diocle. ophione. heraclide. hicesio. dionysio. apollodoro citiense. apollodoro tarentino. praxagora. plistonico. medio. dieuche. cleophanto. philistione. asclepiade. crateua. petronio diodoto. iolla. erasistato. diagora. andrea. mneside. epicharmo. damione. dalione. sosimene. tlepolemo. metrodoro. solone. lyco. olympiade thebana. philino. petricho. miccione. glaucia. xenocrate.

l. xxi continentvr naturae florum et coronamentorum. de strophiolis. serta qui invenerint miscere flores. quando primum corollae appellatae et quare quis primus coronas foliis argenteis et aureis dederit quare corollaria dicta. de lemniscis. quis primus caelaverit eos quantus honor coronarum apud antiquos fuerit severitas antiquorum in coronis quem floribus honoraverit populus romanus pactiles coronae de sutilibus coronis de nardinis. de sericis cleopatrae reginae factum in coronis de rosa. gen. eius xii. med. xxxii lili gen.

iii. med. xxi lacrima sua nascens narcissi gen. iii med. xvi quorum semen tinguatur, ut infecta nascantur quem ad modum quaeque nascantur, serantur, colantur sub singulis generibus violae colores iii. med. xvii luteae gen. v med. x caltha. regius flos baccar. med. xvii combretum med. i crocum. med. xx ubi optimi flores. qui flores troianis temporibus in usu de natura odorum iris. med. xli saliunca med. ii polium sive teuthrion med. xviii qui flos alium colorem mane habeat, alium meridie, alium sole occidente vestium aemulatio cum floribus amarantus cyanus. med. ii holochrysos med. iii petilium. bellio chrysocome sive chrysitis. med. vi. qui frutices flore coronent qui folio. melothrum. spiraea. origanum. cneorum sive casia, gen. ii. melissophyllum sive melittaena. med. xxi melilotos quae sertula campana. med. xiii trifoli gen. iii. med. iiii. myophonum thymi genera ii. med. xxxiii. flore nascentia, non semine conyza iovis flos. hemerocalles. med. iiii helenium med. v phlox. quae ramis et folio odorata habrotonum. med. xxii. adonium. genera ii ipsa se propagantia leucanthemum med. i amaracum sive sampsuchum. med. xi nyctegreton sive chenamyche sive nyctalops quo ordine temporum flores nascantur anemone coronaria sive phrenion med. x oenanthe herba med. vi. melanium. heliochrysos med. xi lychnis. med. vii gladiolus. hyacinthus med. viii tiphyon. pothi gen. ii. orsinae gen. ii vicapervica sive chamaedaphne med. iiii quae semper vireat herba quam longa cuique vita florum quae propter apes serenda inter flores. cerintha de pabulo apium. de morbis earum et remediis de venenato melle et remediis eius de melle insano de melle quod muscae non attingunt de alvariis. de alvis et cura earum si famem apes sentiant de cera facienda quae optima eius genera de cera punica sponte nascentium herbarum in quibuscumque gentibus usus, naturae, miracula fraga. tamnum. ruscum med. iiii batis gen. ii med. ii pastinaca pratensis. lupus salictarius colocasia. med. ii anthalium anthyllium sive anthyllum med. vi oetum. quae radices nihil supra terram gignant: arachidne, aracos candryala. hypochoeris. caucalis. enthryscum. scandix, eadem tragopogon. parthenium sive leucanthes sive amaracum sive perdicium sive muralis med. viii trychnum sive strychnum sive halicacabum sive callias sive dorycnion sive manicon sive peritton sive neuras sive morio sive moly med. iii corchorus med. vi aphace. achynops. epipetron. quae numquam floreat, quae

semper cneci gen. iii. med. iii aculeati generis herbae erynge. glycyrriza tribulus anonis pheos sive stoebe. hippophaes urticae gen. iiii. lamium. scorpio acorna. leucacanthos. chalceos. cnecos. polyacanthos. onopyxos. helxine. scolymos. chamaeleon. tetralix. atractylis sive phonos. acanthice mastiche cactos. tenica, pappum, ascalia herbarum genera per caules: coronopus. anchusa. anthemis. phyllanthes. crepis. lotos differentiae herbarum per folia: quibus folia non cadant. quae particulatim floreant heliotropium, adiantum, herbae quarum medicinae sequenti libro dicentur spicatarum genera: stanyops. alopecuros. stelephuros sive ortyx sive plantago. thryallis perdicium. ornithogale post annum nascentes a summo florentes, item ab imo lappa herba quae intra se parit. opuntia e folio radicem faciens iasine. chondrylla. picris. quae toto anno floreant quibus flos ante quam caules exeant, quibus caulis ante quam flos. quae ter floreat cypiros med. viii. thesium. asphodelus sive hastula regia. anthericus sive albucum iunci gen. vi. med. iiii cyperus. med. xiiii cyperis cypira holoschoenos med. ex iunco odorato sive teuchite x med. ex asaro viii med. ex gallico nardo viii med. ex herba quam phun vocant iiii syrium crocomagma, med. ii pesoluta. med. i graecorum nominum in ponderibus et mensuris interpretatio summa: medicinae et historiae et observationes dccxxx

ex avctoribvs catone censorio. M. Varrone. masurio. antiate. caepione. vestino. vibio rufino. hygino. pomponio mela. pompeio lenaeo. cornelio celso. calpurnio basso. c. valgio. licinio macro. sextio nigro qui graece scripsit. iulio basso qui item. antonio castore.

externis theophrasto. democrito. orpheo. pythagora. magone. menandro qui βιόχρηστα scripsit. nicandro. homero. hesiodo. musaeo. sophocle. anaxilao. medicis mnesitheo qui de coronis. callimacho qui item. phania physico. timaristo. simo. hippocrate. chrysippo. diocle. ophione. heraclide. hicesio. dionysio. apollodoro citiense. apollodoro tarentino. praxagora. plistonico. medio. dieuche. cleophanto. philistione. asclepiade. crateua. petronio diodoto. iolla. erasistrato. diagora. andrea. mneside. epicharmo. damione. dalione. sosimene. tlepolemo. metrodoro. solone. lyco. olympiade thebana. philino. petricho. miccione. glaucia. xenocrate.

l. xxii continentvr auctoritas herbarum gentes herbis formae gratia uti herbis infici vestes, item pigmento gallicae cortinae. de sagminibus. de verbenis et clarigatione de corona graminea. de raritate eius qui soli corona ea donati qui solus centurio medicinae ex reliquis coronamentis: erynge sive eryngio quae centum capita xxx acano i glycyrriza sive adipso xv stomatice i tribuli gen. ii med. xii stoebe sive pheos hippophaes. gen. ii. med. ii urtica lxi lamio vii scorpionis gen. ii med. i leucacantha quae phyllos sive ischas sive polygonatos iiii helxine xii perdicio sive parthenio sive siderite quae urceolaris sive astercum xi chamaeleone sive ixia sive ulophyto sive cynozolo, gen. ii, med. xii. mastiche coronopode anchusa xiiii pseudoanchusa quae echis sive doris iii onochilo sive archebio sive onocheli sive rhexia sive enchrysa x cuius radices colorem mutent anthemide sive leucanthemide sive leucanthemo sive chamaemelo sive melanthio, gen. iii, med. xi loto herba iii lotometra ii heliotropio sive helioscopio sive verrucaria xii heliotropio sive tricocco sive scorpiuro xiiii adianto sive callitricho sive trichomane sive polytricho sive saxifraga, gen. ii, med. xxviii frutex sine radice picride i. thesio i asphodelo li halimo xiiii acantho sive paederote sive melamphyllo v bupleuro v bupresti i elaphobosco viiii scandice viii enthrysco ii iasine iiii caucalide xii sio xi sillybo scolymo sive limonio v sonco, gen. ii, med. xv condrio sive condrille vi de boletis. proprietas eorum in nascendo de fungis. notae venenatorum. med. ex iis viiii silphio vii laseri xxxviiii propoli v. mellis xvi aquae mulsae xviii quare genere ciborum mores quoque mutentur mulso vi melitite iii cera viii contra conpositiones medicorum medicinae ex frugibus

siligine i. tritico ii. palea ii.
farre i. furfuribus i. arinca.
athera ii
farina per genera. medi
cinae xxxviiii
polenta viii
polline v. pulte i. farina
chartaria i
alica vi
milio vi
panico iiii

sesima vii. sesamoide iii.
anticyrico iiii
hordeo viiii. hordeo muri
no quam graeci phoeniceam

i

ptisana iiii
amylo viii. avena i
pane xxi
faba xiiii
lente xxxii
φάκῳ ἐπὶ τελμάτων ii
elelisphaco sive sphaco quae
salvia xiii
cicere et cicercula xxvi
ervo xx
lupino xxxv
irione sive erysimo quod
galli velam xv
hormino vi lolio v miliaria herba i bromo i orobanche sive cynomorio i contra leguminum bestiolas i de zytho i. spuma summa: medicinae et historiae et observationes dccccvi
ex avctoribvs iisdem quibus priore libro et praeter eos chrysermo. eratosthene. alcaeo.

l. xxiii continentvr medicinae ex arboribus cultis: vitibus xx foliis et pampinis vitium xii omphacio vitium xiiii oenanthe xxi uvis recentibus uvarum servatarum generibus med. xi sarmentis uvarum i nucleis acinorum vi vinaceis iii uva theriace iiii uva passa sive astaphide xvii astaphide agria sive staphide sive pituitaria xii labrusca sive uva taminia quae et ampelos agria xii salicastro xii vite alba sive ampelo leuce sive staphyle sive melothro sive psilothro sive archezosti sive cedrosti sive mado xxxi vite nigra sive bryonia sive chironia sive gynaecanthe sive apronia xxxv musto xv falerno vi. albano ii. surrentino iii setino i. statano i. signino i ceteris vinis xiiii observationes circa vina lxi quibus aegris danda, quando danda,

quomodo danda. observationes circa ea xci aceto xxxiii aceto scillino xvii oxymelite vii. oxyalme vii sapa vii faece vini xii faece aceti xvii faece sapae iiii foliis oleae xxiii flore iiii. olea ipsa vi olivis albis iiii. olivis nigris iii amurca xxi foliis oleastri xxi omphacio iii oenanthino oleo xxviii cicino xvi amygdalino xvi laureo viiii myrteo xx chamaemyrsinae sive oxymyrsinae, cupressino, citreo, caryino, cnidio, lentiscino, balanino cyprino et cypro ipsa xv gleucino i, balsamino xv malobathro v byoscyamino ii. thermino i. narcissino i. raphanino ii. sesamino iii. lilino iiii. selgitico i. iguino i elaeomeli ii. pissino ii palmis viiii palma myrobalano iii palma elate xv medicinae ex singulorum generum flore, foliis, fructu, ramis, cortice, suco, ligno, radice, cinere

malorum observationes vi
cotoneorum xxv
struthiorum i
dulcium malorum vi
austerorum i
citreorum v
punicorum xxiii
stomatice xiiii
cytino viiii
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pirorum observationes xiii
ficorum cxi
caprificorum xlii
erineo herba iii
prunis iiii
persicis ii
prunis silvestribus ii
lichene arborum ii
moris xxxxviiii
stomatice sive arteriace si
ve panchrestos iiii
cerasis v
mespilis ii. sorbis ii
nucibus pineis xiii
amygdalis xxviiii

nucibus graecis v
iuglandibus xxiiii. anti
doto
abellanis iii. pistaciis viii.
castaneis v
siliquis v. corno i. unedoni
bus
lauris lxviiii
myrtis lx
myrtidano xiii
oxymyrsine sive chamae
myrsine quae ruscum vi summa: medicinae et historiae et observationes mccccxviii

ex avctoribvs c. valgio. pompeio lenaeo. sextio nigro qui graece scripsit. iulio basso qui item. antonio castore. M. Varrone. cornelio celso. fabiano.

externis theophrasto. democrito. orpheo. pythagora. magone. menandro qui βιόχρηστα. nicandro. homero. hesiodo. musaeo, sophocle, anaxilao. medicis mnesitheo. callimacho. phania physico. timaristo. simo. hippocrate. chrysippo. diocle. ophione. heraclide. hicesio. dionysio. apollodoro citiense. apollodoro tarentino. praxagora. plistonico. medio. dieuche. cleophanto. philistione. asclepiade. crateua. petronio diodoto. iolla. erasistrato. diagora. andrea. mneside. epicharmo. damione. dalione. sosimene. tlepolemo. metrodoro. solone. lyco. olympiade thebana. philino. petricho. miccione. glaucia. xenocrate.

l. xxiv continentvr medicinae ex arboribus silvestribus: loto italica vi glandibus xiii cocco ilicis iii galla xxiii visco ix pilulis glandiferarum i cerro viii subere ii fago iiii cupresso xxiii cedro xiii cedride x galbano xxvi hammoniaco xxiiii styrace xii spondylio xvii sphagno sive sphaco sive bryo v terebintho vi picea viii chamaepity xv pityusa vi resinis xxv pice xxvii pisselaeo sive palimpissa xvi pissasphalto ii zopissa i taeda i lentisco xxii platano xv fraxino v acere i populo viii ulmo xvi tilia v sabuco xv iunipero xxi salice xiiii. amerina i vitice xxxiii erice i genista v myrice quae et tamarica iii

virga sanguinea i brya xviiii silere iii ligustro viii alno i hederis xxxviiii cisto v cisso erythrano ii. chamaecisso ii. milace ii. clematide ii harundine xviiii papyro, charta iii hebeno v rhododendro i rhus gen. ii medicinae vi. stomatice rhu erythro viiii erythrodano xi alysso ii radicula sive struthio xvi apocyno ii rore marino xviii cachry v herba sabina vii selagine ii samolo ii cummi xi spina arabica iiii spina alba ii. acanthio i acacia xviii aspalatho sive erysisceptro sive adipsatheo sive diaxylo viiii spina appendice ii. pyracantha i paliuro x aquifolia x. taxo i rubis li. stomatice cynosbato iii idaeo rubo iii rhamni gen. ii med. v lycio xviii sarcocolla ii oporice ii trixagine sive chamaedrye sive chamaerope sive teucria xvi chamaedaphne vi chamelaea vi chamaesyce viii chamaecisso herba i chamaeleuce sive farfaro sive farfugio i chamaepeuce ii. chamaecyparisso ii. ampelopraso vi. stachye i clinopodio sive cleopiceto sive zopyrontio sive ocimoide iii clematide centunculo iii clematide sive aetite sive lagine x clematide aegyptia sive daphnoide sive polygonoide ii aro xlii dracunculo ii ari iiii milifolio sive myriophyllo vii pseudobunio iiii myrride sive myrra sive myriza viii oenobreche iii magica de herbis

coracesia et calicia
minyade sive corinthia i
aproxi. pythagorea de reci
divis morborum
aglaophotide sive marmari
tide. achaemenide sive
hippophobade. theombrotio
sive semnio. adamantide.
arianide, theronarca. aethio
pide sive meroide. ophiusa.
thalassaegle sive potamau
gide. theangelide. geloto
phyllide. hestiateride sive
protomedia sive casignete
sive dionysonymphade. he
lianthide sive heliocallide.
hermesiade. aeschynomene.
crocide. onothuride. ana

campserote eriphia herba lanaria i. lactoris i. militaris i stratiotes v herba de capite statuae i herba de fluminibus i lingua herba i herba de cribro i herba de fimetis i herba a canum urina i rodarum iii impia ii veneris pecten i exedum i. notia i philanthropos i. lappa canaria ii tordylon sive syreon iii gramen xvii dactylos v faenum graecum quae silicia xxxi summa: medicinae et historiae et observationes mclxxvi

ex avctoribvs c. valgio. pompeio lenaeo. sextio nigro qui graece scripsit. iulio basso qui item. antonio castore. cornelio celso.

externis theophrasto. apollodoro. democrito. orpheo. pythagora. magone. menandro qui βιόχρηστα scripsit. nicandro. homero. hesiodo. musaeo. sophocle. anaxilao. medicis mnesitheo. callimacho. phania physico. timaristo. simo. hippocrate. chrysippo. diocle. ophione. heraclide. hicesio. dionysio. apollodoro citiense. apollodoro tarentino. praxagora. plistonico. medio. dieuche. cleophanto. philistione. asclepiade. crateua. petronio diodoto. iolla. erasistrato. diagora. andrea. mneside. epicharmo. damione. sosimene. tlepolemo. metrodoro. solone. lyco. olympiade thebana. philino. petricho. miccione. glaucia. xenocrate.

l. xxvi continentvr reliquae per genera medicinae de novis morbis quid sint lichenes quando primum in italia coeperint item carbunculus item elephantiasis item colum de nova medicina de asclepiade medico qua ratione medicinam veterem mutaverit contra magos lichen, gen. ii. med. v proserpinaca i bellis ii condurdum i bechion sive arcion sive chamaeleuce quae tussilago iii bechion quae salvia iiii molon sive syron i amomon iii ephedra sive anabasis iii geum iii tripolion iii gromphaena malundrum ii chalcetum i molemonium i halus sive cotonea v chamaerops i. stoechas i astragalus vi ladanum xiii chondris sive pseudodictamnum i hypocisthis sive orobethron, gen. ii. med. viii laver sive sion ii potamogiton viii. statice iii ceratia ii leontopodion sive leuceoron sive doripetron sive thorybethron ... lagopus ii epithymon sive hippopheos viii pycnocomon iiii polypodion iii scamonia viii tithymalos characias ... tithymalos myrtites sive caryites xxi tithymalos paralius sive tithymalis iiii tithymalos helioscopios xviii tithymalos cyparittias xviii tithymalos platyphyllos sive corymbites

sive amygdalites iii tithymalos dendroides sive cobios sive leptophyllos xviii apios ischas sive raphanos agria ii crethmon xi. cachry anthyllion ii. anthyllis ii cepaea i hypericon sive chamaepitys sive corisson viiii caros sive hypericon x callithrix i perpressa i chrysanthemum i anthemis i silaus i herba fulviana inguinalis sive argemo chrysippeos i orchis sive serapias v satyrion iii. satyrion erythraicon iiii lappago sive mollugo i asperugo i phycos quod fucus marinus, gen. iii. med. v lappa boaria geranion sive myrris sive myrtis, gen. iii. med. vi onothera sive onear iii acte sive ebulum. chamaeacte hippuris sive ephedron sive anabasis quae equisaetum, gen. iii. med. xvii stephanomelis erysithales i polycnemon i arsenogonon i. thelygonon i mastos i ophrys summa: medicinae et historiae et observationes mxviiii

ex avctoribvs M. Varrone. c. valgio. pompeio lenaeo. sextio nigro qui graece scripsit. iulio basso qui item. antonio castore. cornelio celso.

externis theophrasto. apollodoro. democrito. iuba. orpheo. pythagora. magone. menandro qui βιόχρηστα scripsit. nicandro. homero. hesiodo. musaeo. sophocle. xantho. anaxilao. medicis mnesitheo. callimacho. phania physico. timaristo. simo. hippocrate. chrysippo. diocle. ophione. heraclide. hicesio. dionysio. apollodoro citiense. apollodoro tarentino. praxagora. plistonico. medio. dieuche. cleophanto. philistione. asclepiade. crateua. petronio diodoto. iolla. erasistrato. diagora. andrea. mneside. epicharmo. damione. sosimene. tlepolemo. metrodoro. solone. lyco. olympiade thebana. philino. petricho. miccione. glaucia. xenocrate.

l. xxvii continentvr reliqua genera herbarum. medicinae ex iis. aconitum sive thelyphonon sive cammaron sive pardalianches sive scorpion, med. iiii aethiopis iiii ageraton iiii aloe xxviiii alcea iiii alypon i alsine ad eadem quae helxine v androsaces iii androsaemon sive ascyron vi ambrosia sive botrys sive artemisia iii anonis sive ononis v anagyros sive acopon vi anonymos v aparine sive omphalocarpos sive philanthropos iiii arction sive arcturon v asplenos sive hemionios ii asclepias ii aster sive bubonion iii ascyron et ascyroides iiii aphaca iii alcibium i alectoros lophos quae cri sta ii

alum quod symphyton petraeum xiiii alga rufa i actaea i ampelos agria iiii absinthium, gen. iii. med. xlviii absinthium marinum sive seriphum ii ballote sive porrum nigrum iii botrys sive artemisia i brabilla i bryon marinum v bupleuron i catanance i. cemos i calyx iii calyx sive anchusa sive rhinoclia ii circeia iii cirsion i crataegonon, gen. ii. med. viii crocodileon ii cynosorchis sive orchis iiii chrysolachani gen. ii. med. iii coagulum terrae ii cucullus sive strumus sive strychnos vi conferva ii coccum cnidium ii dipsacos iii dryopteris ii drabe i elatine ii empetros quam nostri calcifragam iiii epicactis sive elleborine ii epimedion iii enneaphyllon iii felicis gen. ii, quam graeci pterim, alii blachron, item thelypterim, nymphaeam pterim vocant, xi femur bubulum galeopsis sive galeobdolon sive galion vi glaux i glaucion iii. collyrium, med. ii glycyside sive paeonia sive pentorobon xx gnaphalion sive chamaezelon vi gallidraga i holcus sive aristis hyoseris i holosteon iii hippophaeston viii hypoglossa i hypecoon idaea iiii isopyron sive phaselion iii lathyris ii leontopetalon sive rhapadion ii lycapsos ii lithospermon sive exonychon sive Διὸς πυρὸν sive Ἡρακλέους ii lapidis muscus i limeum i leuce sive mesoleucium sive leucas iii leucographis v medion iii myosota sive myosotis iii myagros i nyma i natrix i odontitis i othonna i onosma i onopradon v osyris iiii oxys ii polyanthemon sive batrachion iii polygonos sive polygonion sive thalattias sive carcinothron sive clema sive myrtopetalos quae sanguinaria sive orios, gen. iiii. med. xxxiii pancration xii peplis sive syce sive meconion sive mecon aphrodes iii periclymenon v pelecinos ii polygala i poterion sive phrynion sive neuras iiii phalangitis sive phalangion sive leucacantha iiii phyteuma i phyllon i pellandrion ii phaleris ii polyrrizon ii proserpinaca v rhecoma xxxvi reseda ii stoechas iii solanum quam graeci strychnon ii smyrnion xxxii. sinon ii telephion iiii trichomanes v thalictrum i thlaspi sive persicon napy iiii trachinia i tragonis sive tragion iii tragos sive scorpio iiii tragopogon sive come i de aetatibus herbarum quo modo cuiusque vires efficaciores gentium vitia diversa summa: medicinae et historiae et observationes dcii

ex avctoribvs c. valgio. pompeio lenaeo. sextio nigro qui graece scripsit. iulio basso qui item. antonio castore. cornelio celso.

externis theophrasto. apollodoro. democrito. aristogitone. orpheo.

pythagora. magone. menandro qui βιόχρηστα scripsit. nicandro. medicis mnesitheo. callimacho. timaristo. simo. hippocrate. chrysippo. diocle. ophione. heraclide. hicesio. dionysio. apollodoro citiense. apollodoro tarentino. praxagora. plistonico. medio. dieuche. cleophanto. philistione. asclepiade. crateua. petronio diodoto. iolla. erasistrato. diagora. andrea. mneside. epicharmo. damione. sosimene, tlepolemo. metrodoro. solone. lyco. olympiade thebana. philino. petricho. miccione. glaucia. xenocrate.

l. xxviii continentvr medicinae ex animalibus. an sit in medendo verborum aliqua vis ostenta et sanciri et depelli ex homine remedia contra magos ex viro medicinae et observationes ccxxvi, puero viii muliere lxi ex peregrinis animalibus

elephanto viii
leone x
camelo x
hyaena lxxviiii
crocodilo xviiii. crocodilea

xi

chamaeleone xv
scinco iiii
hippopotamio vii
lynce v medicinae communes ex animalibus feris aut eiusdem generis placidis
lactis usus et observationes

lvii

de caseis xii
butyro xxv
oxygala i
adipis usus et observationes

lii

de sebo
de medulla
de felle
de sanguine privatae ex animalibus medicinae digestae in morbos
ex apro xli
sue lx
cervo lii
lupo xxvii
urso xxviiii
onagro xii
asino lxxvi
polea iii
equifero xi
eculei coagulo i
equo xlii
hippace i
bubus feris ii
bove lxxxi
tauro liii
vitulo lviiii
lepore lxiiii
volpe xx
mele ii
fele v
capra cxxiiii
hirco xxxi
haedo xxi
de glutino taurino proban
do, et medicinae ex eo
vii summa: medicinae et historiae et observationes mdclxxxii

ex avctoribvs M. Varrone. l. pisone. antiate. flacco verrio. fabiano. catone censorio. servio sulpicio. licinio macro. celso. masurio. sextio nigro qui graece scripsit. bitho durracheno. rabirio medico. ofilio medico. granio medico.

externis democrito. Apollonio qui et mys. meleto. artemone. sextilio antaeo. homero. theophrasto. lysimacho. attalo. xenocrate. orpheo qui ἰδιοφυῆ scripsit. archelao qui item. demetrio. sotira.

laide. elephantide. salpe. olympiade thebana. diotimo thebano. iolla. andrea. marcione smyrnaeo. aeschine medico. hippocrate. aristotele. metrodoro scepsio. hicetida medico. Apelle medico. hesiodo. bialcone. caecilio bione qui περὶ δυνάμεων scripsit. anaxilao. iuba rege.

l. xxix continentvr medicinae ex animalibus. de origine medicinae de hippocrate quando primum clinice quando primum iatraliptice de chrysippo medico. de erasistrato de empirice de herophilo. de reliquis inlustribus medicis quotiens ratio medicinae mutata sit quis primus romae medicus et quando quid de medicis antiqui romani iudicaverint vitia medicinae remedia ex lanis xxxv et sequenti libro xxv: lx oesypo xxxii, seq. l. xx: lii ovis xxii, seq. l. xliii: lxv quae sitista ova. quo modo fiant tota lutea de serpentium ovis de commageno conficiendo. medicinae ex eo v remedia ex animalibus quae placida non sint aut fera ariete v et seq. l. vii: xii pecude xxii et seq. l. lv: lxxvii mulis i et seq. l. v: vi caballis i et seq. l. iii: iiii cane xvi et seq. l. xli: lvii cane rabioso iii et seq. l. ii: v ichneumone i. mure xiiii et seq. l. xxviii: xlii mure araneo iiii et seq. l. i: v glire ii et seq. l. iii: v sorice i et seq. l. ii: iii mustela xviiii et seq. l. xxv: xliiii stelione iiii et seq. l. xii: xvi irenaceo v et seq. l. xiii: xviii hystrice i et seq. l. ii: iii lacerta xiii et seq. l. xxx: xliii salamandra i et seq. l. iii: iiii coclea vi et seq. l. lxiii: lxviiii aspide i et seq. l. iii: iiii basilisco iiii dracone vi et seq. l. iiii: x vipera xiiii et seq. l. xxi: xxxv de viperino sale θηριακὴ ἔχεων angue viii et seq. l. xxvii: xxxv hydro i bova iiii et seq. l. iii: vii enhydride i et seq. l. ii: iii serpentibus ceteris viii et seq. l. vii: xv scorpione iiii et seq. l. ii: vi araneorum et phalangiorum gen. xi. med. ex iis ix et seq. l. xxvii: xxxvi gryllo et tauro i et seq. l. vii: viii scolopendra sive multipeda sive milipeda sive centipeda sive onisco sive iulo i et seq. l. xx: xxi admiratio naturae nihil sine usu gignentis limace i et seq. l. iii: iiii uruca i et seq. l. ii: iii verme terreno ii et seq. l. xxii: xxiiii verme ex arboribus i et seq. l. iiii: v ex volucribus aquila iiii et seq. l. iii: vii vulture viii et seq. l. viiii: xvii gallinaceo xxxi et seq. l. xxv: lvi gallina x et seq. l. xxii: xxxii ansere vii et seq. l. xv: xxii cygno i et seq. l. v: vi de adipe avium conficiendo corvo ii et seq. l. iiii: vi cornice ii et seq. l. i: iii

accipitre ii et seq. l. ii: iv miluo ii et seq. l. vi: viii cenchride ii ciconia ii et seq. l. i: iii anate iiii et seq. l. ii: vi perdice vii et seq. l. vii: xiiii columba vii et seq. l. xxv: xxxii palumbe ii et seq. l. xiiii: xvi pico martio i turture iiii et seq. l. v: viiii hirundine viiii et seq. l. xxiiii: xxxiii noctua vii et seq. l. ii: viiii ulula i et seq. l. i: ii bubone ii et seq. l. v: vii vespertilione iiii et seq. l. xii: xvi apibus iv et seq. l. viii: xii bupresti v et seq. l. i: vi pityocampe v et seq. l. iiii: vi naturae benignitatem etiam foedis animalibus inseruisse magna remedia scarabaeo i et seq. l. vii: viii blatta iiii et seq. l. xiii: xvii de genere cantharidum med. ex iis v et seq. l. xi: xvi cimice viiii et seq. l. ii: xi musca vii et seq. l. v: xii locustis iiii et seq. l. iii: vii attelebis i formicis iii et seq. l. v: viii summa: medicinae et historiae et observationes dcxxi

ex avctoribvs M. Varrone. l. pisone. flacco verrio. antiate. nigidio. cassio hemina. Cicerone. plauto. celso. sextio nigro qui graece scripsit. caecilio medico. metello scipione. ovidio poeta. licinio macro.

externis palaephato. homero. aristotele. orpheo. democrito. anaxilao. medicis botrye. apollodoro. archedemo. aristogene. xenocrate. democrate. diodoro. chrysippo philosopho. oro. nicandro. Apollonio pitanaeo.

l. xxxi continentvr medicinae ex aquatilibus. aquarum mirabilia aquarum differentiae medicinae. observationes cclxvi

quales oculis aquae prosint
quales fecunditatem faciant
quales insaniae medeantur
quales calculosis
quales volneribus
quales partum custodiant
quales vitiliginem tollant
quae colorem lanis faciant
quae hominibus
quae memoriam, quae ob
livionem
quae sensus subtilitatem,

quae tarditatem, quae ca
noram vocem
quae vini taedium, quae
inebrient
quae olei vicem praestent
quae salsae et amarae
saxa egerentes, risum aut
ploratum facientes
quae amorem sanare dican
tur
per triduum calentes hau
stus aquarum miracula
in quibus omnia mergantur,
in quibus nihil
aquae necantes, pisces ve
nenati
quae lapideae fiant aut la
pidem faciant de salubritate aquarum de vitiis aquarum probatio aquarum de aqua marcia de aqua virgine aquas inveniendi ratio signa aquarum differentia aquarum per genera terrae ratio aquarum per tempora anni aquarum subito nascentium aut desinentium observatio historica ratio aquae ducendae quo modo medicatis utendum et ad quae genera valitudinum item marinis xxviiii quid prosit navigatio v quo modo marina aqua in mediterraneis possit fieri i quo modo thalassomeli i quo modo hydromeli i remedium contra peregrinas aquas ex musco medicinae vi medicinae ex harenis de salis generibus et confecturis et medicinis observationes cciiii de salis auctoritate historica cxx spuma salis flos salis xx. salsugo ii de garo xv de muria xv de allece viii de natura salis de nitri generibus et confecturis et medicinis observationes ccxxi de spongeis. medicinae et observationes xcii summa: medicinae et historiae et observationes dccccxxiiii

ex avctoribvs M. Varrone. cassio parmense Cicerone. muciano. caelio. celso. trogo. ovidio. polybio. sornatio.

externis callimacho. ctesia. eudico. theophrasto. eudoxo. theopompo. polyclito. iuba. lyco. apione. epigene. pelope. Apelle. democrito. thrasyllo. nicandro. menandro comoedo. attalo. sallustio

dionysio. andrea. nicerato. hippocrate. anaxilao.

l. xxxii continentvr medicinae ex aquatilibus. summa naturae vis in antipathia de echenaide ii de torpedine vii de lepore marino v mirabilia rubri maris de ingeniis piscium proprietates piscium mirabiles

ubi responsa dentur ex
piscibus
ubi ex manu edant
ubi vocem agnoscant
ubi amari sint, ubi salsi,
ubi dulces, ubi non muti.
esse et locorum sympathi

am vel antipathiam quando marini pisces in usu p. r. esse coeperint numae regis constitutio de piscibus de curalio. medicinae et observationes xliii de discordia inter se marinorum pastinaca viiii. galeo, mullo xv de iis quibus in aqua et in terra victus est de castoreis. medicinae et observationes lvi de testudine. medicinae et observationes lxvi aurata iiii. stella marina vii dracone marino iii salsamento xxv sardis i. cybia rana marina vi. fluviatiles lii rana rubeta observationes circa eas xxxii enhydris iii cancri fluviatiles xlv. cancri marini vii ex cocleis fluviatilibus vii coracinis iiii porco pisce ii vitulo marino x murena i hippocampo viiii echinis xi ostreorum genera et observationes et medicinae lviiii purpura viiii alga marina ii mus marinus ii ex scorpione marino xi sanguisugis vi murices xiii conchylia v piscium adips ii callionymi iii coracini fel i pectunculi i sepiae xxiiii ichthyocolla v batia i bacchus sive mizyes ii marini peduculi ii canicula iiii cetum i ex delphinis viii coluthia sive coryphia iii alcyoneum vii thynnus v menae xvi scolopendra ii saurus i conchis i siluro xv strombo sive concha longa vi tethea v olus marinum i myaces xxxv mituli viii pelorides i seriphum ii erythinis ii solea pisce i rhombo i blendia i urtica marina ii pulmone marino iv onyches iiii ex colubra aquatica i ex hydro i mugile i ex pelamyde iiii sciaena i perca iiii ex squatina iii zmarides iii ophidio i ex fibro iiii bryon i ex asello pisce i phagro i ex balaena i polypo i ex glano i glaucisco i rubellio i uva marina i anguilla i hippopotamio i crocodilo

i adarca sive calamochnus iii calamo viii animalium omnium in mari viventium nomina clxxvi summa: medicinae et historiae et observationes dccccxc

ex avctoribvs licinio macro. trebio nigro. sextio nigro qui graece scripsit. ovidio poeta. cassio hemina. maecenate. iaccho. sornatio.

externis iuba. andrea. salpe. apione. pelope. Apelle. thrasyllo. nicandro.

l. xxxiii continentvr metallorum naturae. de auro quae prima commendatio eius de anulorum aureorum origine de modo auri apud antiquos de equestri ordine. de iure anulorum aureorum

de decuriis iudicum

quotiens nomen equestris

ordinis mutatum de donis militaribus aureis et argenteis quando primum corona aurea data de reliquo usu auri, feminarum de nummo aureo quando primum signatum aes, argentum, aurum. antequam ea signarentur, quis mos in aere quae maxima pecunia primi census quotiens et quibus temporibus aucta sit aeris aut nummi signati aestimatio de cupiditate auri qui plurimum auri et argenti possederint quando primum argenti apparatus in harena, quando in scaena quibus temporibus plurimum in aerario populi romani auri et argenti fuerit quando primum lacunaria inaurata quibus de causis praecipua auctoritas auro ratio inaurandi de inveniendo auro de auripigmento de electro primae aureae statuae medicinae ex auro viii de chrysocolla ratio eius in picturis medicinae ex chrysocolla vii de aurificum chrysocolla sive santerna mirabilia naturae glutinandis inter se et perficiendis metallicis rebus de argento de argento vivo de stimi sive stibi sive alabastro sive larbasi sive platyophthalmo. medicinae ex eo vii de scoria argenti. medicinae ex ea vi de spuma argenti. medicinae ex ea vii de minio quam religiosum apud antiquos fuerit de inventione eius et origine de cinnabari ratio eius in picturis et medicina genera mini ratio eius in picturis de hydrargyro medicina ex minio de argento inaurando de coticulis aurariis argenti genera et experimenta de speculis de aegyptio argento de inmodica pecunia quorum maximae opes fuerint quando primum populus romanus stipem sparserit de luxuria in vasis argenteis frugalitatis antiquae in

argento exempla quando primum lectis argentum additum quando lances inmodicae factae quando repositoriis argentum additum quando tympana facta inmodica argenti pretia de statuis argenteis nobilitates operum et artificum in argento de sile qui primi sile pinxerint et qua ratione de caeruleo. medicinae ex eo ii summa: medicinae et historiae et observationes cclxxxviii

ex avctoribvs domitiano caesare. iunio gracchano. l. pisone. M. Varrone. corvino. attico pomponio. calvo licinio. cornelio nepote. muciano. boccho. fetiale. fenestella. valerio maximo. iulio basso qui de medicina graece scripsit. sextio nigro qui item.

externis theophrasto. democrito. iuba. timaeo historico. qui de medicina metallica scripserunt: heraclide. andrea. diagora. botrye. archedemo. dionysio. aristogene. democle. mneside. attalo medico. xenocrate item. theomnesto. nymphodoro. iolla. apollodoro. pasitele qui mirabilia opera scripsit. antigono qui de toreutice scripsit. menaechmo qui item.

l. xxxiv continentvr aeris metalla genera aeris quae corinthia quae deliaca quae aeginetica de tricliniis aeratis de candelabris de templorum ornamentis ex aere quod primum dei simulacrum romae ex aere factum de origine statuarum et honore statuarum genera et figurae. antiquas statuas togatas sine tunicis fuisse quae primae statuae romae. quibus primum publice positae, quibus primum in columna, quando rostra quibus externis romae publice positae quibus romae mulieribus in publico positae quae prima romae statua equestris publice posita quando omnes privatim positae statuae ex publico sublatae quae prima ab externis publice posita fuisse antiquitus et in italia statuarios de pretiis signorum inmodicis de colossis in urbe celeberrimis nobilitates ex aere operum et artificum ccclxvi differentiae aeris et mixturae. de pyropo de campano aere de servando aere de cadmia med. ex ea xv aeris usti effectus in medicina x de scoria aeris. de flore aeris, squama aeris, stomomate aeris. med. ex iis xlvii aerugo. med. ex ea xviii hieracium scolex aeris. med. ex eo xviii de chalcitide. med. ex ea vii psoricon sori. med. ex eo iii misy. med. ex eo xiii chalcanthum sive atramentum sutorium. med. ex eo xvii pompholyx. spodium. med. ex iis vi antispodi gen. xv

smegma de diphryge de triente servilio de ferrariis metallis simulacra ex ferro caelaturae ex ferro differentiae ferri de ferro quod vivum appellant ferri temperatura robiginis remedia med. ex ferro vii med. ex robigine xiiii med. ex squama ferri xvii hygremplastrum de plumbi metallis de plumbo albo de argentario. de stagno de plumbo nigro med. ex plumbo xv med. ex scoria plumbi xv spodium ex plumbo de molybdaena. med. ex ea v psimythium sive cerussa. med. ex ea vi sandaraca. med. ex ea xi arrhenicum summa: medicinae cclviii. ex iis ad canis morsus, ad caput, alopecias, oculos xxv, aures, nares, oris vitia, lepras, gingivas, dentes, uvam, pituitam, fauces, tonsillas, anginam, tussim, vomitiones, pectus, stomachum, suspiria, lateris dolores, splenem, ventrem, tenesmum, dysenteriam, sedem, verenda, sanguinem sistendum, podagras, hydropicos, ulcera, volnera xxvi, suppurata, ossa, paronychia, ignem sacrum, haemorroidas, fistulas, callum, pusulas, scabiem, cicatrices, infantes, muliebria vitia, psilotrum, venerem inhibendam, ad vocem, contra lymphationes. summa: res et historiae et observationes dccccxv

ex avctoribvs l. pisone. antiate. verrio. M. Varrone. cornelio nepote. messala rufo. marso poeta. boccho. iulio basso qui de medicina graece scripsit. sextio nigro qui item. fabio vestale.

externis democrito. metrodoro scepsio. menaechmo qui de toreutice scripsit. xenocrate qui item. antigono qui item. duride qui item. heliodoro qui atheniensium anathemata scripsit. pasitele qui mirabilia opera scripsit. timaeo. qui de medicina metallica scripserunt: nymphodoro. iolla. apollodoro. andrea. heraclide. diagora. botrye. archedemo. dionysio. aristogene. democle. mneside. xenocrate zenonis. theomnesto.

l. xxxv continentvr honos picturae honos imaginum quando primum clupei vice imaginum instituti quando primum in publico positi quando in domibus de picturae initiis de monochromatis picturis de primis pictoribus antiquitas picturarum in italia de pictoribus romanis quando primum dignitas picturae et quibus ex causis romae qui victorias suas pictas proposuerint quando primum externis picturis dignitas romae ratio pingendi de pigmentis praeter metallica de coloribus facticiis de sinopide. med. ex ea xi de rubrica. de terra

lemnia. med. ex ea viiii de aegyptia terra de ochra. med. ex rubrica iii leucophorum paraetonium melinum. med. ex eo vi cerussa usta eretria terra. med. ex ea vi sandaraca sandyx syricum atramentum purpurrissum indicum. med. ex eo iii armenium. med. ex eo i viride appianum anulare qui colores udo non inducantur quibus coloribus antiqui pinxerint quando primum gladiatorum pugnae pictae et propositae sint de aetate picturae operum et artificum in pictura nobilitates ccccv

picturae primum certa
men qui penicillo pinxerint
de avium cantu compescen
do qui encausta cauterio vel cestro vel penicillo pinxerint
quae quis primus invenerit
in pictura
quid difficillimum in pictura.
de generibus picturae
quis primus lacunaria pin
xerit. quando primum ca
marae pictae
pretia mirabilia picturarum.

de talento plastices primi inventores quis primus ex facie imaginem expresserit nobilitates artificum in plastice xiiii de figlinis operibus. de signinis terrae varietates de pulvere puteolano et aliis terrae generibus quae in lapidem vertuntur de parietibus formaceis de latericiis et laterum ratione de sulpure et generibus eius. med. xiiii de bitumine et generibus eius. med. xxvii de alumine et generibus eius. med. ex eo xxxxiiii de terra samia. med. ex ea iii eretriae terrae genera de terra ad medicinam lavanda de chia terra. med. ex ea iii de selinusia. med. ex ea iii de pnigitide. med. ex ea viiii de ampelitide. med. ex ea iiii cretae ad vestium usus cimolia. med. ex ea viiii sarda. vmbrica. saxum argentaria. qui et quorum liberti praepotentes terra ex galata. terra clupea. terra baliarica. terra ebusitana. med. ex iis iiii summa: medicinae et historiae et observationes dcccclvi

ex avctoribvs messala oratore. messala sene. fenestella. attico. M. Varrone. verrio. nepote cornelio. deculone. muciano. melisso. vitruvio. cassio severo. longulano. fabio vestale.

externis qui de pictura scripserunt: pasitele. Apelle. melanthio.

Asclepiodoro. euphranore. heliodoro qui anathemata atheniensium scripsit. metrodoro qui de architectonice scripsit. democrito. theophrasto. apione grammatico. qui de metallica medicina scripserunt: nymphodoro. iolla. apollodoro. andrea. heraclide. diagora. botrye. archedemo. dionysio. aristogene. democle. mneside. xenocrate zenonis. theomnesto.

l. xxxvi continentvr naturae lapidum. luxuria in marmoribus
quis primus peregrino mar
more columnas habuerit
romae
quis primus in publicis
operibus ostenderit qui primi laudati in marmore scalpendo et quibus temporibus
de mausoleo cariae nobilitates operum et artificum in marmore ccxxv quando primum marmorum in aedificiis usus qui primi marmora secuerint et quando quis primus romae crustaverit parietes quibus aetatibus quaeque marmora in usum venerint romae ratio secandi marmora. de harenis quibus secantur de naxio. de armenio de alexandrinis marmoribus de onyche sive alabastrite. med. ex eo iii de lygdino, corallitico, alabandico, thebaico, syenite de obeliscis de eo qui pro gnomone in campo martio est opera mirabilia in terris
sphinx aegyptia. pyrami
des
pharos
labyrinthi
pensiles horti. pensile op
pidum
de templo ephesiae dia
nae
aliorum templorum admi
rabilia
de lapide fugitivo. echo
septiens resonans. sine
clavo aedificia romae miracula operum xviii de magnete lapide. med. ex eo iii syrius lapis de sarcophago sive assio. med. ex eo x de

chernite. de poro de lapidibus osseis. de palmatis. de taenariis. de coranis. de nigris marmoribus de molaribus lapidibus. pyrites. med. ex eo vii ostracites. med. ex eo iiii. amiantus. med. ex eo ii geodes. med. ex eo iii melitinus. med. ex eo vi gagates. med. ex eo vi spongites. med. ex eo ii phrygius haematites. med. ex eo v schistos. med. ex eo vii androdamas. med. ex eo ii. arabicus. miltites sive hepatites. anthracites ae+tites. taphiusius. callimus samius. med. ex eo viii arabus. med. ex eo ii de pumice. med. ex eo viiii de mortariis medicinalibus et aliis. etesius lapis. chalazius siphnius. lapides molles lapides speculares phengites de cotibus de tophis de silicum natura. de reliquis ad structuram lapidibus genera structurae de cisternis de calce harenae genera. mixtura harenae et calcis vitia structurae. de tectoriis de columnis. genera columnarum med. ex calce v de maltha de gypso de pavimentis

asarotos oecos

quod primum pavimentum

romae

de subdialibus pavimen

tis

graecanica pavimenta

quando primum lithostrota quando primum camarae vitreae origo vitri genera eius et ratio faciendi de obsianis miracula ignium medicinae ex igni et cinere iii prodigia foci summa: medicinae ex iis lxxxviiii: ad serpentes iii, bestiarum morsus, ad venena, caput, oculos, epinyctidas, dentes, dentifricia, fauces, strumas, stomachum, iocinera, pituitam, testes, vesicam, calculos, panos, haemorroidas, podagras, sanguini sistendo, sanguinem reicientibus, luxata, phreneticos, lethargicos, comitiales, melancholicos, vertigines, ulcera, volnera urenda, secanda, convolsa, contusa, maculas, usta, phthisin, mammas, muliebria vitia, carbunculos, pestilentia. summa omnis: res et historiae et observationes ccccxxxiiii

ex avctoribvs M. Varrone. c. galba. cincio. muciano. nepote cornelio. l. pisone. q. tuberone. fabio vestale. annio fetiale. fabiano. seneca. catone censorio. vitruvio.

externis theophrasto. pasitele. iuba rege. nicandro. sotaco. sudine. alexandro polyhistore. apione plistonice. duride. herodoto. euhemero. aristagora. dionysio. artemidoro. butorida. antisthene. demetrio.

demotele. lycea.

l. xxxvii continentvr origo gemmarum de polycratis tyranni gemma, de pyrrhi regis qui scalptores optimi nobilitates scalpturae quae prima romae dactyliothece gemmae in pompei magni triumpho translatae quando primum myrrhina invecta. luxuria circa ea natura eorum de crystallo

medicina ex eo

luxuria in crystallo de sucino

quae mentiti sint auctores

de eo

gen. eius vii. med. ex his ... lyncurium. med. ii de adamante sive anancite.

gen. adamantis vi. med. ii de smaragdis

gen. eorum xii

vitia eorum

tanos gemma. chalcosma

ragdos de beryllis. genera eorum viii. vitia eorum de opalis. genera eorum vii.

vitia eorum et experimen

ta de sardonyche. gen. eius ... vitia eius de onyche. gen. eius ... de carbunculis

gen. eorum xii

vitia eorum et experimen

ta anthracitis sandastros. sandaresus lychnis. gen. eius iiii carchedonia sarda. gen. eius v de topazo. gen. eius ii de callaina de prasio. gen. eius iii nilion molochitis de iaspide

gen. eius xvii. vitia eorum de cyano. gen. eius iii de sappiro amethystos

gen. eius v. socondion. sa

penos. pharanitis. aphro

dites blepharon sive ante

ros sive paederos hyacinthus de chrysolitho. gen. eius iiii de chryselectro leucochrysos. gen. eius iii melichrysi, xuthi paederos sive sangenon sive syenites asteria astrion astriotes astolon ceraunia. gen. eius iiii. baetylos iris leros achatae. gen. eorum xiiii. acopos.

med. ex ea ... alabastritis. med. ex ea ... alectoriae. androdamas. argyrodamas. antipathes. arabica. aromatitis. asbestos. aspisatis. atizoe. augitis. amphidanes sive chrysocolla. aphrodisiaca. apsyctos. aegyptilla balanitae. batrachitis. baptes. beli oculus. belus. baroptenus sive baripe. botryitis. bostrychitis. bucardia. brontea. boloe. cadmitis. callais. capnitis. cappadocia. callaica. catochitis. catoptritis. cepitis sive cepolatitis. ceramitis. cinaediae. ceritis. circos. corsoides. corallachates. corallis. crateritis. crocallis. cyitis. chalcophonos. chelidoniae. cheloniae. chelonitis. chloritis. choaspitis. chrysolampsis. chrysopis. cetionides daphnea. diadochos. diphyes. dionysias. dracontias encardia sive enariste. enorchis. exhebenus. erythallis. erotylos sive amphicomos sive hieromnemon. eumeces. eumithres. eupetalos. eureos. eurotias. eusebes. epimelas galaxias. galactitis sive leucogaea sive leucographitis sive synechitis. gallaica. gassinnade. glossopetra. gorgonia. goniaea heliotropion. hephaestitis. hermu aedoeon. hexecontalithos. hieracitis. hammitis. hammonis cornu. hormiscion. hyaeniae. haematitis meniu sive xuthos idaei dactyli. icterias. iovis gemma sive drosolithos. indicae. ion lepidotis. lesbia. leucophthalmos. leucopoecilos. libanochrus. limoniatis. liparea. lysimachos. leucochrysos memnonia. media. meconitis. mithrax. morochthos. mormorion sive promnion sive alexandrion. myrritis. myrmecias. myrsinitis. mesoleucos. mesomelas nasamonitis. nebritis. nipparena oica. ombria sive notia. onocardia. oritis sive sideritis. ostracias sive ostracitis. ostritis. ophicardelos. obsiana panchrus. pangonus. paneros sive panerastos. ponticae. gen. iiii. phloginos sive chrysitis. phoenicitis. phycitis. perileucos. paeanitis sive gaeanis solis gemma. sagda. samothracia. sauritis. sarcitis. selenitis. sideritis. sideropoecilos. spongitis. synodontitis. syrtitis. syringitis trichrus. thelyrrhizos. thelycardios sive mucul. thracia, gen. iii. tephritis. tecolithos veneris crines. veientana zathene. zamilampis. zoraniscaea hepatitis. steatitis. adadu nephros. adadu ophthalmos. adadu dactylos. triophthalmos carcinias. echitis. scorpitis. scaritis. triglitis. aegophthalmos. hyophthalmos. geranitis. ae+titis. myrmecitis. cantharias. lycophthalmos. taos. timictonia ammochrysos. cenchritis. dryitis. cissitis. narcissitis. cyamias. pyren. phoenicitis. chalazias. pyritis. polyzonos. astrapaea. phlogitis. anthracitis. enygros. polythrix. leontios. pardalios.

drosolithos. melichrus. melichloros. crocias. polias. spartopolia. rhoditis. melitis. chalcitis. sycitis. bostrychitis. chernitis. anancitis. synochitis. dendritis cochlides de figura gemmarum ratio probandi comparatio naturae per terras. comparatio rerum per pretia summa: res et historiae et observationes mccc

ex avctoribvs M. Varrone. actis triumphorum. maecenate. iaccho. cornelio boccho.

externis iuba rege. xenocrate zenonis. sudine. aeschylo. philoxeno. euripide. nicandro. satyro. theophrasto. charete. philemone. demostrato. zenothemi. metrodoro. sotaco. pythea. timaeo siculo. nicia. theochresto. asaruba. mnasea. theomene. ctesia. mithridate. sophocle. archelao rege. callistrato. democrito. ismenia. olympico. alexandro polyhistore. apione. oro. zoroastre. zachalia.

LIBER II

mundum et hoc quodcumque nomine alio caelum appellare libuit, cuius circumflexu degunt cuncta, numen esse credi par est, aeternum, inmensum, neque genitum neque interiturum umquam. huius extera indagare nec interest hominum nec capit humanae coniectura mentis. sacer est, aeternus, immensus, totus in toto, immo vero ipse totum, infinitus ac finito similis, omnium rerum certus et similis incerto, extra intra cuncta conplexus in se, idemque rerum naturae opus et rerum ipsa natura. furor est mensuram eius animo quosdam agitasse atque prodere ausos, alios rursus occasione hinc sumpta aut hic data innumerabiles tradidisse mundos, ut totidem rerum naturas credi oporteret aut, si una omnes incubaret, totidem tamen soles totidemque lunas et cetera etiam in uno et inmensa et innumerabilia sidera, quasi non eaedem quaestiones semper in termino cogitationi sint occursurae desiderio finis alicuius aut, si haec infinitas naturae omnium artifici possit adsignari, non idem illud in uno facilius sit intellegi, tanto praesertim opere. furor est profecto, furor egredi ex eo et, tamquam interna eius cuncta plane iam nota sint, ita scrutari extera, quasi vero mensuram ullius rei possit agere qui sui nesciat, aut mens hominis videre quae mundus ipse non capiat.

formam eius in speciem orbis absoluti globatam esse nomen in primis et consensus in eo mortalium orbem appellantium, sed et argumenta rerum docent, non solum quia talis figura omnibus sui partibus vergit in sese ac sibi ipsa toleranda est seque includit et continet nullarum egens compagium nec finem aut initium ullis sui partibus sentiens, nec quia ad motum, quo subinde verti mox adparebit, talis aptissima est, sed oculorum quoque probatione, quod convexus mediusque quacumque cernatur, cum id accidere in alia non possit figura.

hanc ergo formam eius aeterno et inrequieto ambitu, inenarrabili celeritate, viginti quattuor horarum spatio circumagi solis exortus et occasus haut dubium reliquere. an sit inmensus et ideo sensum aurium excedens tantae molis rotatae vertigine adsidua sonitus, non equidem facile dixerim, non, hercule, magis quam circumactorum simul tinnitus siderum suosque volventium orbes an dulcis quidam et

incredibili suavitate concentus. nobis qui intus agimus iuxta diebus noctibusque tacitus labitur mundus. esse innumeras ei effigies animalium rerumque cunctarum inpressas nec, ut in volucrum notamus ovis, levitate continua lubricum corpus, quod clarissimi auctores dixere, terrenorum argumentis indicatur, quoniam inde deciduis rerum omnium seminibus innumerae, in mari praecipue ac plerumque confusis monstrificae, gignantur effigies, praeterea visus probatione, alibi ursi, tauri alibi, alibi litterae figura, candidiore medio per verticem circulo. equidem et consensu gentium moveor; namque et graeci nomine ornamenti appellavere eum et nos a perfecta absolutaque elegantia mundum. caelum quidem haut dubie caelati argumento diximus, ut interpretatur M. Varro. adiuvat rerum ordo discripto circulo qui signifer vocatur in duodecim animalium effigies et per illas solis cursus congruens tot saeculis ratio.

nec de elementis video dubitari quattuor esse ea: ignium summum, inde tot stellarum illos conlucentium oculos; proximum spiritus, quem graeci nostrique eodem vocabulo ae+ra appellant, vitalem hunc et per cuncta rerum meabilem totoque consertum; huius vi suspensam cum quarto aquarum elemento librari medio spatii tellurem. ita mutuo conplexu diversitatis effici nexum et levia ponderibus inhiberi quo minus evolent, contraque gravia ne ruant suspendi, levibus in sublime tendentibus. sic pari in diversa nisu in suo quaeque consistere, inrequieto mundi ipsius constricta circuitu, quo semper in se recurrente imam atque mediam in toto esse terram, eandemque universo cardine stare pendentem, librantem per quae pendeat, ita solam inmobilem circa eam volubili universitate; eandem ex omnibus necti eidemque omnia inniti. inter hanc caelumque eodem spiritu pendent certis discreta spatiis septem sidera, quae ab incessu vocamus errantia, cum errent nulla minus illis. eorum medius sol fertur, amplissima magnitudine ac potestate nec temporum modo terrarumque, sed siderum etiam ipsorum caelique rector. hunc esse mundi totius animum ac planius mentem, hunc principale naturae regimen ac numen credere decet opera eius aestimantes. hic lucem rebus ministrat aufertque tenebras, hic reliqua sidera occultat, inlustrat; hic vices temporum annumque semper renascentem ex usu naturae temperat; hic caeli tristitiam discutit atque etiam humani nubila animi serenat; hic suum lumen ceteris

quoque sideribus fenerat, praeclarus, eximius, omnia intuens, omnia etiam exaudiens, ut principi litterarum homero placuisse in uno eo video.

quapropter effigiem dei formamque quaerere inbecillitatis humanae reor. quisquis est deus, si modo est alius, et quacumque in parte, totus est sensus, totus visus, totus auditus, totus animae, totus animi, totus sui. innumeros quidem credere atque etiam ex vitiis hominum, ut pudicitiam, concordiam, mentem, spem, honorem, clementiam, fidem, aut, ut democrito placuit, duos omnino, poenam et beneficium, maiorem ad socordiam accedit. fragilis et laboriosa mortalitas in partes ita digessit infirmitatis suae memor, ut portionibus coleret quisque quo maxime indigeret. itaque nomina alia aliis gentibus et numina in iisdem innumerabilia invenimus, inferis quoque in genera discriptis morbisque et multis etiam pestibus, dum esse placatas trepido metu cupimus. ideoque etiam publice febris fanum in palatio dicatum est, orbonae ad aedem larum, ara et malae fortunae esquiliis. quam ob rem maior caelitum populus etiam quam hominum intellegi potest, cum singuli quoque ex semet ipsis totidem deos faciant iunones geniosque adoptando sibi, gentes vero quaedam animalia et aliqua etiam obscena pro dis habeant ac multa dictu magis pudenda, per fetidos cibos, alia et similia, iurantes. matrimonia quidem inter deos credi tantoque aevo ex iis neminem nasci et alios esse grandaevos semper canosque, alios iuvenes atque pueros, atri coloris, aligeros, claudos, ovo editos et alternis diebus viventes morientesque, puerilium prope deliramentorum est, sed super omnem inpudentiam, adulteria inter ipsos fingi, mox iurgia et odia, atque etiam furtorum esse et scelerum numina. deus est mortali iuvare mortalem, et haec ad aeternam gloriam via. hac proceres iere romani, hac nunc caelesti passu cum liberis suis vadit maximus omnis aevi rector Vespasianus Augustus fessis rebus subveniens. hic est vetustissimus referendi bene merentibus gratiam mos, ut tales numinibus adscribant. quippe et aliorum nomina deorum et quae supra retuli siderum ex hominum nata sunt meritis. iovem quidem aut mercurium aliterve alios inter se vocari et esse caelestem nomenclaturam, quis non interpretatione naturae fateatur inridendum agere curam rerum humanarum illud, quicquid est, summum ac vel tam tristi atque multiplici ministerio non pollui credamus

dubitemusne vix prodest iudicare, utrum magis conducat generi humano, quando aliis nullus est deorum respectus, aliis pudendus. externis famulantur sacris ac digitis deos gestant, monstra quoque colunt, damnant et excogitant cibos, imperia dira in ipsos, ne somno quidem quieto, inrogant. non matrimonia, non liberos, non denique quicquam aliud nisi iuvantibus sacris deligunt. alii in capitolio fallunt ac fulminantem periurant iovem. et hos iuvant scelera, illos sacra sua poenis agunt.

invenit tamen inter has utrasque sententias medium sibi ipsa mortalitas numen, quo minus etiam plana de deo coniectatio esset. toto quippe mundo et omnibus locis omnibusque horis omnium vocibus fortuna sola invocatur ac nominatur, una accusatur, rea una agitur, una cogitatur, sola laudatur, sola arguitur et cum conviciis colitur, volubilis ... que, a plerisque vero et caeca existimata, vaga, inconstans, incerta, varia indignorumque fautrix. huic omnia expensa, huic feruntur accepta, et in tota ratione mortalium sola utramque paginam facit, adeoque obnoxiae sumus sortis, ut prorsus ipsa pro deo sit qua deus probatur incertus. pars alia et hanc pellit astroque suo eventus adsignat et nascendi legibus, semelque in omnes futuros umquam deo decretum, in reliquum vero otium datum. sedere coepit sententia haec, pariterque et eruditum vulgus et rude in eam cursu vadit. ecce fulgurum monitus, oraculorum praescita, haruspicum praedicta atque etiam parva dictu in auguriis sternumenta et offensiones pedum. Divus Augustus prodidit laevum sibi calceum praepostere inductum quo die seditione militari prope adflictus est. quae singula inprovidam mortalitatem involvunt, solum ut inter ista vel certum sit nihil esse certi nec quicquam miserius homine aut superbius. ceteris quippe animantium sola victus cura est, in quo sponte naturae benignitas sufficit, uno quidem vel praeferendo cunctis bonis, quod de gloria, de pecunia, ambitione superque de morte non cogitant.

verum in his deos agere curam rerum humanarum credi ex usu vitae est poenasque maleficiis aliquando seras, occupato deo in tanta mole, numquam autem inritas esse nec ideo proximum illi genitum hominem, ut vilitate iuxta beluas esset. inperfectae vero in homine naturae praecipua solatia, ne deum quidem posse omnia - namque nec sibi potest mortem consciscere, si velit, quod homini dedit

optimum in tantis vitae poenis, nec mortales aeternitate donare aut revocare defunctos nec facere ut qui vixit non vixerit, qui honores gessit non gesserit - nullumque habere in praeterita ius praeterquam oblivionis atque (ut facetis quoque argumentis societas haec cum deo copuletur) ut bis dena viginti non sint aut multa similiter efficere non posse. per quae declaratur haut dubie naturae potentia idque esse quod deum vocemus. in haec divertisse non fuerit alienum, vulgata iam propter adsiduam quaestionem de deo.

hinc redeamus ad reliqua naturae. sidera, quae adfixa diximus mundo, non illa, ut existimat volgus, singulis attributa nobis et clara divitibus, minora pauperibus, obscura defectis ac pro sorte cuiusque lucentia adnumerata mortalibus, cum suo quaeque homine orta moriuntur nec aliquem exstingui decidua significant. non tanta caelo societas nobiscum est, ut nostro fato mortalis sit ibi quoque siderum fulgor. illa nimio alimento tracti umoris ignea vi abundantiam reddunt, cum decidere creduntur, ut apud nos quoque luminibus accensis liquore olei notamus accidere. ceterum aeterna caelestibus est natura intexentibus mundum intextuque concretis, potentia autem ad terram magnopere eorum pertinens, quae propter effectus claritatemque et magnitudinem in tanta subtilitate nosci potuerunt, sicut suo demonstrabimus loco. circulorum quoque caeli ratio in terrae mentione aptius dicetur, quando ad eam tota pertinet, signiferi modo inventoribus non dilatis. obliquitatem eius intellexisse, hoc est rerum fores aperuisse, anaximander milesius traditur primus olympiade quinquagesima octava, signa deinde in eo cleostratus, et prima arietis ac sagittarii, sphaeram ipsam ante multo atlas.

nunc relicto mundi ipsius corpore reliqua inter caelum terrasque tractentur. summum esse quod vocant saturni sidus ideoque minimum videri et maximo ambire circulo ac tricesimo anno ad brevissima sedis suae principia regredi certum est, omnium autem errantium siderum meatus, interque ea solis et lunae, contrarium mundo agere cursum, id est laevum, illo semper in dextra praecipiti. et quamvis adsidua conversione immensae celeritatis attollantur ab eo rapianturque in occasum, adverso tamen ire motu per suos quaeque passus. ita fieri, ne convolutus aer eandem in partem aeterna mundi vertigine ignavo globo torpeat, sed fundatur adverso siderum verbere discretus et digestus. saturni autem sidus gelidae ac rigentis

esse naturae, multumque ex eo inferiorem iovis circulum et ideo motu celeriore duodenis circumagi annis. tertium martis, quod quidam herculis vocant, igne ardens solis vicinitate, binis fere annis converti, ideoque huius ardore nimio et rigore saturni, interiectum ambobus, ex utroque temperari iovem salutaremque fieri. deinde solis meatum esse partium quidem trecentarum sexaginta, sed ut observatio umbrarum eius redeat ad notas, quinos annis dies adici superque quartam partem diei. quam ob causam quinto anno unus intercalarius dies additur, ut temporum ratio solis itineri congruat.

infra solem ambit ingens sidus appellatum veneris, alterno meatu vagum ipsisque cognominibus aemulum solis ac lunae. praeveniens quippe et ante matutinum exoriens luciferi nomen accepit ut sol alter diemque maturans, contra ab occasu refulgens nuncupatur vesper ut prorogans lucem vicemve lunae reddens. quam naturam eius pythagoras samius primus deprehendit olympiade circiter xlii, qui fuit urbis romae annus cxlii. iam magnitudine extra cuncta alia sidera est, claritatis quidem tantae, ut unius huius stellae radiis umbrae reddantur. itaque et in magno nominum ambitu est. alii enim iunonis, alii isidis, alii matris deum appellavere. huius natura cuncta generantur in terris. namque in alterutro exortu genitali rore conspergens non terrae modo conceptus inplet, verum animantium quoque omnium stimulat. signiferi autem ambitum peragit trecenis et duodequinquagenis diebus, a sole numquam absistens partibus sex atque quadraginta longius, ut timaeo placet.

simili ratione, sed nequaquam magnitudine aut vi, proximum illi mercurii sidus, a quibusdam appellatum apollinis, inferiore circulo fertur viiii diebus ociore ambitu, modo ante solis exortum, modo post occasum splendens, numquam ab eo xxii partibus remotior, ut cidenas et sosigenes docent. ideo et peculiaris horum siderum ratio est neque communis cum supra dictis. nam ea et quarta parte caeli a sole abesse et tertia, et adversa soli saepe cernuntur, maioresque alios habent cuncta plenae conversionis ambitus in magni anni ratione dicendos.

sed omnium admirationem vincit novissimum sidus, terris familiarissimum et in tenebrarum remedium ab natura repertum, lunae. multiformis haec ambigua torsit ingenia contemplantium et proximum ignorare sidus maxime indignantium, crescens semper aut

senescens et modo curvata in cornua facie, modo aequa portione divisa, modo sinuata in orbem, maculosa eademque subito praenitens, inmensa orbe pleno ac repente nulla, alias pernox, alias sera et parte diei solis lucem adiuvans, deficiens et in defectu tamen conspicua - quae mensis exitu latet, tum laborare non creditur - , iam vero humilis et excelsa, et ne id quidem uno modo, sed alias admota caelo, alias contigua montibus, nunc in aquilonem elata, nunc in austros deiecta. quae singula in ea deprehendit hominum primus endymion; ob id amor eius fama traditur. non sumus profecto grati erga eos qui labore curaque lucem nobis aperuere in hac luce, miraque humani ingeni peste sanguinem et caedes condere annalibus iuvat, ut scelera hominum noscantur mundi ipsius ignaris. proxima ergo cardini, ideoque minimo ambitu, vicenis diebus septenisque et tertia diei parte peragit spatia eadem, quae saturni sidus altissimum xxx, ut dictum est, annis. dein morata in coitu solis biduo, cum tardissime, a tricesima luce rursum ad easdem vices exit, haut scio an omnium, quae in caelo pernosci potuerunt, magistra: in xii mensium spatia oportere dividi annum, quando ipsa totiens solem redeuntem ad principia consequitur; solis fulgore, ut reliqua siderum, regi, siquidem in totum mutuata ab eo luce fulgere, qualem in repercussu aquae volitare conspicimus; ideo molliore et inperfecta vi solvere tantum umorem atque etiam augere, quem solis radii absumant. ideo inaequali lumine adspici, quia, ex adverso demum plena, reliquis diebus tantum ex se terris ostendat, quantum a sole ipsa concipiat; in coitu quidem non cerni, quoniam haustum omnem lucis aversa illo regerat, unde acceperit. sidera vero haut dubie umore terreno pasci, quia dimidio orbe numquam maculoso cernatur, scilicet nondum suppetente ad hauriendum ultra iusta vi; masculas enim non aliud esse quam terrae raptas cum umore sordes. defectus autem suos et solis, rem in tota contemplatione naturae maxime miram et ostento similem, magnitudinum umbraeque indices exsistere. quippe manifestum est solem interventu lunae occultari lunamque terrae obiectu ac vices reddi, eosdem solis radios luna interpositu suo auferente terrae terraque lunae. hac subeunte repentinas obduci tenebras rursumque illius umbra sidus hebetari. neque aliud esse noctem quam terrae umbram, figuram autem umbrae similem metae ac turbini inverso, quando mucrone tantum ingruat neque lunae

excedat altitudinem, quoniam nullum aliud sidus eodem modo obscuretur et talis figura semper mucrone deficiat. spatio quidem consumi umbras indicio sunt volucrum praealti volatus. ergo confinium illis est ae+ris terminus initiumque aetheris. supra lunam pura omnia ac diurnae lucis plena. a nobis autem per noctem cernuntur sidera, ut reliqua lumina e tenebris, et propter has causas nocturno tempore deficit luna. stati autem atque menstrui non sunt utrique defectus propter obliquitatem signiferi lunaeque multivagos, ut dictum est, flexus, non semper in scripulis partium congruente siderum motu.

haec ratio mortales animos subducit in caelum ac velut inde contemplantibus trium maximarum rerum naturae partium magnitudinem detegit. non posset quippe totus sol adimi terris intercedente luna, si terra maior esset quam luna. tertia ex utroque vastitas solis aperietur, ut non sit necesse amplitudinem eius oculorum argumentis atque coniectura animi scrutari: inmensum esse, quia arborum in limitibus porrectarum in quotlibet passuum milia umbras paribus iaciat intervallis, tamquam toto spatio medius, et quia per aequinoctium omnibus in meridiana plaga habitantibus simul fiat a vertice, item quia circa solstitialem circulum habitantium meridie ad septentrionem umbrae cadant, ortu vero ad occasum, quae fieri nullo modo possent, nisi multo quam terra maior esset, nec non quod montem idam exoriens latitudine exsuperet, dextra laevaque large amplectens, praesertim tanto discretus intervallo.

defectus lunae magnitudinem eius haut dubia ratione declarat, sicut terrae parvitatem ipse deficiens. namque cum sint tres umbrarum figurae constetque, si par lumini sit materia quae iaciat, umbram columnae effigie iaci nec habere finem, si vero maior materia quam lumen, turbinis recti, ut sit imum eius angustissimum et simili modo infinita longitudo, si minor materia quam lux, metae existere effigiem in cacuminis finem desinentem talemque cerni umbram deficiente luna: palam fit, ut nulla amplius relinquatur dubitatio, superari magnitudinem terrae. id quidem et tacitis naturae ipsius indiciis: cur enim partitis vicibus anni brumalis abscedit aut noctium opacitate terras reficit exusturus haut dubie, et sic quoque exurens quadam in parte. tanta magnitudo est.

et rationem quidem defectus utriusque primus romani generis in

vulgum extulit sulpicius gallus, qui consul cum m. marcello fuit, sed tum tribunus militum, sollicitudine exercitu liberato pridie quam perses rex superatus a paulo est in concionem ab imperatore productus ad praedicendam eclipsim, mox et composito volumine. apud graecos autem investigavit primus omnium thales milesius olympiadis xlviii anno quarto praedicto solis defectu, qui alyatte rege factus est urbis conditae anno clxx. post eos utriusque sideris cursum in sexcentos annos praececinit hipparchus, menses gentium diesque et horas ac situs locorum et visus populorum complexus, aevo teste haut alio modo quam consiliorum naturae particeps. viri ingentes supraque mortalia, tantorum numinum lege deprehensa et misera hominum mente iam soluta, in defectibus scelera aut mortem aliquam siderum pavente - quo in metu fuisse stesichori et pindari vatum sublimia ora palam est deliquio solis - aut in luna veneficia arguente mortalitate et ob id crepitu dissono auxiliante - quo pavore ignarus causae nicias atheniensium imperator veritus classem portu educere opes eorum adflixit - : macte ingenio este, caeli interpretes rerumque naturae capaces, argumenti repertores, quo deos hominesque vicistis! quis enim haec cernens et statos siderum (quoniam ita appellare placuit) labores non suae necessitati mortales genitos ignoscat

nunc confessa de iisdem breviter atque capitulatim attingam ratione admodum necessariis locis strictimque reddita, nam neque instituti operis talis argumentatio est neque omnium rerum afferri posse causas minus mirum est quam constare in aliquis.

defectus ccxxiii mensibus redire in suos orbes certum est, solis defectus non nisi novissima primave fieri luna, quod vocant coitum, lunae autem non nisi plena, semperque citra quam proxime fuerint; omnibus autem annis fieri utriusque sideris defectus statis diebus horisque sub terra nec tamen, cum superne fiant, ubique cerni, aliquando propter nubila, saepius globo terrae obstante convexitatibus mundi. intra ducentos annos hipparchi sagacitate compertum est et lunae defectum aliquando quinto mense a priore fieri, solis vero septimo, eundem bis in xxx diebus super terras occultari, sed ab aliis hoc cerni, quaeque sunt in hoc miraculo maxime mira, cum conveniat umbra terrae lunam hebetari, nunc ab occasus parte hoc ei accidere, nunc ab exortus, quanam ratione, cum

solis exortu umbra illa hebetatrix sub terra esse debeat, semel iam acciderit ut in occasu luna deficeret utroque super terram conspicuo sidere. nam ut xv diebus utrumque sidus quaereretur, et nostro aevo accidit imperatoribus vespasianis patre iii. filio consulibus.

lunam semper aversis a sole cornibus, si crescat, ortus spectare, si minuatur, occasus, haut dubium est; lucere dodrantes semuncias horarum ab secunda adicientem usque ad plenum orbem detrahentemque in deminutionem; intra xiiii autem partes solis semper occultam esse. quo argumento amplior errantium stellarum quam lunae magnitudo colligitur, quando illae et a septenis interdum partibus emergant. sed altitudo cogit minores videri, sicut adfixas caelo solis fulgor interdiu non cerni, cum aeque ac noctu luceant idque manifestum fiat defectu solis et praealtis puteis.

errantium autem tres, quas supra solem diximus sitas, occultantur meantes cum eo, exoriuntur vero matutino discedentes partibus numquam amplius undenis. postea radiorum eius contactu reguntur et in triquetro a partibus cxx stationes matutinas faciunt, quae et primae vocantur, mox in adverso a partibus clxxx exortus vespertinos, iterumque in cxx ab alio latere appropinquantes stationes vespertinas, quas et secundas vocant, donec assecutus in partibus duodenis occultet illas, qui vespertini occasus appellantur. martis stella, ut propior, etiam ex quadrato sentit radios, a xc partibus, unde et nomen accepit motus primus et secundus nonagenarius dictus ab utroque exortu. eadem stationalis senis mensibus commoratur in signis, alioqui bimenstris, cum ceterae utraque statione quaternos menses non inpleant. inferiores autem duae occultantur in coitu vespertino simili modo, relictaeque a sole totidem in partibus faciunt exortus matutinos, ad quos longissimis distantiae suae metis solem insequuntur adeptaeque occasu matutino conduntur ac praetereunt. mox eodem intervallo vespere exoriuntur usque ad quos diximus terminos. ab his retrogradiuntur ad solem et occasu vespertino delitescunt. veneris stella et stationes duas, matutinam vespertinamque, ab utroque exortu facit a longissimis distantiae suae finibus, mercurii stationum breviore momento quam ut deprehendi possint.

haec est luminum occultationumque ratio, perplexior motu multisque involuta miraculis, siquidem magnitudines suas et colores

mutant, et eaedem ad septentrionem accedunt abeuntque ad austrum terrisque propiores aut caelo repente cernuntur. in quibus aliter multa quam priores tradituri fatemur ea quoque illorum esse muneris qui primi vias quaerendi demonstraverint, modo ne quis desperet saecula proficere semper. pluribus de causis haec omnia accidunt: prima circulorum, quos graeci ἀψῖδας in stellis vocant; etenim graecis utendum erit vocabulis. sunt autem hi sui cuique earum aliique quam mundo, quoniam terra a verticibus duobus, quos appellaverunt polos, centrum caeli nec non et signiferi est oblique inter eos siti. omnia autem haec constant ratione circini semper indubitata. ergo ab alio cuique centro apsides suae exsurgunt ideoque diversos habent orbes motusque dissimiles, quoniam interiores apsidas necesse est breviores esse. igitur a terrae centro apsides altissimae sunt saturno in scorpione, iovi in virgine, marti in leone, soli in geminis, veneri in sagittario, mercurio in capricorno, lunae in tauro, mediis omnium partibus, et e contrario ad terrae centrum humillimae atque proximae. sic fit ut tardius moveri videantur, cum altissimo ambitu feruntur, non quia adcelerent tardentve naturales motus, qui certi ac singuli sunt illis, sed quia deductas ab summa apside lineas coartari ad centrum necesse est, sicut in rotis radios, idemque motus alias maior, alias minor centri propinquitate sentitur. altera sublimitatium causa, quoniam a suo centro apsidas altissimas habent in aliis signis, saturnus in librae parte vicesima, iuppiter cancri quinta decima, mars capricorni xxviii, sol arietis xviiii, venus piscium xxvii, mercurius virginis xv, luna tauri iii. tertia altitudinum ratio caeli mensura, non circuli, intellegitur, subire eas aut descendere per profundum ae+ris oculis aestimantibus.

huic conexa latitudinum signiferi obliquitatisque causa est. per hunc stellae quas diximus feruntur, nec aliud habitatur in terris quam quod illi subiacet, reliqua a polis squalent. veneris tantum stella excedit eum binis partibus, quae causa intellegitur efficere ut quaedam animalia et in desertis mundi nascantur. luna quoque per totam latitudinem eius vagatur, sed omnino non excedens eum. ab his mercurii stella laxissime, ut tamen e duodenis partibus - tot enim sunt latitudinis - non amplius octonas pererret, neque has aequaliter, sed duas in medio eius et supra quattuor, infra duas. sol deinde medio fertur inter duas partes flexuoso draconum meatu inaequalis, martis

stella quattuor mediis, iovis media et super eam duabus, saturni duabus ut sol. haec erit latitudinum ratio ad austrum descendentium aut ad aquilonem subeuntium. hac constare et tertiam illam a terra subeuntium in caelum, et pariter scandi eam quoque existimavere plerique falso. qui ut coarguantur, aperienda est subtilitas inmensa et omnes eas conplexa causas.

convenit stellas in occasu vespertino proximas esse terrae et altitudine et latitudine, exortusque matutinos in initio cuiusque fieri, stationes in mediis latitudinum articulis, quae vocant ecliptica. perinde confessum est motum augeri, quamdiu in vicino sint terrae; cum abscedant in altitudinem, minui. quae ratio lunae maxime sublimitatibus adprobatur. aeque non est dubium in exortibus matutinis etiamnum augeri atque a stationibus primis tris superiores deminuere se usque ad stationes secundas. quae cum ita sint, manifestum erit ab exortu matutino latitudines scandi, quoniam in eo primum habitu incipiat parcius adici motus, in stationibus vero primis et altitudinem subiri, quoniam tum primum incipiant detrahi numeri stellaeque retroire. cuius rei ratio privatim reddenda est. percussae in qua diximus parte et triangulo solis radio inhibentur rectum agere cursum et ignea vi levantur in sublime. hoc non protinus intellegi potest visu nostro, ideoque existimantur stare, unde et nomen accepit statio. progreditur deinde eiusdem radii violentia et retroire cogit vapore percussas. multo id magis in vespertino earum exortu, toto sole adverso cum in summas apsidas expelluntur minimaeque cernuntur, quoniam altissime absunt, et minimo feruntur motu, tanto minore, cum hoc in altissimis apsidum evenit signis. ab exortu vespertino latitudo descenditur parcius iam se minuente motu, non tamen ante stationes secundas augente, cum et altitudo descenditur, superveniente ab alio latere radio eademque vi rursus ad terras deprimente, qua sustulerat in caelum e priore triquetro. tantum interest, subeant radii an superveniant, multoque eadem magis in vespertino occasu accidunt. haec est superiorum stellarum ratio; difficilior reliquarum et a nullo ante nos reddita.

primum igitur dicatur, cur veneris stella numquam longius xlvi partibus, mercurii xx ab sole abscedant, saepe citra eas ad solem reciprocent. conversas habent utraeque apsidas ut infra solem sitae, tantumque circulis earum subter est quantum superne praedictarum,

et ideo non possunt abesse amplius, quoniam curvatura apsidum ibi non habet longitudinem maiorem. ergo utrique simili ratione modum statuunt apsidum suarum margines, ac spatia longitudinis latitudinum evagatione pensant. at enim cur non semper ad quadraginta sex et ad partes viginti perveniunt immo vero, sed ratio canonicos fallit. namque apparet apsidas quoque earum moveri, quod numquam transeant solem. itaque cum in partem ipsam eius incidere margines alterutro latere, tum et stellae ad longissima sua intervalla pervenire intelleguntur. cum citra fuere margines, totidem partibus et ipsae ocius redire coguntur, cum sit illa semper utrique extremitas summa.

hinc et ratio motuum conversa intellegitur. superiores enim celerrime feruntur in occasu vespertino, hae tardissime; illae a terra altissime absunt, cum tardissime moventur, hae, cum ocissime, quia, sicut in illis propinquitas centri adcelerat, ita in his extremitas circuli. illae ab exortu matutino minuere celeritatem incipiunt, hae vero augere; illae retro cursum agunt a statione matutina usque ad vespertinam, veneris a vespertina usque ad matutinam. incipit autem ab exortu matutino latitudinem scandere, altitudinem vero ac solem insequi a statione matutina, ocissima in occasu matutino et altissima, degredi autem latitudine motumque minuere ab exortu vespertino, retro quidem ire simulque altitudine degredi ab statione vespertina, mercurii rursus stella utroque modo scandere ab exortu matutino, degredi vero latitudine a vespertino, consecutoque sole ad quindecim partium intervallum consistit quadriduo prope inmobilis. mox ab altitudine descendit retroque graditur ab occasu vespertino usque ad exortum matutinum, tantumque haec et luna totidem diebus, quot subiere, descendunt. veneris quindecies pluribus subit, rursus saturni et iovis duplicato degrediuntur, martis etiam quadruplicato. tanta est naturae varietas, sed ratio evidens. nam quae in vaporem solis nituntur, etiam descendunt aegre.

multa promi amplius circa haec possunt secreta naturae legesque, quibus ipsa serviat, exempli gratia in martis sidere, cuius est maxime inobservabilis cursus, numquam id stationem facere iovis sidere triquetro, raro admodum lx partibus discreto, qui numerus sexangulas mundi efficit formas, nec exortus nisi in duobus signis tantum, cancri et leonis, simul edere, mercurii vero sidus exortus vespertinos in piscibus raros facere, creberrimos in virgine, in libra matutinos, item

matutinos in aquario, rarissimos in leone, retrogradum in tauro et geminis non fieri, in cancro vero non citra vicesimam quintam partem, lunam bis coitum cum sole in nullo alio signo facere quam geminis, non coire aliquando in sagittario tantum, novissimam vero primamque eadem die vel nocte nullo alio in signo quam ariete conspici - id quoque paucis mortalium contigit, et inde fama cernendi lynceo - , non conparere in caelo saturni sidus et martis, cum plurimum, diebus clxx, iovis xxxvi aut, cum minimum, denis detractis diebus, veneris lxviiii aut, cum minimum, lii, mercuri xiii aut, cum plurimum, xvii.

colores ratio altitudinum temperat, siquidem earum similitudinem trahunt, in quarum ae+ra venere subeundo, tinguitque adpropinquantes utralibet alieni meatus circulus, frigidior in pallorem, ardentior in ruborem, ventosus in horrorem, sol atque commissurae apsidum extremaeque orbitae atram in obscuritatem. suus quidem cuique color est: saturno candidus, iovi clarus, marti igneus, lucifero candens, vesperi refulgens, mercurio radians, lunae blandus, soli, cum oritur, ardens, postea radians, his causis conexo visu et earum quae caelo continentur. namque modo multitudo conferta inest circa dimidios orbes lunae, placida nocte leniter inlustrante eas, modo raritas, ut fugisse miremur, plenilunio abscondente aut cum solis suprave dictarum radii visus praestrinxere nostros. et ipsa autem luna ingruentium solis radiorum haut dubie differentias sentit, hebetante cetero inflexos mundi convexitate eos praeterquam ubi recti angulorum conpetant ictus. itaque in quadrato solis dividua est, in triquetro seminani ambitur orbe, inpletur autem in adverso, rursusque minuens easdem effigies paribus edit intervallis, simili ratione qua super solem tria sidera.

sol autem ipse quattuor differentias habet, bis aequata nocte diei, vere et autumno, in centrum incidens terrae octavis in partibus arietis ac librae, bis permutatis spatiis, in auctum diei bruma, octava in parte capricorni, noctis vero solstitio, totidem in partibus cancri. inaequalitatis causa obliquitas est signiferi, cum pars aequa mundi super subterque terras omnibus fiat momentis. sed quae recta in exortu suo consurgunt signa longiore tractu tenent lucem; quae vero obliqua, ociore transeunt spatio.

latet plerosque magna caeli adsectatione conpertum principibus

doctrinae viris, superiorum trium siderum ignes esse qui decidui ad terras fulminum nomen habeant, sed maxime iovis medio loco siti, fortassis quoniam contagium nimii umoris ex superiore circulo atque ardoris ex subiecto per hunc modum egerat, ideoque dictum iovem fulmina iaculari. ergo ut e flagrante ligno carbo cum crepitu, sic a sidere caelestis ignis exspuitur praescita secum adferens, ne abdicata quidem sui parte in divinis cessante operibus. idque maxime turbato fit ae+re, quia collectus umor abundantiam stimulat aut quia turbatur quodam ceu gravidi sideris partu.

intervalla quoque siderum a terra multi indagare temptarunt, et solem abesse a luna undeviginti partes quantam lunam ipsam a terra prodiderunt. pythagoras vero, vir sagacis animi, a terra ad lunam [cxxvi] stadiorum esse collegit, ad solem ab ea duplum, inde ad duodecim signa triplicatum, in qua sententia et gallus sulpicius fuit noster.

sed pythagoras interdum et musica ratione appellat tonum quantum absit a terra luna, ab ea ad mercurium dimidium spatii et ab eo ad veneris, a quo ad solem sescuplum, a sole ad martem tonum id est quantum ad lunam a terra, ab eo ad iovem dimidium et ab eo ad saturni, et inde sescuplum ad signiferum; ita septem tonis effici quam διὰ πασῶν ἁρμονίαν vocant, hoc est universitatem concentus; in ea saturnum dorio moveri phthongo, iovem phrygio et in reliquis similia, iucunda magis quam necessaria subtilitate.

stadium xxv nostros efficit passus, hoc est pedes dcxxv. posidonius non minus xl stadiorum a terra altitudinem esse, in quam nubila ac venti nubesque perveniant, inde purum liquidumque et inperturbatae lucis ae+ra, sed a turbido ad lunam viciens c milia stadiorum, inde ad solem quinquiens miliens, et spatio fieri, ut tam inmensa eius magnitudo non exurat terras. plures autem dcccc in altitudinem nubes subire prodiderunt. inconperta haec et inextricabilia, sed prodenda, quia sunt prodita, in quis tamen una ratio geometricae collectionis numquam fallacis possit non repudiari, si cui libeat altius ista persequi, nec ut mensura - id enim velle paene dementis otii est - , sed ut tantum aestimatio coniectanti constet animo. nam cum ccclx et fere sex partibus orbis solis ex circuitu eius patere appareat circulum, per quem meat, semperque dimetiens tertiam partem ambitus et tertiae paulo minus septimam colligat,

apparet dempta eius dimidia, quoniam terra centralis interveniat, sextam fere partem huius inmensi spatii, quod circa terram circuli solaris animo conprehenditur, inesse altitudinis spatio, lunae vero duodecimam, quoniam tanto breviore quam sol ambitu currit. ita fieri eam in medio solis ac terrae. miror quo procedat inprobitas cordis humani parvolo aliquo invitata successu, sicut in supra dictis occasionem inpudentiae ratio largitur. ausique divinare solis ad terram spatia eadem ad caelum agunt, quoniam sit medius sol, ut protinus mundi quoque ipsius mensura veniat in digitos. quantas enim dimetiens habeat septimas, tantas habere circulum duoetvicesimas, tamquam plane a perpendiculo mensura caeli constet. aegyptia ratio, quam petosiris et nechepsos ostendere, singulas partes in lunari circulo, ut dictum est, minimo xxxiii stadiis paulo amplius patere colligit, in saturni amplissimo duplum, in solis, quem medium esse diximus, utriusque mensurae dimidium. quae computatio plurimum habet pudoris, quoniam ad saturni circulum addito signiferi ipsius intervallo nec numerabilis multiplicatio efficitur.

restant pauca de mundo. namque et in ipso caelo stellae repente nascuntur. plura earum genera. cometas graeci vocant, nostri crinitas, horrentes crine sanguineo et comarum modo in vertice hispidas. iidem pogonias quibus inferiore ex parte in speciem barbae longae promittitur iuba. acontiae iaculi modo vibrantur, ocissimo significatu. haec fuit, de qua quinto consulatu suo titus imperator caesar praeclaro carmine perscripsit, ad hunc diem novissima visa. easdem breviores et in mucronem fastigatas xiphias vocavere, quae sunt omnium pallidissimae et quodam gladii nitore ac sine ullis radiis, quos et disceus, nomini similis, colore autem electro, raros e margine emittit. pitheus doliorum cernitur figura, in concavo fumidae lucis. ceratias cornus speciem habet, qualis fuit cum graecia apud salamina depugnavit. lampadias ardentes imitatur faces, hippeus equinas iubas, celerrimi motus atque in orbem circa se euntes. fit et candidus Διὸς cometes, argenteo crine ita refulgens, ut vix contueri liceat, specieque humana dei effigiem in se ostendens. fiunt et hirci, villorum specie et nube aliqua circumdati. semel adhuc iubae effigies mutata in hastam est, olympiade cviii, urbis anno ccccviii. brevissimum quo cernerentur spatium vii dierum adnotatum est,

longissimum clxxx.

moventur autem aliae errantium modo, aliae inmobiles haerent, omnes ferme sub ipso septentrione aliqua eius parte non certa, sed maxime in candida, quae lactei circuli nomen accepit. aristoteles tradit et simul plures cerni, nemini conpertum alteri, quod equidem sciam, ventos autem ab iis graves aestusve significari. fiunt et hibernis mensibus et in austrino polo, sed ibi citra ullum iubar. diraque conperta aethiopum et aegypti populis cui nomen aevi eius rex dedit typhon, ignea specie ac spirae modo intorta, visu quoque torvo, nec stella verius quam quidam igneus nodus. sparguntur aliquando et errantibus stellis ceterisque crines. sed cometes numquam in occasura parte caeli est, terrificum magna ex parte sidus atque non leviter piatum, ut civili motu octavio consule iterumque pompei et caesaris bello, in nostro vero aevo circa veneficium, quo claudius caesar imperium reliquit domitio neroni, ac deinde principatu eius adsiduum prope ac saevum. referre arbitrantur, in quas partes sese iaculetur aut cuius stellae vires accipiat quasque similitudines reddat et quibus in locis emicet: tibiarum specie musicae arti portendere, obscenis autem moribus in verendis partibus signorum, ingeniis et eruditioni, si triquetram figuram quadratamve paribus angulis ad aliquos perennium stellarum situs edat; venena fundere in capite septentrionalis austrinaeve serpentis.

cometes in uno totius orbis loco colitur in templo romae, admodum faustus Divo Augusto iudicatus ab ipso, qui incipiente eo apparuit ludis, quos faciebat veneri genetrici non multo post obitum patris caesaris in collegio ab eo instituto. namque his verbis in ... gaudium prodit is: “ipsis ludorum meorum diebus sidus crinitum per septem dies in regione caeli sub septemtrionibus est conspectum. id oriebatur circa undecimam horam diei clarumque et omnibus e terris conspicuum fuit. eo sidere significari vulgus credidit caesaris animam inter deorum inmortalium numina receptam, quo nomine id insigne simulacro capitis eius, quod mox in foro consecravimus, adiectum est.” haec ille in publicum; interiore gaudio sibi illum natum seque in eo nasci interpretatus est. et, si verum fatemur, salutare id terris fuit.

sunt qui et haec sidera perpetua esse credant suoque ambitu ire, sed non nisi relicta ab sole cerni; alii vero qui nasci umore fortuito et

ignea vi ideoque solvi.

idem hipparchus numquam satis laudatus, ut quo nemo magis adprobaverit cognationem cum homine siderum animasque nostras partem esse caeli, novam stellam et aliam in aevo suo genitam deprehendit eiusque motu, qua fulsit, ad dubitationem est adductus, anne hoc saepius fieret moverenturque et eae, quas putamus adfixas, ideoque ausus rem etiam deo inprobam, adnumerare posteris stellas ac sidera ad nomen expungere organis excogitatis, per quae singularum loca atque magnitudines signaret, ut facile discerni posset ex eo non modo an obirent ac nascerentur, sed an omnino aliquae transirent moverenturque, item an crescerent minuerenturque, caelo in hereditate cunctis relicto, si quisquam, qui cretionem eam caperet, inventus esset.

emicant et faces, non nisi cum decidunt visae, qualis germanico caesare gladiatorum spectaculum edente praeter ora populi meridiano transcucurrit. duo genera earum. lampadas vocant plane faces, alterum bolidas, quale mutinensibus malis visum est. distant quod faces vestigia longa faciunt priore ardente parte, bolis vero perpetua ardens longiorem trahit limitem.

emicant et trabes simili modo, quas δοκοὺς vocant, qualis cum lacedaemonii classe victi imperium graeciae amisere. fit et caeli ipsius hiatus, quod vocant chasma, fit et sanguinea species et, quo nihil terribilius mortalium timori est, incendium ad terras cadens inde, sicut olympiadis cvii anno tertio, cum rex philippus graeciam quateret. atque ego haec statis temporibus naturae vi, ut cetera, arbitror existere, non, ut plerique, variis de causis, quas ingeniorum acumen excogitat, quippe ingentium malorum fuere praenuntia; sed ea accidisse non quia haec facta sunt arbitror, verum haec ideo facta quia incasura erant illa, raritate autem occultam eorum esse rationem ideoque non, sicut exortus supra dictos defectusque et multa alia, nosci.

cernuntur et stellae cum sole totis diebus, plerumque et circa solis orbem ceu spiceae coronae et versicolores circuli, qualiter Augusto Caesare in prima iuventa urbem intrante post obitum patris ad nomen ingens capessendum. existunt eaedem coronae circa lunam et circa nobilia astra caeloque inhaerentia. circa solem arcus adparuit l. opimio q. fabio cos., orbis c. porcio m’. acilio, circulus rubri coloris

l. iulio p. rutilio cos.

fiunt prodigiosi et longiores solis defectus, qualis occiso dictatore caesare et antoniano bello totius paene anni pallore continuo. et rursus soles plures simul cernuntur, nec supra ipsum nec infra, sed ex obliquo, numquam iuxta nec contra terram nec noctu, sed aut oriente aut occidente. semel et meridie conspecti in bosporo produntur, qui ab matutino tempore duraverunt in occasum. trinos soles et antiqui saepius videre, sicut sp. postumio q. mucio et q. marcio m. porcio et m. antonio p. dolabella et m. lepido l. planco cos., et nostra aetas vidit divo claudio principe, consulatu eius cornelio orfito collega. plures quam tres simul visi ad hoc aevi numquam produntur.

lunae quoque trinae, ut cn. domitio c. fannio consulibus, apparuere.

quod plerique appellaverunt soles nocturnos, lumen de caelo noctu visum est c. caecilio cn. papirio consulibus et saepe alias, ut diei species nocte luceret.

clipeus ardens ab occasu ad ortum scintillans transcucurrit solis occasu l. valerio c. mario consulibus.

scintillam visam e stella cadere et augeri terrae adpropinquantem ac, postquam lunae magnitudine facta sit, inluxisse ceu nubilo die, dein, cum in caelum se reciperet, lampadem factam semel umquam proditur cn. octavio c. scribonio consulibus. vidit id silanus proconsul cum comitatu suo.

fieri videntur et discursus stellarum numquam temere, ut non ex ea parte truces venti cooriantur.

existunt stellae et in mari terrisque. vidi nocturnis militum vigiliis inhaerere pilis pro vallo fulgorem effigie ea; et antemnis navigantium aliisque navium partibus ceu vocali quodam sono insistunt, ut volucres sedem ex sede mutantes, graves, cum solitariae venere, mergentesque navigia et, si in carinae ima deciderint, exurentes, geminae autem salutares et prosperi cursus nuntiae, quarum adventu fugari diram illam ac minacem appellatamque helenam ferunt et ob id polluci ac castori id numen adsignant eosque in mari invocant. hominum quoque capita vespertinis magno praesagio circumfulgent. omnia incerta ratione et in naturae maiestate abdita.

hactenus de mundo ipso sideribusque: nunc reliqua caeli memorabilia. namque et hoc caelum appellavere maiores quod alio

nomine ae+ra, omne quod inani simile vitalem hunc spiritum fundit. infra lunam haec sedes multoque inferior, ut animadverto propemodum constare, infinitum ex superiore natura ae+ris, infinitum terreni halitus miscens utraque sorte confunditur. hinc nubila, tonitrua et alia fulmina, hinc grandines, pruinae, imbres, procellae, turbines, hinc plurima mortalium mala et rerum naturae pugna secum. terrena in caelum tendentia deprimit siderum vis eademque quae sponte non subeant ad se trahit. decidunt imbres, nebulae subeunt, siccantur amnes, ruunt grandines. torrent radii et terram in medium undique inpellunt, iidem infracti resiliunt et quae potuere auferunt secum. vapor ex alto cadit rursusque in altum redit. venti ingruunt inanes iidemque cum rapina remeant. tot animalium haustus spiritum e sublimi trahit, at ille contra nititur, tellusque ut inani caelo spiritum fundit. sic ultro citro commeante natura ut tormento aliquo mundi celeritate discordia accenditur. nec stare pugnae licet, sed adsidue rapta convolvitur et circa terram inmenso rerum causas globo ostendit, subinde per nubes caelum aliud obtexens. ventorum hoc regnum. itaque praecipua eorum natura ibi et ferme reliquas complexa eas causas, quoniam tonitruum et fulminum iactus horum violentiae plerique adsignant, quin et ideo lapidibus pluere interim, quia vento sint rapti, et multa similiter. quam ob rem simul plura dicenda sunt.

tempestatum imbriumque quasdam statas esse causas, quasdam vero fortuitas aut adhuc rationis inconpertae, manifestum est. quis enim aestates et hiemes quaeque in temporibus annua vice intelleguntur siderum motu fieri dubitet ergo ut solis natura temperando intellegitur anno, sic reliquorum quoque siderum propria est cuiusque vis et ad suam cuique naturam fertilis. alia sunt in liquorem soluti umoris fecunda, alia concreti in pruinas aut coacti in nives aut glaciati in grandines, alia flatus, teporis alia aut vaporis, alia roris, alia rigoris. nec vero haec tanta debent existimari, quanta cernuntur, cum esse eorum nullum minus luna tam inmensae altitudinis ratio declaret. igitur in suo quaeque motu naturam suam exercent, quod manifestum saturni maxime transitus imbribus faciunt. nec meantium modo siderum haec vis est, sed multorum etiam adhaerentium caelo, quotiens errantium accessu inpulsa aut coniectu radiorum exstimulata sunt, qualiter in suculis sentimus

accidere, quas graeci ob id pluvio nomine appellant. quin et sua sponte quaedam statisque temporibus, ut haedorum exortus. arcturi vero sidus non ferme sine procellosa grandine emergit.

nam caniculae exortu accendi solis vapores quis ignorat cuius sideris effectus amplissimi in terra sentiuntur: fervent maria exoriente eo, fluctuant in cellis vina, moventur stagna. orygem appellat aegyptus feram, quam in exortu eius contra stare et contueri tradit ac velut adorare, cum sternuerit. canes quidem toto eo spatio maxime in rabiem agi non est dubium.

quin partibus quoque signorum quorundam sua vis inest, ut autumnali aequinoctio brumaeque, cum tempestatibus confici sidus intellegimus, nec imbribus tantum tempestatibusque, sed multis et corporum et ruris experimentis. adflantur alii sidere, alii commoventur statis temporibus alvo, nervis, capite, mente. olea et populus alba et salices solstitio folia circumagunt. floret ipso brumali die suspensi in tectis arentis herba pulei. rumpuntur intentae spiritu membranae. miretur hoc qui non observet cotidiano experimento, herbam unam, quae vocatur heliotropium, abeuntem solem intueri semper omnibusque horis cum eo verti, vel nubilo obumbrante. iam quidem lunari potestate ostrearum conchyliorumque et concharum omnium corpora augeri ac rursus minui, quin et soricum fibras respondere numero lunae exquisivere diligentiores, minimumque animal, formicam, sentire vires sideris interlunio semper cessantem. quo turpior homini inscitia est fatenti praecipue iumentorum quorundam in oculis morbos cum luna increscere ac minui. patrocinatur vastitas rei, inmensa discreta altitudine in duo atque septuaginta signa, hoc est rerum aut animantium effigies, in quas digessere caelum periti. in iis quidem mdc adnotavere stellas, insignes scilicet effectu visuve, exempli gratia in cauda tauri septem quas appellavere vergilias, in fronte suculas, booten, quae sequitur septem triones.

extra has causas non negaverim exsistere imbres ventosque, quoniam umidam a terra, alias vero propter vaporem fumidam exhalari caliginem certum est nubesque liquore egresso in sublime aut ex ae+re coacto in liquorem gigni. densitas earum corpusque haut dubio coniectatur argumento, cum solem obumbrent, perspicuum alias etiam urinantibus in quamlibet profundam aquarum altitudinem.

igitur non eam infitias posse in has et ignes superne stellarum decidere, quales sereno saepe cernimus, quorum ictu concuti ae+ra verum est, quando et tela vibrata stridunt, cum vero in nubem perveniunt, vaporem dissonum gigni, ut candente ferro in aquam demerso, et fumidum verticem volvi. hinc nasci procellas et, si in nube luctetur flatus aut vapor, tonitrua edi; si erumpat ardens, fulmina; si longiore tractu nitatur, fulgetras. his findi nubem, illis perrumpi, et esse tonitrua inpactorum ignium plagas, ideoque protinus coruscare igneas nubium rimas. posse et repulsu siderum depressum qui a terra meaverit spiritum nube cohibitum tonare, natura strangulante sonitum, dum rixetur, edito fragore, cum erumpat, ut in membrana spiritu intenta. posse et attritu, dum praeceps feratur, illum, quisquis est, spiritum accendi. posse et conflictu nubium elidi, ut duorum lapidum, scintillantibus fulgetris. sed haec omnia esse fortuita. hinc bruta fulmina et vana, ut quae nullam habeant rationem naturae. his percuti montes, his maria, omnesque alios inritos iactus. illa vero fatidica ex alto statisque de causis et ex suis venire sideribus.

simili modo ventos vel potius flatus posse et arido siccoque anhelitu terrae gigni non negaverim, posse et aquis ae+ra exspirantibus, qui neque in nebulam densetur nec crassescat in nubes, posse et solis inpulsu agi, quoniam ventus haut aliud intellegatur quam fluctus ae+ris, pluribusque etiam modis. namque et e fluminibus ac nivibus et e mari videmus, et quidem tranquillo, et alios, quos vocant altanos, e terra consurgere. qui, cum e mari redeunt, tropaei vocantur, si pergunt, apogei.

montium vero flexus crebrique vertices et conflexa cubito aut confracta in umeros iuga, concavi vallium sinus, scindentes inaequalitate ideo resultantem ae+ra - quae causa etiam voces multis in locis reciprocas facit - , sine fine ventos generant. iam quidem et specus, qualis in dalmatia ore vasto, praeceps hiatu, in quem deiecto levi pondere quamvis tranquillo die turbini similis emicat procella; nomen loco est senta. quin et in cyrenaica provincia rupes quaedam austro traditur sacra, quam profanum sit attrectari hominis manu, confestim austro volvente harenas. in domibus etiam multis madefacta inclusa opacitate conceptacula auras suas habent. adeo causa non deest.

sed plurimum interest, flatus sit an ventus. illos statos atque perspirantes, quos non tractus aliquis, verum terrae sentiunt, qui non aura, non procella, sed, mares appellatione quoque ipsa, venti sunt, sive adsiduo mundi motu et contrario siderum occursu nascuntur, sive hic est ille generabilis rerum naturae spiritus huc illuc tamquam in utero aliquo vagus, sive disparili errantium siderum ictu radiorumque multiformi iactu flagellatus ae+r, sive a suis sideribus exeunt his propioribus sive ab illis caelo adfixis cadunt, palam est illos quoque legem habere naturae non ignotam, etiamsi nondum percognitam. viginti amplius auctores graeci veteres prodidere de his observationes. quo magis miror orbe discordi et in regna, hoc est in membra, diviso tot viris curae fuisse tam ardua inventu, inter bella praesertim et infida hospitia, piratis etiam, omnium mortalium hostibus, transituros fama terrentibus, ut hodie quaedam in suo quisque tractu ex eorum commentariis, qui numquam eo accessere, verius noscat quam indigenarum scientia, nunc vero pace tam festa, tam gaudente proventu rerum artiumque principe, omnino nihil addisci nova inquisitione, immo ne veterum quidem inventa perdisci. non erant maiora praemia, in multos dispersa fortunae magnitudine, et ista plures sine praemio alio quam posteros iuvandi eruerunt. namque mores hominum senuere, non fructus, et inmensa multitudo aperto, quodcumque est, mari hospitalique litorum omnium adpulsu navigat, sed lucri, non scientiae, gratia. nec reputat caeca mens et tantum avaritiae intenta id ipsum scientia posse tutius fieri. quapropter scrupulosius, quam instituto fortassis conveniat operi, tractabo ventos, tot milia navigantium cernens.

veteres quattuor omnino servavere per totidem mundi partes - ideo nec homerus plures nominat - hebeti, ut mox iudicatum est, ratione; secuta aetas octo addidit nimis subtili atque concisa. proximis inter utramque media placuit, ad brevem ex numerosa additis quattuor. sunt ergo bini in quattuor caeli partibus, ab oriente aequinoctiali subsolanus, ab oriente brumali vulturnus. illum apelioten, hunc graeci eurum appellant. a meridie auster et ab occasu brumali africus; notum et liba nominant. ab occasu aequinoctiali favonius, ab occasu solstitiali corus; zephyrum et argesten vocant. a septentrionibus septentrio, interque eum et exortum solstitialem aquilo, aparctias et boreas dicti. numerosior ratio quattuor his interiecerat, thrascian

media regione inter septentrionem et occasum solstitialem, itemque caecian media inter aquilonem et exortum aequinoctialem ab ortu solstitiali, phoenica media regione inter ortum brumalem et meridiem, item inter liba et notum conpositum ex utroque medium inter meridiem et hibernum occidentem libonotum. nec finis. alii quippe mesen nomine etiamnum addidere inter borean et caecian, et inter eurum notumque euronotum. sunt etiam quidam peculiares quibusque gentibus venti, non ultra certum procedentes tractum, ut atheniensibus sciron, paulo ab argeste deflexus, reliquae graeciae ignotus. aliubi flatus idem olympias vocatur. consuetudo omnibus his nominibus argesten intellegit. caecian aliqui vocant hellespontian, et eosdem alii aliter. item in narbonensi provincia clarissimus ventorum est circius nec ullo omnium violentia inferior, ostiam plerumque secto ligustico mari perferens. idem non modo in reliquis partibus caeli ignotus est, sed ne viennam quidem eiusdem provinciae urbem attingens: paucis ante milibus iugi modici occursu tantus ille ventorum coercitus! et austros in aegyptum penetrare negat fabianus. quo fit manifesta lex naturae, ventis etiam et tempore et fine dicto.

ver ergo aperit navigantibus maria, cuius in principio favonii hibernum molliunt caelum sole aquarii xxv obtinente partem. is dies sextus februarias ante idus. conpetit ferme et hoc omnibus, quos deinde ponam, per singulas intercalationes uno die anticipantibus rursusque lustro sequenti ordinem servantibus. favonium quidam a. d. viii kalendas martias chelidonian vocant ab hirundinis visu, nonnulli vero ornithian, uno et lxx die post brumam ab adventu avium flantem per dies viiii. favonio contrarius est quem subsolanum appellavimus. dat aestatem exortus vergiliarum in totidem partibus tauri vi diebus ante maias idus, quod tempus austrinum est, huic vento septentrione contrario. ardentissimo autem aestatis tempore exoritur caniculae sidus sole primam partem leonis ingrediente, qui dies xv ante augustas kalendas est. huius exortum diebus viii ferme aquilones antecedunt, quos prodromos appellant. post biduum autem exortus iidem aquilones constantius perflant diebus xl. quos etesias appellant. mollire eos creditur solis vapor geminatus ardore sideris, nec ulli ventorum magis stati sunt. post eos rursus austri frequentes usque ad sidus arcturi, quod exoritur xi diebus ante aequinoctium autumni. cum hoc corus incipit. corus autumnat; huic est contrarius

vulturnus. post id aequinoctium diebus fere iiii et xl vergiliarum occasus hiemem inchoat, quod tempus in iii idus novembres incidere consuevit; hoc est aquilonis hiberni multumque aestivo illi dissimilis, cuius ex adverso est africus. ante brumam autem vii diebus totidemque post eam sternitur mare alcyonum feturae, unde nomen ii dies traxere. reliquum tempus hiemat. nec tamen saevitia tempestatum concludit mare. piratae primum coegere mortis periculo in mortem ruere et hiberna experiri maria; nunc idem avaritia cogit.

ventorum frigidissimi sunt quos a septentrione diximus spirare et vicinus iis corus. hi et reliquos conpescunt et nubes abigunt. umidi africus et praecipue auster italiae. narrant et in ponto caecian in se trahere nubes. sicci corus et vulturnus, praeterquam desinentes. nivales aquilo et septentrio. grandines septentrio inportat et corus. aestuosus auster, tepidi vulturnus et favonius. iidem subsolano sicciores, et in totum omnes a septentrione et occidente sicciores quam a meridie et oriente. saluberrimus autem omnium aquilo, noxius auster et magis siccus, fortassis quia umidus frigidior est. minus esurire eo spirante creduntur animantes. etesiae noctu desinunt fere et a tertia diei oriuntur. in hispania et asia ab oriente flatus est eorum, in ponto ab aquilone, reliquis in partibus a meridie. spirant autem et a bruma, cum vocantur ornithiae, sed leniores et paucis diebus. permutant et duo naturam cum situ: auster africae serenus, aquilo nubilus. omnes venti vicibus suis spirant, maiore ex parte autem ut contrarius desinenti incipiat. cum proximi cadentibus surgunt, a laevo latere in dextrum ut sol ambiunt. de ratione eorum menstrua quarta maxime luna decernit. isdem autem ventis in contrarium navigatur prolatis pedibus, ut noctu plerumque adversa vela concurrant. austro maiores fluctus eduntur quam aquilone, quoniam ille inferus ex imo mari spirat, hic summo. ideoque post austros noxii praecipue terrae motus. noctu auster, interdiu aquilo vehementior, et ab ortu flantes diuturniores sunt ab occasu flantibus. septentriones inpari fere desinunt numero, quae observatio et in aliis multis rerum naturae partibus valet; mares itaque existimantur inpares numeri. sol et auget et conprimit flatus: auget exoriens, occidens, conprimit meridianus aestivis temporibus. itaque medio diei aut noctis plerumque sopiuntur, quia aut nimio frigore aut aestu solvuntur. et imbribus venti sopiuntur. exspectantur autem maxime

unde nubes discussae adaperuere caelum. omnium quidem - si libeat observare minimos ambitus - redire easdem vices quadriennio exacto eudoxus putat, non ventorum modo, verum et reliquarum tempestatum magna ex parte. et est principium lustri eius semper intercalario anno caniculae ortu. de generalibus ventis haec.

nunc de repentinis flatibus, qui exhalante terra, ut dictum est, coorti rursusque deiecti, interim obducta nubium cute, multiformes exsistunt. vagi quippe et ruentes torrentium modo, ut aliquis placere ostendimus, tonitrua et fulgura edunt. maiore vero inlati pondere incursuque, si late siccam rupere nubem, procellam gignunt, quae vocatur a graecis ecnephias; sin vero depresso sinu artius rotati effregerunt, sine igni, hoc est sine fulmine, verticem faciunt, qui typhon vocatur, id est vibratus ecnephias. defert hic secum aliquid abruptum e nube gelida, convolvens versansque et ruinam suam illo pondere adgravans ac locum ex loco mutans rapida vertigine, praecipua navigantium pestis, non antemnas modo, verum ipsa navigia contorta frangens, tenui remedio aceti in advenientem effusi, cui frigidissima est natura. idem inlisu ipso repercussus correpta secum in caelum refert sorbetque in excelsum. quod si maiore depressae nubis eruperit specu, sed minus lato quam procella, nec sine fragore, turbinem vocant, proxima quaeque prosternentem. idem ardentior accensusque, dum furit, prester vocatur, amburens contacta pariter et proterens. non fit autem aquilonius typhon, nec nivalis aut nive iacente ecnephias. quod si simul rupit nubem exarsitque et ignem habuit, non postea concepit, fulmen est. distat a prestere quo flamma ab igni. hic late funditur flatu, illud conglobatur impetu. vertex autem remeando distat a turbine et quo stridor a fragore, procella latitudine ab utroque, disiecta nube verius quam rupta. fit et caligo beluae similis in nube, dira navigantibus. vocatur et columna, cum spissatus umor rigensque ipse se sustinet, ex eodem genere et aulon, cum veluti fistula nubes aquam trahit.

hieme et aestate rara fulmina contrariis de causis, quoniam hieme densatus ae+r nubium crassiore corio spissatur, omnisque terrarum exhalatio rigens ac gelida quicquid accipit ignei vaporis exstinguit. quae ratio inmunem scythiam et circa rigentia a fulminum casu praestat, e diverso nimius ardor aegyptum, siquidem calidi siccique halitus terrae raro admodum tenuesque et infirmas densantur in

nubes. vere autem et autumno crebriora fulmina, corruptis in utroque tempore aestatis hiemisque causis, qua ratione crebra in italia, quia mobilior aer mitiore hieme et aestate nimbosa semper quodammodo vernat vel autumnat. italiaeque partibus iis, quae a septentrione descendunt ad teporem, qualis est urbis et campaniae tractus, iuxta hieme et aestate fulgurat, quod non in alio situ.

fulminum ipsorum plura genera traduntur. quae sicca veniunt, non adurunt, sed dissipant; quae umida, non urunt, sed infuscant. tertium est quod clarum vocant, mirificae maxime naturae, quo dolia exhauriuntur intactis operimentis nulloque alio vestigio relicto, aurum et aes et argentum liquatur intus, sacculis ipsis nullo modo ambustis ac ne confuso quidem signo cerae. marcia, ... princeps romanorum, icta gravida partu exanimato ipsa citra ullum aliud incommodum vixit. in catilinianis prodigiis pompeiano ex municipio m. herennius decurio sereno die fulmine ictus est.

tuscorum litterae novem deos emittere fulmina existimant, eaque esse undecim generum; iovem enim trina iaculari. romani duo tantum ex iis servavere, diurna attribuentes iovi, nocturna summano, rariora sane eadem de causa frigidioris caeli. etruria erumpere terra quoque arbitratur, quae infera appellat, brumali tempore facta saeva maxime et exsecrabilia, cum sint omnia, quae terrena existimant, non illa generalia nec a sideribus venientia, sed ex proxima atque turbidiore natura. argumentum evidens, quod omnia superiora e caelo decidentia obliquos habent ictus, haec autem, quae vocant terrena, rectos. et quae ex propiore materia cadunt, ideo creduntur e terra exire, quoniam ex repulsu nulla vestigia edunt, cum sit illa ratio non inferi ictus, sed adversi. a saturni ea sidere proficisci subtilius ista consectati putant, sicut cremantia a martis, qualiter cum volsinii, oppidum tuscorum opulentissimum, totum concrematum est fulmine. vocant et familiaria in totam vitam fatidica, quae prima fiunt familiam suam cuique indepto. ceterum existimant non ultra decem annos portendere privata, praeterquam aut primo patrimonio facta aut natali die, publica non ultra tricesimum annum, praeterquam in deductione oppidi.

exstat annalium memoria sacris quibusdam et precationibus vel cogi fulmina vel impetrari. vetus fama etruriae est, impetratum volsinios urbem depopulatis agris subeunte monstro, quod vocavere

oltam, evocatum a porsina suo rege. et ante eum a numa saepius hoc factitatum in primo annalium suorum tradidit l. piso, gravis auctor, quod imitatum parum rite tullum hostilium ictum fulmine. lucosque et aras et sacra habemus interque statores ac tonantes et feretrios elicium quoque accepimus iovem. varia in hoc vitae sententia et pro cuiusque animo. imperare naturae sacra audacis est credere, nec minus hebetis beneficiis abrogare vires, quando in fulgurum quoque interpretatione eo profecit scientia, ut ventura alia finito die praecinat et an peremptura sint factum aut prius alia facta quae lateant, innumerabilibus in utroque publicis privatisque experimentis. quam ob rem sint ista ut rerum naturae libuit, alias certa alias dubia, aliis probata aliis damnanda: nos de cetero quae sunt in his memorabilia non omittemus.

fulgetrum prius cerni quam tonitrua audiri, cum simul fiant, certum est, nec mirum, quoniam lux sonitu velocior, ictum autem et sonitum congruere ita modulante natura, sed sonitum profecti esse fulminis, non inlati, etiamnum spiritum ociorem fulmine, ideo quati prius omne et adflari quam percuti, nec quemquam tangi qui prior viderit fulmen aut tonitrua audierit. laeva prospera existimantur, quoniam laeva parte mundi ortus est. nec tam adventus spectatur quam reditus, sive ab ictu resilit ignis sive opere confecto aut igne consumpto spiritus remeat. in sedecim partes caelum in eo spectu divisere tusci. prima est a septemtrionibus ad aequinoctialem exortum, secunda ad meridiem, tertia ad aequinoctialem occasum, quarta obtinet quod est reliquum ab occasu ad septemtriones. has iterum in quaternas divisere partes, ex quibus octo ab exortu sinistras, totidem e contrario appellavere dextras. ex iis maxime dirae quae septemtriones ab occasu attingunt. itaque plurimum refert unde venerint fulmina et quo concesserint. optimum est in exortivas redire partes. ideo cum a prima caeli parte venerint et in eandem concesserint, summa felicitas portendetur, quale sullae dictatori ostentum datum accepimus. cetera ad ipsius mundi portionem minus prospera aut dira. quaedam fulgura enuntiare non putant fas nec audire, praeterquam si hospiti indicentur aut parenti. magna huius observationis vanitas tacta iunonis aede romae deprehensa est Scauro consule, qui mox princeps fuit. noctu magis quam interdiu sine tonitribus fulgurat.

vnum animal, hominem, non semper exstinguit, cetera ilico, hunc videlicet natura tribuente honorem, cum tot beluae viribus praestent. omnia contrarias incubant partes. homo, nisi convertatur in percussas, non respirat. superne icti considunt. vigilans ictus coniventibus oculis, dormiens patentibus reperitur. hominem ita exanimatum cremari fas non est, condi terra religio tradidit. nullum animal nisi exanimatum fulmine accenditur. vulnera fulminatorum frigidiora sunt reliquo corpore. ex iis, quae terra gignuntur, lauri fruticem non icit nec umquam quinque altius pedibus descendit in terram. ideo pavidi altiores specus tutissimos putant aut tabernacula pellibus beluarum, quas vitulos appellant, quoniam hoc solum animal ex marinis non percutiat, sicut nec e volucribus aquilam, quae ob hoc armigera huius teli fingitur. in italia inter tarracinam et aedem feroniae turres belli civilis temporibus desiere fieri, nulla non earum fulmine diruta.

praeter haec inferiore caelo relatum in monumenta est lacte et sanguine pluisse m'. acilio c. porcio cos. et saepe alias, sicut carne p. volumnio servio sulpicio cos., exque ea non perputruisse quod non diripuissent aves, item ferro in lucanis anno ante quam M. Crassus a parthis interemptus est omnesque cum eo lucani milites, quorum magnus numerus in exercitu erat. effigies quo pluit ferri spongiarum similis fuit. haruspices praemonuerunt superna volnera. l. autem paulo c. marcello cos. lana pluit circa castellum carissanum, iuxta quod post annum t. annius milo occisus est. eodem causam dicente lateribus coctis pluisse in acta eius anni relatum est.

armorum crepitus et tubae sonitus auditos e caelo cimbricis bellis accepimus, crebroque et prius et postea. tertio vero consulatu mari ab amerinis et tudertibus spectata arma caelestia ab ortu occasuque inter se concurrentia, pulsis quae ab occasu erant. ipsum ardere caelum minime mirum est et saepius visum maiore igni nubibus correptis.

celebrant graeci anaxagoran clazomenium olympiadis lxxviii secundo anno praedixisse caelestium litterarum scientia, quibus diebus saxum casurum esset e sole, idque factum interdiu in thraciae parte ad aegos flumen, qui lapis etiam nunc ostenditur magnitudine vehis, colore adusto, comete quoque illis noctibus flagrante. quod si quis praedictum credat, simul fateatur necesse est, maioris miraculi divinitatem anaxagorae fuisse solvique rerum naturae intellectum et

confundi omnia, si aut ipse sol lapis esse aut umquam lapidem in eo fuisse credatur. decidere tamen crebro non erit dubium. in abydi gymnasio ex ea causa colitur hodieque modicus quidem, sed quem in media terrarum casurum idem anaxagoras praedixisse narretur. colitur et cassandriae, quae potidaea quondam vocitata est, ob id deducta. ego ipse vidi in vocontiorum agro paulo ante delatum.

arcus vocamus extra miraculum frequentes et extra ostentum. nam ne pluvios quidem aut serenos dies cum fide portendunt. manifestum est radium solis inmissum cavae nubi repulsa acie in solem refringi, colorumque varietatem mixtura nubium, ignium, ae+ris fieri. certe nisi sole adverso non fiunt nec umquam nisi dimidia circuli forma nec noctu, quamvis aristoteles prodat aliquando visum, quod tamen fatetur idem non nisi xxx luna posse fieri. fiunt autem hieme maxime ab aequinoctio autumnali die decrescente. quo rursus crescente ab aequinoctio verno non exsistunt, nec circa solstitium longissimis diebus, bruma vero id est brevissimis frequenter, iidem sublimes humili sole humilesque sublimi, et minores oriente aut occidente, sed in latitudinem dimissi, meridie exiles, verum ambitus maioris. aestate autem per meridiem non cernuntur, post autumni aequinoctium quacumque hora, nec umquam plures simul quam duo.

cetera eiusdem naturae non multis dubia esse video: grandinem conglaciato imbre gigni et nivem eodem umore mollius coacto, pruinam autem ex rore gelido; per hiemem nives cadere, non grandines, ipsasque grandines interdiu saepius quam noctu, et multo celerius resolvi quam nives; nebulas nec aestate nec maximo frigore exsistere, rores neque gelu neque ardoribus neque ventis nec nisi serena nocte; gelando liquorem minui, resolutaque glacie non eundem inveniri modum; varietates colorum figurarumque in nubibus cerni, prout admixtus ignis superet aut vincatur.

praeterea quasdam proprietates quibusdam locis esse, roscidas aestate africae noctes, in italia locris et in lacu velino nullo non die apparere arcus, rhodi et syracusis numquam tanta nubila obduci, ut non aliqua hora sol cernatur, qualia aptius suis referentur locis. haec sint dicta de ae+re.

sequitur terra, cui uni rerum naturae partium eximia propter merita cognomen indidimus maternae venerationis. sic hominum illa, ut caelum dei, quae nos nascentes excipit, natos alit semelque editos

et sustinet semper, novissime conplexa gremio iam a reliqua natura abdicatos, tum maxime ut mater operiens, nullo magis sacra merito quam quo nos quoque sacros facit, etiam monimenta ac titulos gerens nomenque prorogans nostrum et memoriam extendens contra brevitatem aevi, cuius numen ultimum iam nullis precamur irati grave, tamquam nesciamus hanc esse solam quae numquam irascatur homini. aquae subeunt in imbres, rigescunt in grandines, tumescunt in fluctus, praecipitantur in torrentes, aer densatur nubibus, furit procellis: at haec benigna, mitis, indulgens ususque mortalium semper ancilla, quae coacta generat, quae sponte fundit, quos odores saporesque, quos sucos, quos tactus, quos colores! quam bona fide creditum faenus reddit! quae nostra causa alit! pestifera enim animantia, vitali spiritu habente culpam: illi necesse est semina excipere et genita sustinere; sed in malis generantium noxa est. illa serpentem homine percusso amplius non recipit poenasque etiam inertium nomine exigit. illa medicas fundit herbas et semper homini parturit. quin et venena nostri miseritam instituisse credi potest, ne in taedio vitae fames, mors terrae meritis alienissima, lenta nos consumeret tabe, ne lacerum corpus abrupta dispergerent, ne laquei torqueret poena praepostera incluso spiritu, cui quaereretur exitus, ne in profundo quaesita morte sepultura pabulo fieret, ne ferri cruciatus scinderet corpus. ita est, miserita genuit id, cuius facillimo haustu inlibato corpore et cum toto sanguine exstingueremur, nullo labore, sitientibus similes, qualiter defunctos non volucres, non ferae attingerent terraeque servaretur qui sibi ipsi periisset. verum fateamur: terra nobis malorum remedium genuit, nos illud vitae facimus venenum. non enim et ferro, quo carere non possumus, simili modo utimur nec tamen quereremur merito, etiamsi maleficii causa tulisset. adversus unam quippe naturae partem ingrati sumus. quas non ad delicias quasque non ad contumelias servit homini in maria iacitur aut, ut freta admittamus, eroditur. aquis, ferro, igni, ligno, lapide, fruge omnibus cruciatur horis multoque plus, ut deliciis quam ut alimentis famuletur nostris. et tamen quae summa patitur atque extrema cute tolerabilia videantur: penetramus in viscera, auri argentique venas et aeris ac plumbi metalla fodientes, gemmas etiam et quosdam parvulos quaerimus lapides scrobibus in profundum actis. viscera eius extrahimus, ut digito gestetur gemma, quo petitur.

quot manus atteruntur, ut unus niteat articulus! si ulli essent inferi, iam profecto illos avaritiae atque luxuriae cuniculi refodissent. et miramur, si eadem ad noxam genuit aliqua! ferae enim, credo, custodiunt illam arcentque sacrilegas manus. non inter serpentes fodimus et venas auri tractamus cum veneni radicibus placatiore tamen dea ob haec, quod omnes hi opulentiae exitus ad scelera caedesque et bella tendunt, quodque sanguine nostro rigamus insepultisque ossibus tegimus, quibus tamen velut exprobrato furore tandem ipsa se obducit et scelera quoque mortalium occultat.

inter crimina ingrati animi et hoc duxerim quod naturam eius ignoramus. est autem figura prima, de qua consensus iudicat. orbem certe dicimus terrae globumque verticibus includi fatemur. neque enim absoluti orbis est forma in tanta montium excelsitate, tanta camporum planitie, sed cuius amplexus, si cuncta liniarum conprehendantur ambitu, figuram absoluti orbis efficiat, id quod ipsa rerum natura cogit, non isdem causis, quas attulimus in caelo. namque in illo cava in se convexitas vergit et cardini suo, hoc est terrae, undique incumbit. haec ut solida ac conferta adsurgit intumescenti similis extraque protenditur. mundus in centrum vergit, at terra exit a centro, inmensum eius globum in formam orbis adsidua circa eam mundi volubilitate cogente.

ingens hic pugna litterarum contraque vulgi, circumfundi terrae undique homines conversisque inter se pedibus stare, et cunctis similem esse verticem, simili modo et quacumque parte media calcari, illo quaerente, cur non decidant contra siti, tamquam non ratio praesto sit, ut nos non decidere mirentur illi. intervenit sententia quamvis indocili probabilis turbae, inaequali globo, ut si sit figura pineae nucis, nihilo minus terram undique incoli. sed quid hoc refert, alio miraculo exoriente, pendere ipsam ac non cadere nobiscum, ceu spiritus vis, mundo praesertim inclusi, dubia sit, aut possit cadere, natura repugnante et quo cadat negante. nam sicut ignium sedes non est nisi in ignibus, aquarum nisi in aquis, spiritus nisi in spiritu, sic terrae, arcentibus cunctis, nisi in se locus non est. globum tamen effici mirum est in tanta planitie maris camporumque. cui sententiae adest dicaearchus, vir in primis eruditus, regum cura permensus montes, ex quibus altissimum prodidit pelium mccl passuum ratione perpendiculi, nullam esse eam portionem universae rotunditatis

colligens. mihi incerta haec videtur coniectatio, haud ignaro quosdam alpium vertices longo tractu nec breviore quinquaginta milium passuum adsurgere. sed vulgo maxime haec pugna est, si coactam in verticem aquarum quoque figuram credere cogatur. atqui non aliud in rerum natura adspectu manifestius. namque et dependentes ubique guttae parvis globantur orbibus et pulveri inlatae frondiumque lanugini inpositae absoluta rotunditate cernuntur, et in poculis repletis media maxime tument, quae propter subtilitatem umoris mollitiamque in se residentem ratione facilius quam visu deprehenduntur. idque etiam magis mirum, in poculis repletis addito umore minimo circumfluere quod supersit, contra evenire ponderibus additis ad vicenos saepe denarios, scilicet quia intus recepta liquorem in verticem attollant, at cumulo eminenti infusa delabantur. eadem est causa, propter quam e navibus terra non cernatur, e navium malis conspicua, ac procul recedente navigio, si quid quod fulgeat religetur in mali cacumine, paulatim descendere videatur et postremo occultetur. denique oceanus, quem fatemur ultimum, quanam alia figura cohaereret atque non decideret nullo ultra margine includente id ipsum ad miraculum redit, quonam modo, etiamsi globetur, extremum non decidat mare. contra quod, ut sint plana maria et qua videntur figura, non posse id accidere, magno suo gaudio magnaque gloria inventores graeci subtilitate geometrica docent. namque cum e sublimi in inferiora aquae ferantur et sit haec natura earum confessa nec quisquam dubitet in litore ullo accessisse eas quo longissime devexitas passa sit, procul dubio apparere, quo quid humilius sit, propius a centro esse terrae, omnesque linias, quae emittantur ex eo ad proximas aquas, breviores fieri quam quae ad extremum mare a primis aquis; ergo totas omnique ex parte aquas vergere in centrum ideoque non decidere, quoniam in interiora nitantur.

quod ita formasse artifex natura credi debet, ut, cum terra arida et sicca constare per se ac sine umore non posset, nec rursus stare aqua nisi sustinente terra, mutuo inplexu iungerentur, hac sinus pandente, illa vero permeante totam, intra extra, supra infra, venis ut vinculis discurrentibus, atque etiam in summis iugis erumpente, quo spiritu acta et terrae pondere expressa siphonum modo emicat tantumque a periculo decidendi abest, ut in summa quaeque et altissima exsiliat. qua ratione manifestum est, quare tot fluminum cotidiano accessu

maria non crescant. est igitur in toto suo globo tellus medio ambitu praecincta circumfluo mari, nec argumentis hoc investigandum, sed iam experimentis cognitum.

a gadibus columnisque herculis hispaniae et galliarum circuitu totus hodie navigatur occidens. septentrionalis vero oceanus maiore ex parte navigatus est, auspiciis Divi Augusti germaniam classe circumvecta ad cimbrorum promunturium et inde inmenso mari prospecto aut fama cognito scythicam ad plagam et umore nimio rigentia. propter quod minime verisimile est illic maria deficere, ubi umoris vis superet. iuxta vero ab ortu ex indico mari sub eodem sidere pars tota vergens in caspium mare pernavigata est macedonum armis seleuco atque antiocho regnantibus, qui et seleucida et antiochida ab ipsis appellari voluere. et circa caspium multa oceani litora explorata parvoque brevius quam totus hinc aut illinc septentrio eremigatus, ut iam coniecturae locum sic quoque non relinquat ingens argumentum paludis maeoticae, sive ea illius oceani sinus est, ut multos adverto credidisse, sive angusto discreti situ restagnatio. alio latere gadium ab eodem occidente magna pars meridiani sinus ambitu mauretaniae navigatur hodie. maiorem quidem eius partem et orientis victoriae magni alexandri lustravere usque in arabicum sinum, in quo res gerente c. caesare Augusti filio signa navium ex hispaniensibus naufragiis feruntur agnita. et hanno carthaginis potentia florente circumvectus a gadibus ad finem arabiae navigationem eam prodidit scripto, sicut ad extera europae noscenda missus eodem tempore himilco. praeterea nepos cornelius auctor est eudoxum quendam sua aetate, cum lathyrum regem fugeret, arabico sinu egressum gades usque pervectum, multoque ante eum caelius antipater vidisse se qui navigasset ex hispania in aethiopiam commercii gratia. idem nepos de septentrionali circuitu tradit quinto metello celeri, afrani in consulatu collegae, sed tum galliae proconsuli, indos a rege sueborum dono datos, qui ex india commercii causa navigantes tempestatibus essent in germaniam abrepti. sic maria circumfusa undique dividuo globo partem orbis auferunt nobis, nec inde huc nec hinc illo pervio tractu. quae contemplatio apta detegendae mortalium vanitati poscere videtur, ut totum hoc, quicquid est, in quo singulis nihil satis est, ceu subiectum oculis quantum sit ostendam.

iam primum in dimidio conputari videtur, tamquam nulla portio ipsi decedat oceano, qui toto circumdatus medio et omnes ceteras fundens recipiensque aquas et quicquid exit in nubes ac sidera ipsa tot ac tantae magnitudinis pascens, quo tandem amplitudinis spatio credetur habitare inproba et infinita debet esse tam vastae molis possessio. adde quod ex relicto plus abstulit caelum. nam cum sint eius quinque partes, quas vocant zonas, infesto rigore et aeterno gelu premitur omne, quicquid est subiectum duabus extremis utrimque circa vertices, hunc, qui trionum septem vocatur, eumque, qui adversus illi austrinus appellatur. perpetua caligo utrobique et alieno molliorum siderum adspectu maligna ac pruina tantum albicans lux. verum media terrarum, qua solis orbita est, exusta flammis et cremata comminus vapore torretur. circa duae tantum inter exustam et rigentes temperantur eaeque ipsae inter se non perviae propter incendium siderum. ita terrae tres partes abstulit caelum; oceani rapina in incerto est. sed et relicta nobis una portio haud scio an etiam in maiore damno sit, idem siquidem oceanus infusus in multos, ut dicemus, sinus adeo vicino accessu interna maria adlatrat, ut centum quindecim milibus passuum arabicus sinus distet ab aegyptio mari, caspius vero [ccclxxv] a pontico, idem interfusus intrat per tot maria, quibus africam, europam, asiam dispescit, ut quantum terrarum occupet conputetur etiamnum mensura tot fluminum, tantarum paludium, addantur et lacus, stagna, iam elata in caelum et ardua aspectu quoque iuga, iam silvae vallesque praeruptae et solitudines ac mille causis deserta; detrahantur hae tot portiones terrae, immo vero, ut plures tradidere, mundi puncto (neque enim aliud est terra in universo): haec est materia gloria nostrae, haec sedes. hic honores gerimus, hic exercemus imperia, hic opes cupimus, hic tumultuamur humanum genus, hic instauramus bella etiam civilia mutuisque caedibus laxiorem facimus terram! et, ut publicos gentium furores transeam, haec, in qua conterminos pellimus furtoque vicini caespitem nostro solo adfodimus, ut, qui latissime rura metatus fuerit ultraque famam exegerit adcolas, quota terrarum parte gaudeat vel, cum ad mensuram avaritiae suae propagaverit, quam tandem portionem eius defunctus obtineat

mediam esse mundi totius haut dubiis constat argumentis, sed clarissimo aequinocti paribus horis. nam nisi in medio esset, aequales

dies noctesque habere non posse deprehendere est dioptraeque vel maxime confirmant, cum aequinoctiali tempore ex eadem linia ortus occasusque cernatur, solstitiali exortus per suam liniam, brumali occasus. quae accidere nullo modo possent nisi in centro sita.

tres autem circuli supra dictis zonis inplexi inaequalitates temporum distingunt: solstitialis a parte signiferi excelsissima nobis ad septentrionalem plagam versus, contraque ad alium polum brumalis, item medio ambitu signiferi orbis incedens aequinoctialis.

reliquorum quae miramur causa in ipsius terrae figura est, quam globo similem et cum ea aquas isdem intellegitur argumentis. sic enim fit haut dubie, ut nobis septentrionalis plagae sidera numquam occidant, contra meridianae numquam oriantur, rursusque haec illis non cernantur, attollente se contra medios visus terrarum globo. septentriones non cernit trogodytice et confinis aegyptus, nec canopum italia et quem vocant berenices crinem, item quem sub Divo Augusto cognominavere caesaris thronon, insignes ibi stellas. adeoque manifesto adsurgens fastigium curvatur, ut canopus quartam fere partem signi unius supra terram eminere alexandriae intuentibus videatur, eadem a rhodo terram quodammodo ipsam stringere, in ponto omnino non cernatur, ubi maxime sublimis septentrio. idem a rhodo absconditur magisque alexandriae, in arabia novembri mense, prima vigilia occultus, secunda se ostendit, in meroe+ solstitio vesperi paulisper apparet paucisque ante exortum arcturi diebus pariter cum die cernitur. navigantium haec maxime cursus deprehendunt, in alia adverso, in alia prono mari, subitoque conspicuis atque ut e freto emergentibus, quae in anfractu pilae latuere, sideribus. neque enim, ut dixere aliqui, mundus hoc polo excelsiore se attollit - aut undique cernerentur haec sidera - , verum haec eadem quibusque proximis sublimiora creduntur eademque demersa longinquis, utque nunc sublimis in deiectu positis videtur hic vertex, sic in illam terrae devexitatem transgressis illa se attollunt, residentibus quae hic excelsa fuerant, quod nisi in figura pilae accidere non posset.

ideo defectus solis ac lunae vespertinos orientis incolae non sentiunt nec matutinos ad occasum habitantes, meridianos vero serius nobis illi. apud arbilam magni alexandri victoria luna defecisse noctis secunda hora est prodita eademque in sicilia exoriens. solis defectum

vipstano et fonteio cos., qui fuere ante paucos annos, factum pridie kalendas maias campania hora diei inter septimam et octavam sensit, corbulo dux in armenia inter horam diei decimam et undecimam prodidit visum, circuitu globi alia aliis detegente et occultante. quod si plana esset terra, simul omnia apparerent cunctis noctesque non fierent inaequales; nam aeque aliis quam in medio sitis paria duodecim horarum intervalla cernerentur, quae nunc non in omni parte simili modo congruunt.

ideo nec nox diesque, quamvis eadem, toto orbe simul est, oppositu globi noctem aut ambitu diem adferente. multis hoc cognitum experimentis, in africa hispaniaque turrium Hannibalis, in asia vero propter piraticos terrores simili specularum praesidio excitato, in quis praenuntios ignes sexta hora diei accensos saepe conpertum est tertia noctis a tergo ultimis visos. eiusdem alexandri cursor philonides ex sicyone elin mille et ducenta stadia novem diei confecit horis indeque, quamvis declivi itinere, tertia noctis hora remensus est saepius. causa, quod eunti cum sole iter erat, eundem remeans obvium contrario praetervertebat occursu. qua de causa ad occasum navigantes, quamvis brevissimo die, vincunt spatia nocturnae navigationis, ut solem ipsum comitantes.

vasaque horoscopa non ubique eadem sunt usui, in trecenis stadiis aut, ut longissime, in quingenis mutantibus semet umbris solis. itaque umbilici, quem gnomonem appellant, umbra in aegypto meridiano tempore aequinoctii die paulo plus quam dimidiam gnomonis mensuram efficit, in urbe roma nona pars gnomonis deest umbrae, in oppido ancona superest quinta tricesima, in parte italiae, quae venetia appellatur, isdem horis umbra gnomoni par fit.

simili modo tradunt in syene oppido, quod est supra alexandriam quinque milibus stadium, solstiti die medio nullam umbram iaci puteumque eius experimenti gratia factum totum inluminari. ex quo apparere tum solem illi loco supra verticem esse, quod et in india supra flumen hypasim fieri tempore eodem onesicritus scribit. constatque in berenice urbe trogodytarum, et inde stadiis [iiii] dcccxx in eadem gente ptolemaide oppido, quod in margine rubri maris ad primos elephantorum venatus conditum est, hoc idem ante solstitium quadragenis quinis diebus totidemque postea fieri, et per eos xc dies in meridiem umbras iaci. rursus in meroe+ - insula haec caputque

gentis aethiopum v milibus stadium a syene in amne nilo habitatur - bis anno absumi umbras, sole duodevicesimam tauri partem et quartam decimam leonis tunc obtinente. in indiae gente oretum mons est maleus nomine, iuxta quem umbrae aestate in austrum, hieme in septentrionem iaciuntur. quindecim tantum noctibus ibi apparet septentrio. in eadem india patalis, celeberrimo portu, sol dexter oritur, umbrae in meridiem cadunt. septentrionem ibi alexandro morante adnotatum prima tantum parte noctis aspici. onesicritus, dux eius, scripsit, quibus in locis indiae umbrae non sint, septentrionem non conspici, et ea loca appellari ascia, nec horas dinumerari ibi. et tota trogodytice umbras bis quadragenis quinis diebus in anno eratosthenes in contrarium cadere prodidit. sic fit, ut vario lucis incremento in meroe+ longissimus dies xii horas aequinoctiales et octo partes unius horae colligat, alexandriae vero xiiii horas, in italia xv, in britannia xvii, ubi aestate lucidae noctes haut dubie se promittunt, id quod cogit ratio credi, solstiti diebus accedente sole propius verticem mundi angusto lucis ambitu subiecta terrae continuos dies habere senis mensibus noctesque e diverso ad brumam remoto. quod fieri in insula thyle pytheas massiliensis scribit, sex dierum navigatione in septentrionem a britannia distante, quidam vero et in mona, quae distat a camaloduno britanniae oppido circiter [cc], adfirmant.

vmbrarum hanc rationem et quam vocant gnomonicen invenit anaximenes milesius, anaximandri, de quo diximus, discipulus, primusque horologium, quod appellant sciothericon, lacedaemone ostendit.

ipsum diem alii aliter observavere: babylonii inter duos solis exortus, athenienses inter duos occasus, vmbri a meridie ad meridiem, vulgus omne a luce ad tenebras, sacerdotes romani et qui diem finiere civilem, item aegyptii et hipparchus a media nocte in mediam. minora autem intervalla esse lucis inter ortus solis iuxta solstitia quam aequinoctia apparet, quia positio signiferi circa media sui obliquior est, iuxta solstitium autem rectior.

contexenda sunt his caelestibus nexa causis. namque et aethiopas vicini sideris vapore torreri adustisque similes gigni, barba et capillo vibrato, non est dubium, et adversa plaga mundi candida atque glaciali cute esse gentes, flavis promissas crinibus, truces vero ex

caeli rigore has, illas mobilitate sapientes, ipsoque crurum argumento illis in supera sucum revocari natura vaporis, his in inferas partes depelli umore deciduo; hic graves feras, illic varias effigies animalium provenire et maxime alitum multas figuras igni volucres; corporum autem proceritatem utrobique, illic ignium nisu, hic umoris alimento; medio vero terrae salubri utrimque mixtura fertiles ad omnia tractus, modicos corporum habitus magna et in colore temperie, ritus molles, sensus liquidos, ingenia fecunda totiusque naturae capacia, isdem imperia, quae numquam extimis gentibus fuerint, sicut ne illae quidem his paruerint, avolsae ac pro numine naturae urguentis illas solitariae.

babyloniorum placita et motus terrae hiatusque, qua cetera omnia, siderum vi existimant fieri, sed illorum trium, quibus fulmina adsignant, fieri autem meantium cum sole aut congruentium et maxime circa quadrata mundi. praeclara quaedam et inmortalis in eo, si credimus, divinitas perhibetur anaximandro milesio physico, quem ferunt lacedaemoniis praedixisse ut urbem ac tecta custodirent, instare enim motum terrae, cum et urbs tota eorum corruit et taygeti montis magna pars, ad formam puppis eminens, abrupta cladem eam insuper ruina pressit. perhibetur et pherecydi, pythagorae doctori, alia coniectatio, sed et illa divina, haustu aquae e puteo praesensisse ac praedixisse civibus terrae motum. quae si vera sunt, quantum a deo tandem videri possunt tales distare, dum vivant et haec quidem arbitrio cuiusque existimanda relinquantur: ventos in causa esse non dubium reor. neque enim umquam intremiscunt terrae nisi sopito mari caeloque adeo tranquillo, ut volatus avium non pendeant, subtracto omni spiritu qui vehit, nec umquam nisi post ventos, condito scilicet in venas et cava eius occulta flatu. neque aliud est in terra tremor quam in nube tonitruum, nec hiatus aliud quam cum fulmen erumpit incluso spiritu luctante et ad libertatem exire nitente.

varie itaque quatitur, et mira eduntur opera, alibi prostratis moenibus, alibi hiatu profundo haustis, alibi egestis molibus, alibi emissis amnibus, nonnumquam etiam ignibus calidisve fontibus, alibi averso fluminum cursu. praecedit vero comitaturque terribilis sonus, alias murmuri similis, alias mugitibus aut clamori humano armorumve pulsantium fragori, pro qualitate materiae excipientis formaque vel cavernarum vel cuniculi, per quem meet, exilius

grassante in angusto, eodem rauco in recurvis, resultante in duris, fervente in umidis, fluctuante in stagnantibus, furente contra solida. itaque et sine motu saepe editur sonus. nec simplici modo quatitur umquam, sed tremit vibratque. hiatus vero alias remanet ostendens quae sorbuit, alias occultat ore conpresso rursusque ita inducto solo, ut nulla vestigia exstent, urbibus plerumque devoratis agrorumque tractu hausto. maritima autem maxime quatiuntur, nec montuosa tali malo carent. exploratum mihi est alpes appenninumque saepius tremuisse. et autumno ac vere terrae crebrius moventur, sicut fulmina. ideo galliae et aegyptus minime quatiuntur, quoniam hic aestatis causa obstat, illic hiemis. item noctu saepius quam interdiu. maximi autem motus existunt matutini vespertinique, sed propinqua luce crebri, interdiu autem circa meridiem. fiunt et solis lunaeque defectu, quoniam tempestates tunc sopiuntur, praecipue vero cum sequitur imbres aestus imbresve aestum.

navigantes quoque sentiunt non dubia coniectura, sine flatu intumescente fluctu subito aut quatiente ictu. intremunt vero et in navibus postes aeque quam in aedificiis crepituque praenuntiant. quin et volucres non inpavidae sedent. est et in caelo signum praeceditque motu futuro aut interdiu aut paulo post occasum sereno tenuis ceu lineae nube in longum porrecta spatium.

est et in puteis turbidior aqua nec sine odoris taedio, sicut in isdem et remedium, quale et crebri specus praebent; conceptum enim spiritum exhalant. quod in totis notatur oppidis: minus quatiuntur crebris ad eluviem cuniculis cavata, multoque sunt tutiora in isdem illis quae pendent, sicuti neapoli in italia intellegitur, parte eius, quae solida est, ad tales casus obnoxia. tutissimi sunt aedificiorum fornices, anguli quoque parietum postesque, alterno pulsu renitente. et latere terreno facti parietes minore noxa quatiuntur. magna differentia est et in ipso genere motus, pluribus siquidem modis quatitur. tutissimum est cum vibrat crispante aedificiorum crepitu et cum intumescit adsurgens alternoque motu residit; innoxium et cum concurrentia tecta contrario ictu arietant, quoniam alter motus alteri renititur. undantis inclinatio et fluctus more quaedam volutatio infesta est aut cum in unam partem totus se motus inpellit. desinunt autem tremores, cum ventus emersit; sin vero duravere, non ante xl dies sistuntur, plerumque et tardius, utpote cum quidam annuo et

bienni spatio duraverint.

factum est semel, quod equidem in etruscae disciplinae voluminibus invenio, ingens terrarum portentum l. marcio sexto iulio cos. in agro mutinensi. namque montes duo inter se concurrerunt crepitu maximo adsultantes recedentesque, inter eos flamma fumoque in caelum exeunte interdiu, spectante e via aemilia magna equitum romanorum familiarumque et viatorum multitudine. eo concursu villae omnes elisae, animalia permulta, quae intra fuerant, exanimata sunt, anno ante sociale bellum, quod haud scio an funestius terrae ipsi italiae fuerit quam civilia. non minus mirum ostentum et nostra cognovit aetas anno neronis principis supremo, sicut in rebus eius exposuimus, pratis oleisque intercedente publica via in contrarias sedes transgressis in agro marrucino praediis vetti marcelli equitis romani res neronis procurantis.

fiunt simul cum terrae motu et inundationes maris, eodem videlicet spiritu infusi aut terrae sidentis sinu recepti. maximus terrae memoria mortalium exstitit motus tiberii caesaris principatu, xii urbibus asiae una nocte prostratis; creberrimus punico bello intra eundem annum septies ac quinquagies nuntiatus romam, quo quidem anno ad trasimenum lacum dimicantes maximum motum neque poeni sensere nec romani. nec vero simplex malum aut in ipso tantum motu periculum est, sed par aut maius ostento. numquam urbs roma tremuit, ut non futuri eventus alicuius id praenuntium esset.

eadem nascentium causa terrarum est, cum idem ille spiritus adtollendo potens solo non valuit erumpere. nascuntur enim, nec fluminum tantum invectu, sicut echinades insulae ab acheloo amne congestae maiorque pars aegypti a nilo, in quam a pharo insula noctis et diei cursum fuisse homero credimus, nec recessu maris, sicuti olim cerceis. quod accidisse et in ambraciae portu decem milium passuum intervallo et atheniensium quinque milium ad piraeeum memoratur. et ephesius quondam aedem dianae adluebat. herodoto quidem si credimus, mare fuit supra memphim usque ad aethiopum montes itemque a planis arabiae, mare circa ilium et tota teuthranie quaque campos intulerit maeander.

nascuntur et alio modo terrae ac repente in aliquo mari emergunt, velut paria secum faciente natura quaeque hauserit hiatus alio loco reddente.

clarae iam pridem insulae delos et rhodos memoriae produntur; et natae postea minores, ultra melon anaphe, inter lemnum et hellespontum neae, inter lebedum et teon halone, inter cycladas thera et therasia, inter easdem olympiadis cxlv anno quarto post annos cxxx hiera eademque automate, et ab ea duobus stadiis post annos ccxlii nostro aevo iunio silano valerio balbo cos. a. d. viii idus iulias thia. ante nos et iuxta italiam inter aeolias insulas, item iuxta cretam emersit mm d passuum una cum calidis fontibus, altera olympiadis clxiii anno tertio in tusco sinu, flagrans haec violento cum flatu, proditurque memoriae, magna circa eam multitudine piscium fluitante confestim expirasse quibus ex his cibus fuisset. sic et pithecussas in campano sinu ferunt ortas, mox in his montem epopon, cum repente flamma ex eo emicuisset, campestri aequatum planitiei. in eadem et oppidum haustum profundo, alioque motu terrae stagnum emersisse, et alio provolutis montibus insulam extitisse prochytam.

namque et hoc modo insulas rerum natura fecit: avellit siciliam italiae, cyprum syriae, euboeam boeotiae, euboeae atalanten et macrian, besbicum bithyniae, leucosiam sirenum promunturio. rursus abstulit insulas mari iunxitque terris, antissam lesbo, zephyrium halicarnaso, aethusan myndo, dromiscon et pernen mileto, narthecusam parthenio promunturio. hybanda, quondam insula ioniae, ducentis nunc a mari abest stadiis, syrien ephesus in mediterraneo habet, derasidas et sapphoniam vicina ei magnesia. epidaurus et oricum insulae esse desierunt. in totum abstulit terras primum omnium ubi atlanticum mare est, si platoni credimus, inmenso spatio, mox interno quoque: videmus hodie mersam acarnaniam ambracio sinu, achaiam corinthio, europam asiamque propontide et ponto. ad hoc perrupit mare leucada, antirrhium, hellespontum, bosporos duos.

atque ut sinus et stagna praeteream, ipsa se comest terra. devoravit cibotum altissimum montem cum oppido cariae, sipylum in magnesia et prius in eodem loco clarissimam urbem, quae tantalis vocabatur, galenes et gamales urbium in phoenice agros cum ipsis, phegium, aethiopiae iugum excelsissimum, tamquam non infida grassarentur et litora. pyrram et antissam circa maeotim pontus abstulit, helicen et buram sinus corinthius, quarum in alto vestigia

apparent. ex insula cea amplius triginta milia passuum abrupta subito cum plurimis mortalium rapuit et in sicilia dimidiam tyndarida urbem ac quicquid ab italia deest, similiter in boeotia eleusina.

motus enim terrae sileantur et quicquid est, ubi saltem busta urbium exstant, simul ut terrae miracula potius dicamus quam scelera naturae. et, hercules, non caelestia enarratu difficiliora fuerint. metallorum opulentia tam varia, tam dives, tam fecunda, tot saeculis suboriens, cum tantum cotidie orbe toto populentur ignes, ruinae, naufragia, bella, fraudes, tantum vero luxuria et tot mortales conterant; gemmarum pictura tam multiplex, lapidum tam discolores maculae interque eos candor alicuius praeter lucem omnia excludens; medicatorum fontium vis; ignium tot locis emicantium perpetua tot saeculis incendia; spiritus letales aliubi aut scrobibus emissi aut ipso loci situ mortiferi, aliubi volucribus tantum, ut soracte vicino urbi tractu, aliubi praeter hominem ceteris animantibus, nonnumquam et homini, ut in sinuessano agro et puteolano! spiracula vocant, alii charonea, scrobes mortiferum spiritum exhalantes, item in hirpinis ampsancti ad mephitis aedem locum, quem qui intravere moriuntur; simili modo hierapoli in asia, matris tantum magnae sacerdoti innoxium. aliubi fatidici specus, quorum exhalatione temulenti futura praecinant, ut delphis nobilissimo oraculo. quibus in rebus quid possit aliud causae adferre mortalium quispiam quam diffusae per omne naturae subinde aliter atque aliter numen erumpens

quaedam vero terrae ad ingressus tremunt, sicut in gabiensi agro non procul urbe roma iugera ferme ducenta equitantium cursu; similiter in reatino. quaedam insulae semper fluctuantur, sicut in agro caecubo et eodem reatino, mutinensi, statoniensi, in vadimonis lacu, ad cutilias aquas opaca silva, quae numquam die ac nocte eodem loco visitur, in lydia quae vocantur calaminae, non ventis solum, sed etiam contis quo libeat inpulsae, multorum civium mithridatico bello salus. sunt et in nymphaeo parvae, saliares dictae, quoniam in symphoniae cantu ad ictus modulantium pedum moventur. in tarquiniensi lacu magno italiae duae nemora circumferunt, nunc triquetram figuram edentes, nunc rotundam conplexu ventis inpellentibus, quadratam numquam.

celebre fanum habet veneris paphos, in cuius quandam aream non inpluit, item in nea, oppido troadis, circa simulacrum minervae; in

eodem et relicta sacrificia non putrescunt. iuxta harpasa oppidum asiae cautes stat horrenda, uno digito mobilis, eadem, si toto corpore inpellatur, resistens. in taurorum paeninsula in civitate parasino terra est, qua sanantur omnia vulnera. at circa asson troadis lapis nascitur, quo consumuntur omnia corpora; sarcophagus vocatur. duo sunt montes iuxta flumen indum: alteri natura ut ferrum omne teneat, alteri ut respuat, itaque, si sint clavi in calciamento, vestigia evelli in altero non possint, in altero sisti. locris et crotone pestilentiam numquam fuisse nec in ilio terrae motum adnotatum est, in lycia vero semper a terrae motu quadraginta dies serenos esse. in agro arpano frumentum satum non nascitur; ad aras mucias in veiente et apud tusculanum et in silva ciminia loca sunt, in quibus in terram depacta non extrahuntur. in crustumino natum faenum ibi noxium, extra salubre est.

et de aquarum natura complura dicta sunt, sed aestus maris accedere ac reciprocare maxime mirum, pluribus quidem modis, verum causa in sole lunaque. bis inter duos exortus lunae adfluunt bisque remeant vicenis quaternisque semper horis, et primum attollente se cum ea mundo intumescentes, mox a meridiano caeli fastigio vergente in occasum residentes, rursusque ab occasu subter ad caeli ima et meridiano contraria accedente inundantes, hinc, donec iterum exoriatur, se resorbentes nec umquam eodem tempore quo pridie reflui, velut anhelantes sidere avido trahente secum haustu maria et adsidue aliunde quam pridie exoriente, paribus tamen intervallis reciproci senisque semper horis, non cuiusque diei aut noctis aut loci, sed aequinoctialibus ideoque inaequales vulgarium horarum spatio, utcumque plures in eos aut diei aut noctis illarum mensurae cadant, et aequinoctio tantum pares ubique. ingens argumentum plenumque lucis ac vocis etiam diurnae, hebetes esse qui negent subtermeare sidera ac rursus eadem exsurgere, similemque terris, immo vero naturae universae, et inde faciem in isdem ortus occasusque operibus, non aliter sub terra manifesto sideris cursu aliove effectu quam cum praeter oculos nostros feratur.

multiplex etiamnum lunaris differentia, primumque septenis diebus. quippe modici a nova ad dividuam aestus, pleniores ab ea exundant plenaque maxime fervent. inde mitescunt, pares ad septimam primis, iterumque alio latere dividua augentur. in coitu

solis pares plenae. eadem in aquilonia et a terris longius recedente mitiores quam cum in austros digressa propiore nisu vim suam exercet. per octonos quosque annos ad principia motus et paria incrementa centesimo lunae revocantur ambitu. augent ea cuncta solis annuis causis, duobus aequinoctiis maxime tumentes et autumnali amplius quam verno, inanes vero bruma et magis solstitio. nec tamen in ipsis quos dixi temporum articulis, sed paucis post diebus, sicuti neque in plena aut novissima, sed postea, nec statim ut lunam mundus ostendat occultetve aut media plaga declinet, verum fere duabus horis aequinoctialibus serius, tardiore semper ad terras omnium, quae geruntur in caelo, effectu cadente quam visu, sicuti fulguris et tonitrus et fulminum.

omnes autem aestus in oceano maiora integunt spatia nudantque quam in reliquo mari, sive quia in totum universitate animosius quam parte est, sive quia magnitudo aperta sideris vim laxe grassantis efficacius sentit, eandem angustiis arcentibus. qua de causa nec lacus nec amnes similiter moventur. - (octogenis cubitis supra britanniam intumescere aestus pytheas massiliensis auctor est.) - et interiora autem maria terris clauduntur ut portu; quibusdam tamen in locis spatiosior laxitas dicioni paret, utpote cum plura exempla sint in tranquillo mari nulloque velorum pulsu tertio die ex italia pervectorum vticam aestu fervente. circa litora autem magis quam in alto deprehenduntur hi motus, quoniam et in corpore extrema pulsum venarum, id est spiritus, magis sentiunt. in plerisque tamen aestuariis propter dispares siderum in quoque tractu exortus diversi existunt aestus, tempore, non ratione discordes, sicut in syrtibus.

et quorundam tamen privata natura est, velut tauromenitani euripi saepius et in euboea septies die ac nocte reciprocantis. idem aestus triduo in mense consistit, septima, octava nonaque luna. gadibus qui est delubro herculis proximus fons, inclusus ad putei modum, alias simul cum oceano augetur minuiturque, alias utrumque contrariis temporibus; eodem in loco alter oceani motibus consentit. in ripa baetis oppidum est, cuius putei crescente aestu minuuntur, augescunt decedente, mediis temporum immobiles. eadem natura hispali oppido uni puteo, ceteris vulgaris. et pontus semper extra meat in propontidem, introrsus in pontum numquam refluo mari.

omnia plenilunio maria purgantur, quaedam et stato tempore.

circa messanam et mylas fimo similia expuuntur in litus purgamenta, unde fabula est solis boves ibi stabulari. his addit - ut nihil, quod equidem noverim, praeteream - aristoteles nullum animal nisi aestu recedente expirare. observatum id multis in gallico oceano et dumtaxat in homine compertum. quo vera coniectatio existit, haut frustra spiritus sidus lunam existimari; hoc esse quod terras saturet accedensque corpora impleat, abscedens inaniat. ideo cum incremento eius augeri conchylia et maxime spiritum sentire quibus sanguis non sit, sed et sanguinem, hominum etiam, cum lumine eius augeri ac minui, frondes quoque et pabula - ut suo loco dicetur - sentire, in omnia eadem penetrante vi. itaque solis ardore siccatur liquor, et hoc esse masculum sidus accepimus, torrens cuncta sorbensque. sic mari late patenti saporem incoqui salis, aut quia exhausto inde dulci tenuique, quod facillime trahat vis ignea, omne asperius crassiusque linquatur - ideo summam aequorum aquam dulciorem profunda; hanc esse veriorem causam asperi saporis quam quod mare terrae sudor sit aeternus - aut quia plurimus ex arido misceatur illi vapor aut quia terrae natura sicut medicatas aquas inficiat. est in exemplis dionysio siciliae tyranno, cum pulsus est ea potentia, accidisse prodigium, ut uno die in portu dulcesceret mare. e contrario ferunt lunae femineum ac molle sidus, atque nocturnum solvere umorem et trahere, non auferre. id manifestum esse, quod ferarum occisa corpora in tabem visu suo resolvat somnoque sopitis torporem contractum in caput revocet, glaciem refundat cunctaque umifico spiritu laxet. ita pensari naturae vices semperque sufficere, aliis siderum elementa cogentibus, aliis vero fundentibus. sed in dulcibus aquis lunae alimentum esse, sicut in marinis solis.

altissimum mare xv stadiorum fabianus tradit. alii in ponto ex adverso coraxorum gentis - vocant bathea ponti - trecentis fere a continente stadiis inmensam altitudinem maris tradunt, vadis numquam repertis. mirabilius id faciunt aquae dulces iuxta mare ut fistulis emicantes. nam nec aquarum natura miraculis cessat. dulces mari invehuntur, leviores haut dubie; ideo et marinae, quarum natura gravior, magis invecta sustinent. quaedam vero et dulces inter se supermeant alias, ut in fucino lacu invectus pitonius amnis, in lario addua, in verbanno ticinus, in benaco mincius, in sebinno ollius, in lemanno rhodanus: hic trans alpis, superiores in italia, multorum

milium transitu hospitali suas tantum nec largiores quam intulere aquas evehentes. proditum hoc et in oronte amne syriae multisque aliis. quidam vero odio maris ipsa subeunt vada, sicut arethusa, fons syracusanus, in quo redduntur iacta in alpheum, qui per olympiam fluens peloponnesiaco litori infunditur. subeunt terras rursusque redduntur lycus in asia, erasinus in argolica, tigris in mesopotamia et, quae in aesculapi fonte athenis mersa sunt, in phalerico redduntur. et in atinate campo fluvius mersus post xx milia passuum exit et in aquileiensi timavus. nihil in asphaltite iudaeae lacu, qui bitumen gignit, mergi potest nec in armeniae maioris aretissa; is quidem nitrosus pisces alit. in sallentino iuxta oppidum manduriam lacus, ad margines plenus, neque exhaustis aquis minuitur neque infusis augetur. in ciconum flumine et in piceno lacu velino lignum deiectum lapideo cortice obducitur et in surio colchidis flumine adeo, ut lapidem plerumque durans adhuc integat cortex. similiter in flumine silero ultra surrentum non virgulta modo inmersa, verum et folia lapidescunt, alias salubri potu eius aquae. in exitu paludis reatinae saxum crescit et in rubro mari oleae virentesque frutices enascuntur.

sed fontium plurimorum natura mira est fervore, idque etiam in iugis alpium ipsoque in mari inter italiam et aenariam in baiano sinu et in liri fluvio multisque aliis. nam dulcis haustus in mari plurimis locis, ut ad chelidonias insulas et aradum et in gaditano oceano. patavinorum aquis calidis herbae virentes innascuntur, pisanorum ranae, ad vetulonios in etruria non procul a mari pisces. in casinate fluvius appellatur scatebra, frigidus, abundantior aestate; in eo, ut in arcadia stymphali, nascuntur aquatiles musculi. in dodone iovis fons, cum sit gelidus et inmersas faces extinguat, si extinctae admoveantur, accendit. idem meridie semper deficit, qua de causa ἀναπαυόμενον vocant, mox increscens ad medium noctis exuberat, ab eo rursus sensim deficit. in illyricis supra fontem frigidum expansae vestes accenduntur. iovis hammonis stagnum, interdiu frigidum, noctibus fervet. in trogodytis fons solis appellatur dulcis et circa meridiem maxime frigidus; mox paulatim tepescens ad noctis media fervore et amaritudine infestatur.

padi fons mediis diebus aestivis velut interquiescens semper aret. in tenedo insula fons semper a tertia noctis hora in sextam ab aestivo

solstitio exundat, et in delo insula inopus fons eodem quo nilus modo ac pariter cum eo decrescit augeturve. contra timavum amnem insula parva in mari est cum fontibus calidis, qui pariter cum aestu maris crescunt minuunturque. in agro pitinate trans appenninum fluvius novanus, omnibus solstitiis torrens, bruma siccatur.

in falisco omnis aqua pota candidos boves facit, in boeotia amnis melas oves nigras, cephisus ex eodem lacu profluens albas, rursus nigras penius rufasque iuxta ilium xanthus, unde et nomen amni. in ponto fluvius axiaces rigat campos, in quibus pastae nigro lacte equae gentem alunt. in reatino fons neminie appellatus alio atque alio loco exoritur, annonae mutationem significans. brundisi in portu fons incorruptas praestat aquas navigantibus. lyncestis aqua quae vocatur acidula vini modo temulentos facit; item in paphlagonia et in agro caleno. andro in insula templo liberi patris fontem nonis ianuariis semper vini saporem fundere mucianus ter consul credit. dies Θεοδοσία vocatur. iuxta nonacrim in arcadia styx, nec odore differens nec colore, pota ilico necat; item in liberoso taurorum colle tres fontes sine remedio, sine dolore mortiferi. in carrinensi hispaniae agro duo fontes iuxta fluunt, alter omnia respuens, alter obsorbens. in eadem gente alius aurei coloris omnes ostendit pisces, nihil extra illam aquam differentes. in comensi iuxta larium lacum fons largus horis singulis semper intumescit ac residit. in cydonea insula ante lesbum fons calidus vere tantum fluit. lacus sannaus in asia circa nascente absinthio inficitur. colophone in apollinis clarii specu lacuna est, cuius potu mira redduntur oracula, bibentium breviore vita. amnes retro fluere et nostra vidit aetas neronis principis supremis, sicut in rebus eius rettulimus.

iam omnes fontes aestate quam hieme gelidiores esse quem fallit sicut illa permira naturae opera, aes ac plumbum in massa mergi, dilatatum fluitare, eiusdemque ponderis alia sidere, alia invehi, onera in aqua facilius moveri, syrium lapidem quamvis grandem innatare eundemque comminutum mergi, recentia cadavera ad vadum labi, intumescentia attolli, inania vasa haud facilius quam plena extrahi; pluvias salinis aquas dulciores esse quam reliquas, nec fieri salem nisi admixtis dulcibus; marinas tardius gelari, celerius accendi; hieme mare calidius esse, autumnale salsius; omne oleo tranquillari, et ob id urinantes ore spargere, quoniam mitiget naturam asperam

lucemque deportet; nives in alto mari non cadere; cum omnis aqua deorsum feratur, exilire fontes atque etiam in aetnae radicibus, flagrantis in tantum, ut quinquagena, centena milia passuum harenas flammarum globo eructet. namque et ignium, quod est naturae quartum elementum, reddamus aliqua miracula, sed primum ex aquis.

in urbe commagenes samosata stagnum est emittens limum - maltham vocant - flagrantem. cum quid attigit solidi, adhaeret; praeterea tactu et sequitur fugientes. sic defendere muros oppugnante lucullo: flagrabat miles armis suis. aquis et accenditur; terra tantum restingui docuere experimenta. similis est natura naphthae. ita appellatur circa babylonem et in austacenis parthiae profluens bituminis liquidi modo. huic magna cognatio ignium, transiliuntque in eam protinus undecumque visam. ita ferunt a medea paelicem crematam, postquam sacrificatura ad aras accesserat, corona igne rapto. verum in montium miraculis ardet aetna noctibus semper tantoque aevo materia ignium sufficit, nivalis hibernis temporibus egestumque cinerem pruinis operiens. nec in illo tantum natura saevit exustionem terris denuntians: flagrat in phaselitis mons chimaera, et quidem inmortali diebus ac noctibus flamma; ignem eius accendi aqua, extingui vero terra aut fimo cnidius ctesias tradit. eadem in lycia hephaesti montes taeda flammante tacti flagrant, et adeo ut lapides quoque rivorum et harenae in ipsis aquis ardeant, aliturque ignis ille pluviis; baculo si quis ex iis accenso traxerit sulcum, rivos ignium sequi narrant. flagrat in bactris cophanti noctibus vertex. flagrat in medis et in sittacene confinio persidis, susis quidem ad turrim albam xv caminis, maximo eorum et interdiu, campus. babylone flagrat e quadam veluti piscina iugeri magnitudine, aethiopum iuxta hesperu montem stellarum modo campi noctu; similiter in megalopolitanorum agro. nam si intermisit ille iucundus frondemque densi supra se nemoris non adurens et iuxta gelidum fontem semper ardens nymphaei crater, dira apolloniatis suis portendit, ut theopompus tradidit; augetur imbribus egeritque bitumen temperandum fonte illo ingustabili, et alias omni bitumine dilutius. sed quis haec miretur in medio mari hiera et lipara insulae aeoliae iuxta italiam cum ipso mari arsere per aliquot dies sociali bello, donec legatio senatus piavit. maximo tamen ardet incendio

theon ochema dictum aethiopum iugum torrentesque solis ardoribus flammas egerit. tot locis, tot incendiis rerum natura terras cremat!

praeterea cum sit huius unius elementi ratio fecunda seque ipsa pariat et minimis crescat a scintillis, quid fore putandum est in tot rogis terrae quae est illa natura, quae voracitatem in toto mundo avidissimam sine damno sui pascit addantur his sidera innumera ingensque sol, addantur humani ignes et lapidum quoque insiti naturae attritique inter se ligni, iam nubium et origines fulminum: excedet profecto miracula omnia ullum diem fuisse, quo non cuncta conflagrarent, cum specula quoque concava adversa solis radiis facilius etiam accendant quam ullus alius ignis. quid quod innumerabiles parvi, sed naturales, scatent in nymphaeo exit e petra flamma, quae pluviis accenditur; exit et ad aquas scantias, haec quidem invalida, cum transit, nec longe in alia durans materia - viret aeterno hunc fontem igneum contegens fraxinus - ; exit in mutinensi agro statis volcano diebus. reperitur apud auctores subiectis ariciae arvis, si carbo deciderit, ardere terram, in agro sabino et sidicino unctum flagrare lapidem, in sallentino oppido gnatia inposito ligno in saxum quoddam ibi sacrum protinus flammam existere, in laciniae iunonis ara sub diu sita cinerem inmobilem esse perflantibus undique procellis; quin et repentinos existere ignes et in aquis et in corporibus, etiam humanis: trasimenum lacum arsisse totum; servio tullio dormienti in pueritia ex capite flammam emicuisse, l. marcio in hispania interemptis scipionibus contionanti et milites ad ultionem exhortanti arsisse simili modo valerius antias narrat. plura mox et distinctius; nunc enim quadam mixtura rerum omnium exhibentur miracula. verum egressa mens interpretationem naturae festinat legentium animos per totum orbem veluti manu ducere.

pars nostra terrarum, de qua memoro, ambienti, ut dictum est, oceano velut innatans longissime ab ortu ad occasum patet, hoc est ab india ad herculis columnas gadibus sacratas [30lxxxv]30 [lxxviii] p., ut artemidoro auctori placet, ut vero isidoro, [30xcviii]30 [xviii]. artemidorus adicit amplius a gadibus circuitu sacri promunturii ad promunturium artabrum, quo longissime frons procurrat hispaniae, [dccccxci] d. mensura currit duplici via: a gange amne ostioque eius, quo se in eoum oceanum effundit, per indiam parthyenenque ad myriandrum urbem syriae in issico sinu positam [30lii]30 [xv], inde

proxima navigatione cyprum insulam, patara lyciae, rhodum, astypalaeam in carpathio mari insulam, taenarum laconicae, lilybaeum siciliae, caralim sardiniae [30xxi]30 [xiii], deinde gades [30xii]30 [l], quae mensura universa ab eoo mari efficit [30lxxxv]30 [lxxviii]. alia via, quae certior et iniri terreno maxime potest, a gange ad euphraten amnem [30li]30 [lxix], inde cappadociae mazaca [ccxliiii], inde per phrygiam, cariam, ephesum [ccccxcviiii], ab epheso per aegaeum pelagus delum [cc], isthmum [ccxii] d, inde terra et laconico mari et corinthiaco sinu patras peloponnesi [xc], leucadem [lxxxvii] d, corcyram totidem, acroceraunia [lxxxii] d, brundisium [lxxxvii] d, romam [ccclx], alpes usque ad scingomagum vicum [dxviiii], per galliam ad pyrenaeos montes illiberim [cccclxviii], ad oceanum et hispaniae oram [dcccxxxi], traiectu gadis [vii] d, quae mensura artemidori ratione [30lxxxix]30 [xlv] efficit.

latitudo autem terrae a meridiano situ ad septentriones, dimidio fere minor, isidoro colligit [30liiii]30 [lxii], quo palam fit quantum et hinc vapor abstulerit et illinc rigor. neque enim deesse terris arbitror aut non esse globi formam, sed inhabitabilia utrimque inconperta esse. haec mensura currit a litore aethiopici oceani, qua modo habitatur, ad meroen [dcxxv], inde alexandriam [30xii]30 [l], rhodum [dlxxxiiii], cnidum [lxxxvii] d, coum [xxv], samum [c], chium [xciiii], mytilenen [lxv], tenedum [cxix], sigeum promunturium [xii] d, os ponti [cccxii] d, carambin promunturium [cccl], os maeotis [cccxii] d, ostium tanais [cclxxv], qui cursus conpendiis maris brevior fieri potest [lxxix]. ab ostio tanais nihil inmodicum diligentissimi auctores fecere. artemidorus ulteriora inconperta existimavit, cum circa tanain sarmatarum gentes degere fateretur ad septentriones versus; isidorus adiecit [30xii]30 [l] usque ad thylen, quae coniectura divinationis est. ego non minore quam proxime dicto spatio sarmatarum fines nosci intellego. et alioqui quantum esse debet quod innumerabiles gentes subinde sedem mutantes capiat unde ulteriorem mensuram inhabitabilis plagae multo esse maiorem arbitror. nam et a germania inmensas insulas non pridem conpertas cognitum habeo.

de longitudine ac latitudine haec sunt, quae digna memoratu putem. universum autem circuitum eratosthenes, in omnium quidem litterarum subtilitate, set in hac utique praeter ceteros solers, quem

cunctis probari video, cclii milium stadiorum prodidit, quae mensura romana conputatione efficit trecentiens quindeciens centena milia passuum: inprobum ausum, verum ita subtili argumentatione conprehensum, ut pudeat non credere. hipparchus, et in coarguendo eo et in reliqua omni diligentia mirus, adicit stadiorum paulo minus [xxvi]. alia dionysodoro fides. neque enim subtraham exemplum vanitatis graecae maximum. melius hic fuit, geometricae scientia nobilis; senecta diem obiit in patria. funus duxere ei propinquae, ad quas pertinebat hereditas. hae cum secutis diebus iusta peragerent, invenisse dicuntur in sepulchro epistulam dionysodori nomine ad superos scriptam: pervenisse eum a sepulchro ad infimam terram; esse eo stadiorum [xlii]. nec defuere geometrae qui interpretarentur, significare epistulam a medio terrarum orbe missam, quod deorsum ab summo longissimum esset spatium et idem pilae medium. ex quo consecuta conputatio est, ut circuitum esse [cclii] stadiorum pronuntiarent.

harmonica ratio, quae cogit rerum naturam sibi ipsam congruere, addit huic mensurae stadiorum [xii] terramque xcvi partem totius mundi facit.

LIBER III

hactenus de situ et miraculis terrae aquarumque et siderum ac ratione universitatis atque mensura. nunc de partibus, quamquam infinitum id quoque existimatur nec temere sine aliqua reprehensione tractatum, haut ullo in genere venia iustiore, si modo minime mirum est hominem genitum non omnia humana novisse. quapropter auctorem neminem unum sequar, sed ut quemque verissimum in quaque parte arbitrabor, quoniam commune ferme omnibus fuit, ut eos quisque diligentissime situs diceret, in quibus ipse prodebat. ideo nec culpabo aut coarguam quemquam. locorum nuda nomina et quanta dabitur brevitate ponentur, claritate causisque dilatis in suas partes; nunc enim sermo de toto est. quare sic accipi velim, ut si vidua fama sua nomina, qualia fuere primordio ante ullas res gestas, nuncupentur et sit quaedam in his nomenclatura quidem, sed mundi rerumque naturae.

terrarum orbis universus in tres dividitur partes, europam, asiam, africam. origo ab occasu solis et gaditano freto, qua inrumpens oceanus atlanticus in maria interiora diffunditur. hinc intranti dextera africa est, laeva europa, inter has asia. termini amnes tanais et nilus. [xv] p. in longitudinem quas diximus fauces oceani patent, [v] in latitudinem, a vico mellaria hispaniae ad promunturium africae album, auctore turranio gracile iuxta genito. t. livius ac nepos cornelius latitudinis tradiderunt minus [vii] p., ubi vero plurumum, [x]: tam modico ore tam inmensa aequorum vastitas panditur. nec profunda altitudo miraculum minuit. frequentes quippe taeniae candicantis vadi carinas territant. qua de causa limen interni maris multi eum locum appellavere. proximis autem faucibus utrimque inpositi montes coercent claustra, abila africae, europae calpe, laborum herculis metae, quam ob causam indigenae columnas eius dei vocant creduntque perfossas exclusa antea admisisse maria et rerum naturae mutasse faciem.

primum ergo de europa, altrice victoris omnium gentium populi longeque terrarum pulcherrima, quam plerique merito non tertiam portionem fecere, verum aequam, in duas partes ab amne tanai ad gaditanum fretum universo orbe diviso. oceanus a quo dictum est

spatio atlanticum mare infundens et avido meatu terras, quaecunque venientem expavere, demergens resistentes quoque flexuoso litorum anfractu lambit, europam vel maxime recessibus crebris excavans, sed in quattuor praecipuos sinus, quorum primus a calpe hispaniae extimo, ut dictum est, monte locros, bruttium usque promunturium, inmenso ambitu flectitur.

in eo prima hispania terrarum est, ulterior appellata, eadem baetica, mox a fine murgitano citerior eademque tarraconensis ad pyrenaei iuga. ulterior in duas per longitudinem provincias dividitur, si quidem baeticae latere septentrionali praetenditur lusitania, amne ana discreta. ortus hic in laminitano agro citerioris hispaniae et modo in stagna se fundens, modo in angustias resorbens aut in totum cuniculis condens et saepius nasci gaudens in atlanticum oceanum effunditur. tarraconensis autem, adfixa pyrenaeo totoque eius a latere decurrens et simul ad gallicum oceanum hiberico a mari transversa se pandens, solorio monte et oretanis iugis carpetanisque et asturum a baetica atque lusitania distinguitur.

baetica, a flumine mediam secante cognominata, cunctas provinciarum diviti cultu et quodam fertili ac peculiari nitore praecedit. iuridici conventus ei iiii, gaditanus, cordubensis, astigitanus, hispalensis. oppida omnia numero clxxv, in iis coloniae viiii, municipia c. r. x, latio antiquitus donata xxvii, libertate vi, foedere iii, stipendiaria cxx. ex his digna memoratu aut latio sermone dictu facilia, a flumine ana litore oceani oppidum ossonoba, aestuaria cognominatum, inter confluentes luxiam et vrium, hareni montes, baetis fluvius, litus curense inflexo sinu, cuius ex adverso gadis inter insulas dicenda, promunturium iunonis, portus baesippo, oppidum baelo, mellaria, fretum ex atlantico mari, carteia, tartesos a graecis dicta, mons calpe. dein litore interno oppida barbesula cum fluvio, item salduba, oppidum suel, malaca cum fluvio foederatorum. dein maenuba cum fluvio, sexi cognomine firmum iulium, sel, abdara, murgi, baeticae finis. oram eam in universum originis poenorum existimavit m. agrippa; ab ana autem atlantico oceano obversa bastulorum turdulorumque est. in universam hispaniam M. Varro pervenisse hiberos et persas et phoenicas celtasque et poenos tradit. lusum enim liberi patris aut lyssam cum eo bacchantium nomen dedisse lusitaniae et pana praefectum eius universae. at quae de

hercule ac pyrene vel saturno traduntur fabulosa in primis arbitror.

baetis, in tarraconensis provinciae non, ut aliqui dixere, mentesa oppido, sed tugiensi exoriens saltu - iuxta quem tader fluvius, qui carthaginiensem agrum rigat - , ilorci refugit scipionis rogum versusque in occasum oceanum atlanticum, provinciam adoptans, petit, modicus primo, sed multorum fluminum capax, quibus ipse famam aquasque aufert. baeticae primum ab ossigitania infusus, amoeno blandus alveo, crebris dextra laevaque accolitur oppidis.

celeberrima inter hunc et oceani oram in mediterraneo segida quae augurina cognominatur, vlia quae fidentia, vrgao quae alba, ebora quae cerialis, iliberri quod florentini, ilipula quae laus, artigi quod iulienses, vesci quod faventia, singili, ategua, arialdunum, agla minor, baebro, castra vinaria, cisimbrium, hippo nova, ilurco, osca, oscua, sucaelo, vnditanum, tucci vetus, omnia bastetaniae vergentis ad mare. conventus vero cordubensis circa flumen ipsum ossigi quod cognominatur latonium, iliturgi quod forum iulium, ipra, isturgi quod triumphales, vcia et [xiiii] p. remotum in mediterraneo obulco quod pontificense appellatur, mox ripa, epora foederatorum, sacili martialium, onuba et dextra corduba colonia patricia cognomine, inde primum navigabili baete oppida carbula, detumo, fluvius singilis, eodem baetis latere incidens.

oppida hispalensis conventus celti, axati, arua, canama, naeva, ilipa cognomine ilpa, italica et a laeva hispal colonia cognomine romulensis, ex adverso oppidum osset quod cognominatur iulia constantia, lucurgentum quod iuli genius, orippo, caura, siarum, fluvius maenuba, baeti et ipse a dextro latere infusus. at inter aestuaria baetis oppida nabrissa cognomine veneria et colobana, coloniae hasta quae regia dicitur et in mediterraneo asido quae caesarina.

singilis fluvius, in baetim quo dictum est ordine inrumpens, astigitanam coloniam adluit, cognomine augustam firmam, ab ea navigabilis. huius conventus sunt reliquae coloniae inmunes tucci quae cognominatur augusta gemella, ituci quae virtus iulia, vcubi quae claritas iulia, vrso quae genetiva vrbanorum, inter quae fuit munda, cum pompeio filio rapta; oppida libera astigi vetus, ostippo; stipendiaria callet, callicula, castra gemina, ilipula minor, marruca, sacrana, obulcula, oningi, sabora, ventippo. maenubam amnem, et

ipsum navigabilem, haut procul accolunt olontigi, laelia, lastigi.

quae autem regio a baete ad fluvium anam tendit extra praedicta, baeturia appellatur, in duas divisa partes totidemque gentes: celticos, qui lusitaniam attingunt, hispalensis conventus, turdulos, qui lusitaniam et tarraconensem accolunt, iura cordubam petunt. celticos a celtiberis ex lusitania advenisse manifestum est sacris, lingua, oppidorum vocabulis, quae cognominibus in baetica distinguntur: seriae adicitur fama iulia, nertobrigae concordia iulia, segidae restituta iulia, contributa iulia vgultuniae, cum qua et curiga nunc est, lacimurgae constantia iulia, steresibus fortunales et callensibus aeneanici. praeter haec in celtica acinippo, arunda, arunci, turobriga, lastigi, salpesa, saepone, serippo. altera baeturia, quam diximus turdulorum et conventus cordubensis, habet oppida non ignobilia arsam, mellariam, mirobrigam reginam, sosintigi, sisaponem. gaditani conventus civium romanorum regina, latinorum laepia regia, carisa cognomine aurelia, vrgia cognominata castrum iulium, item caesaris salutariensis; stipendiaria besaro, belippo, barbesula, blacippo, baesippo, callet, cappa cum oleastro, iptuci, ibrona, lascuta, saguntia, saudo, vsaepo.

longitudinem universam eius prodidit m. agrippa [cccclxxv] p., latitudinem [cclviii], sed cum termini carthaginem usque procederent: quae causa magnos errores conputatione mensurae saepius parit, alibi mutato provinciarum modo, alibi itinerum, auctisque aut deminutis passibus. incubuere maria tam longo aevo, alibi processere litora, torsere se fluminum aut correxere flexus. praeterea aliunde aliis exordium mensurae est et alia meatus. ita fit ut nulli duo concinant. baeticae longitudo nunc a castulonis oppidi fine gadis [ccl] et a murgi maritima ora [xxv] p. amplior, latitudo a carteia anam ora [ccxxxiiii] p. agrippam quidem in tanta viri diligentia praeterque in hoc opere cura, cum orbem terrarum orbi spectandum propositurus esset, errasse quis credat et cum eo divum augustum is namque conplexam eum porticum ex destinatione et commentariis m. agrippae a sorore eius inchoatam peregit.

citerioris hispaniae sicut conplurium provinciarum aliquantum vetus forma mutata est, utpote cum pompeius magnus tropaeis suis, quae statuebat in pyrenaeo, dccclxvi oppida ab alpibus ad fines hispaniae ulterioris in dicionem ab se redacta testatus sit. nunc

universa provincia dividitur in conventus vii, carthaginiensem, tarraconensem, caesaraugustanum, cluniensem, asturum, lucensem, bracarum. accedunt insulae, quarum mentione seposita civitates provincia ipsa praeter contributas aliis ccxciii continet, oppida clxxviiii, in iis colonias xii, oppida civium romanorum xiii, latinorum veterum xviii, foederatorum unum, stipendiaria cxxxv.

primi in ora bastuli, post eos quo dicetur ordine intus recedentes mentesani, oretani et ad tagum carpetani, iuxta eos vaccaei, vettones et celtiberi arevaci. oppida orae proxima vrci adscriptumque baeticae baria, regio bastitania, mox deinde contestania, carthago nova colonia, cuius a promunturio, quod saturni vocatur, caesaream mauretaniae urbem [clxxxxvii] p. traiectus. reliqua in ora flumen tader, colonia inmunis ilici, unde ilicitanus sinus. in eam contribuuntur icositani. mox latinorum lucentum, dianium stipendiarium, sucro fluvius et quondam oppidum, contestaniae finis. regio edetania, amoeno praetendente se stagno, ad celtiberos recedens. valentia colonia [iii] p. a mari remota, flumen turium, et tantundem a mari saguntum civium romanorum, oppidum fide nobile, flumen vdiva. regio ilergaonum, hiberus amnis, navigabili commercio dives, ortus in cantabris haut procul oppido iuliobrica, per [ccccl] p. fluens, navium per [cclx] a vareia oppido capax, quem propter universam hispaniam graeci appellavere hiberiam. regio cessetania, flumen subi, colonia tarracon, scipionum opus, sicut carthago poenorum. regio ilergetum, oppidum subur, flumen rubricatum, a quo laeetani et indigetes. post eos quo dicetur ordine intus recedentes radice pyrenaei ausetani fitani, iacetani perque pyrenaeum ceretani, dein vascones. in ora autem colonia barcino cognomine faventia, oppida civium romanorum baetulo, iluro, flumen arnum, blandae, flumen alba, emporiae, geminum hoc veterum incolarum et graecorum, qui phocaeensium fuere suboles, flumen ticer. ab eo pyrenaea venus in latere promunturii altero [xl].

nunc per singulos conventus reddentur insignia praeter supra dicta. tarracone disceptant populi xlii, quorum celeberrimi civium romanorum dertosani, bisgargitani; latinorum ausetani, ceretani qui iuliani cognominantur et qui augustani, edetani, gerundenses, iessonienses, teari qui iulienses; stipendiariorum aquicaldenses, aesonenses, baeculonenses.

caesaraugusta colonia immunis, amne hibero adfusa, ubi oppidum antea vocabatur salduba, regionis edetaniae, recipit populos lv: ex his civium romanorum bilbilitanos, celsenses ex colonia, calagurritanos qui nasici cognominantur, ilerdenses surdaonum gentis, iuxta quos sicoris fluvius, oscenses regionis suessetaniae, turiassonenses; latinorum veterum cascantenses, ergavicenses, graccurritanos, leonicenses, osicerdenses; foederatos tarracenses; stipendiarios arcobrigenses, andelonenses, aracelitanos, bursaonenses, calagurritanos qui fibularenses cognominantur, conplutenses, carenses, cincienses, cortonenses, damanitanos, ispallenses, ilursenses, iluberitanos, iacetanos, libienses, pompelonenses, segienses.

carthaginem conveniunt populi lxv exceptis insularum incolis ex colonia accitana gemellense, ex libisosana cognomine foroaugustana, quibus duabus ius italiae datum, ex colonia salariense, oppidani lati veteris castulonenses qui caesarii iuvenales appellantur, saetabitani qui augustani, valerienses. stipendiariorum autem celeberrimi alabanenses, bastitani, consaburrenses, dianenses, egelestani, ilorcitani, laminitani, mentesani qui et oretani, mentesani qui et bastuli, oretani qui et germani cognominantur, caputque celtiberiae segobrigenses, carpetaniae toletani tago flumini inpositi, dein viatienses et virgilienses.

in cluniensem conventum varduli ducunt populos xiiii, ex quibus alabanenses tantum nominare libeat, turmogidi iiii, in quibus segisamonenses et segisamaiulienses. in eundem conventum carietes et vennenses v civitatibus vadunt, quarum sunt velienses. eodem pelendones celtiberum iiii populis, quorum numantini fuere clari, sicut in vaccaeorum xvii civitatibus intercatienses, palantini, lacobrigenses, caucenses. nam in cantabricis viiii populis iuliobriga sola memoretur, in autrigonum x civitatibus tritium et virovesca. arevacis nomen dedit fluvius areva. horum vi oppida, secontia et vxama, quae nomina crebro aliis in locis usurpantur, praeterea segovia et nova augusta, termes ipsaque clunia, celtiberiae finis. ad oceanum reliqua vergunt vardulique ex praedictis et cantabri.

iunguntur iis asturum xxii populi divisi in augustanos et transmontanos, asturica urbe magnifica. in iis sunt gigurri, paesici, lancienses, zoelae. numerus omnis multitudinis ad ccxl liberorum

capitum.

lucensis conventus populorum est sedecim, praeter celticos et lemavos ignobilium ac barbarae appellationis, sed liberorum capitum ferme [clxvi].

simili modo bracarum xxiiii civitates [cclxxxv] capitum, ex quibus praeter ipsos bracaros bibali, coelerni, callaeci, equaesi, limici, querquerni citra fastidium nominentur.

longitudo citerioris hispaniae est ad finem castulonis a pyrenaeo [dc] vii p. et ora paulo amplius, latitudo a tarracone ad litus oiarsonis [cccvii], e radicibus pyrenaei, ubi cuneatur angustiis inter duo maria; paulatim deinde se pandens, qua contingit ulteriorem hispaniam, tantundem et amplius latitudini adicit. metallis plumbi, ferri, aeris, argenti, auri tota ferme hispania scatet, citerior et specularis lapidis, baetica et minio. sunt et marmorum lapicidinae. universae hispaniae Vespasianus imperator Augustus iactatum procellis rei publicae latium tribuit. pyrenaei montes hispanias galliasque disterminant promunturiis in duo diversa maria proiectis.

narbonensis provincia appellatur pars galliarum quae interno mari adluitur, bracata antea dicta, amne varo ab italia discreta alpiumque vel saluberrimis romano imperio iugis, a reliqua vero gallia latere septentrionali montibus cebenna et iuribus, agrorum cultu, virorum morumque dignatione, amplitudine opum nulli provinciarum postferenda breviterque italia verius quam provincia. in ora regio sordonum intusque consuaranorum, flumina tecum, vernodubrum, oppida illiberis, magnae quondam urbis tenue vestigium, ruscino latinorum, flumen atax, e pyrenaeo rubrensem permeans lacum, narbo martius decumanorum colonia [xii] p. a mari distans, flumina araris, liria. oppida de cetero rara praeiacentibus stagnis: agatha quondam massiliensium et regio volcarum tectosagum atque ubi rhoda rhodiorum fuit, unde dictus multo galliarum fertilissimus rhodanus amnis, ex alpibus se rapiens per lemannum lacum segnemque deferens ararim nec minus se ipso torrentes isaram et druantiam. libica appellantur duo eius ora modica, ex his alterum hispaniense, alterum metapinum, tertium idemque amplissimum massalioticum. sunt auctores et heracleam oppidum in ostio rhodani fuisse. ultra fossae ex rhodano, c. mari opere et nomine insignes, stagnum mastromela, oppidum maritima avaticorum, superque campi

lapidei, herculis proeliorum memoria, regio anatiliorum et intus dexivatium cavarumque; rursus a mari tricorium et intus tritollorum vocontiorumque et segovellaunorum, mox allobrogum. at in ora massilia graecorum phocaeensium foederata, promunturium zao, citharista portus, regio camactulicorum, dein suelteri supraque verucini. in ora autem athenopolis massiliensium, forum iuli octavanorum colonia, quae pacensis appellatur et classica, amnis nomine argenteus, regio oxubiorum ligaunorumque, super quos suebri, quariates, adunicates. at in ora oppidum latinum antipolis, regio deciatium, amnis varus, ex alpium monte caenia profusus.

in mediterraneo coloniae arelate sextanorum, baeterrae septimanorum, arausio secundanorum, in agro cavarum valentia, vienna allobrogum. oppida latina aquae sextiae salluviorum, avennio cavarum, apta iulia vulgientium, alebaece reiorum apollinarium, alba helvorum, augusta tricastinorum, anatilia, aerea, bormani, comani, cabellio, carcasum volcarum tectosagum, cessero, carbantorate meminorum, caenicenses, cambolectri qui atlantici cognominantur, forum voconi, glanum libii, lutevani qui et foroneronienses, nemausum arecomicorum, piscinae, ruteni, samnagenses, tolosani tectosagum aquitaniae contermini, tasgoduni, tarusconienses, vmbranici, vocontiorum civitatis foederatae duo capita vasio et lucus augusti, oppida vero ignobilia xviiii, sicut xxiiii nemausiensibus adtributa. adiecit formulae galba imperator ex inalpinis avanticos atque bodionticos, quorum oppidum dinia. longitudinem provinciae narbonensis [ccclxx] p. agrippa tradit, latitudinem [ccxlviii].

italia dehinc primique eius ligures, mox etruria, vmbria, latium, ibi tiberina ostia et roma, terrarum caput, [xvi] p. intervallo a mari. volscum postea litus et campaniae, picentinum inde ac lucanum bruttiumque, quo longissime in meridiem ab alpium paene lunatis iugis in maria excurrit italia. ab eo graeciae ora, mox sallentini, poeduculi, apuli, paeligni, frentani, marrucini, vestini, sabini, picentes, galli, vmbri, tusci, veneti, carni, iapudes, histri, liburni. nec ignoro ingrati ac segnis animi existimari posse merito, si obiter atque in transcursu ad hunc modum dicatur terra omnium terrarum alumna eadem et parens, numine deum electa quae caelum ipsum clarius faceret, sparsa congregaret imperia ritusque molliret et tot populorum discordes ferasque linguas sermonis commercio contraheret ad

conloquia et humanitatem homini daret breviterque una cunctarum gentium in toto orbe patria fieret. sed quid agam tanta nobilitas omnium locorum, quos quis attigerit, tanta rerum singularum populorumque claritas tenet. urbs roma vel sola in ea, ... et digna iam tam festa cervice facies, quo tandem narrari debet opere qualiter campaniae ora per se felixque illa ac beata amoenitas, ut palam sit uno in loco gaudentis opus esse naturae iam vero tota ea vitalis ac perennis salubritas, talis caeli temperies, tam fertiles campi, tam aprici colles, tam innoxii saltus, tam opaca nemora, tam munifica silvarum genera, tot montium adflatus, tanta frugum vitiumque et olearum fertilitas, tam nobilia pecudi vellera, tam opima tauris colla, tot lacus, tot amnium fontiumque ubertas totam eam perfundens, tot maria, portus, gremiumque terrarum commercio patens undique et tamquam iuvandos ad mortales ipsa avide in maria procurrens! neque ingenia ritusque ac viros et lingua manuque superatas commemoro gentes. ipsi de ea iudicavere grai, genus in gloriam sui effusissimum, quotam partem ex ea appellando graeciam magnam! nimirum id, quod in caeli mentione fecimus, hac quoque in parte faciendum est, ut notas quasdam et pauca sidera attingamus. legentes tantum quaeso meminerint ad singula toto orbe edissertanda festinari.

est ergo folio maxime querno adsimulata, multo proceritate amplior quam latitudine, in laevam se flectens cacumine et amazonicae figura desinens parmae, ubi a medio excursu cocynthos vocatur, per sinus lunatos duo cornua emittens, leucopetram dextra, lacinium sinistra. patet longitudine ab inalpino fine praetoriae augustae per urbem capuamque cursu meante regium oppidum, in umero eius situm, a quo veluti cervicis incipit flexus, decies centena et viginti milia passuum, multoque amplior mensura fieret lacinium usque, ni talis obliquitas in latus degredi videretur. latitudo eius varia est, quadringentorum decem milium inter duo maria inferum et superum amnesque varum atque arsiam, media autem ferme circa urbem romam ab ostio aterni amnis in hadriaticum mare influentis ad tiberina ostia [cxxxvi], et paulo minus a castro novo hadriatici maris alsium ad tuscum aequor, haud ullo in loco [cc] latitudinem excedens. universae autem ambitus a varo ad arsiam [30xx]30 [xlviiii] p. efficit. abest a circumdatis terris histria ac liburnia quibusdam locis centena milia, ab epiro et illyrico quinquaginta, ab

africa minus ducenta, ut auctor est M. Varro, ab sardinia centum viginti milia, ab sicilia md, a corcyra minus [lxxx], ab issa [l]. incedit per maria caeli regione ad meridiem quidem, sed, si quis id diligenti subtilitate exigat, inter sextam horam primamque brumalem.

nunc ambitum eius urbesque enumerabimus, qua in re praefari necessarium est auctorem nos Divum Augustum secuturos discriptionemque ab eo factam italiae totius in regiones xi, sed ordine eo, qui litorum tractu fiet; urbium quidem vicinitates oratione utique praepropera servari non posse, itaque interiore parte digestionem in litteras eiusdem nos secuturos, coloniarum mentione signata, quas ille in eo prodidit numero. nec situs originesque persequi facile est, ingaunis liguribus - ut ceteri omittantur - agro tricies dato.

igitur ab amne varo nicaea a massiliensibus conditum, fluvius palo, alpes populique inalpini multis nominibus, sed maxime capillati, oppido vediantiorum civitatis cemenelo, portus herculis monoeci, ligustina ora. ligurum celeberrimi ultra alpes sallui, deciates, oxubi, citra veneni, turri, soti, bagienni, statielli, binbelli, maielli, caburriates, casmonates, velleiates et quorum oppida in ora proxime dicemus. flumen rutuba, oppidum album intimilium, flumen merula, oppidum album ingaunum, portus vadorum sabatium, flumen porcifera, oppidum genua, fluvius fertor, portus delphini, tigulia intus, segesta tiguliorum, flumen macra, liguriae finis. a tergo autem supra dictorum omnium appenninus mons italiae amplissimus, perpetuis iugis ab alpibus tendens ad siculum fretum. ab altero eius latere ad padum amnem italiae ditissimum omnia nobilibus oppidis nitent, libarna, dertona colonia, iria, vardacate, industria, pollentia, carrea quod potentia cognominatur, foro fulvi quod valentinum, augusta bagiennorum, alba pompeia, hasta, aquis statiellorum. haec regio ex discriptione Augusti nona est. patet ora liguriae inter amnes varum et macram [ccxi] p.

adnectitur septima, in qua etruria est ab amne macra, ipsa mutatis saepe nominibus. vmbros inde exegere antiquitus pelasgi, hos lydi, a quorum rege tyrrheni, mox a sacrifico ritu lingua graecorum tusci sunt cognominati. primum etruriae oppidum luna, portu nobile, colonia luca a mari recedens propiorque pisae inter amnes auserem et arnum, ortae a pelopidis sive a teutanis, graeca gente. vada volaterrana, fluvius caecina, populonium, etruscorum quondam hoc

tantum in litore. hinc amnes prile, mox vmbro, navigiorum capax, et ab eo tractus vmbriae portusque telamo, cosa volcientium a populo romano deducta, graviscae, castrum novum, pyrgi, caeretanus amnis et ipsum caere intus m. p. vii, agylla a pelasgis conditoribus dictum, alsium, fregenae, tiberis amnis a macra [cclxxxiiii] p. intus coloniae falisca, argis orta, ut auctor est cato, quae cognominatur etruscorum, lucus feroniae, rusellana, seniensis, sutrina. de cetero arretini veteres, arretini fidentiores, arretini iulienses, amitinenses, aquenses cognomine taurini, blerani, cortonenses, capenates, clusini novi, clusini veteres, florentini praefluenti arno adpositi, faesulae, ferentinum, fescennia, hortanum, herbanum, nepet, novem pagi, praefectura claudia foroclodi, pistorium, perusia, suanenses, saturnini qui ante aurini vocabantur, subertani, statonienses, tarquinienses, tuscanienses, vetulonienses, veientani, vesentini, volaterrani, volcentani cognomine etrusci, volsinienses. in eadem parte oppidorum veterum nomina retinent agri crustuminus, caletranus.

tiberis, antea thybris appellatus et prius albula, e media fere longitudine appennini finibus arretinorum profluit, tenuis primo nec nisi piscinis corrivatus emissusque navigabilis, sicuti tinia et clanis influentes in eum, novenorum ita conceptu dierum, si non adiuvent imbres. sed tiberis propter aspera et confragosa ne sic quidem, praeterquam trabibus verius quam ratibus, longe meabilis fertur, per [cl] p. non procul tiferno perusiaque et ocriculo etruriam ab vmbris ac sabinis, mox citra [xvi] p. urbis veientem agrum a crustumino, dein fidenatem latinumque a vaticano dirimens. sed infra arretinum clanim duobus et quadraginta fluviis auctus, praecipuis autem nare et aniene, qui et ipse navigabilis latium includit a tergo, nec minus tamen aquis ac tot fontibus in urbem perductis, et ideo quamlibet magnarum navium ex italo mari capax, rerum in toto orbe nascentium mercator placidissimus, pluribus prope solus quam ceteri in omnibus terris amnes accolitur aspiciturque villis. nullique fluviorum minus licet inclusis utrimque lateribus, nec tamen ipse depugnat, quamquam creber ac subitus incrementis est, nusquam magis aquis quam in ipsa urbe stagnantibus. quin immo vates intellegitur potius ac monitor, auctu semper religiosus verius quam saevus.

latium antiquum a tiberi cerceios servatum est m. p. l longitudine:

tam tenues primordio imperi fuere radices. colonis saepe mutatis tenuere alii aliis temporibus, aborigines, pelasgi, arcades, siculi, aurunci, rutuli et ultra cerceios volsci, osci, ausones, unde nomen lati processit ad lirim amnem. in principio est ostia colonia ab romano rege deducta, oppidum laurentum, lucus iovis indigetis, amnis numicius, ardea a danae+ persei matre condita. dein quondam aphrodisium, antium colonia, astura flumen et insula, fluvius nymphaeus, clostra romana, cercei, quondam insula inmenso quidem mari circumdata, ut creditur homero, et nunc planitie. mirum est quod hac de re tradere hominum notitiae possumus. theophrastus, qui primus externorum aliqua de romanis diligentius scripsit - nam theopompus, ante quem nemo mentionem habuit, urbem dumtaxat a gallis captam dixit, clitarchus, ab eo proximus, legationem tantum ad alexandrum missam - hic iam plus quam ex fama cerceiorum insulae et mensuram posuit stadia lxxx in eo volumine, quod scripsit nicodoro atheniensium magistratu, qui fuit urbis nostrae ccccxl anno. quicquid ergo terrarum est praeter [x] p. ambitus adnexum insulae, post eum annum accessit italiae. aliud miraculum a cerceis palus pomptina est, quem locum xxiiii urbium fuisse mucianus ter consul prodidit. dein flumen aufentum, supra quod tarracina oppidum, lingua volscorum anxur dictum, et ubi fuere amyclae sive amynclae, a serpentibus deletae, dein locus speluncae, lacus fundanus, caieta portus, oppidum formiae, hormiae dictum, ut existimavere, antiqua laestrygonum sedes. ultra fuit oppidum pirae, est colonia minturnae, liri amne divisa, clani olim appellato, sinuessa, extremum in adiecto latio, quam quidam sinopen dixere vocitatam. hinc felix illa campania, ab hoc sinu incipiunt vitiferi colles et temulentia nobilis suco per omnes terras incluto atque, ut veteres dixere, summum liberi patris cum cerere certamen. hinc setini et caecubi protenduntur agri; his iunguntur falerni, caleni, dein consurgunt massici, gaurani surrentinique montes. ibi leborini campi sternuntur et in delicias alicae politur messis. haec litora fontibus calidis rigantur praeterque cetera in toto mari conchylio et pisce nobili adnotantur. nusquam generosior oleae liquor est, hoc quoque certamen humanae voluptatis. tenuere osci, graeci, vmbri, tusci, campani. in ora savo fluvius, volturnum oppidum cum amne, liternum, cumae chalcidensium, misenum, portus baiarum, bauli, lacus lucrinus et

avernus, iuxta quem cimmerium oppidum quondam, dein puteoli colonia dicaearchea dicti, postque phlegraei campi, acherusia palus cumis vicina; litore autem neapolis, chalcidensium et ipsa, parthenope a tumulo sirenis appellata, herculaneum, pompei haud procul spectato monte vesuvio, adluente vero sarno amne, ager nucerinus et [viiii] p. a mari ipsa nuceria, surrentum cum promunturio minervae, sirenum quondam sede. navigatio a cerceis [ii] de [lxxx] patet. regio ea a tiberi prima italiae servatur ex discriptione Augusti.

intus coloniae capua, ab [xl] campo dicta, aquinum, suessa, venafrum, sora, teanum sidicinum cognomine, nola; oppida abellinum, aricia, alba longa, acerrani, allifani, atinates, aletrinates, anagnini, atellani, aefulani, arpinates, auximates, abellani, alfaterni et qui ex agro latino, item hernico, item labicano cognominantur, bovillae, caiatia, casinum, calenum, capitulum hernicum, cereatini qui mariani cognominantur, corani a dardano troiano orti, cubulterini, castrimoenienses, cingulani, cabienses in monte albano, foropopulienses ex falerno, frusinates, ferentinates, freginates, fabraterni veteres, fabraterni novi, ficolenses, fregellani, forum appi, forentani, gabini, interamnates sucasini qui et lirenates vocantur, ilionenses, lanivini, norbani, nomentani, praenestini urbe quondam stephane dicta, privernates, setini, signini, suessulani, telesini, trebulani cognomine ballienses, trebani, tusculani, verulani, veliterni, vlubrenses, vrbanates superque roma ipsa, cuius nomen alterum dicere nisi arcanis caerimoniarum nefas habetur optimaque et salutari fide abolitum enuntiavit valerius soranus luitque mox poenas. non alienum videtur inserere hoc loco exemplum religionis antiquae ob hoc maxime silentium institutae. namque diva angerona, cui sacrificatur a. d. xii kal. ian., ore obligato obsignatoque simulacrum habet.

vrbem tris portas habentem romulus reliquit aut, ut plurimas tradentibus credamus, iiii. moenia eius collegere ambitu imperatoribus censoribusque vespasianis anno conditae dcccxxvi m. p. xiii cc, conplexa montes septem. ipsa dividitur in regiones xiiii, compita larum cclxv. eiusdem spatium mensura currente a miliario in capite romani fori statuto ad singulas portas, quae sunt hodie numero xxxvii, ita ut xii portae semel numerentur praetereanturque ex

veteribus vii, quae esse desierunt, efficit passuum per directum xx m dcclxv. ad extrema vero tectorum cum castris praetoriis ab eodem miliario per vicos omnium viarum mensura colligit paulo amplius [lx] p. quod si quis altitudinem tectorum addat, dignam profecto aestimationem concipiat fateaturque nullius urbis magnitudinem in toto orbe potuisse ei comparari. clauditur ab oriente aggere tarquini superbi, inter prima opere mirabili; namque eum muris aequavit qua maxime patebat aditu plano. cetera munita erat praecelsis muris aut abruptis montibus, nisi quod exspatiantia tecta multas addidere urbes.

in prima regione praeterea fuere in latio clara oppida satricum, pometia, scaptia, politorium, tellena, tifata, caenina, ficana, crustumeria, ameriola, medullum, corniculum, saturnia ubi nunc roma est, antipolis quod nunc ianiculum in parte romae, antemnae, camerium, collatia, amitinum, norbe, sulmo, et cum iis carnem in monte albano soliti accipere populi albenses: albani, aesolani, accienses, abolani, bubetani, bolani, cusuetani, coriolani, fidenates, foreti, hortenses, latinienses, longani, manates, macrales, munienses, numinienses, olliculani, octulani, pedani, poletaurini, querquetulani, sicani, sisolenses, tolerienses, tutienses, vimitellari, velienses, venetulani, vitellenses. ita ex antiquo latio liii populi interiere sine vestigiis. in campano autem agro stabiae oppidum fuere usque ad cn. pompeium l. catonem cos. pr. kal. mai., quo die l. sulla legatus bello sociali id delevit, quod nunc in villam abiit. intercidit ibi et taurania. sunt morientes casilini reliquiae. praeterea auctor est antias oppidum latinorum apiolas captum a l. tarquinio rege, ex cuius praeda capitolium is inchoaverit. a surrentino ad silerum amnem xxx m. p. ager picentinus fuit tuscorum, templo iunonis argivae ab iasone condito insignis. intus oppidum salerni, picentia.

a silero regio tertia et ager lucanus bruttiusque incipit, nec ibi rara incolarum mutatione. tenuerunt eum pelasgi, oenotri, itali, morgetes, siculi, graeciae maxime populi, novissime lucani samnitibus orti duce lucio. oppidum paestum, graecis posidonia appellatum, sinus paestanus, oppidum elea quae nunc velia, promunturium palinurum, a quo sinu recedente traiectus ad columnam regiam c m. p. proximum autem flumen melpes, oppidum buxentum, graeciae pyxus, laus amnis. fuit et oppidum eodem nomine. ab eo bruttium litus, oppidum blanda, flumen baletum, portus parthenius

phocensium et sinus vibonensis, locus clampetiae, oppidum tempsa, a graecis temese dictum, et crotoniensium terina sinusque ingens terinaeus. oppidum consentia intus. in paeninsula fluvius acheron, a quo oppidani aceruntini. hippo, quod nunc vibonem valentiam appellamus, portus herculis, metaurus amnis, tauroentum oppidum, portus orestis et medma. oppidum scyllaeum, crataeis fluvius, mater, ut dixere, scyllae. dein columna regia, siculum fretum ac duo adversa promunturia, ex italia caenus, e sicilia pelorum, xii stadiorum intervallo, unde regium xciv. inde appennini silva sila, promunturium leucopetra [xv] p., ab ea [li] locri, cognominati a promunturio zephyrio. absunt a silero [ccciii].

et includitur europae sinus primus. in eo maria nuncupantur: unde inrumpit, atlanticum, ab aliis magnum; qua intrat, porthmos a graecis, a nobis gaditanum fretum; cum intravit, hispanum quatenus hispanias adluit, ab aliis hibericum aut baliaricum; mox gallicum ante narbonensem provinciam; hinc ligusticum; ab eo ad siciliam insulam tuscum, quod ex graecis alii notium, alii tyrrenum, e nostris plurimi inferum vocant. ultra siciliam quod est ad sallentinos, ausonium polybius appellat, eratosthenes autem inter ostium oceani et sardiniam quicquid est sardoum, inde ad siciliam tyrrenum, ab hac cretam usque siculum, ab ea creticum.

insulae per haec maria primae omnium pityussae graecis dictae a frutice pineo; nunc ebusus vocatur utraque, civitate foederata, angusto freto interfluente. patent [xlvi], absunt ab dianio dcc stadia, totidem dianium per continentem a carthagine nova, tantundem a pityussis in altum baliares duae et sucronem versus colubraria. baliares funda bellicosas graeci gymnasias dixere. maior [c] p. est longitudine, circuitu vero [cccclxxv]. oppida habet civium romanorum palmam et pollentiam, latina guium et tucim, et foederatum bocchorum fuit. ab ea [xxx] distat minor, longitudine [xl], circuitu [cl]. civitates habet iamonem, saniseram, magonem. a maiore [xii] in altum abest capraria, insidiosa naufragiis, et e regione palmae urbis menariae ac tiquadra et parva Hannibalis. ebusi terra serpentes fugat, colubrariae parit, ideo infesta omnibus nisi ebusitanam terram inferentibus; graeci ophiussam dixere. nec cuniculos ebusus gignit, populantes baliarium messes.

sunt aliae viginti ferme parvae mari vadoso, galliae autem ora in

rhodani ostio metina, mox quae blascorum vocatur, et tres stoechades a vicinis massiliensibus dictae propter ordinem quo sitae sunt. nomina singulis prote, mese, quae et pomponiana vocatur, tertia hypaea, ab iis sturium, phoenice, phila, lero et lerina adversum antipolim, in qua berconi oppidi memoria.

in ligustico mari est corsica, quam graeci cyrnon appellavere, sed tusco propior, a septentrione in meridiem proiecta, longa passuum [cl], lata maiore ex parte [l], circuitu [cccxxv]. abest a vadis volaterranis [lxii], civitates habet xxxii et colonias marianam, a c. mario deductam, aleriam, a dictatore sulla. citra est oglasa, intra vero, et [lx] p. a corsica, planasia a specie dicta, aequalis freto ideoque navigiis fallax. amplior vrgo et capraria, quam graeci aegilion dixere, item igilium et dianium, quam artemisiam, ambae contra cosanum litus, et barpana, menaria, columbaria, venaria, ilva cum ferri metallis, circuitus [c], a populonio [x], a graecis aethalia dicta. ab ea planasia [xxviii]. ab iis ultra tiberina ostia in antiano astura, mox palmaria, sinonia, adversum formias pontiae. in puteolano autem sinu pandateria, prochyta, non ab aeneae nutrice, sed quia profusa ab aenaria erat, aenaria a statione navium aeneae, homero inarime dicta, pithecusa, non a simiarum multitudine, ut aliqui existimavere, sed a figlinis doliorum. inter pausilypum et neapolim megaris, mox a surrento [viii] distantes tiberi principis arce nobiles capreae circuitu xi m, leucothea extraque conspectum pelagus africum attingens sardinia, minus [viii] p. a corsicae extremis, etiamnum angustias eas artantibus insulis parvis, quae cunicularіae appellantur, itemque phintonis et fossae, a quibus fretum ipsum taphros nominatur.

sardinia ab oriente patens [clxxxviii] p., ab occidente [clxxv], a meridie [lxxvii], a septentrione [cxxv], circuitu [dlxv], abest ab africa caralitano promunturio [cc], a gadibus [30xii]30 l. habet et a gorditano promunturio duas insulas quae vocantur herculis, a sulcensi enosim, a caralitano ficariam. quidam haut procul ab ea et leberidas ponunt et callode et quam vocant heras lutra. celeberrimi in ea populorum ilienses, balari, corsi, oppidorum xviii sulcitani, valentini, neapolitani, bitienses, caralitani civium r. et norenses, colonia autem una, quae vocatur ad turrem libisonis. sardiniam ipsam timaeus sandaliotim appellavit ab effigie soleae, myrsilus ichnusam a similitudine vestigii. contra paestanum sinum leucosia est, a sirene

ibi sepulta appellata, contra veliam pontia et isacia, utraeque uno nomine oenotrides, argumentum possessae ab oenotris italiae, contra vibonem parvae quae vocantur ithacesiae ab ulixis specula.

verum ante omnes claritate sicilia, sicania thucydidi dicta, trinacria pluribus aut trinacia a triangula specie, circuitu patens, ut auctor est agrippa, [dcxviii] p., quondam bruttio agro cohaerens, mox interfuso mari avulsa, [xv] in longitudinem freto, in latitudinem autem m d p. iuxta columnam regiam. ab hoc dehiscendi argumento rhegium graeci nomen dedere oppido in margine italiae sito. in eo freto est scopulus scylla, item charybdis mare verticosum, ambae clarae saevitia. ipsius triquetrae, ut diximus, promunturium pelorum vocatur adversus scyllam vergens in italiam, pachynum in graeciam, [ccccxl] ab eo distante peloponneso, lilybaeum in africam [clxxx] intervallo a mercuri promunturio et a caralitano sardiniae [cxc]. inter se autem promunturia ac latera distant his spatiis: terreno itinere a peloro pachynum [clxxvi], inde lilybaeum [cc], unde pelorum [ccxlii], coloniae ibi v, urbes aut civitates lxiii. a peloro mare ionium ora spectante oppidum messana civium r., qui mamertini vocantur, promunturium drepanum, colonia tauromenium, quae antea naxos, flumen asines, mons aetna, nocturnis mirus incendiis. crater eius patet ambitu stadia viginti; favilla tauromenium et catinam usque pervenit fervens, fragor vero ad maroneum et gemellos colles. scopuli tres cyclopum, portus vlixis, colonia catina, flumina symaethum, terias. intus laestrygoni campi. oppida leontini, megaris, amnis pantagies, colonia syracusae cum fonte arethusa, quamquam et temenitis et archidemia et magea et cyane et milichie fontes in syracusano potantur agro, portus naustathmus, flumen elorum, promunturium pachynum, a quo ... fronte siciliae flumen hyrminum, oppidum camarina, fluvius gelas, oppidum agragas, quod agrigentum nostri dixere, thermae colonia, amnes achates, mazara, hypsa, selinuus, oppidum lilybaeum, ab eo promunturium, drepana, mons eryx, oppida panhormum, soluus, himera cum fluvio, cephaloedis, haluntium, agathyrnum, tyndaris colonia, oppidum mylae et, unde coepimus, pelorias. intus autem latinae condicionis centuripini, netini, segestani, stipendiarii assorini, aetnenses, agyrini, acestaei, acrenses, bidini, citarini, drepanitani, ergetini, echetlienses, erycini, entellini, egguini, gelani, galacteni, halaesini, hennenses, hyblenses,

herbitenses, herbessenses, herbulenses, halicuenses, hadranitani, imacarenses, ichanenses, iaetenses, mutustratini, magellini, murgentini, mutycenses, menaini, naxi, noini, petrini, paropini, phintienses, semelitani, scherini, selinunti, symaethii, talarenses, tissienses, triocalini, tyracinenses. zanclaei messeniorum in siculo freto sunt.

insulae in africam versae gaulos, melita a camarina [lxxxvii], a lilybaeo [cxiii], cossyra, hieronnesos, caene, galata, lopadusa, aethusa, quam alii aegusam scripserunt, bucinna et a solunte [lxxv] osteodes contraque paropinos vstica. citra vero siciliam ex adverso metauri amnis [xxv] ferme p. ab italia septem aeoliae appellatae, eaedem liparaeorum, hephaestiades a graecis, a nostris volcaniae, aeoliae, quod aeolus iliacis temporibus ibi regnavit. lipara cum civium romanorum oppido, dicta a liparo rege, qui successit aeolo, antea milogonis vel meligunis vocitata, abest [xxv] ab italia, ipsa circuitu paulo minor [v]. inter hanc et siciliam altera, antea therasia appellata, nunc hiera, quia sacra volcano est, colle in ea nocturnas evomente flammas. tertia strongyle, a lipara [vi] p. ad exortum solis vergens, in qua regnavit aeolus; quae a lipara liquidiore tantum flamma differt, e cuius fumo, quinam flaturi sint venti in triduo, praedicere incolae traduntur; unde ventos aeolo paruisse existimatum. quarta didyme, minor quam lipara. quinta ericusa, sexta phoenicusa, pabulo proximarum relictae. novissima eademque minima euonymos. hactenus de primo europae sinu.

a locris italiae frons incipit, magna graecia appellata, in tris sinus recedens ausonii maris, quoniam ausones tenuere primi. patet [lxxxvi], ut auctor est Varro; plerique [lxxv] fecere. in ea ora flumina innumera, sed memoratu digna a locris sagra et vestigia oppidi caulonis, mustiae, consilinum castrum, cocynthum, quod esse longissimum italiae promunturium aliqui existimant. dein sinus et oppidum scolacium, scylaceum et scylletium atheniensibus, cum conderent, dictum, quem locum occurrens terinaeus sinus paeninsulam efficit, et in ea portus qui vocatur castra Hannibalis, nusquam angustiore italia: [xl] p. latitudo est; itaque dionysius maior intercisam eo loco adicere siciliae voluit. amnes ibi navigabiles carcinus, crotalus, semirus, arogas, thagines, oppidum intus petelia, mons clibanus, promunturium lacinium, cuius ante oram insula [x] a

terra dioscoron, altera calypsus, quam ogygiam appellasse homerus existimatur, praeterea tyris, eranusa, meloessa. ipsum a caulone abesse [lxx] prodit agrippa.

a lacinio promunturio secundus europae sinus incipit, magno ambitu flexus et acroceraunio epiri finitus promunturio, a quo abest [lxxv]. oppidum croto, amnis neaethus, oppidum thuri inter duos amnes crathim et sybarim, ubi fuit urbs eodem nomine. similiter est inter sirim et acirim heraclea, aliquando siris vocitata. flumina talandrum, casuentum, oppidum metapontum, quo tertia italiae regio finitur. mediterranei bruttiorum aprustani tantum; lucanorum autem atinates, bantini, eburini, grumentini, potentini, sontini, sirini, tergilani, vrsentini, volcentani, quibus numestrani iunguntur. praeterea interisse thebas lucanas cato auctor est, et pandosiam lucanorum urbem fuisse theopompus, in qua alexander epirotes occubuerit.

conectitur secunda regio amplexa hirpinos, calabriam, apuliam, sallentinos, [ccl] sinu qui tarentinus appellatur ab oppido laconum - in recessu hoc intimo situm, contributa eo maritima colonia, quae ibi fuerat, abest [cxxxvi] a lacinio promunturio - , adversam ei calabriam in paeninsulam emittens. graeci messapiam a duce appellavere et ante peucetiam a peucetio oenotri fratre in sallentino agro. inter promunturia [c] intersunt. latitudo paeninsulae a tarento brundisium terreno itinere [xxxxv] patet multoque brevius a portu sasine. oppida per continentem a tarento vria, cui cognomen ob apulam messapiae, aletium, in ora vero senum, callipolis, quae nunc est anxa, [lxxv] a tarento. inde [xxxiii] promunturium quod acran iapygiam vocant, quo longissime in maria excurrit italia. ab eo basta oppidum et hydruntum decem ac novem milia passuum, ad discrimen ionii et hadriatici maris, qua in graeciam brevissimus transitus, ex adverso apolloniatum oppidi latitudine intercurrentis freti [l] non amplius. hoc intervallum pedestri continuare transitu pontibus iactis primum pyrrus epiri rex cogitavit, post eum M. Varro, cum classibus pompei piratico bello praeesset; utrumque aliae inpedivere curae. ab hydrunte soletum desertum, dein fratuentium, portus tarentinus, statio miltopes, lupia, balesium, caelia, brundisium [l] p. ab hydrunte, in primis italiae portu nobile ac velut certiore transitu sicuti longiore, excipiente illyrici urbe durrachio [ccxxv] traiectu. brundisio

conterminus poediculorum ager. novem adulescentes totidemque virgines ab illyriis xii populos genuere. poediculorum oppida rudiae, gnatia, barium, amnes iapyx a daedali filio rege, a quo et iapygia amita, pactius, aufidus ex hirpinis montibus canusium praefluens. hinc apulia dauniorum cognomine a duce diomedis socero, in qua oppidum salapia Hannibalis meretricio amore inclutum, sipuntum, vria, amnis cerbalus, dauniorum finis, portus aggasus, promunturium montis gargani, a sallentino sive iapygio [ccxxxiiii] ambitu gargani, portus garnae, lacus pantanus, flumen portuosum fertor. teanum apulorum itemque larinum, cliternia, tifernus amnis. inde regio frentana. ita apulorum genera tria: teani a duce e grais; lucani subacti a calchante, quae nunc loca tenent atinates; dauniorum praeter supra dicta coloniae luceria, venusia, oppida canusium, arpi, aliquando argos hippium diomede condente, mox argyripa dictum. diomedes ibi delevit gentes monadorum dardorumque et urbes duas, quae in proverbii ludicrum vertere, apinam et tricam. cetera intus in secunda regione hirpinorum colonia una beneventum auspicatius mutato nomine, quae quondam appellata maleventum, aeculani, aquiloni, abellinates cognomine protropi, compsani, caudini, ligures qui cognominantur corneliani et qui baebiani, vescellani. ausculani, aletrini, abellinates cognominati marsi, atrani, aecani, alfellani, atinates, arpani, borcani, collatini, corinenses et nobiles clade romana cannenses, dirini, forentani, genusini, herdonienses, irini, larinates cognomine frentani, metinates ex gargano, mateolani, neretini, natini, rubustini, silvini, strapellini, turnantini, vibinates, venusini, vlurtini. - calabrorum mediterranei aezetini, apamestini, argetini, butuntinenses, deciani, grumbestini, norbanenses, palionenses, stulnini, tutini. - sallentinorum aletini, basterbini, neretini, vzentini, veretini.

sequitur regio quarta gentium vel fortissimarum italiae. in ora frentanorum a tiferno flumen trinium portuosum, oppida histonium, buca, hortona, aternus amnis. intus anxani cognomine frentani, carecini supernates et infernates, iuanenses. - marrucinorum teatini. - paelignorum corfinienses, superaequani, sulmonenses. - marsorum anxatini, antinates, fucentes, lucenses, marruvini. - albensium alba ad fucinum lacum. - aequiculanorum cliternini, carseolani. - vestinorum angulani, pennienses, peltuinates, quibus iunguntur aufinates cismontani. - samnitium, quos sabellos et graeci saunitas dixere,

coloniae bovianum vetus et alterum cognomine vndecumanorum, aufidenates, aesernini, fagifulani, ficolenses, saepinates, tereventinates. - sabinorum amiternini, curenses, forum deci, forum novum, fidenates, interamnates, nursini, nomentani, reatini, trebulani qui cognominantur mutuesci et qui suffenates, tiburtes, tarinates. in hoc situ ex aequicolis interiere comini, tadiates, caedici, alfaterni. gellianus auctor est lacu fucino haustum marsorum oppidum archippe, conditum a marsya duce lydorum; item vidicinorum in piceno deletum a romanis valerianus. sabini, ut quidam existimavere, a religione et deum cultu sebini appellati, velinos accolunt lacus, roscidis collibus. nar amnis exhaurit illos sulpureis aquis tiberim ex his petens, replet e monte fiscello avens iuxta vacunae nemora et reate in eosdem conditus. at ex alia parte anio, in monte trebanorum ortus, lacus tris amoenitate nobiles, qui nomen dedere sublaqueo, defert in tiberim. in agro reatino cutiliae lacum, in quo fluctuetur insula, italiae umbilicum esse M. Varro tradit. infra sabinos latium est, a latere picenum, a tergo vmbria, appennini iugis sabinos utrimque vallantibus.

quinta regio piceni est, quondam uberrimae multitudinis. [ccclx] picentium in fidem p. r. venere. orti sunt a sabinis voto vere sacro. tenuere ab aterno amne, ubi nunc ager hadrianus et hadria colonia a mari [vi]. flumen vomanum, ager praetutianus palmensisque, item castrum novum, flumen batinum, truentum cum amne, quod solum liburnorum in italia relicum est, flumina albula, tessuinum, helvinum, quo finitur praetutiana regio et picentium incipit. cupra oppidum, castellum firmanorum et super id colonia asculum, piceni nobilissima intus, novana. in ora cluana, potentia, numana a siculis condita, ab iisdem colonia ancona, adposita promunturio cunero in ipso flectentis se orae cubito, a gargano [clxxxiii]. intus auximates, beregrani, cingulani, cuprenses cognomine montani, falerienses, pausulani, planinenses, ricinenses, septempedani, tolentinates, traienses, vrbesalvia pollentini.

iungetur his sexta regio vmbriam conplexa agrumque gallicum citra ariminum. ab ancona gallica ora incipit togatae galliae cognomine. siculi et liburni plurima eius tractus tenuere, in primis palmensem, praetutianum hadrianumque agrum. vmbri eos expulere, hos etruria, hanc galli. vmbrorum gens antiquissima italiae

existimatur, ut quos ombrios a graecis putent dictos, quod in inundatione terrarum imbribus superfuissent. trecenta eorum oppida tusci debellasse reperiuntur. nunc in ora flumen aesis, senagallia, metaurus fluvius, coloniae fanum fortunae, pisaurum cum amne et intus hispellum, tuder. de cetero amerini, attidiates, asisinates, arnates, aesinates, camertes, casuentillani, carsulani, dolates cognomine sallentini, fulginiates, foroflaminienenses, foroiulienses cognomine concupienses, forobrentani, forosempronienses, iguini, interamnates cognomine nartes, mevanates, mevaniolenses, matilicates, narnienses, quod oppidum nequinum antea vocitatum est, nucerini cognomine favonienses et camellani, ocriculani, ostrani, pitinates cognomine pisuertes et alii mergentini, plestini, sentinates, sarsinates, spoletini, suasani, sestinates, suillates, tadinates, trebiates, tuficani, tifernates cognomine tiberini et alii metaurenses, vesinicates, vrvinates cognomine metaurenses et alii hortenses, vettonenses, vindinates, visuentani. in hoc situ interiere feliginates et qui clusiolum tenuere supra interamnam et sarranates cum oppidis acerris quae vafriae cognominabantur, turocaelo quod vettiolum, item solinates, curiates, falinates, sapinates. interiere et arinates cum crinivolo et vsidicani et plangenses, paesinates, caelestini. ameriam supra scriptam cato ante persei bellum conditam annis dcccclxiii prodit.

octava regio determinatur arimino, pado, appennino. in ora fluvius crustumium, ariminum colonia cum amnibus arimino et aprusa, fluvius rubico, quondam finis italiae. ab eo sapis et vtis et anemo, ravenna sabinorum oppidum cum amne bedese, ab ancona [cv], nec procul a mari vmbrorum butrium. intus coloniae bononia, felsina vocitata tum cum princeps etruriae esset, brixillum, mutina, parma, placentia. oppida caesena, claterna, fora clodi, livi, popili, druentinorum, corneli, licini, faventini, fidentini, otesini, padinates, regienses a lepido, solonates saltusque galliani qui cognominantur aquinates, tannetani, veleiates cognomine vetti regiates, vrbanates. in hoc tractu interierunt boi, quorum tribus cxii fuisse auctor est cato, item senones, qui ceperunt romam.

padus, e gremio vesuli montis celsissimum in cacumen alpium elati finibus ligurum bagiennorum visendo fonte profluens condensque se cuniculo et in forovibiensium agro iterum exoriens,

nullo amnium claritate inferior, graecis dictus eridanus ac poena phaethontis inlustratus, augetur ad canis ortus liquatis nivibus, agris quam navigiis torrentior, nihil tamen ex rapto sibi vindicans atque, ubi linquit, ubertate largitor. [ccc] p. a fonte addens meatu duo de lxxxx nec amnes tantum appenninos alpinosque navigabiles capiens, sed lacus quoque inmensos in eum sese exonerantes, omni numero xxx flumina in mare hadriaticum defert, celeberrima ex iis appennini latere iactum, tanarum, trebiam placentinum, tarum, inciam, gabellum, scultennam, rhenum, alpium vero sturam, orgum, durias duas, sesitem, ticinum, lambrum, adduam, ollium, mincium. nec alius amnium tam brevi spatio maioris incrementi est. urguetur quippe aquarum mole et in profundum agitur, gravis terrae, quamquam diductus in flumina et fossas inter ravennam altinumque per [cxx], tamen, qua largius vomit, septem maria dictus facere. augusta fossa ravennam trahitur, ubi padusa vocatur, quondam messanicus appellatus. proximum inde ostium magnitudinem portus habet qui vatreni dicitur, qua claudius caesar e britannia triumphans praegrandi illa domo verius quam nave intravit hadriam. hoc ante eridanum ostium dictum est, ab aliis spineticum ab urbe spina, quae fuit iuxta, praevalens, ut delphicis creditum est thesauris, condita a diomede. auget ibi padum vatrenus amnis ex forocorneliensi agro. proximum inde ostium caprasiae, dein sagis, dein volane, quod ante olane vocabatur, omnia ea fossa flavia, quam primi a sagi fecere tusci egesto amnis impetu per transversum in atrianorum paludes quae septem maria appellantur, nobili portu oppidi tuscorum atriae, a quo atriaticum mare ante appellabatur quod nunc hadriaticum. inde ostia plena carbonaria, fossiones ac philistina, quod alii tartarum vocant, omnia ex philistinae fossae abundatione nascentia, accedentibus atesi ex tridentinis alpibus et togisono ex patavinorum agris. pars eorum et proximum portum facit brundulum, sicut aedronem meduaci duo ac fossa clodia. his se padus miscet ac per haec effundit, plerisque, ut in aegypto nilus quod vocant delta, triquetram figuram inter alpes atque oram maris facere proditus, stadiorum ii circuitu. pudet a graecis italiae rationem mutuari, metrodorus tamen scepsius dicit, quoniam circa fontem arbor multa sit picea, quales gallice vocentur padi, hoc nomen accepisse, ligurum quidem lingua amnem ipsum bodincum vocari, quod significet fundo carentem. cui argumento adest oppidum

iuxta industria vetusto nomine bodincomagum, ubi praecipua altitudo incipit.

transpadana appellatur ab eo regio undecima, tota in mediterraneo, cui marina cuncta fructuoso alveo inportat. oppida vibi forum, segusio, coloniae ab alpium radicibus augusta taurinorum - inde navigabili pado - antiqua ligurum stirpe, dein salassorum augusta praetoria iuxta geminas alpium fores, graias atque poeninas - his poenos, grais herculem transisse memorant - , oppidum eporedia sibyllinis a populo romano conditum iussis. eporedias galli bonos equorum domitores vocant. vercellae libiciorum ex salluis ortae, novaria ex vertamocoris, vocontiorum hodieque pago, non, ut cato existimat, ligurum, ex quibus laevi et marici condidere ticinum non procul a pado, sicut boi transalpibus profecti laudem pompeiam, insubres mediolanum. oromobiorum stirpis esse comum atque bergomum et licini forum aliquotque circa populos auctor est cato, sed originem gentis ignorare se fatetur, quam docet cornelius alexander ortam a graecia interpretatione etiam nominis vitam in montibus degentium. in hoc situ interiit oppidum oromobiorum parra, unde bergomates cato dixit ortos, etiamnum prodente se altius quam fortunatius situm. interiere et caturiges, insubrum exsules, et spina supra dicta, item melpum opulentia praecipuum, quod ab insubribus et bois et senonibus deletum eo die, quo camillus veios ceperit, nepos cornelius tradidit.

sequitur decima regio italiae, hadriatico mari adposita, cuius venetia, fluvius silis ex montibus tarvisanis, oppidum altinum, flumen liquentia ex montibus opiterginis et portus eodem nomine, colonia concordia, flumina et portus reatinum, tiliaventum maius minusque, anaxum, quo varamus defluit, alsa, natiso cum turro, praefluentes aquileiam coloniam [xv] p. a mari sitam. carnorum haec regio iunctaque iapudum, amnis timavus, castellum nobile vino pucinum, tergestinus sinus, colonia tergeste, [xxxiii] ab aquileia. ultra quam sex milia p. formio amnis, ab ravenna [clxxxviiii], anticus auctae italiae terminus, nunc vero histriae. quam cognominatam a flumine histro, in hadriam effluente e danuvio amne eodemque histro exadversum padi fauces, contrario eorum percussu mari interiecto dulcescente, plerique dixere falso, et nepos etiam padi accola; nullus enim ex danuvio amnis in mare hadriaticum effunditur. deceptos

credo, quoniam argo navis flumine in mare hadriaticum descendit non procul tergeste, nec iam constat quo flumine. umeris travectam alpis diligentiores tradunt, subisse autem histro, dein savo, dein nauporto, cui nomen ex ea causa est inter emonam alpisque exorienti.

histria ut paeninsula excurrit. latitudinem eius [xl], circuitum [cxxv] prodidere quidam, item adhaerentis liburniae et flanatici sinus, alii [ccxxv], alii liburniae [clxxx]. nonnulli in flanaticum sinum iapudiam promovere a tergo histriae [cxxx], dein liburniam [cl] fecere. tuditanus, qui domuit histros, in statua sua ibi inscripsit: “ab aqvileia ad titivm flvmen stadia mm”. oppida histriae civium romanorum agida, parentium, colonia pola, quae nunc pietas iulia, quondam a colchis condita; abest a tergeste [cv]. mox oppidum nesactium et - nunc finis italiae - fluvius arsia. ad polam ab ancona traiectus [cxx] p. est.

in mediterraneo regionis decimae coloniae cremona, brixia cenomanorum agro, venetorum autem ateste et oppida acelum, patavium, opitergium, belunum, vicetia. mantua tuscorum trans padum sola reliqua. venetos troiana stirpe ortos auctor est cato, cenomanos iuxta massiliam habitasse in volcis. feltrini et tridentini et beruenses raetica oppida, raetorum et euganeorum verona, iulienses carnorum. dein, quos scrupulosius dicere non attineat, alutrenses, asseriates, flamonienses vanienses et alii cognomine carici, foroiulienses cognomine transpadani, foretani, nedinates, quarqueni, tarvisani, togienses, varvari. in hoc situ interiere per oram irmene, pellaon, palsicium, ex venetis atina et caelina, carnis segesta et ocra, tauriscis noreia. et ab aquileia ad xii lapidem deletum oppidum etiam invito senatu a m. claudio marcello l. piso auctor est.

in hac regione et undecuma lacus incluti sunt amnesque eorum partus aut alumni, si modo acceptos reddunt, ut adduam larius, ticinum verbannus, mincium benacus, ollium sebinnus, lambrum eupilis, omnes incolas padi.

alpis in longitudinem [30x]30 p. patere a supero mari ad inferum caelius tradit, timagenes [xxv] p. deductis, in latitudinem autem cornelius nepos [c], t. livius [iii] stadiorum, uterque diversis in locis. namque et centum milia excedunt aliquando, ubi germaniam ab italia summovent, nec [lxx] inplent reliqua sui parte graciles, veluti naturae providentia. latitudo italiae subter radices earum a varo per vada

sabatia, taurinos, comum, brixiam, veronam, vicetiam, opitergium, aquileiam, tergeste, polam, arsiam [dccxlv] p. colligit.

incolae alpium multi populi, sed inlustres a pola ad tergestis regionem fecusses, subocrini, catali, menoncaleni iuxtaque carnos quondam taurisci appellati, nunc norici. his contermini raeti et vindelici, omnes in multas civitates divisi. raetos tuscorum prolem arbitrantur a gallis pulsos duce raeto. verso deinde in italiam pectore alpium latini iuris euganeae gentes, quarum oppida xxxiiii enumerat cato. ex iis trumplini, venalis cum agris suis populus, dein camunni conpluresque similes finitimis adtributi municipis. lepontios et salassos tauriscae gentis idem cato arbitratur; ceteri fere lepontios relictos ex comitatu herculis interpretatione graeci nominis credunt, praeustis in transitu alpium nive membris. eiusdem exercitus et graios fuisse graiarum alpium incolas praestantesque genere euganeos, inde tracto nomine. caput eorum stoenos. raetorum vennonenses sarunetesque ortus rheni amnis accolunt, lepontiorum qui vberi vocantur fontem rhodani eodem alpium tractu. sunt praeterea latio donati incolae, ut octodurenses et finitimi ceutrones, cottianae civitates et turi liguribus orti, bagienni ligures et qui montani vocantur capillatorumque plura genera ad confinium ligustici maris.

non alienum videtur hoc loco subicere inscriptionem e tropaeo alpium, quae talis est:

non sunt adiectae cottianae civitates xv, quae non fuerant hostiles, item adtributae municipiis lege pompeia.

haec est italia diis sacra, hae gentes eius, haec oppida populorum. super haec italia, quae l. aemilio paulo c. atilio regulo cos. nuntiato gallico tumultu sola sine externis ullis auxiliis atque etiam tunc sine transpadanis equitum [lxxx], peditum [dcc] armavit, metallorum omnium fertilitate nullis cedit terris; sed interdictum id vetere consulto patrum italiae parci iubentium.

arsiae gens liburnorum iungitur usque ad flumen titium. pars eius fuere mentores, himani, encheleae, bulini et quos callimachus peucetios appellat, nunc totum uno nomine illyricum vocatur generatim. populorum pauca effatu digna aut facilia nomina. conventum scardonitanum petunt iapudes et liburnorum civitates xiiii, ex quibus lacinienses, stulpinos, burnistas, olbonenses nominare

non pigeat. ius italicum habent ex eo conventu alutae, flanates, a quibus sinus nominatur, lopsi, varvarini inmunesque asseriates, et ex insulis fertinates, curictae. cetero per oram oppida a nesactio alvona, flanona, tarsatica, senia, lopsica, ortoplinia, vegium, argyruntum, corinium, aenona, civitas pasini. flumen telavium, quo finitur iapudia. insulae eius sinus cum oppidis praeter supra significatas absortium, arba, crexi, gissa, portunata. rursus in continente colonia iader, quae a pola [clx] abest, inde [xxx] colentum insula, [xliii] ostium titii fluminis.

liburniae finis et initium delmatiae scardona in amne eo [xii] passuum a mari. dein tariotarum antiqua regio et castellum tariona, promunturium diomedis vel, ut alii, paeninsula hyllis circuitu [c], tragurium civium romanorum, marmore notum, siculi, in quem locum divus claudius veteranos misit, salona colonia ab iader [cxii]. petunt in eam iura viribus discriptis in decurias cccxlii delmatae, xxv deuri, ccxxxviiii ditiones, cclxviiii maezei, lii sardeates. in hoc tractu sunt burnum, andetrium, tribulium, nobilitata proeliis castella. petunt et ex insulis issaei, solentini, separi, epetini. ab his castella petuntium, nareste, oneum. narona colonia tertii conventus a salona [lxxxv] p., adposita cognominis sui fluvio a mari [xx] p. M. Varro lxxxviiii civitates eo ventitasse auctor est; nunc soli prope noscuntur cerauni decuriis xxiiii, daversi xvii, desitiates ciii, docleatae xxxiii, deretini xiiii, deraemistae xxx, dindari xxxiii, glinditiones xliiii, melcumani xxiiii, naresi cii, scirtari lxxii, siculotae xxiiii populatoresque quondam italiae vardaei non amplius quam xx decuriis. praeter hos tenuere tractum eum ozuaei, partheni, cavi, haemasi, masthitae, arinistae. a narone amne [c] p. abest epidaurum colonia. ab epidauro sunt oppida civium romanorum rhizinium, acruium, butuanum, olcinium, quod antea colchinium dictum est, a colchis conditum, amnis drino superque eum oppidum civium romanorum scodra ab mari [xviii], praeterea multorum graeciae oppidorum deficiens memoria nec non et civitatium validarum: eo namque tractu fuere labeatae, senedi, rudini, sasaei, grabaei; proprieque dicti illyri et taulanti et pyraei retinent nomen. in ora nymphaeum promunturium. lissum oppidum civium romanorum ab epidauro [c] p. a lisso macedonia provincia. gentes partheni et a tergo eorum dassaretae, montes candaviae a dyrrachio [lxxviii] p., in ora

vero denda civium romanorum, epidamnum colonia, propter inauspicatum nomen a romanis dyrrachium appellata, flumen aous, a quibusdam aeas nominatum, apollonia, quondam corinthiorum colonia, [iiii] p. a mari recedens, cuius in finibus celebre nymphaeum accolunt barbari amantes et buliones. at in ora oppidum oricum, a colchis conditum. inde initium epiri, montes acroceraunia, quibus hunc europae determinavimus sinum. oricum a sallentino italiae promunturio distat [lxxx].

a tergo carnorum et iapudum, qua se fert magnus hister, raetis iunguntur norici. oppida eorum virunum, celeia, teurnia, aguntum, iuvaum, omnia claudia, flavium solvense. noricis iunguntur lacus pelso, deserta boiorum; iam tamen colonia divi claudi savaria et oppido scarabantia iulia habitantur.

inde glandifera pannoniae, qua mitescentia alpium iuga per medium illyricum a septentrione ad meridiem versa molli in dextra ac laeva devexitate considunt. quae pars ad mare hadriaticum spectat, appellatur delmatia et illyricum supra dictum; ad septentriones pannonia vergit. finitur inde danuvio. in ea coloniae emona, siscia. amnes clari et navigabiles in danuvium defluunt draus e noricis violentior, saus ex alpibus carnicis placidior, [cxx] intervallo: draus per serretes, serapillos, iasos, andizetes, saus per colapianos breucosque. populorum haec capita; praeterea arviates, azali, amantini, belgites, catari, cornacates, eravisci, hercuniates, latovici, oseriates, varciani. mons claudius, cuius in fronte scordisci, in tergo taurisci. insula in sao metubarbis, amnicarum maxima. praeterea amnes memorandi: colapis in saum influens iuxta sisciam gemino alveo insulam ibi efficit quae segestica appellatur; alter amnis bacuntius in saum ... sirmio oppido influit, ubi civitas sirmiensium et amantinorum. inde [xlv] taurunum, ubi danuvio miscetur saus. supra influunt valdasus, urpanus, et ipsi non ignobiles.

pannoniae iungitur provincia quae moesia appellatur, ad pontum usque cum danuvio decurrens. incipit a confluente supra dicto. in ea dardani, celegeri, triballi, timachi, moesi, thraces pontoque contermini scythae. flumina clara e dardanis margus, pingus, timachus, ex rhodope oescus, ex haemo vtus, asamus, ieterus.

illyrici latitudo qua maxima est [cccxxv] p. colligit, longitudo a flumine arsia ad flumen drinium [dxxx]. a drinio ad promunturium

acroceraunium [clxxv] agrippa prodidit, universum autem sinum italiae et illyrici ambitu [30xvii]30. in eo duo maria quo distinximus fine, ionium in prima parte, interius hadriaticum, quod superum vocant.

insulae in ausonio mari praeter iam dictas memoratu dignae nullae, in ionio paucae calabro litore ante brundisium, quarum obiectu portus efficitur, contra apulum litus diomedia, conspicua monumento diomedis, et altera eodem nomine, a quibusdam teutria appellata. illyrici ora mille amplius insulis frequentatur, natura vadoso mari aestuariisque tenui alveo intercursantibus. clarae ante ostia timavi calidorum fontium cum aestu maris crescentium, iuxta histrorum agrum cissa, pullariae et absyrtides grais dictae a fratre medeae ibi interfecto. iuxta eas electridas vocavere in quibus proveniret sucinum, quod illi electrum appellant, vanitatis graecae certissimum documentum, adeo ut quas earum designent haut umquam constiterit. contra iader est lissa et quae appellata est, contra liburnos crateae aliquot nec pauciores liburnicae, celadussae, contra tragurium bova et capris laudata brattia, issa civium romanorum et cum oppido pharia. ab issa corcyra melaena cognominata cum cnidiorum oppido distat [xxv], inter quam et illyricum melite, unde catulos melitaeos appellari callimachus auctor est. [xv] ab ea vii elaphites, in ionio autem mari ab orico mm p. sasonis, piratica statione nota.

LIBER IV

tertius europae sinus acroceraunis incipit montibus, finitur hellesponto, amplectitur praeter minores sinus [30xix]30 [xxv] passuum. in eo epiros, acarnania, aetolia, phocis, locris, achaia, messenia, laconica, argolis, megaris, attice, boeotia iterumque ab alio mari eadem phocis et locris, doris, phthiotis, thessalia, magnesia, macedonia, thracia. omnis graeciae fabulositas sicut et litterarum claritas ex hoc primum sinu effulsit, quapropter paululum in eo conmorabimur.

epiros in universum appellata a ceraunis incipit montibus. in ea primi chaones, a quibus chaonia, dein thesproti, antigonenses, locus aornos et pestifera avibus exhalatio, cestrini, perrhaebi, quorum mons pindus, cassopaei, dryopes, selloe, hellopes, molossi, apud quos dodonaei iovis templum oraculo inlustre, talarus mons, centum fontibus circa radices theopompo celebratus. epiros ipsa, ad magnesiam macedoniamque tendens, a tergo suo dassaretas supra dictos, liberam gentem, mox feram dardanos habet. dardanis laevo triballi praetenduntur latere et moesicae gentes, a fronte iunguntur maedi ac denselatae, quibus threces ad pontum usque pertinentes. ita succincta rhodopes, mox et haemi, vallatur excelsitas. in epiri ora castellum in acroceraunis chimera, sub eo aquae regiae fons, oppida maeandria, cestria, flumen thesprotiae thyamis, colonia buthrotum, maximeque nobilitatus ambracius sinus, d passuum faucibus spatiosum aequor accipiens, longitudinis [xxxvii], latitudinis [xv]. in eum defertur amnis acheron, e lacu thesprotiae acherusia profluens [xxxv] passuum inde et mille pedum ponte mirabilis omnia sua mirantibus. in sinu oppidum ambracia. molossorum flumina aphas, aratthus, civitas anactorica, locus pandosia.

acarnaniae, quae antea curetis vocabatur, oppida heraclia, echinus et in ore ipso colonia Augusti actium cum templo apollinis nobili ac civitate libera nicopolitana. egressos sinu ambracio in ionium excipit leucadium litus, promunturium leucates, dein sinus et leucadia ipsa paeninsula, quondam neritis appellata, opere accolarum abscisa continenti ac reddita ventorum flatu congeriem harenae adtumulantium, qui locus vocatur dioryctos stadiorum longitudine

trium. oppidum in ea leucas, quondam neritum dictum. deinde acarnanum urbes alyzia, stratos, argos amphilochicum cognominatum. amnis achelous e pindo fluens atque acarnaniam ab aetolia dirimens et artemitam insulam adsiduo terrae invectu continenti adnectens.

aetolorum populi athamanes, tymphaei, ephyri, aenienses, perrhaebi, dolopes, maraces, atraces, a quibus atrax amnis ionio mari infunditur. aetoliae oppidum calydon est [vii] d passuum a mari iuxta euenum amnem. dein macynia, molycria, cuius a tergo chalcis mons et taphiassus. at in ora promunturium antirrhium, ubi ostium corinthiaci sinus minus m p. latitudine influentis aetolosque dirimentis a peloponneso. promunturium quod contra procedit appellatur rhion. sed in corinthio sinu oppida aetoliae naupactos, eupalimna et in mediterraneo pleuron, halicarna. montes clari in dodone tomarus, in ambracia crania, in acarnania aracynthus, in aetolia achaton, panaetolium, macynium.

proximi aetolis locri cognominantur ozolae, immunes. oppidum oeanthe, portus apollinis phaesti, sinus crisaeus. intus oppida argyna, eupalia, phaestum, calamisus. ultra cirrhaei phocidis campi, oppidum cirrha, portus chalaeon, a quo [vii] p. introrsus liberum oppidum delphi sub monte parnaso, clarissimi in terris oraculi apollinis. fons castalius, amnis cephisus praefluens delphos, ortus in lilaea urbe. quondam praeterea oppidum crisa et cum bulensibus anticyra, naulochum, pyrrha, amphisa immunis, tithrone, tithorea, ambrysus, mirana, quae regio daulis appellatur. deinde in intimo sinu angulus boeotiae adluitur cum oppidis siphis, thebis quae corsiae cognominatae sunt iuxta heliconem montem. tertium ab hoc mari boeotiae oppidum pagae, unde peloponnesi prosilit cervix.

peloponnesus, apia antea appellata et pelasgia, paeninsula haut ulli terrae nobilitate postferenda, inter duo maria aegaeum et ionium, platani folio similis propter angulosos recessus, circuitu [dlxiii] p. colligit auctore isidoro; eadem per sinus paene tantundem adicit. angustiae, unde procedit, isthmos appellatur. in eo loco inrumpentia e diverso quae dicta sunt maria a septentrione et exortu eius omnem ibi latitudinem vorant, donec contrario incursu tantorum aequorum v milium passuum intervallo exesis utrimque lateribus angusta cervice peloponnesum contineat hellas. corinthiacus hinc, illinc saronicus

appellatur sinus; lecheae hinc, cenchreae illinc angustiarum termini, longo et ancipiti navium ambitu quas magnitudo plaustris transvehi prohibet. quam ob causam perfodere navigabili alveo angustias eas temptavere demetrius rex, dictator caesar, gaius princeps, domitius nero, nefasto, ut omnium exitu patuit, incepto. in medio hoc intervallo, quod isthmon appellavimus, adplicata colli habitatur colonia corinthus, antea ephyra dicta, sexagenis ab utroque litore stadiis, e summa sua arce, quae vocatur acrocorinthos, in qua fons pirene, diversa duo maria prospectans. [lxxxviii] p. ad corinthiacum sinum traiectus est patras a leucade. patrae, colonia in longissimo promunturio peloponnesi condita ex adverso aetoliae et fluminis eueni minus m p., ut dictum est, intervallo in ipsis faucibus, sinum corinthiacum [lxxxv] in longitudinem usque ad isthmon transmittunt.

achaiae nomen provinciae ab isthmo incipit. antea aegialos vocabatur propter urbes in litore per ordinem dispositas. primae ibi quas diximus lecheae, corinthiorum portus, mox olyros, pellenaeorum castellum, oppida helice, bura, in quae refugere haustis prioribus, sicyon, aegira, aegium, erineos. intus cleonae, hysiae. panhormus portus demonstratumque iam rhium, a quo promunturio [v] absunt patrae, quas supra memoravimus. locus pherae. in achaia novem montium scioessa notissimus, fons cymothoe. ultra patras oppidum olenum, colonia dyme, loca buprasium, hyrmine, promunturium araxus, cyllenius sinus, promunturium chelonates, unde cyllenen [xv] p., castellum phlius, quae regio ab homero araethyrea dicta est, postea asopis. inde eliorum ager, qui antea epioe vocabantur. ipsa elis in mediterraneo et a pylo [xiii] intus delubrum olympii iovis, ludorum claritate fastos graeciae complexum, pisaeorum quondam oppidum, praefluente alpheo amne. at in ora promunturium ichthys, amnis alpheus - navigatur [vi] p. - , oppida aulon, leprium, promunturium platanodes. omnia haec ad occasum versa, ad meridiem autem cyparissius sinus cum urbe cyparisso [lxxv] circuitu, oppida pylos, mothone, locus helos, promunturium acritas, sinus asinaeus ab oppido asine, coronaeus a corone. finiuntur taenaro promunturio. ibi regio messenia duodeviginti montium, amnis pamisus, intus autem ipsa messene, ithome, oechalia, arene, pteleon, thryon, dorion, zancle, variis quaeque clara temporibus. huius sinus circuitus [lxxx], traiectus vero [xxx].

dehinc a taenaro ager laconicus liberae gentis et sinus circuitu [cvi], traiectu [xxxviii]. oppida taenarum, amyclae, pherae, leuctra et intus sparta, therapne atque ubi fuere cardamyle, pitane, anthia, locus thyreae, gerania. mons taygetus, amnis eurotas. sinus aegilodes, oppidum psamathus. sinus gytheates ab oppido, ex quo cretam in insulam certissimus cursus. omnes autem maleo promunturio includuntur.

qui sequitur sinus ad scyllaeum argolicus appellatur, traiectu [l], idem ambitu [clxii]. oppida boea, epidaurus limera cognomine, zarax, cyphans portus. amnes inachus, erasinus, inter quos argos hippium cognominatum supra locum lernen a mari mm, novemque additis milibus mycenae et ubi fuisse tiryntha tradunt et locus mantinea. montes artemisius, apesantus, asterion, parparus aliique xi numero. fontes niobe, amymone, psamathe. a scyllaeo ad isthmon [lxxx] p. oppida hermione, troezen, coryphasium appellatumque alias inachium, alias dipsium argos, portus schoenitas. sinus saronicus, olim querno nemore redimitus, unde nomen, ita graecia antiqua appellante quercum; in eo epidaurum oppidum, aesculapi delubro celebre, spiraeum promunturium, portus anthedus et bucephalus et quas supra dixeramus cenchreae, isthmi pars altera cum delubro neptuni quinquennalibus incluto ludis. tot sinus peloponnesi oram lancinant, tot maria adlatrant, siquidem a septentrione ionium inrumpit, ab occidente siculo pulsatur, a meridie cretico urguetur, ab oriente brumali aegaeo, ab oriente solstitiali myrtoo, quod a megarico incipiens sinu totam atticen adluit.

mediterranea eius arcadia maxime tenet undique a mari remota, initio drymodes, mox pelasgis appellata. oppida eius psophis, mantinea, stymphalum, tegea, antigonea, orchomenum, pheneum, pallantium, unde palatium romae, megalepolis, gortyna, bucolium, carnion, parrhasie, thelpusa, melaenae, heraea, pylae, pallene, agrae, epium, cynaethae, lepreon arcadiae, parthenium, alea, methydrium, enispe, macistum, lampia, clitorium, cleonae. inter quae duo oppida regio nemea est, et bembinadia vocitata. montes in arcadia pholoe+ cum oppido, item cyllene, lycaeus, in quo lycaei iovis delubrum, maenalus, artemisius, parthenius, lampeus, nonacris praeterque ignobiles viii. amnes ladon e paludibus phenei, erymanthus e monte eiusdem nominis in alpheum defluens. reliquae civitates in achaia

dicendae alipheraei, abeatae, pyrgenses, paroreatae, pharygenitae, tortuni, typanei, thriusi, tritienses. universae achaiae libertatem domitius nero dedit. peloponnesus in latitudinem a promunturio maleae ad oppidum aegium corinthiaci sinus [cxc] patet, at in transversum ab elide epidaurum [cxxv], ab olympia argos per arcadiam [lxviii]; ab eodem loco ad pylum iam dicta mensura est. universa autem, velut pensante aequorum incursus natura, in montes sex atque lxx attollitur.

ab isthmi angustiis hellas incipit, nostris graecia appellata. in ea prima attice, antiquitus acte vocata. attingit isthmum parte sui quae appellatur megaris ab colonia megara, e regione pagarum. duo haec oppida excurrente peloponneso sita sunt, utraque ex parte velut in umeris helladis, pagaei et amplius aegosthenenses contributi megarensibus. in ora autem portus schoenos, oppida sidous, cremmyon, scironia saxa [vi] longitudine, gerania, megara, eleusin. fuere et oenoe et probalinthos. nunc sunt ab isthmo [lv] piraeus et phalera portus, [v] muro recedentibus athenis iuncti. libera haec civitas nec indiga ullius praeconii amplius: tanta claritas superfluit. in attica fontes cephisia, larine, callirroe enneacrunos, montes brilessus, aegialeus, icarius, hymettus, lycabettus, locus ilisos. a piraeo [xlv] sunium promunturium, thoricos promunturium, potamos, steria, brauron, quondam oppida, rhamnus pagus, locus marathon, campus thriasius, oppidum melita et oropus in confinio boeotiae.

cuius anthedon, onchestos, thespiae liberum oppidum, lebadea nec cedentes athenis claritate quae cognominantur boeotiae thebae, duorum numinum liberi atque herculis, ut volunt, patria. et musis natalem in nemore heliconis adsignant. datur et his thebis saltus cithaeron, amnis ismenus. praeterea fontes in boeotia oedipodia, psamathe, dirce, epicrane, arethusa, hippocrene, aganippe, gargaphie. montes extra praedictos mycalesus, hadylius, acontius. reliqua oppida inter megaricam et thebas eleutherae, haliartus, plataeae, pherae, aspledon, hyle, thisbe, erythrae, glissa, copae, iuxta cephisum amnem lamiae et anichiae, medeon, phlygone, acraephia, coronea, chaeronea. in ora autem infra thebas ocalee, eteonos, scolos, schoenos, peteon, hyrie, mycalesos, ireseum et eleon, ollarum, tanagra, liber populus, et in ipsis faucibus euripi, quem facit obiecta insula euboea, aulis capaci nobilis portu. boeotos hyantas antiquitus

dixere. locri deinde epicnemidii cognominantur, olim leleges appellati, per quos amnis cephisus defertur in mare. oppida opus, unde et sinus opuntius, cynus. phocidis in litore unum daphnus, introrsus autem larisa, elatea et in ripa cephisi, ut diximus, lilaea delphosque versae cnemis et hyampolis. rursus locrorum ora, in qua larumna, thronium, iuxta quod boagrius amnis defertur in mare. oppida narycum, alope, scarphia. postea maliacus sinus ab incolis dictus, in quo oppida halcyone, aegonia, phalara. doris deinde, in qua sparthos, erineon, boion, pindus, cytinum. doridis a tergo mons oeta est.

sequitur mutatis saepe nominibus haemonia, eadem pelasgis et pelasgicon argos, hellas, eadem thessalia et dryopis, semper a regibus cognominata. ibi genitus rex nomine graecus, a quo graecia; ibi hellen, a quo hellenes. hos eosdem homerus tribus nominibus appellavit myrmidonas et hellenas et achaeos. ex his phthiotae nominantur dorida accolentes. eorum oppida echinus, in faucibus sperchii fluminis thermopylarum angustiae, quo argumento [iiii] inde heraclea trechin dicta est. mons ibi callidromus; oppida celebrata hellas, halos, lamia, phthia, arne.

in thessalia autem orchomenus, minyius antea dictus, et oppidum alimon, ab aliis holmon, atrax, palamna, fons hyperia, oppida pherae, quarum a tergo pieria ad macedoniam protenditur, larisa, gomphi, thebae thessalae, nemus pteleon, sinus pagasicus, oppidum pagasa, idem postea demetrias dictum, tricca, pharsali campi cum civitate libera, crannon, iletia. montes phthiotidis nymphaeus, quodam topiario naturae opere spectabilis, buzygaeus, donacoessa, bromiaeus, daphusa, chimarone, athamas, stephane. in thessalia quattuor atque triginta, quorum nobilissimi cercetii, olympus pierius, ossa, cuius ex adverso pindus et othrys, lapitharum sedes, hi ad occasum vergentes, ad ortus pelius, omnes theatrali modo inflexi, caveatis ante eos lxxv urbibus. flumina thessaliae apidanus, phoenix, enipeus, onochonus, pamisus, fons messeis, lacus boebeis et ante cunctos claritate penius, ortus iuxta gomphos interque ossam et olympum nemorosa convalle defluens d stadiis, dimidio eius spatii navigabilis. in eo cursu tempe vocant, [v] passuum longitudine et ferme sesquiiugeri latitudine, ultra visum hominis attollentibus se dextra laevaque leniter convexis iugis, intus silva late viridante, ac

labitur penius viridis calculo, amoenus circa ripas gramine, canorus avium concentu. accipit amnem horcon nec recipit, sed olei modo supernatantem, ut dictum est homero, brevi spatio portatum abdicat, poenales aquas dirisque genitas argenteis suis misceri recusans.

thessaliae adnexa magnesia est, cuius fons libethra, oppida iolcus, ormenium, pyrra, methone, olizon, promunturium sepias, oppida castana, spalathra, promunturium aeantium, oppida meliboea, rhizus, erymnae, ostium penii, oppida homolium, orthe, iresiae, pelinna, thaumacie, gyrton, crannon, acharne, dotion, melite, phylace, potniae.

epiri, achaiae, atticae, thessaliae in porrectum longitudo [cccclxxxx] traditur, latitudo [cclxxxxvii].

macedonia postea cl populorum, duobus incluta regibus quondamque terrarum imperio, emathia antea dicta. haec ad epiroticas gentes in solis occasum recedens post terga magnesiae atque thessaliae infestatur a dardanis; partem eius septentrionalem paeonia ac pelagonia protegunt a triballis. oppida aegae, in quo sepeliri mos reges, beroea et in regione, quae pieria appellatur a nemore, aeginium. in ora heraclea, flumen apilas, oppida pydna, aloros, amnis haliacmon. intus aloritae, vallaei, phylacaei, cyrrestae, tyrissaei, pella colonia, oppidum stobi civium romanorum, mox antigonea, europus ad axium amnem, eodemque nomine per quod rhoedias fluit, scydra, eordaea, mieza, gordyniae. mox in ora ichnae, fluvius axius. ad hunc finem dardani, treres, pieres macedoniam accolunt. ab hoc amne paeoniae gentes paraxiaei, eordenses, almopi, pelagones, mygdones. montes rhodope, scopius, orbelus. dein praeiacente gremio terrarum arethusii, antiochienses, idomenenses, doberi, aestrienses, allantenses, audaristenses, morylli, garresci, lyncestae, othryonei et liberi amantini atque orestae, coloniae bullidenses et dienses, xylopolitae, scotusaei liberi, heraclea sintica, tymphaei, toronaei.

in ora sinus macedonica oppidum chalastra et intus piloros, lete medioque litoris flexu thessalonice liberae condicionis - ad hanc a dyrrhachio [ccxlv] - , therme in thermaico sinu, oppida dicaea, palinandrea, scione, promunturium canastraeum, oppida pallene, phlegra. qua in regione montes hypsizonus, epytus, alcyon, elaeuomne, oppida nissos, phryxelon, mendae et in pallenensi isthmo

quondam potidaea, nunc cassandrea colonia, anthemus, olophyxus, sinus mecyberna, oppida myscella, ampelos, torone, siggos, stolos, fretum, quo montem atho xerxes persarum rex continenti abscidit in longitudinem passuum md. mons ipse a planitie excurrit in maria [lxxv] passuum, ambitus radicis [cl] colligit. oppidum in cacumine fuit acrothoon; nunc sunt vranopolis, palaehorium, thyssus, cleonae, apollonia, cuius incolae macrobii cognominantur. oppidum cassera faucesque alterae isthmi, acanthus, stagira, sithone, heraclea et regio mygdoniae subiacens, in qua recedentes a mari apollonia, arethusa. in ora rursus posidium et sinus cum oppido cermoro, amphipolis liberum, gens bisaltae. dein macedoniae terminus amnis strymon, ortus in haemo. memorandum in septem lacus eum fundi, priusquam derigat cursum.

haec est macedonia terrarum imperio potita quondam, haec asiam, armeniam, hiberiam, albaniam, cappadociam, syriam, aegyptum, taurum, caucasum transgressa, haec in bactris, medis, persis dominata toto oriente possesso, haec etiam indiae victrix per vestigia liberi patris atque herculis vagata. haec eadem est macedonia, cuius uno die paulus aemilius imperator noster lxxii urbes direptas vendidit. tantam differentiam sortis praestitere duo homines!

thracia sequitur, inter validissimas europae gentes, in strategias l divisa. populorum eius, quos nominare non pigeat, amnem strymonem accolunt dextro latere denseletae et maedi ad bisaltas usque supra dictos, laevo digerri bessorumque multa nomina ad mestum amnem ima pangaei montis ambientem inter haletos, diobessos, carbilesos, inde brigas, sapaeos, odomantos. odrysarum gens fundit hebrum accolentibus carbiletis, pyrogeris, drugeris, caenicis, hypsaltis, benis, corpilis, bottiaeis, edonis. eodem sunt in tractu sialetae, priantae, dolongae, thyni, coelaletae maiores haemo, minores rhodopae subditi. inter quos hebrus amnis, oppidum sub rhodope poneropolis antea, mox a conditore philippopolis, nunc a situ trimontium dicta. haemi excelsitas [vi] passuum subitur. aversa eius et in histrum devexa moesi, getae, aedi, scaugdae clariaeque et sub iis arraei sarmatae, quos areatas vocant, scythaeque et circa ponti litora moriseni sitonique, orphei vatis genitores, optinent. ita finit hister a septentrione, ab ortu pontus ac propontis, a meridie aegaeum mare. cuius in ora a strymone apollonia, oesyma, neapolis, datos.

intus philippi colonia - absunt a dyrrhachio [cccxxv] - , scotusa, topiros civitas. mesti amnis ostium, mons pangaeus. heraclea, olynthos, abdera libera civitas. stagnum bistonum et gens. oppidum fuit tirida, diomedis equorum stabulis dirum; nunc sunt dicaea, ismaron, locus parthenion, phalesina, maronea, prius orthagurea dicta. mons serrium, zone, tum locus doriscum, [x] hominum capax - ita xerxes ibi dinumeravit exercitum - , os hebri, portus stentoris, oppidum aenos liberum cum Polydori tumulo, ciconum quondam regio. a dorisco incurvatur ora ad macron tichos [cxii] p., circa quem locum fluvius melas, a quo sinus appellatur. oppida cypsela, bisanthe, macron tichos, dictum quia a propontide ad melanem sinum inter duo maria porrectus murus procurrentem excludit cherronesum. namque thracia altero latere a pontico litore incipiens, ubi hister amnis inmergitur, vel pulcherrimas in ea parte urbes habet, histropolin milesiorum, tomos, callatim, quae antea cerbatis vocabatur, heracleam. habuit et bizonen terrae hiatu raptam; nunc habet dionysopolim, crunon antea dictam; adluit zyras amnis. totum eum tractum scythae aroteres cognominati tenuere. eorum oppida aphrodisias, libistos, zygere, rhocobae, eumenia, parthenopolis, gerania, ubi pygmaeorum gens fuisse proditur; catizos barbari vocabant, creduntque a gruibus fugatos. in ora a dionysopoli est odessus milesiorum, flumen pannysis, oppidum ereta, naulochus. mons haemus, vasto iugo procumbens in pontum, oppidum habuit in vertice aristaeum; nunc in ora mesembria, anchialum, ubi messa fuerat. astice regio habuit oppidum anthium; nunc est apollonia. flumina panisos, iuras, tearus, orosines; oppida thynias, halmydesos, develton cum stagno, quod nunc deultum vocatur veteranorum, phinopolis, iuxta quam bosporos. ab histri ostio ad os ponti passuum [d] alii fecere, agrippa [lx] adiecit; inde ad murum supra dictum [cl], ab eo cherronesi [cxxvi]. - sed a bosporo sinus lasthenes, portus senum et alter qui mulierum cognominatur. promunturium chryseon ceras, in quo oppidum byzantium liberae condicionis, antea lygos dictum; abest a dyrrhachio [dccxi] p.: tantum patet longitudo terrarum inter hadriaticum mare et propontidem. amnes bathynias, pidaras sive athyras. oppida selymbria, perinthus, latitudine cc pedum continenti adnexa. intus bizye, arx regum thraciae, a terei nefasto invisa hirundinibus, regio caenica, colonia flaviopolis, ubi

antea caela oppidum vocabatur, et a bizye [l] p. apros colonia, quae a philippis abest [clxxxviiii]. at in ora amnis erginus; oppidum fuit ganos. deseritur et lysimachea iam in cherroneso. alius namque ibi isthmos angustias similes eodem nomine et pari latitudine inlustrat. duae urbes utrimque litora haut dissimili modo tenuere, pactye a propontide, cardia a melane sinu, haec ex facie loci nomine accepto, utraeque conprehensae postea lysimachea [v] p. a longis muris. cherronesos a propontide habuit tiristasin, crithoten, cissam flumini aegos adpositam; nunc habet a colonia apro [xxii] p. resisthon, ex adverso coloniae parianae. et hellespontus vii, ut diximus, stadiis europam ab asia dividens, iiii inter se contrarias urbes habet, in europa callipolim et seston, in asia lampsacon et abydon. dein promunturium cherronesi mastusia adversum sigeo, cuius in fronte obliqua cynossema - ita appellatur hecubae tumulus - , statio achaeorum et turris, delubrum protesilai et in extrema cherronesi fronte, quae vocatur aeolium, oppidum elaeus. dein petenti melana sinum portus coelos et panhormus et supra dicta cardia.

tertius europae sinus ad hunc modum clauditur. montes extra praedictos thraciae edonus, gygemeros, meritus, melamphyllos. flumina in hebrum cadentia bargus, syrmus. macedoniae, thraciae, hellesponti longitudo est supra dicta; quidam [dccxx] faciunt. latitudo [ccclxxxiiii] est. aegaeo mari nomen dedit scopulus inter tenedum et chium verius quam insula, aex nomine a specie caprae, quae ita graecis appellatur, repente e medio mari exiliens. cernunt eum ab dextera parte antandrum navigantes ab achaia, dirum ac pestiferum. aegaei pars myrtoo datur. appellatur ab insula parva, quae cernitur macedoniam a geraesto petentibus haut procul euboeae carysto. romani omnia haec maria duobus nominibus appellant, macedonicum quacumque macedoniam aut thraciam attingit, graeciense qua graeciam adluit. nam graeci et ionium dividunt in siculum ac creticum ab insulis, item icarium, quod est inter samum et myconum. cetera nomina sinus dedere quod diximus.

et maria quidem gentesque in tertio europae sinu ad hunc modum se habent; insulae autem ex adverso thesprotiae a buthroto [xii] p., eadem ab acrocerauniis [l], cum urbe eiusdem nominis corcyra liberae civitatis et oppido cassiope temploque cassi iovis, [xcvii] in longitudinem patens, homero dicta scheria et phaeacia, callimacho

etiam drepane. circa eam aliquot, sed ad italiam vergens othronos, ad leucadiam paxos, subotae duae, [v] discretae a corcyra. nec procul ab iis ante corcyram ericusa, marathe, elaphusa, malthace, trachie, pythionia, ptychia, tarachie et a phalacro, corcyrae promunturio, scopulus in quem mutatam vlixis navem a simili specie fabula est. ante leucadiam autem et aetoliam permultae, quarum teleboides eaedemque taphiae ab incolis ante leucadiam appellantur taphias, carnos, oxia, prinoessa, ante aetoliam echinades aegialia, cotonis, thyatira, geoaris, dionysia, cyrnus, chalcis, pinara, nystrus. ante eas in alto cephallania, zacynthus, utraque libera, ithaca, dulichium, same, crocyle. a paxo cephallania, quondam melaena dicta, [x] p. abest, circuitu patet [xciii]. same diruta a romanis adhuc tamen oppida tria habet. inter hanc et achaiam cum oppido magnifica et fertilitate praecipua zacynthus, aliquando appellata hyrie, a cephallaniae meridiana parte [xxv] abest. mons elatus ibi nobilis; ipsa circuitu colligit [xxxvi]. ab ea ithaca [xv] distat, in qua mons neritus; tota vero circuitu patet [xxv]. ab ea araxum, peloponnesi promunturium, [xv]. ante hanc in alto asteris, prote, ante zacynthum [xxxv] in eurum ventum strophades duae, ab aliis plotae dictae, ante cephallaniam letoia, ante pylum iii sphagiae, totidem ante messenen oenussae. in asinaeo sinu tres thyrides, in laconico theganusa, cothon, cythera cum oppido, antea porphyris appellata. haec sita est a maleae promunturio [v] passuum, ancipiti propter angustias ibi navium ambitu. in argolico pityusa, arine, ephyre. contra hermionium agrum tricarenus, aperopia, colonis, aristera, contra troezenium calauria, [l] distans plateis, belbina, lasia, baucidias, contra epidaurum cecryphalos, pityonesos [vi] a continente. ab hac aegina liberae condicionis [xv], cuius [xviiii] praenavigatio est; eadem autem a piraeo atheniensium portu [xx] abest, ante oenone vocitata. spiraeo promunturio obiacent eleusa, adendros, craugiae duae, caeciae duae, selacosa; et a cenchreis aspis [vii] et in megarico sinu methurides [iiii], aegila autem [xv] a cythera, eademque a cretae phalasarna oppido [xxv].

ipsa creta, altero latere ad austrum, altero ad septentrionem versa, inter ortum occasumque porrigitur centum urbium clara fama. dosiades eam a crete nympha, hesperidis filia, anaximander a rege curetum, philistides mallotes et crates primum ae+riam dictam,

deinde postea curetim; et macaron nonnulli a temperie caeli appellatam existimavere. latitudine nusquam [l] excedens et circa mediam sui partem maxime patens longitudine implet [cclxx], circuitu [dlxxxviiii], flectensque se in creticum pelagus ab ea dictum, qua longissima est, ad orientem promunturium samonium adversum rhodo, ad occidentem criu metopon cyrenas versus expellit. oppida eius insignia phalasarna, elaea, cisamon, pergamum, cydonea, minoium apteron, pantomatrium, amphimala, rhithymna, panhormum, cytaeum, apollonia, matium, heraclea, miletos, ampelos, hierapytna, lebena, hierapolis, et in mediterraneo gortyna, phaestum, gnosus, polyrrhenum, myrina, lycastos, rhamnus, lyctus, dium, asium, pyloros, rhytion, elatos, pherae, olopyxos, lasos, eleuthernae, therapnae, marathusa, tylisos; et aliorum circiter lx oppidorum memoria extat. montes cadistus, idaeus, dictynnaeus, corycus. ipsa abest promunturio suo, quod vocatur criu metopon, ut prodit agrippa, a cyrenarum promunturio phycunte [cxxv], item cadisto ... a malea peloponnesi [lxxx], a carpatho insula promunturio samonio [lx] in favonium ventum. haec inter eam et rhodum interiacet; reliquae circa eam ante peloponnesum duae corycoe, totidem mylae, et latere septentrionali dextra cretam habenti contra cydoneam leuce et duae budroe, contra matium dia, contra itanum promunturium onysia, leuce, contra hierapytnam chrysea, gaudos. eodem tractu ophiussa, butoa, ramnus circumvectisque criu metopon tres acusagorus appellatae. ante samonium promunturium phocoe, platiae, syrnides, naulochos, harmedon, zephyre.

at in hellade, etiamnum in aegaeo, lichades, scarphia, corese, phocasia conpluresque aliae ex adverso atticae, sine oppidis et ideo ignobiles. sed contra eleusina clara salamis. ante eam psyttalia, a sunio vero helene [v] distans. dein ceos ab ea totidem, quam nostri quidam dixere ceam, graeci et hydrusam, avolsam euboeae. quingentos longa stadios fuit quondam, mox quattuor fere partibus, quae ad boeotiam vergebant, eodem mari devoratis oppida habet reliqua iulida, carthaeam; intercidere coresus, poeeessa. ex hac profectam delicatiorem feminis vestem auctor est Varro.

euboea, et ipsa avolsa boeotiae, tam modico interfluente euripo, ut ponte iungantur, ad meridiem promunturiis duobus, geraesto ad atticam vergente et ad hellespontum caphereo, insignis, a

septentrione cenaeo, nusquam latitudinem ultra [xl] extendit, nusquam intra mm contrahit, sed in longitudinem universae boeotiae ab attica ad thessaliam usque praetenta in [cl], circuitu vero [ccclxv]. abest ab hellesponto parte capherei [ccxxv], urbibus quondam pyrrha, porthmo, neso, cerintho, oreo, dio, aedepso, oechalia, nunc chalcide, cuius ex adverso in continente aulis est, geraesto, eretria, carysto, oritano, artemisio, fonte arethusa, flumine lelanto aquisque calidis quae ellopiae vocantur nobilis, notior tamen marmore carystio. antea vocitata est chalcodontis aut macris, ut dionysius et ephorus tradunt, ut aristides, macra, ut callidemus, chalcis aere ibi primum reperto, ut menaechmus, abantias, ut poetae vulgo, asopis.

extra eam in myrtoo multae, sed maxime inlustres glauconnesos et aegilia et a promunturio geraesto circa delum in orbem sitae, unde et nomen traxere, cyclades. prima earum andrus cum oppido abest a geraesto [x], a ceo [xxxviii]. ipsam myrsilus cauron, deinde antandron cognominatam tradit, callimachus lasiam, alii nonagriam, hydrusam, epagrim; patet circuitu [lxxxxiii]. ab eadem andro passus mille et a delo [xv] tenos cum oppido in [xv] porrecta, quam propter aquarum abundantiam aristoteles hydrusam appellatam ait, aliqui ophiusam. ceterae myconus cum monte dimasto a delo [xv], siphnus, ante meropia et acis appellata, circuitu [xxviii], seriphus [xv] prepesinthus, cythnos ipsaque longe clarissima et cycladum media ac templo apollinis et mercatu celebrata delos, quae diu fluctuata, ut proditur, sola motum terrae non sensit ad M. Varronis aetatem; mucianus prodidit bis concussam. hanc aristoteles ita appellatam tradit, quoniam repente apparuerit enata, aglaosthenes cynthiam, alii ortygiam, asteriam, lagiam, chlamydiam, cynethum, pyrpylen igne ibi primum reperto. cingitur [v] passuum, adsurgit cynthio monte. proxima ei rhene, quam anticlides celadusam vocat, item artemiten, celadinen. syros, quam circuitu patere [xx] prodiderunt veteres, mucianus [clx], olearos, paros cum oppido, ab delo [xxxviii], marmore nobilis, quam primo platean, postea minoida vocarunt. ab ea [vii] d naxus, a delo [xviii], cum oppido, quam strongylen, deinde dian, mox dionysiada a vinearum fertilitate, alii siciliam minorem aut callipolim appellarunt. patet circuitu [lxxv] p. dimidioque maior est quam parus.

et hactenus quidem cycladas servant, ceteras quae secuntur

sporadas. sunt autem helene, phacusa, nicasia, schinusa, pholegandros et a naxo [xxxviii] p. icaros, quae nomen mari dedit, tantundem ipsa in longitudinem patens, cum oppidis duobus tertio amisso, antea vocitata doliche et macris et ichthyusa. sita est ab exortu solstitiali deli [l] eademque a samo [xxxv], inter euboeam et andrum [x] passuum freto, ab ea geraestum [cxii] d passuum. nec deinde servari potest ordo; acervatim ergo ponentur reliquae. scyros, ios a naxo [xviii], homeri sepulchro veneranda, longitudine [xxii], antea phoenice appellata, odia, oletandros. gyara cum oppido, circuitu [xv] p., abest ab andro [lxii], ab ea syrnos [lxxx], cynethus, telos unguento nobilis, a callimacho agathusa appellata, donusa, patmus circuitu [xxx], corassiae, lebinthus, gyrus, cinara, sicinus quae antea oenoe, heraclia quae onus, casos quae astrabe, cimolos quae echinusa, melos cum oppido, quam aristides mimblida appellat, aristoteles zephyriam, callimachus mimallida, heraclides siphin et acytan; haec insularum rotundissima est. buporthmos, machia, hypere, quondam patage, ut alii, platage, nunc amorgos, polyaegas, sapyle, thera, cum primum emersit, calliste dicta. ex ea avolsa postea therasia, atque inter duas enata mox automate, eadem hiera, et in nostro aevo thia iuxta easdem enata. distat ios a thera [xxv] p. secuntur lea, ascania, anaphe, hippuris. astypalaea, liberae civitatis, circuitus [lxxxviii], abest a cadisto cretae [cxxv], ab ea platea [lx], unde caminia [xxxviii], azibintha, lamse, atragia, pharmacusa, thetaedia, chalcia, calymna, in qua oppidum, coos, eulimna, a qua carpathum, quae nomen carpathio mari dedit, [xxv]. inde rhodum africo vento [l], a carpatho casum [vii], a caso samonium, cretae promunturium, [xxx]. in euripo autem euboico primo fere introitu petaliae iiii insulae et in exitu atalante. cyclades et sporades ab oriente litoribus icariis asiae, ab occidente myrtois atticae, a septentrione aegaeo mari, a meridie cretico et carpathio inclusae per [dcc] in longitudinem et per [cc] in latitudinem iacent.

pagasicus sinus ante se habet euthiam, cicynethum, scyrum supra dictam, sed cycladum et sporadum extimam, gerontiam, scandiram, thermaeus iresiam, solymniam, eudemiam, neam, quae minervae sacra est, athos ante se iiii, peparethum cum oppido, quondam euoenon dictam, novem milia, sciathum [xv], imbrum cum oppido [lxxxviii]. eadem abest a mastusia cherronesi [xxii] p., ipsa circuitur

[lxii] d; perfunditur amne ilisso. ab ea lemnos [xxii], quae ab atho [lxxxvii]; circuitu patet [cxv] d p., oppida habet hephaestiam et myrinam, in cuius forum solstitio athos eiaculatur umbram. ab ea thasos libera [vi] p., olim ae+ria vel aethria dicta. inde abdera continentis [xxii], athos [lxii] d, tantundem insula samothrace libera ante hebrum, ab imbro [xxxii], a lemno [xxii] d p., a thraciae ora [xxxviii]; circuitur [xxxv], attollitur monte saoce [x] p. altitudinis, vel inportuosissima omnium. callimachus eam antiquo nomine dardaniam vocat. inter cherronesum et samothracen, utrimque fere [xv], halonesos, ultra gethone, lamponia, alopeconnesus haud procul a coelo, cherronesi portu, et quaedam ignobiles. desertis quoque reddantur in hoc sinu quarum modo inveniri potuere nomina: avesticos, sarnos, cissyros, charbrusa, calathusa, scyllia, dialeon, dictaea, melanthia, dracanon, arconesos, diethusa, ascapos, capheris, mesate, aeantion, pateronnesos, pateria, calathe, neriphus, pelendos.

quartus e magnis europae sinus ab hellesponto incipiens maeotis ostio finitur. sed totius ponti forma breviter conplectenda est, ut facilius partes noscantur. vastum mare, praeiacens asiae et ab europa porrecto cherronesi litore expulsum, angusto meatu inrumpit in terras, vii stadiorum, ut dictum est, intervallo europam auferens asiae. primas angustias hellespontum vocant; hac xerxes persarum rex constrato in navibus ponte duxit exercitum. porrigitur deinde tenuis euripus [lxxxvi] spatio ad priapum urbem asiae, qua magnus alexander transcendit. inde exspatiatur aequor rursusque in artum coit. laxitas propontis appellatur, angustiae thracius bosporus, latitudine quingentorum passuum, qua darius pater xerxis copias ponte transvexit. tota ab hellesponto longitudo [ccxxxix]. dein vastum mare pontus euxinus, qui quondam axenus, longe refugientes occupat terras magnoque litorum flexu retro curvatus in cornua ab iis utrimque porrigitur, ut sit plane arcus scythici forma. medio flexu iungitur ostio maeotii lacus. cimmerius bosporus id os vocatur, [ii] quingentorum passuum latitudine. at inter duos bosporos thracium et cimmerium derecto cursu, ut auctor est polybius, [d] intersunt. circuitus vero totius ponti viciens semel l, ut auctor est Varro et fere veteres. nepos cornelius [cccl] adicit, artemidorus vicies novies decem novem milia facit, agrippa [30xxv]30 [xl], mucianus [30xxiiii]30 [xxv]. simili modo de europae latere mensuram alii

[30xiiii]30 [lxxviiii] determinavere, alii [30xi]30. M. Varro ad hunc modum metitur: ab ostio ponti apolloniam [clxxxvii] d p., callatim tantundem, ad ostium histri [cxxv], ad borysthenem [ccl], cherronesum heracleotarum oppidum [ccclxxv] p., ad panticapaeum, quod aliqui bosporum vocant, extremum in europae ora, [ccxii] d, quae summa efficit [30xiii]30 [xxxvii] d. agrippa a byzantio ad flumen histrum [dlx], inde panticapaeum [dcxxxviii]. lacus ipse maeotis, tanain amnem ex ripaeis montibus defluentem accipiens, novissimum inter europam asiamque finem, [30xiiii]30 [vi] circuitu patere traditur, ab aliis [30xi]30 [xxv]. ab ostio eius ad tanais ostium derecto cursu [cclxxv] esse constat. accolae sinus eius in mentione thraciae dicti sunt histropolin usque. inde ostia histri.

ortus hic in germania iugis montis abnouae ex adverso raurici galliae oppidi, multis ultra alpes milibus ac per innumeras lapsus gentes danuvi nomine, inmenso aquarum auctu et unde primum illyricum adluit hister appellatus, lx amnibus receptis, medio ferme eorum numero navigabili, in pontum vastis sex fluminibus evolvitur. primum ostium peuces, mox ipsa peuce insula, in qua proximus alveus appellatus [xix] p. magna palude sorbetur. ex eodem alveo et super histropolim lacus gignitur [lxiii] passuum ambitu; halmyrin vocant. secundum ostium naracustoma appellatur, tertium calon stoma iuxta insulam sarmaticam, quartum pseudostomon et insula conopon diabasis, postea borion stoma et psilon stoma. singula autem ora sunt tanta, ut prodatur in [xl] passuum longitudinis vinci mare dulcemque intellegi haustum.

ab eo in plenum quidem omnes scytharum sunt gentes, varie tamen litori adposita tenuere, alias getae, daci romanis dicti, alias sarmatae, graecis sauromatae, eorumque hamaxobii aut aorsi, alias scythae degeneres et a servis orti aut trogodytae, mox alani et rhoxolani; superiora autem inter danuvium et hercynium saltum usque ad pannonica hiberna carnunti germanorumque ibi confinium, campos et plana iazyges sarmatae, montes vero et saltus pulsi ab iis daci ad pathissum amnem, a maro, sive duria est a suebis regnoque vanniano dirimens eos, aversa basternae tenent aliique inde germani. agrippa totum eum tractum ab histro ad oceanum bis ad decies centenum milium passuum in longitudinem, quattuor milibus minus [cccc] in latitudinem, ad flumen vistlam a desertis sarmatiae prodidit.

scytharum nomen usquequaque transiit in sarmatas atque germanos. nec aliis prisca illa duravit appellatio quam qui extremi gentium harum, ignoti prope ceteris mortalibus, degunt.

verum ab histro oppida cremniscoe, aepolium, montes macrocremni, clarus amnis tyra, oppido nomen inponens ubi antea ophiusa dicebatur. in eodem insulam spatiosam incolunt tyragetae; abest a pseudostomo histri ostio [cxxx]. mox axiacae cognomines flumini, ultra quos crobyzi, flumen rhode, sinus saggarius, portus ordesos et a tyra [cxx] flumen borysthenes lacusque et gens eodem nomine et oppidum ab mari recedens [xv] passuum, olbiopolis et miletopolis antiquis nominibus. rursus litore portus achaeorum, insula achillis, tumulo eius viri clara, et ab ea [cxxv] passuum paeninsula ad formam gladii in transversum porrecta, exercitatione eiusdem cognominata dromos achilleos, cuius longitudinem [lxxx] tradidit agrippa. totum eum tractum tenent sardi scythae et siraci. inde silvestris regio hylaeum mare, quo adluitur, cognominavit; enoecadioe vocantur incolae. ultra panticapes amnis, qui nomadas et georgos disterminat, mox acesinus. quidam panticapen confluere intra olbiam cum borysthene tradunt, diligentiores hypanim, tanto errore eorum, qui illum in asiae parte prodidere.

mare subit magno recessu, donec [v] passuum intervallo absit a maeotide, vasta ambiens spatia multasque gentes. sinus carcinites appellatur. flumen pacyris; oppida navarum, carcine. a tergo lacus buces, fossa emissus in mare. ipse buces a coreto, maeoti lacus sinu, petroso discluditur dorso. recipit amnes bucem, gerrhum. hypanim, ex diverso venientes tractu. nam gerrhus basilidas et nomadas separat, hypanis per nomadas et hylaeos fluit, manu facto alveo in bucen, naturali in coretum. regio scythiae sindica nominatur.

sed a carcinite taurica incipit, quondam mari circumfusa et ipsa qua nunc campi iacent; dein vastis attollitur iugis. triginta sunt eorum populi, ex iis mediterranei xxiii; vi oppida orgocini, characeni, assyrani, stactari, acisalitae, caliordi. iugum ipsum scythotauri tenent; cluduntur ab occidente cherroneso nea, ab ortu scythis satarcis. in ora a carcine oppida taphrae in ipsis angustiis paeninsulae, mox heraclea cherronesus, libertate a romanis donatum; megarice vocabatur antea, praecipui nitoris, in toto eo tractu custoditis graeciae moribus, [v] passuum ambiente muro. inde

parthenium promunturium, taurorum civitas placia, symbolum portus, promunturium criu metopon adversum carambico asiae promunturio, per medium euxinum procurrens [clxx] intervallo, quae maxime ratio scythici arcus formam efficit. ab eo taurorum portus multi et lacus. oppidum theodosia a criu metopo [cxxv] p., a cherroneso vero [clxv]. ultra fuere oppida cytae, zephyrium, acrae, nymphaeum, dia. restat longe validissimum in ipso bospori introitu panticapaeum milesiorum, a theodosia [lxxxvii] d p., a cimmerio vero oppido trans fretum sito mm d, ut diximus, passuum. haec ibi latitudo asiam ab europa separat, eaque ipsa pedibus plerumque pervia glaciato freto. bospori cimmerii longitudo [xii] d passuum. oppida habet hermisium, myrmecium et intus insulam alopecen. per maeotim autem ab extremo isthmo, qui locus taphrae vocatur, ad os bospori [cclx] longitudo colligit.

a taphris per continentem introrsus tenent auchetae, apud quos hypanis oritur, neuroe, apud quos borysthenes, geloni, thyssagetae, budini, basilidae et caeruleo capillo agathyrsi. super eos nomades, deinde anthropophagi, a buce vero super maeotim sauromatae et essedones. at per oram ad tanain usque maeotae, a quibus lacus nomen accepit, ultimique a tergo eorum arimaspi. mox ripaei montes et adsiduo nivis casu pinnarum similitudine pterophoros appellata regio, pars mundi damnata a rerum natura et densa mersa caligine neque in alio quam rigoris opere gelidisque aquilonis conceptaculis.

pone eos montes ultraque aquilonem gens felix, si credimus, quos hyperboreos appellavere, annoso degit aevo, fabulosis celebrata miraculis. ibi creduntur esse cardines mundi extremique siderum ambitus semenstri luce et una die solis adversi, non, ut imperiti dixere, ab aequinoctio verno in autumnum: semel in anno solstitio oriuntur iis soles brumaque semel occidunt. regio aprica, felici temperie, omni adflatu noxio carens. domus iis nemora lucique, et deorum cultus viritim gregatimque, discordia ignota et aegritudo omnis. mors non nisi satietate vitae epulatis delibutoque senio luxu e quadam rupe in mare salientibus; hoc genus sepulturae beatissimum. quidam eos in prima parte asiae litorum posuere, non in europa, quia sunt ibi similitudine et situs attacorum nomine. alii medios fecere eos inter utrumque solem, antipodum occasus exorientemque nostrum, quod fieri nullo modo potest tam vasto mari interveniente. qui alibi

quam in semenstri luce constituere eos, serere matutinis, meridie metere, occidente fetus arborum decerpere, noctibus in specus condi tradiderunt. nec licet dubitare de gente ea: tot auctores produnt frugum primitias solitos delum mittere apollini, quem praecipue colunt. virgines ferebant eas, hospitiis gentium per annos aliquot venerabiles, donec violata fide in proximis accolarum finibus deponere sacra ea instituere iique ad conterminos deferre atque ita delum usque. mox et hoc ipsum exolevit. sarmatiae, scythiae, tauricae omnisque a borysthene amne tractus longitudo [dcccclxxx], latitudo [dccxvi] a m. agrippa tradita est. ego incertam in hac terrarum parte mensuram arbitror.

verum instituto ordine reliqua huius sinus dicantur, et maria quidem eius nuncupavimus.

hellespontus insulas non habet in europa dicendas. in ponto duae, m d ab europa, [xiiii] ab ostio, cyaneae, ab aliis symplegades appellatae traditaeque fabulis inter se concucurrisse, quoniam parvo discretae intervallo ex adverso intrantibus geminae cernebantur paulumque deflexa acie coeuntium speciem praebebant. citra histrum apolloniatarum una, [lxxx] p. a bosporo thracio, ex qua m. lucullus capitolinum apollinem advexit. inter ostia histri quae essent diximus. ante borysthenen achillea est supra dicta, eadem leuce et macaron appellata. hanc temporum horum demonstratio a borysthene [cxl] ponit, a tyra [cxx], a peuce insula [l]; cingitur circiter [x] p. reliquae in carcinite sinu cephalonesos, spodusa, macra. non est omittenda multorum opinio, priusquam digrediamur a ponto, qui maria omnia interiora illo capite nasci, non gaditano freto, existimavere, haut inprobabili argumento, quoniam aestus semper e ponto profluens numquam reciprocet.

exeundum deinde est, ut extera europae dicantur, transgressisque ripaeos montes litus oceani septentrionalis in laeva, donec perveniatur gadis, legendum. insulae complures sine nominibus eo situ traduntur, ex quibus ante scythiam quae appellatur baunonia unam abesse diei cursu, in quam veris tempore fluctibus electrum eiciatur, timaeus prodidit. reliqua litora incerta. signata fama septentrionalis oceani. amalchium eum hecataeus appellat a parapaniso amne, qua scythiam adluit, quod nomen eius gentis lingua significat congelatum. philemon morimarusam a cimbris vocari, hoc

est mortuum mare, inde usque ad promunturium rusbeas, ultra deinde cronium. xenophon lampsacenus a litore scytharum tridui navigatione insulam esse inmensae magnitudinis balciam tradit, eandem pytheas basiliam nominat. feruntur et oeonae, in quibus ovis avium et avenis incolae vivant, aliae, in quibus equinis pedibus homines nascantur, hippopodes appellati, phanesiorum aliae, in quibus nuda alioqui corpora praegrandes ipsorum aures tota contegant.

incipit deinde clarior aperiri fama ab gente inguaeonum, quae est prima in germania. mons saevo ibi, inmensus nec ripaeis iugis minor, inmanem ad cimbrorum usque promunturium efficit sinum, qui codanus vocatur, refertus insulis, quarum clarissima est scatinavia, inconpertae magnitudinis, portionem tantum eius, quod notum sit, hillevionum gente quingentis incolente pagis: quare alterum orbem terrarum eam appellant. nec minor est opinione aeningia. quidam haec habitari ad vistlam usque fluvium a sarmatis, venedis, sciris, hirris tradunt, sinum cylipenum vocari et in ostio eius insulam latrim, mox alterum sinum lagnum, conterminum cimbris. promunturium cimbrorum excurrens in maria longe paeninsulam efficit, quae tastris appellatur. xxiii inde insulae romanis armis cognitae. earum nobilissimae burcana, fabaria nostris dicta a frugis multitudine sponte provenientis, item glaesaria a sucino militiae appellata, barbaris austeravia, praeterque actania.

toto autem mari ad scaldim usque fluvium germaniae accolunt gentes, haud explicabili mensura: tam inmodica prodentium discordia est. graeci et quidam nostri [30xxv]30 oram germaniae tradiderunt, agrippa cum raetia et norico longitudinem [dcxxxvi], latitudinem [ccxlviii], raetiae prope unius maiore latitudine, sane circa excessum eius subactae; nam germania multis postea annis nec tota percognita est. si coniectare permittitur, haut multum ora deerit graecorum opinioni et longitudini ab agrippa proditae. germanorum genera quinque: vandili, quorum pars burgodiones, varinnae, charini, gutones. alterum genus inguaeones, quorum pars cimbri, teutoni ac chaucorum gentes. proximi autem rheno istuaeones, quorum ... mediterranei hermiones, quorum suebi, hermunduri, chatti, cherusci. quinta pars peucini, basternae, supra dictis contermini dacis. amnes clari in oceanum defluunt guthalus, visculus sive vistla, albis,

visurgis, amisis, rhenus, mosa. introrsus vero nullo inferius nobilitate hercynium iugum praetenditur. in rheno autem ipso, prope [c] in longitudinem, nobilissima batavorum insula et cannenefatium et aliae frisiorum, chaucorum, frisiavonum, sturiorum, marsaciorum, quae sternuntur inter helinium ac flevum. ita appellantur ostia, in quae effusus rhenus a septentrione in lacus, ab occidente in amnem mosam se spargit, medio inter haec ore modicum nomini suo custodiens alveum.

ex adverso huius situs britannia insula, clara graecis nostrisque monimentis, inter septentrionem et occidentem iacet, germaniae, galliae, hispaniae, multo maximis europae partibus, magno intervallo adversa. albion ipsi nomen fuit, cum britanniae vocarentur omnes de quibus mox paulo dicemus. haec abest a gesoriaco morinorum gentis litore proximo traiectu [l]. circuitu patere [30xxxxviii]30 [lxxv] pytheas et isidorus tradunt, xxx prope iam annis notitiam eius romanis armis non ultra vicinitatem silvae calidoniae propagantibus. agrippa longitudinem [dccc] esse, latitudinem [ccc] credit, eandem hiberniae, sed longitudinem [cc] minorem. super eam haec sita abest brevissimo transitu a silurum gente [xxx]. reliquarum nulla [cxxv] amplior circuitu proditur. sunt autem xl orcades, modicis inter se discretae spatiis, vii haemodae, xxx hebudes et inter hiberniam ac britanniam mona, monapia, riginia, vectis, silumnus, andros, infra vero samnis et axanthos et ab adversa in germanicum mare sparsae glaesiae, quas electridas graeci recentiores appellavere, quod ibi electrum nasceretur. ultima omnium quae memorantur tyle, in qua solstitio nullas esse noctes indicavimus, cancri signum sole transeunte, nullosque contra per brumam dies. hoc quidam senis mensibus continuis fieri arbitrantur. timaeus historicus a britannia introrsus sex dierum navigatione abesse dicit insulam ictim, in qua candidum plumbum proveniat; ad eam britannos vitilibus navigiis corio circumsutis navigare. sunt qui et alias prodant, scandias, dumnam, bergos maximamque omnium berricen, ex qua in tylen navigetur. a tyle unius diei navigatione mare concretum a nonnullis cronium appellatur.

gallia omnis comata uno nomine appellata in tria populorum genera dividitur, amnibus maxime distincta. a scalde ad sequanam belgica, ab eo ad garunnam celtica eademque lugdunensis, inde ad

pyrenaei montis excursum aquitanica, aremorica antea dicta. universam oram [30xvii]30 [l] agrippa, galliarum inter rhenum et pyrenaeum atque oceanum ac montes cebennam et iures, quibus narbonensem galliam excludit, longitudinem [ccccxx], latitudinem [cccxviii] computavit. a scaldi incolunt texero texuandri pluribus nominibus, dein menapi, morini ora marsacis iuncti pago qui gesoriacus vocatur, britanni, ambiani, bellovaci, bassi. introrsus catoslugi, atrebates, nervi liberi, veromandui, suaeuconi, suessiones liberi, vlmanectes liberi, tungri, sunuci, frisiavones, baetasi, leuci liberi, treveri liberi antea et lingones foederati, remi foederati, mediomatrici, sequani, raurici, helveti, coloniae equestris et raurica. rhenum autem accolentes germaniae gentium in eadem provincia nemetes, triboci, vangiones, in vbis colonia agrippinensis, guberni, batavi et quos in insulis diximus rheni.

lugdunensis gallia habet lexovios, veliocasses, caletos, venetos, abrincatuos, ossismos, flumen clarum ligerem, sed paeninsulam spectatiorem excurrentem in oceanum a fine ossismorum circuitu [dcxxv], cervice in latitudinem [cxxv]. ultra eum namnetes, intus autem aedui foederati, carnuteni foederati, boi, senones, aulerci qui cognominantur eburovices et qui cenomani, meldi liberi, parisi, tricasses, andecavi, viducasses, bodiocasses, venelli, coriosvelites, diablinti, riedones, turones, atesui, segusiavi liberi, in quorum agro colonia lugudunum.

aquitanicae sunt ambilatri, anagnutes, pictones, santoni liberi, bituriges liberi cognomine vivisci, aquitani, unde nomen provinciae, sediboviates. mox in oppidum contributi convenae, begerri, tarbelli quattuorsignani, cocosates sexsignani, venami, onobrisates, belendi, saltus pyrenaeus infraque monesi, oscidates montani, sybillates, camponi, bercorcates, pinpedunni, lassunni, vellates, toruates, consoranni, ausci, elusates, sottiates, oscidates campestres, succasses, latusates, basaboiates, vassei, sennates, cambolectri agessinates. pictonibus iuncti autem bituriges liberi qui cubi appellantur, dein lemovices, arverni liberi, vellavi liberi, gabales. rursus narbonensi provinciae contermini ruteni, cadurci, nitiobroges tarneque amne discreti a tolosanis petrocori.

maria circa oram ad rhenum septentrionalis oceanus. inter rhenum et sequanam britannicus, inter id et pyrenaeum gallicus. insulae

conplures venestorum et quae veneticae appellantur et in aquitanico sinu vliaros.

a pyrenaei promunturio hispania incipit, angustior non gallia modo, verum etiam semet ipsa, ut diximus, inmensum quantum hinc oceano, illinc hiberico mari comprimentibus. ipsa pyrenaei iuga ab exortu aequinoctiali in occasum brumalem breviores quam latere meridiano hispanias faciunt. proxima ora citerioris est eiusdemque tarraconensis situs. a pyrenaeo per oceanum vasconum saltus, olarso, vardulorum oppida, morogi, menosca, vesperies, amanum portus, ubi nunc flaviobrica colonia. civitatium novem regio cantabrorum. flumen sauga. portus victoriae iuliobrigensium; ab eo loco fontes hiberi [xl] p. portus blendium. orgenomesci e cantabris; portus eorum veseiasueca. regio asturum, noega oppidum. in paeninsula paesici et deinde conventus lucensis a flumine navia albiones, cibarci, egi, varri cognomine namarini, adovi, arroni, arrotrebae. promunturium celticum, amnes florius, nelo. celtici cognomine neri et super tamarci, quorum in paeninsula tres arae sestianae Augusto dicatae, copori, oppidum noeta, celtici cognomine praestamarci, cileni. ex insulis nominandae corticata et aunios. a cilenis conventus bracarum helleni, grovi, castellum tyde, graecorum subolis omnia. insulae siccae, oppidum abobrica. minius amnis, [iiii] ore spatiosus, leuni, seurbi, bracarum oppidum augusta, quos super gallaecia. flumen limia, durius amnis e maximis hispaniae, ortus in pelendonibus et iuxta numantiam lapsus, dein per arevacos vaccaeosque, disterminatis ab asturia vettonibus, a lusitania gallaecis, ibi quoque turdulos a bracaris arcens. omnis, quae dicta regio a pyrenaeo, metallis referta auri, argenti, ferri, plumbi nigri albique.

a durio lusitania incipit. turduli veteres, paesuri, flumen vagia, oppidum talabrica, oppidum et flumen aeminium, oppida conimbriga, collippo, eburobrittium. excurrit deinde in altum vasto cornu promunturium, quod aliqui artabrum appellavere, alii magnum, multi olisiponense ab oppido, terras, maria, caelum discriminans. illo finitur hispaniae latus et a circuitu eius incipit frons. septentrio hinc oceanusque gallicus, occasus illinc, oceanus atlanticus. promunturi excursum [lx] prodidere, alii [xc], ad pyrenaeum inde non pauci [30xii]30 [l], et ibi gentem artabrum, quae numquam fuit, manifesto errore. arrotrebas enim, quos ante celticum diximus promunturium,

hoc in loco posuere litteris permutatis. erratum et in amnibus inclutis. ab minio, quem supra diximus, [cc], ut auctor est Varro, abest aeminius, quem alibi quidam intellegunt et limaeam vocant, oblivionis antiquis dictus multumque fabulosus, ab durio tagus [cc] interveniente munda. tagus auriferis harenis celebratur. ab eo [clx] promunturium sacrum e media prope hispaniae fronte prosilit. [30xiiii]30 inde ad pyrenaeum medium colligi Varro tradit, ad anam vero, quo lusitaniam a baetica discrevimus, [cxxvi], a gadibus [cii] additis. gentes celtici turduli et circa tagum vettones, ab ana ad sacrum lusitani. oppida a tago memorabilia in ora olisipo, equarum e favonio vento conceptu nobile, salacia cognominata vrbs imperatoria, merobrica. promunturium sacrum et alterum cuneus. oppida ossonoba, balsa, myrtilis.

vniversa provincia dividitur in conventus tres, emeritensem, pacensem, scalabitanum, tota populorum xlv, in quibus coloniae sunt quinque, municipium civium romanorum, latii antiqui iii, stipendiaria xxxvi. coloniae augusta emerita, anae fluvio adposita, metellinensis, pacensis, norbensis caesarina cognomine; contributa sunt in eam castra servilia, castra caecilia. quinta est scalabis quae praesidium iulium vocatur. municipium civium romanorum olisipo, felicitas iulia cognominatum. oppida veteris latii ebora, quod item liberalitas iulia, et myrtilis ac salacia, quae diximus. stipendiariorum quos nominare non pigeat, praeter iam dictos in baeticae cognominibus, augustobrigenses, aeminienses, aranditani, arabricenses, balsenses, caesarobrigenses, caperenses, caurienses, colarni, cibilitani, concordienses, elbocori, interannienses, lancienses, mirobrigenses qui celtici cognominantur, medubrigenses qui plumbari, ocelenses, turduli qui bardili et tapori.

lusitaniam cum asturia et gallaecia patere longitudine [dxl], latitudine [dxxxvi], agrippa prodidit. omnes autem hispaniae a duobus pyrenaei promunturiis per maria totius orae circuitu [30xxviiii]30 [xxiiii] colligere existimantur, ab aliis [30xxvi]30.

ex adverso celtiberiae conplures sunt insulae, cassiterides dictae graecis a fertilitate plumbi, et e regione arrotrebarum promunturi deorum vi, quas aliqui fortunatas appellavere. in ipso vero capite baeticae ab ostio freti p. [xxv] gadis, longa, ut polybius scribit, [xii], lata [iii]. abest a continente proxima parte minus pedes dcc, reliqua

plus [vii]. ipsius spatium [xv] est. habet oppidum civium romanorum, qui appellantur augustani vrbe iulia gaditana. ab eo latere, quo hispaniam spectat, passibus fere c altera insula est, longa m passus, m lata, in qua prius oppidum gadium fuit. vocatur ab ephoro et philistide erythea, a timaeo et sileno aphrodisias, ab indigenis iunonis. maiorem timaeus cotinusam aput eos vocitatam ait; nostri tarteson appellant, poeni gadir, ita punica lingua saepem significante. erythea dicta est, quoniam tyri aborigines earum orti ab erythro mari ferebantur. in hac geryones habitasse a quibusdam existimatur, cuius armenta hercules abduxerit. sunt qui aliam esse eam et contra lusitaniam arbitrentur, eodemque nomine quandam ibi appellant.

peracto ambitu europae reddenda consummatio est, ne quid non in expedito sit noscere volentibus. longitudinem eius artemidorus atque isidorus a tanai gades [30lxxxvii]30 [xiiii] prodiderunt. polybius latitudinem europae ab italia ad oceanum scripsit [30xii]30 [l] esse, etiam tum incomperta magnitudine. est autem ipsius italiae, ut diximus, [30x]30 xx ad alpes, unde lugdunum et ad portum morinorum britannicum, qua videtur mensuram agere polybius, [30xi]30 [lxviiii]. sed certior mensura ac longior ad occasum solis aestivi ostiumque rheni per castra legionum germaniae ab iisdem alpibus derigitur, [30xii]30 [xliii].

hinc deinde africa atque asia dicentur.

LIBER V

africam graeci libyam appellavere et mare ante eam libycum; aegyptio finitur, nec alia pars terrarum pauciores recipit sinus, longe ab occidente litorum obliquo spatio. populorum eius oppidorumque nomina vel maxime sunt ineffabilia praeterquam ipsorum linguis, et alias castella ferme inhabitant.

principio terrarum mauretaniae appellantur, usque ad c. caesarem germanici filium regna, saevitia eius in duas divisae provincias. promunturium oceani extumum ampelusia nominatur a graecis. oppida fuere lissa et cottae ultra columnas herculis, nunc est tingi, quondam ab antaeo conditum, postea a claudio caesare, cum coloniam faceret, appellatum traducta iulia. abest a baelone oppido baeticae proximo traiectu [xxx]. ab eo [xxv] in ora oceani colonia Augusti iulia constantia zulil, regum dicioni exempta et iura in baeticam petere iussa. ab ea [xxxv] colonia a claudio caesare facta lixos, vel fabulosissime antiquis narrata: ibi regia antaei certamenque cum hercule et hesperidum horti. adfunditur autem aestuarium e mari flexuoso meatu, in quo dracones custodiae instar fuisse nunc interpretantur. amplectitur intra se insulam, quam solam e vicino tractu aliquanto excelsiore non tamen aestus maris inundant. exstat in ea et ara herculis nec praeter oleastros aliud ex narrato illo aurifero nemore. minus profecto mirentur portentosa graeciae mendacia de his et amne lixo prodita qui cogitent nostros nuperque paulo minus monstrifica quaedam de iisdem tradidisse, praevalidam hanc urbem maioremque magna carthagine, praeterea ex adverso eius sitam et prope inmenso tractu ab tingi, quaeque alia cornelius nepos avidissime credidit. ab lixo [xl] in mediterraneo altera Augusti colonia est babba, iulia campestris appellata, et tertia banasa [lxxv] p., valentia cognominata. ab ea [xxxv] volubile oppidum, tantundem a mari utroque distans. at in ora a lixo [l] amnis sububus, praeter banasam coloniam defluens, magnificus et navigabilis. ab eo totidem milibus oppidum sala, eiusdem nominis fluvio inpositum, iam solitudinibus vicinum elephantorumque gregibus infestum, multo tamen magis autololum gente, per quam iter est ad montem africae vel fabulosissimum atlantem.

e mediis hunc harenis in caelum attolli prodidere, asperum, squalentem qua vergat ad litora oceani, cui cognomen inposuit, eundem opacum nemorosumque et scatebris fontium riguum qua spectet africam, fructibus omnium generum sponte ita subnascentibus, ut numquam satias voluptatibus desit. incolarum neminem interdiu cerni; silere omnia haut alio quam solitudinum horrore; subire tacitam religionem animos propius accedentium praeterque horrorem elati super nubila atque in vicina lunaris circuli. eundem noctibus micare crebris ignibus, aegipanum satyrorumque lascivia inpleri, tibiarum ac fistulae cantu tympanorumque et cymbalorum sonitu strepere. haec celebrati auctores prodidere praeter herculi et perseo laborata ibi. spatium ad eum inmensum incertumque. fuere et hannonis carthaginiensium ducis commentarii punicis rebus florentissimis explorare ambitum africae iussi, quem secuti plerique e graecis nostrisque et alia quidem fabulosa et urbes multas ab eo conditas ibi prodidere, quarum nec memoria ulla nec vestigium exstat.

scipione aemiliano res in africa gerente polybius annalium conditor, ab eo accepta classe scrutandi illius orbis gratia circumvectus, prodidit a monte eo ad occasum versus saltus plenos feris, quas generat africa; ad flumen anatim [cccclxxxxvi], ab eo lixum [ccv]. agrippa lixum a gaditano freto [cxii] abesse; inde sinum qui vocetur sagigi, oppidum in promunturio mulelacha, flumina sububam et salat, portum rutubis a lixo [ccxxiiii], inde promunturium solis, portum rhysaddir, gaetulos autoteles, flumen quosenum, gentes selatitos et masatos, flumen masathat, flumen darat, in quo crocodilos gigni. dein sinum [dcxvi] includi montis bracae promunturio excurrente in occasum, quod appelletur surrentium. postea flumen salsum, ultra quod aethiopas perorsos, quorum a tergo pharusios. his iungi in mediterraneo gaetulos daras, at in ora aethiopas daratitas, flumen bambotum, crocodilis et hippopotamis refertum. ab eo montes perpetuos usque ad eum, quem theon ochema dicemus. inde ad promunturium hesperu navigationem dierum ac noctium decem. in medio eo spatio atlantem locavit, ceteris omnibus in extremis mauretaniae proditum.

romana arma primum claudio principe in mauretania bellavere, ptolemaeum regem a gaio caesare interemptum ulciscente liberto

aedemone, refugientibusque barbaris ventum constat ad montem atlantem. nec solum consulatu perfunctis atque e senatu ducibus, qui tum res gessere, sed equitibus quoque romanis, qui ex eo praefuere ibi, atlantem penetrasse in gloria fuit. quinque sunt, ut diximus, romanae coloniae in ea provincia, perviumque famae videri potest, sed id plerumque fallacissimum experimento deprehenditur, quia dignitates, si indagare vera pigeat, ignorantiae pudore mentiri non piget, haut alio fidei proniore lapsu quam ubi falsae rei gravis auctor existit. equidem minus miror inconperta quaedam esse equestris ordinis viris, iam vero et senatum inde intrantibus, quam luxuriae, cuius efficacissima vis sentitur atque maxima, cum ebori, citro silvae exquirantur, omnes scopuli gaetuli muricibus, purpuris. indigenae tamen tradunt in ora ab salat [cl] flumen asanam, marino haustu, sed portu spectabile, mox amnem, quem vocant fut, ab eo ad dirim - hoc enim atlanti nomen esse eorum lingua convenit - [cc], interveniente flumine, cui nomen est ivor. ibi pauca extare circa vestigia habitati quondam soli, vinearum palmetorumque reliquias. suetonius paulinus, quem consulem vidimus, primus romanorum ducum transgressus quoque atlantem aliquot milium spatio, prodidit de excelsitate quidem eius quae ceteri, imas radices densis altisque repletas silvis incognito genere arborum, proceritatem spectabilem esse enodi nitore, frondes cupressi similes praeterquam gravitate odoris, tenui eas obduci lanugine, quibus addita arte posse quales e bombyce vestes confici. verticem altis etiam aestate operiri nivibus. decumis se eo pervenisse castris et ultra ad fluvium, qui ger vocatur, per solitudines nigri pulveris, eminentibus interdum velut exustis cautibus, loca inhabitabilia fervore, quamquam hiberno tempore, experto. qui proximos inhabitent saltus, refertos elephantorum ferarumque et serpentium omni genere, canarios appellari, quippe victum eius animalis promiscuum iis esse et dividua ferarum viscera. iunctam aethiopum gentem, quos perorsos vocant, satis constat. iuba ptolemaei pater, qui primus utrique mauretaniae imperitavit, studiorum claritate memorabilior etiam quam regno, similia prodidit de atlante, praeterque gigni herbam ibi euphorbeam nomine, ab inventore medico suo appellatam. cuius lacteum sucum miris laudibus celebrat in claritate visus contraque serpentes et venena omnia privatim dicato volumine. et satis superque de atlante.

tingitanae provinciae longitudo [clxx] est. gentes in ea: quondam praecipua maurorum - unde nomen - quos plerique maurusios dixerunt, attenuata bellis ad paucas recidit familias. proxima illi masaesylorum fuerat; simili modo extincta est. gaetulae nunc tenent gentes, baniurae multoque validissimi autololes et horum pars quondam nesimi, qui avolsi iis propriam fecere gentem versi ad aethiopas. ipsa provincia ab oriente montuosa fert elephantos, in abila quoque monte et quos septem fratres a simili altitudine appellant. freto imminent iuncti abilae. ab iis ora interni maris, flumen tamuda navigabile, quondam et oppidum, flumen laud, et ipsum navigiorum capax. rhysaddir oppidum et portus, malvane fluvius navigabilis. siga oppidum ex adverso malacae in hispania siti, syphacis regia, alterius iam mauretaniae. namque diu regum nomina obtinuere, ut bogutiana appellaretur extuma, itemque bocchi quae nunc caesariensis. ab ea portus magnus, a spatio appellatus, civium romanorum oppido. amnis mulucha, bocchi masaesylorumque finis. quiza cenitana peregrinorum oppidum, arsennaria latinorum, [iii] a mari; cartenna, colonia Augusti legione secunda, item colonia eiusdem deducta cohorte praetoria gunugu. promunturium apollinis oppidumque ibi celeberrimum caesarea, ante vocitatum iol, iubae regia a divo claudio coloniae iure donata; eiusdem iussu deductis veteranis oppidum novum et latio dato tipasa, itemque a vespasiano imperatore eodem munere donatum icosium; colonia Augusti rusguniae, rusucurium civitate honoratum a claudio, rusazus colonia Augusti, saldae colonia eiusdem, item igilgili; oppidum tucca, inpositum mari et flumini ampsagae. intus colonia Augusti aquae, item succhabar, item tubusuptu, civitates timici, tigavae. flumina sardabal, aves, nabar. gens macurebi, flumen vsar, gens nababes. flumen ampsaga abest a caesarea [cccxxii]. utriusque mauretaniae longitudo [30x]30 [xxxviii], latitudo [cccclxvii].

ab ampsaga numidia est, masinissae clara nomine, metagonitis terra a graecis appellata, numidae vero nomades a permutandis pabulis, mapalia sua, hoc est domos, plaustris circumferentes. oppida chullu, rusicade, et ab eo ad [xlviii] in mediterraneo colonia cirta sittianorum cognomine, et alia intus sicca liberumque oppidum bulla regia. at in ora tacatua, hippo regius, flumen armua, oppidum thabraca civium romanorum, tusca fluvius, numidiae finis. nec

praeter marmoris numidici ferarumque proventum aliud insigne ei.

a tusca zeugitana regio et quae proprie vocetur africa est. tria promunturia, candidum, mox apollinis adversum sardiniae, mercuri adversum siciliae, in altum procurrentia duos efficiunt sinus, hipponiensem proximum ab oppido quod hipponem dirutum vocant, diarrhytum graecis dictum propter aquarum rigua. cui finitimum theudalis inmune oppidum, longius a litore. dein promunturium apollinis et in altero sinu vtica civium romanorum, catonis morte nobilis, flumen bagrada, locus castra cornelia, colonia carthago magnae in vestigiis carthaginis, colonia maxula, oppida carpi, missua et liberum clypea in promunturio mercuri, item libera curubis, neapolis. mox africae ipsius alia distinctio. libyphoenices vocantur qui byzacium incolunt. ita appellatur regio [ccl] p. circuitu, fertilitatis eximiae, cum centesima fruge agricolis faenus reddente terra. hic oppida libera leptis, hadrumetum, ruspina, thapsus. inde thenae, aves, macomades, tacape, sabrata, contingens syrtim minorem, ad quam numidiae et africae ab ampsaga longitudo [dlxxx], latitudo, qua cognitum est, [cc]. ea pars, quam africam appellavimus, dividitur in duas provincias, veterem et novam, discretas fossa inter africanum sequentem et reges thenas usque perducta, quod oppidum a carthagine abest [ccxvi].

tertius sinus dividitur in geminos, duarum syrtium vadoso ac reciproco mari diros. ad proximam, quae minor est, a carthagine [ccc] polybius tradit, ipsam centum milium passuum aditu, trecentorum ambitu. et terra autem siderum observatione ad eam per deserta ... . harenis perque serpentes iter est. excipiunt saltus repleti ferarum multitudine et introrsus elephantorum solitudines, mox deserta vasta ultraque garamantes, ab augilis dierum xii itinere distantes. super illos fuere gens psylli, super quos lacus lycomedis, desertis circumdatus. augilae ipsi medio fere spatio locantur, ab aethiopia, quae ad occidentem vergit, et a regione, quae inter duas syrtis interiacet, pari utrimque intervallo, sed litore inter duas syrtis [ccl]. ibi civitas oeensis, cinyps fluvius ac regio, oppida neapolis, taphra, habrotonum, leptis altera, quae cognominatur magna. inde syrtis maior, circuitu [dcxxv], aditu autem [cccxii], inde accolit gens cisippadum. in intimo sinu fuit ora lotophagon, quos quidam machroas dixere, ad philaenorum aras; ex harena sunt hae. ab iis non

procul a continente palus vasta amnem tritonem nomenque ab eo accipit, pallantias appellata callimacho et citra minorem syrtim esse dicta, multis vero inter duas syrtis. promunturium, quod maiorem cludit, borion appellatur. ultra cyrenaica provincia.

ad hunc finem africa a fluvio ampsaga populos dxvi habet, qui romano pareant imperio, in his colonias sex, praeter iam dictas vthinam, thuburbi. oppida civium romanorum xv, ex quibus in mediterraneo dicenda absuritanum, abutucense, aboriense, canopicum, chiniavense, simithuense, thunusidense, thuburnicense, thinidrumense, tibigense, vcitana duo, maius et minus, vagense. oppidum latinum unum vzalitanum. oppidum stipendiarium unum castris corneliis. oppida libera xxx, ex quibus dicenda intus achollitanum, accaritanum, avittense, abziritanum, canopitanum, melizitanum, materense, salaphitanum, tusdritanum, thisicense, tunisense, theudense, tagesense, tigiense, vlusubburitanum, vagense aliud, ... ense, zamense. ex reliquo numero non civitates tantum, sed plerique etiam nationes iure dici possunt, ut nattabutes, capsitani, musulami, sabarbares, massyli, nicives, vamacures, cinithi, musuni, marchubi et tota gaetulia ad flumen nigrim, qui africam ab aethiopia dirimit.

cyrenaica, eadem pentapolitana regio, inlustratur hammonis oraculo, quod a cyrenis abest [cccc] p., fonte solis, urbibus maxime quinque, berenice, arsinoe, ptolemaide, apollonia ipsaque cyrene. berenice in syrtis extimo cornu est, quondam vocata hesperidum supra dictarum, vagantibus graeciae fabulis. nec procul ante oppidum fluvius lethon, lucus sacer, ubi horti memorantur. abest ab lepti [ccclxxv]. ab ea arsinoe, teuchira vocitata, [xliii] et deinde ptolemais, antiquo nomine barce, [xxii]. mox [xl] promunturium phycuus per creticum mare excurrit, distans [cccl] p. a taenaro laconicae promunturio, a creta vero ipsa [cxxv]. post id cyrene, ab mari [xi] passuum, a phycunte apolloniam [xxiiii], ad cherronesum [lxxxviii], unde catabathmum [ccxvi]. accolunt marmaridae, a paraetoni ferme regione ad syrtim maiorem usque porrecti. post eos acrauceles ac iam in ora syrtis nasamones, quos antea mesammones grai appellavere ab argumento loci, medios inter harenas sitos. cyrenaicus ager [xv] p. latitudine a litore et arboribus fertilis habetur, intus eodem spatio frugibus tantum, mox [xxx] latitudine et [ccl] longitudine lasere

modo. post nasamonas asbytae et macae vivunt; ultra eos amantes xi dierum itinere a syrtibus maioribus ad occidentem et ipsi versus harenis circumdati, puteos tamen haut difficile binum ferme cubitorum altitudine inveniunt ibi restagnantibus mauretaniae aquis. domos sale montibus suis exciso ceu lapide construunt. ab iis ad trogodytas hiberni occasus plaga dierum septem iter, cum quibus commercium gemmae tantum, quam carbunculum vocamus, ex aethiopia invectae. intervenit ad solitudines africae super minorem syrtim dictas versa phazania, ubi gentem phazaniorum urbesque alelen et cillibam subegimus, item cidamum e regione sabratae. ab iis mons longo spatio in occasum ab ortu tendit, ater nostris dictus a natura, adusto similis aut solis repercussu accenso. ultra eum deserta, mathelgae oppidum garamantum itemque debris adfuso fonte a medio die ad mediam noctem aquis ferventibus totidemque horis ad medium diem rigentibus, clarissimumque garama, caput garamantum, omnia armis romanis superata et a cornelio balbo triumphata, unius omnium curru externo et quiritium iure donato; quippe gadibus genito civitas romana cum maiore balbo patruo data est. et hoc mirum, supra dicta oppida ab eo capta auctores nostros prodidisse, ipsum in triumpho praeter cidamum et garamam omnium aliarum gentium urbiumque nomina ac simulacra duxisse, quae iere hoc ordine: tabudium oppidum, niteris natio, miglis gemella oppidum, bubeium natio vel oppidum, enipi natio, thuben oppidum, mons nomine niger, nitibrum, rapsa oppida, viscera natio, decri oppidum, flumen nathabur, thapsagum oppidum, tamiagi natio, boin oppidum, pege oppidum, flumen dasibari, mox oppida continua baracum, buluba, alasit, galsa, balla, maxalla, cizania, mons gyri, in quo gemmas nasci titulus praecessit. ad garamantas iter inexplicabile adhuc fuit, latronibus gentis eius puteos - qui sunt non alte fodiendi, si locorum notitia adsit - harenis operientibus. proxumo bello, quod cum oeensibus gessere initiis vespasiani imperatoris, conpendium viae quadridui deprehensum est. hoc iter vocatur praeter caput saxi. finis cyrenaicus catabathmos appellatur, oppidum et vallis repente convexa. ad eum terminum cyrenaica africa a syrti minore [30x]30 [lx] in longitudinem patet, in latitudinem, qua cognitum est, [dccccx].

quae sequitur regio mareotis libya appellatur, aegypto contermina.

tenent marmarides, adyrmachidae, dein mareotae. mensura a catabathmo paraetonium [lxxxvi]. in eo tractu intus apis interest, nobilis religione aegypti locus. ab eo paraetonium [lxii] d, inde alexandriam [cc]. latitudo [clxviiii] est. eratosthenes a cyrenis alexandriam terrestri itinere [dxxv] prodit. agrippa totius africae a mari atlantico cum inferiore aegypto [30xxx]30 [xxxx] longitudinem, polybius et eratosthenes, diligentissimi existimati, ab oceano ad carthaginem magnam [30xi]30, ab ea canopum, nili proximum ostium, [30xvi]30 [lxxxviii] fecerunt, isidorus a tingi canopum [30xxxvi]30 [xcvii], artemidorus xl m minus quam isidorus.

insulas non ita multas complectuntur haec maria. clarissima est meninx, longitudine [xxv], latitudine [xxii], ab eratosthene lotophagitis appellata; oppida habet duo, meningen ab africae latere et altero thoar, ipsa a dextro syrtis minoris promunturio passibus md sita. ab ea [c] p. contra laevum cercina cum urbe eiusdem nominis libera, longa [xxv], lata dimidium eius, ubi plurimum, at in extremo non plus [v]. huic perparva carthaginem versus cercinitis ponte iungitur. ab iis [l] fere passuum lepadusa, longa [vi]; mox gaulos, galata, cuius terra scorpiones, dirum animal africae, necat. dicuntur et in clupea emori, cuius ex adverso cossyra cum oppido. at contra carthaginis sinum duae aegimoeroe, arae autem scopuli verius quam insulae, inter siciliam maxime et sardiniam. auctores sunt et has quondam habitatas subsedisse.

interiore autem ambitu africae ad meridiem versus superque gaetulos, intervenientibus desertis, primi omnium libyes aegyptii, deinde leucoe aethiopes habitant. super eos aethiopum gentes nigritae a quo dictum est flumine, gymnetes pharusi, iam oceanum attingentes quos in mauretaniae fine diximus perorsi. ab his omnibus vastae solitudines orientem versus usque ad garamantas augilasque et trogodytas, verissima opinione eorum, qui desertis africae duas aethiopias superponunt, et ante omnes homeri, qui bipertitos tradit aethiopas, ad orientem occasumque versos. nigri fluvio eadem natura quae nilo. calamum ac papyrum et easdem gignit animantes isdemque temporibus augescit. oritur inter tarraelios aethiopas et oechalicas. horum oppidum magium. quidam solitudinibus interposuerunt atlantas, iuxta eas aegipanas semiferos et blemmyas et gamphasantas et satyros et himantopodas. atlantes degeneres sunt

humani ritus, si credimus. nam neque nominum ullorum inter ipsos appellatio est et solem orientem occidentemque dira inprecatione contuentur ut exitialem ipsis agrisque, neque in somno visunt qualia reliqui mortales. trogodytae specus excavant; hae illis domus, victus serpentium carnes, stridorque, non vox: adeo sermonis commercio carent. garamantes matrimoniorum exortes passim cum feminis degunt. augilae inferos tantum colunt. gamphasantes, nudi proeliorumque expertes, nulli externo congregantur. blemmyis traduntur capita abesse, ore et oculis pectori adfixis; satyris praeter figuram nihil moris humani; aegipanum qualis vulgo pingitur forma; himantopodes loripedes quidam, quibus serpendo ingredi natura sit; pharusi, quondam persae, comites fuisse herculis ad hesperidas tendentis. nec de africa plura quae memorentur occurrunt.

adhaeret asia, quam patere a canopico ostio ad ponti ostium timosthenes [30xxvi]30 [xxxviii] p. tradit, ab ore autem ponti ad os maeotis eratosthenes [30xv]30 [xlv], universam vero cum aegypto ad tanain artemidorus et isidorus [30l]30 [xiii] dccl. maria eius conplura ab accolis traxere nomina: quare simul indicabuntur.

proxima africae incolitur aegyptus, introrsus ad meridiem recedens, donec a tergo praetendantur aethiopes. inferiorem eius partem nilus dextera laevaque divisus amplexu suo determinat, canopico ostio ab africa, ab asia pelusiaco, [clxx] passuum intervallo. quam ob causam inter insulas quidam aegyptum retulere, ita se findente nilo, ut triquetram terrae figuram efficiat, ideoque multi graecae litterae vocabulo delta appellavere aegyptum. mensura ab unitate alvei, unde se primum findit in latera, ad canopicum ostium [cxlvi], ad pelusiacum [clvi] est. summa pars contermina aethiopiae thebais vocatur. dividitur in praefecturas oppidorum, quas νὁμους vocant: ombiten, apollonopoliten, hermonthiten, thiniten, phaturiten, coptiten, tentyriten, diospoliten, antaeopoliten, aphroditopoliten, lycopoliten. quae iuxta pelusium est regio nomos habet pharbaethiten, bubastiten, sethroiten, taniten. reliqua autem arabicum, hammoniacum tendentem ad hammonis iovis oraculum, oxyrynchiten, leontopoliten, athribiten, cynopoliten, hermopoliten, xoiten, mendesium, sebennyten, cabasiten, latopoliten, heliopoliten, prosopiten, panopoliten, busiriten, onuphiten, saiten, ptenethum, ptemphum, naucratiten, meteliten, gynaecopoliten, menelaiten,

alexandriae regionem, item libyae, mareotis. heracleopolites est in insula nili longa p. [l], in qua et oppidum, herculis appellatum. arsinoitae duo sunt; hi et memphites usque ad summum delta perveniunt, cui sunt contermini ex africa duo oasitae. quidam ex iis aliqua nomina permutant et substituunt alios nomos, ut heroopoliten et crocodilopoliten. inter arsinoiten autem ac memphiten lacus fuit circuitu [ccl] aut, ut mucianus tradit, [ccccl] et altitudinis quinquaginta passuum, manu factus, a rege qui fecerat moeridis appellatus. inde [lxii] p. abest memphis, quondam arx aegypti regum, unde ad hammonis oraculum xii dierum iter, ad scissuram autem nili, quod appellavimus delta, [xv].

nilus incertis ortus fontibus, ut per deserta et ardentia et inmenso longitudinis spatio ambulans famaque tantum inermi quaesitus sine bellis, quae ceteras omnes terras invenere, originem, ut iuba rex potuit exquirere, in monte inferioris mauretaniae non procul oceano habet lacu protinus stagnante, quem vocant nilidem. ibi pisces reperiuntur alabetae, coracini, siluri. crocodilus quoque inde ob argumentum hoc caesareae in iseo dicatus ab eo spectatur hodie. praeterea observatum est, prout in mauretania nives imbresve satiaverint, ita nilum increscere. ex hoc lacu profusus indignatur fluere per harenosa et squalentia conditque se aliquot dierum itinere, mox alio lacu maiore in caesariensis mauretaniae gente masaesylum erumpit et hominum coetus veluti circumspicit, isdem animalium argumentis. iterum harenis receptus conditur rursus xx dierum desertis ad proximos aethiopas atque, ubi iterum sensit hominem, prosilit, fonte, ut verisimile est, illo quem nigrim vocavere. inde africam ab aethiopia dispescens, etiamsi non protinus populis, feris tamen et beluis frequens silvarumque opifex, medios aethiopas secat, cognominatus astapus, quod illarum gentium lingua significat aquam e tenebris profluentem. insulas ita innumeras spargit quasdamque tam vastae magnitudinis, quamquam rapida celeritate, ut tamen dierum v cursu, non breviore, transvolet, circa clarissimam earum meroen astabores laevo alveo dictus, hoc est ramus aquae venientis e tenebris, dextra vero astosapes, quod alteris significationem adicit, nec ante nilus quam se totum aquis rursus concordibus iunxit, sic quoque etiamnum giris ante nominatus per aliquot milia et in totum homero aegyptus aliisque triton. subinde insulis impactus, totidem

incitatus inritamentis, postremo inclusus montibus, nec aliunde torrentior, vectus aquis properantibus ad locum aethiopum, qui catadupi vocantur, novissimo catarracte inter occursantes scopulos non fluere inmenso fragore creditur, sed ruere. postea lenis et confractis aquis domitaque violentia, aliquid et spatio fessus, multis quamvis faucibus in aegyptium mare se evomat, certis tamen diebus auctu magno per totam spatiatus aegyptum fecundus innatat terrae.

causas huius incrementi varias prodidere, sed maxime probabiles etesiarum eo tempore ex adverso flantium repercussum, ultra in ora acto mari, aut imbres aethiopiae aestivos, isdem etesiis nubila illo ferentibus e reliquo orbe. timaeus mathematicus occultam protulit rationem: phialam appellari fontem eius, mergique in cuniculos ipsum amnem vapore anhelantem, fumidis cautibus ubi conditur. verum sole per eos dies comminus facto extrahi ardoris vi et suspensum abundare ac, ne devoretur, abscondi. id evenire a canis ortu per introitum solis in leonem, contra perpendiculum fontis sidere stante, cum eo tractu absumantur umbrae, plerisque e diverso opinatis largiorem fluere ad septentriones sole discedente, quod in cancro et leone evenit, ideoque tunc minus siccari, rursus in capricornum et austrinum polum reverso sorberi et ob id parcius fluere. sed timaeo si quis extrahi posse credat, umbrarum defectus iis diebus et locis sine fine adest.

incipit crescere luna nova, quaecumque post solstitium est, sensim modiceque cancrum sole transeunte, abundantissime autem leonem, et residit in virgine isdem quibus adcrevit modis. in totum autem revocatur intra ripas in libra, ut tradit herodotus, centesimo die. cum crescit, reges aut praefectos navigare eo nefas iudicatum est. auctus per puteos mensurae notis deprehenduntur. iustum incrementum est cubitorum xvi. minores aquae non omnia rigant, ampliores detinent tardius recedendo. hae serendi tempora absumunt solo madente, illae non dant sitiente. utrumque reputat provincia. in xii cubitis famem sentit, in xiii etiamnum esurit, xiiii cubita hilaritatem adferunt, xv securitatem, xvi delicias. maximum incrementum ad hoc aevi fuit cubitorum xviii claudio principe, minimum v pharsalico bello, veluti necem magni prodigio quodam flumine aversante. cum stetere aquae, apertis molibus admittuntur. ut quaeque liberata est terra, seritur. idem amnis unus omnium nullas exspirat auras.

dicionis aegyptiae esse incipit a fine aethiopiae syene; ita vocatur paeninsula m passuum ambitu, in qua castra sunt, latere arabiae, et ex adverso insula est [iiii], philae, [dc] p. a nili fissura, unde appellari diximus delta. hoc spatium edidit artemidorus et in eo ccl oppida fuisse, iuba [cccc] p., aristocreon ab elephantide ad mare [dccl]. elephantis insula intra novissimum catarracten [iiii] p. et supra syenen [xvi] habitatur, navigationis aegyptiae finis, ab alexandria [dlxxxv] p.: in tantum erravere supra scripti. ibi aethiopicae veneunt naves; namque eas plicatiles umeris transferunt, quotiens ad catarractas ventum est.

aegyptus super ceteram antiquitatis gloriam [xx] urbium sibi amase regnante habitata praefert, nunc quoque multis etiamsi ignobilibus frequens. celebrantur tamen apollinis, mox leucotheae, diospolis magna, eadem thebe portarum centum nobilis fama, coptos, indicarum arabicarumque mercium nilo proximum emporium, mox veneris oppidum et iterum iovis ac tentyris, infra quod abydus, memnonis regia et osiris templo inclutum, [vii] d p. in libyam remotum a flumine. dein ptolemais et panopolis ac veneris iterum et in libyco lycon, ubi montes finiunt thebaidem. ab iis oppida mercuri, alabastron, canum et supra dictum herculis. deinde arsinoes ac iam dicta memphis, inter quam et arsinoiten nomon in libyco turres quae pyramides vocantur, et labyrinthus, in moeridis lacu nullo addito ligno exaedificatus, et oppidum crialon. unum praeterea intus et arabiae conterminum claritatis magnae, solis oppidum.

sed iure laudetur in litore aegyptii maris alexandria, a magno alexandro condita in africae parte ab ostio canopico [xii] p. iuxta mareotim lacum, qui locus antea rhacotes nominabatur. metatus est eam dinochares architectus pluribus modis memorabili ingenio, [xv] p. laxitate insessa ad effigiem macedonicae chlamydis orbe gyrato laciniosam, dextra laevaque anguloso procursu, iam tum tamen quinta situs parte regiae dicata. mareotis lacus a meridiana urbis parte euripo e canopico ostio mittit ex mediterraneo commercia, insulas quoque plures amplexus, [xxx] traiectu, [ccl] ambitu, ut tradit claudius caesar. alii schoenos in longitudinem patere xl faciunt schoenumque stadia xxx: ita fieri longitudinis [cl] p., tantundem et latitudinis. sunt in honore et intra decursus nili multa oppida, praecipue quae nomina ostiis dedere, non omnibus - xii enim

reperiuntur superque quattuor, quae ipsi falsa ora appellant - , sed celeberrimis vii, proximo alexandriae canopico, dein bolbitino, sebennytico, phatmitico, mendesico, tanitico ultimoque pelusiaco. praeterea butos, pharbaethos, leontopolis, athribis, isidis oppidum, busiris, cynopolis, aphrodites, sais, naucratis, unde ostium quidam naucratiticum nominant quod alii heracleoticum, canopico, cui proximum est, praeferentes.

vltra pelusiacum arabia est, ad rubrum mare pertinens et odoriferam illam ac divitem terram et beatae cognomine inclutam. haec catabanum et esbonitarum et scenitarum arabum vocatur, sterilis, praeterquam ubi syriae confinia attingit, nec nisi casio monte nobilis. his arabes iunguntur, ab oriente canchlei, a meridie cedrei, qui deinde ambo nabataeis. heroopoliticus vocatur alterque laeaniticus vel aelaniticus sinus rubri maris in aegyptum vergentis, [cl] intervallo inter duo oppida, laeana et in nostro mari gazam. agrippa a pelusio arsinoen, rubri maris oppidum, per deserta [cxxv] p. tradit: tam parvo distat ibi tanta rerum naturae diversitas.

iuxta syria litus occupat, quondam terrarum maxuma et plurimis distincta nominibus. namque palaestine vocabatur qua contingit arabas, et iudaea et coele, dein phoenice et qua recedit intus damascena, ac magis etiamnum meridiana babylonia, eadem mesopotamia inter euphraten et tigrin quaque transit taurum sophene, citra vero eam commagene et ultra armeniam adiabene, assyria ante dicta, et ubi ciliciam attingit antiochia. longitudo eius inter ciliciam et arabiam [cccclxx] p. est, latitudo a seleucia pieria ad oppidum in euphrate zeugma [clxxv]. qui subtilius dividunt, circumfundi syria phoenicen volunt et esse oram maritimam syriae, cuius pars sit idumaea et iudaea, dein phoenicen, dein syriam. id quod praeiacet mare totum phoenicium appellatur. ipsa gens phoenicum in magna gloria litterarum inventionis et siderum navaliumque ac bellicarum artium.

a pelusio chabriae castra, casius mons, delubrum iovis casii, tumulus magni pompei. ostracine arabia finitur, a pelusio [lxv] p. mox idumaea incipit et palaestina ab emersu sirbonis lacus, quem quidam [cl] circuitu tradidere. herodotus casio monti adplicuit, nunc est palus modica. oppida rhinocolura et intus rhaphea, gaza et intus anthedon, mons argaris. regio per oram samaria; oppidum ascalo

liberum, azotos, iamneae duae, altera intus. iope phoenicum, antiquior terrarum inundatione, ut ferunt, insidet collem, praeiacente saxo, in quo vinculorum andromedae vestigia ostendit. colitur illic fabulosa ceto. inde apollonia, stratonis turris, eadem caesarea ab herode rege condita, nunc colonia prima flavia a vespasiano imperatore deducta, finis palaestines, [clxxxviiii] p. a confinio arabiae. dein phoenice; intus autem samariae oppida neapolis, quod antea mamortha dicebatur, sebaste in monte, et altiore gamala.

supra idumaeam et samariam iudaea longe lateque funditur. pars eius syriae iuncta galilaea vocatur, arabiae vero et aegypto proxima peraea, asperis dispersa montibus et a ceteris iudaeis iordane amne discreta. reliqua iudaea dividitur in toparchias decem quo dicemus ordine: hiericuntem palmetis consitam, fontibus riguam, emmaum, lyddam, iopicam, acrabatenam, gophaniticam, thamniticam, betholeptephenen, orinen, in qua fuere hierosolyma, longe clarissima urbium orientis, non iudaeae modo, herodium cum oppido inlustri eiusdem nominis.

iordanes amnis oritur e fonte paneade, qui cognomen dedit caesareae, de qua dicemus. amnis amoenus et, quatenus locorum situs patitur, ambitiosus accolisque se praebens velut invitus asphaltiten lacum dirum natura petit, a quo postremo ebibitur aquasque laudatas perdit, pestilentibus mixtas. ergo ubi prima convallium fuit occasio, in lacum se fundit, quem plures genesaram vocant, [xvi] p. longitudinis, [vi] latitudinis, amoenis circumsaeptum oppidis, ab oriente iuliade et hippo, a meridie tarichea, quo nomine aliqui et lacum appellant, ab occidente tiberiade, aquis calidis salubri.

asphaltites nihil praeter bitumen gignit, unde et nomen. nullum corpus animalium recipit, tauri camelique fluitant; inde fama nihil in eo mergi. longitudine excedit [c] p., latitudine maxima [lxxv] implet, minima [vi]. prospicit eum ab oriente arabia nomadum, a meridie machaerus, secunda quondam arx iudaeae ab hierosolymis. eodem latere est calidus fons medicae salubritatis callirrhoe, aquarum gloriam ipso nomine praeferens.

ab occidente litora esseni fugiunt usque qua nocent, gens sola et in toto orbe praeter ceteras mira, sine ulla femina, omni venere abdicata, sine pecunia, socia palmarum. in diem ex aequo convenarum turba renascitur, large frequentantibus quos vita fessos

ad mores eorum fortuna fluctibus agit. ita per saeculorum milia - incredibile dictu - gens aeterna est, in qua nemo nascitur. tam fecunda illis aliorum vitae paenitentia est! infra hos engada oppidum fuit, secundum ab hierosolymis fertilitate palmetorumque nemoribus, nunc alterum bustum. inde masada castellum in rupe, et ipsum haut procul asphaltite. et hactenus iudaea est.

iungitur ei latere syriae decapolitana regio, a numero oppidorum, in quo non omnes eadem observant, primum tamen damascum epoto riguis amne chrysorroa fertilem, philadelphiam, rhaphanam, omnia in arabiam recedentia, scythopolim, antea nysam, a libero patre sepulta nutrice ibi scythis deductis, gadara, hieromice praefluente, et iam dictum hippon, dion, pellam aquis divitem, garasam, canatham. intercursant cinguntque has urbes tetrarchiae - regnorum instar singulae, et regna contribuuntur - trachonitis, paneas, in qua caesarea cum supra dicto fonte, abila, arca, ampeloessa, gabe.

hinc redeundum est ad oram atque phoenicen. fuit oppidum crocodilon, est flumen. memoria urbium dorum, sycaminum. promunturium carmelum et in monte oppidum eodem nomine, quondam acbatana dictum. iuxta getta, geba, rivus pacida sive belus, vitri fertiles harenas parvo litori miscens; ipse e palude cendebia a radicibus carmeli profluit. iuxta colonia claudi caesaris ptolemais, quae quondam acce. oppidum ecdippa, promunturium album. tyros, quondam insula praealto mari dcc passibus divisa, nunc vero alexandri oppugnantis operibus continens; olim partu clara, urbibus genitis lepti, vtica et illa aemula terrarumque orbis avida carthagine, etiam gadibus extra orbem conditis: nunc omnis eius nobilitas conchylio atque purpura constat. circuitus [xviiii] est, intra palaetyro inclusa; oppidum ipsum xxii stadia optinet. inde sarepta et ornithon oppida et sidon, artifex vitri thebarumque boeotiarum parens. a tergo eius libanus mons orsus md stadiis zimyram usque porrigitur, quae coeles syriae cognominatur. huic par, interiacente valle, mons adversus antilibanus obtenditur, quondam muro coniunctus. post eum introrsus decapolitana regio praedictaeque cum ea tetrarchiae et palaestines tota laxitas. at in ora item subiecta libano fluvius magoras, berytus colonia, quae felix iulia appellatur, leontos oppidum, flumen lycos, palaebyblos, flumen adonis, oppida byblos, botrys, gigarta, trieris, calamos, tripolis, quoniam tyrii et sidonii et

aradii optinent, orthosia, eleutheros flumen, oppida zimyra, marathos contraque arados, septem stadiorum oppidum et insula ducentis passibus a continente distans, regio, in qua supradicti desinunt montes, et interiacentibus campis bargylus mons.

incipit hinc rursus syria, desinente phoenice. oppida carne, balanea, paltos, gabala, promunturium, in quo laodicea libera, dipolis, heraclea, charadrus, posidium. dein promunturium syriae antiochiae. intus ipsa antiochia libera, epi daphnes cognominata; oronte amne dividitur. in promunturio autem seleucia libera, pieria appellata. super eam mons eodem quo alius nomine, casius. cuius excelsa altitudo quarta vigilia orientem per tenebras solem aspicit, brevi circumactu corporis diem noctemque pariter ostendens. ambitus ad cacumen [xviiii] p. est, altitudo per derectum [iiii]. at in ora amnis orontes, natus inter libanum et antilibanum iuxta heliopolim. oppida rhosos et a tergo portae, quae syriae appellantur, intervallo rhosiorum montium et tauri. in ora oppidum myriandros, mons amanus, in quo oppidum bomitae. ipse ab syris ciliciam separat.

nunc interiora dicantur. coele habet apameam, marsya amne divisam a nazerinorum tetrarchia, bambycen, quae alio nomine hierapolis vocatur, syris vero mabog - ibi prodigiosa atargatis, graecis autem derceto dicta, colitur - , chalcidem cognominatam ad belum, unde regio chalcidena fertilissima syriae, et inde cyrresticae cyrrum, gazetas, gindarenos, gabenos, tetrarchias duas quae granucomatitae vocantur, hemesenos, hylatas, ituraeorum gentem et qui ex iis baethaemi vocantur, mariamnitanos, tetrarchiam quae mammisea appellatur, paradisum, pagras, penelenitas, seleucias praeter iam dictam duas, quae ad euphraten et quae ad belum vocantur, tardytenses. reliqua autem syria habet, exceptis quae cum euphrate dicentur, arethusios, beroeenses, epiphanenses ad orontem, laodicenos, qui ad libanum cognominantur, leucadios, larisaeos, praeter tetrarchias in regna discriptas barbaris nominibus xvii.

et de euphrate hoc in loco dixisse aptissimum fuerit. oritur in praefectura armeniae maioris caranitide, ut prodidere ex iis, qui proxime viderunt, domitius corbulo, in monte aga, licinius mucianus, sub radicibus montis, quem capoten appellant, supra zimaram [xii] p., initio pyxurates nominatus. fluit derzenen primum, mox

anaeticam, armeniae regiones a cappadocia excludens. dascusa abest a zimara [lxxv] p.; inde navigatur sartonam [l], melitenen cappadociae [xxiiii], elegeam armeniae x, acceptis fluminibus lyco, arsania, arsano. apud elegeam occurrit ei taurus mons nec resistit, quamquam [xii] p. latitudine praevalens. ommam vocant inrumpentem, mox ubi perfregit, euphraten, ultra quoque saxosum et violentum. arabiam inde laeva, orroeon dictam regionem, trischoena mensura, dextraque commagenen disterminat, pontis tamen, etiam ubi taurum expugnat, patiens. apud claudiopolim cappadociae cursum ad occasum solis agit. primo hunc illic in pugna taurus aufert victusque et abscisus sibimet alio modo vincit ac fractum expellit in meridiem. ita naturae dimicatio illa aequatur, hoc eunte quo vult, illo prohibente ire qua velit. a catarractis iterum navigatur. [xl] p. inde commagenes caput samosata.

arabia supra dicta habet oppida edessam, quae quondam antiochia dicebatur, callirrhoen, a fonte nominatam, carrhas, crassi clade nobile. iungitur praefectura mesopotamiae, ab assyriis originem trahens, in qua anthemusia et nicephorium oppida. mox arabes qui praetavi vocantur; horum caput singara. a samosatis autem latere syriae marsyas amnis influit. cingilla commagenen finit, imeneorum civitas incipit. oppida adluuntur epiphania et antiochia, quae ad euphraten vocantur, item zeugma [lxxii] p. a samosatis, transitu euphratis nobile. ex adverso apameam seleucus, idem utriusque conditor, ponte iunxerat. qui cohaerent mesopotamiae, rhoali vocantur. at in syria oppida europum, thapsacum quondam, nunc amphipolis; arabes scenitae. ita fertur usque suram locum, in quo conversus ad orientem relinquit syriae palmyrenas solitudines, quae usque ad petram urbem et regionem arabiae felicis appellatae pertinent.

palmyra, urbs nobilis situ, divitiis soli et aquis amoenis, vasto undique ambitu harenis includit agros ac, velut terris exempta a rerum natura, privata sorte inter duo imperia summa romanorum parthorumque est, prima in discordia semper utrimque cura. abest ab seleucia parthorum, quae vocatur ad tigrim, [cccxxxvii] p., a proximo vero syriae litore [cciii] et a damasco [xxvii] propius.

infra palmyrae solitudines telendena regio est dictaeque iam hierapolis ac beroea et chalcis. ultra palmyram quoque ex

solitudinibus his aliquid obtinet hemesa, item elatium, dimidio propior petrae quam damascus. a sura autem proxime est philiscum, oppidum parthorum ad euphraten. ab eo seleuciam dierum decem navigatio, totidemque fere babylonem. scinditur enim euphrates a zeugmate [dlxxxxiiii] p. circa vicum masicen et parte laeva in mesopotamiam vadit, per ipsam seleuciam circaque eam praefluenti infusus tigri, dexteriore autem alveo babylonem, quondam chaldaeae caput, petit mediamque permeans, item quam mothrim vocant, distrahitur in paludes. increscit autem et ipse nili modo statis diebus, paulum differens, ac mesopotamiam inundat sole optinente xx partem cancri. minui incipit in virginem e leone transgresso, in totum vero remeat in xxviiii parte virginis.

sed redeamus ad oram syriae, cui proxima est cilicia. flumen diaphanes, mons crocodilus, portae amani montis, flumina androcus, pinarus, lycus, sinus issicus, oppidum issos, item alexandria, flumen chlorus, oppidum aegaeae liberum, amnis pyramus, portae ciliciae, oppida mallos, magirsos et intus tarsos. campi alei, oppida casyponis, mopsos liberum, pyramo inpositum, tyros, zephyrium, anchiale. amnes saros, cydnos, tarsum liberam urbem procul a mari secans. regio celenderitis cum oppido, locus nymphaeum, soloe cilicii, nunc pompeiopolis, adana, cibyra, pinare, pedalie, alae, selinus, arsinoe, iotape, dorion iuxtaque mare corycos, eodem nomine oppidum et portus et specus. mox flumen calycadnus, promunturium sarpedon, oppida holmoe, myle, promunturium et oppidum veneris, a quo proxime cyprus insula. sed in continente oppida mysanda, anemurium, coracesium, finisque antiquus ciliciae melas amnis. intus autem dicendi anazarbeni, qui nunc caesarea, augusta, castabala, epiphania, quae ante oeniandos, ele+usa, iconium, seleucia supra amnem calycadnum, tracheotis cognomine, ab mari relata ubi vocabatur hermia. praeterea intus flumina liparis, bombos, paradisus, mons imbarus.

ciliciae pamphyliam omnes iunxere neglecta gente isaurica. oppida eius intus isaura, clibanus, lalasis; decurrit autem ad mare anemuri e regione supra dicti. simili modo omnibus, qui eadem composuere, ignorata est contermina illi gens omanadum, quorum intus oppidum omana. cetera castella xliiii inter asperas convalles latent.

insident verticem pisidae, quondam appellati solymi, quorum colonia caesarea, eadem antiochia. oppida oroanda, sagalessos.

hos includit lycaonia, in asiaticam iurisdictionem versa, cum qua conveniunt philomelienses, tymbriani, leucolithi, pelteni, tyrienses. datur et tetrarchia ex lycaonia, qua parte galatiae contermina est, civitatium xiiii, urbe celeberrima iconio. ipsius lycaoniae celebrantur thebasa in tauro, ide in confinio galatiae atque cappadociae. a latere autem eius super pamphyliam veniunt thracum suboles milyae, quorum arycanda oppidum.

pamphylia ante mopsopia appellata est. mare pamphylium cilicio iungitur. oppida side et in monte aspendum, plantanistum, perga. promunturium leucolla, mons sardemisus. amnes eurymedon, iuxta aspendum fluens, catarractes, iuxta quem lyrnesus et olbia ultimaque eius orae phaselis.

iunctum mare lycium est gensque lycia, unde vastus sinus. taurus mons, ab eois veniens litoribus, chelidonio promunturio disterminat, inmensus ipse et innumerarum gentium arbiter, dextro latere septentrionalis, ubi primum ab indico mari exsurgit, laevo meridianus et ad occasum tendens mediamque distrahens asiam, nisi opprimenti terras occurrerent maria. resilit ergo ad septentriones flexusque inmensum iter quaerit, velut de industria rerum natura subinde aequora opponente, hinc phoenicium, hinc ponticum, illinc caspium et hyrcanium contraque maeotium lacum. torquetur itaque collisus inter haec claustra et tamen victor flexuosus evadit usque ad cognata ripaeorum montium iuga, numerosis nominibus et novis, quacumque incedit, insignis: imaus prima parte dictus, mox emodus, paropanisus, circius, cambades, pariades, choatras, oreges, oroandes, niphates, taurus atque, ubi se quoque exuperat, caucasus, ubi brachia emittit subinde temptanti maria similis, sarpedon, coracesius, cragus, iterumque taurus, etiam ubi dehiscit seque populis aperit, portarum tamen nomine unitatem sibi vindicans, quae aliubi armeniae, aliubi caspiae, aliubi ciliciae vocantur. quin etiam confractus, effugiens quoque maria, plurimis se gentium nominibus hinc et illinc implet, a dextra hyrcanius, caspius, a laeva parihedrus, moschicus, amazonicus, coraxicus, scythicus appellatus, in universum vero graece ceraunius.

in lycia igitur a promunturio eius oppidum simena, mons

chimaera, noctibus flagrans, hephaestium civitas, et ipsa saepe flagrantibus iugis. oppidum olympus ibi fuit, nunc sunt montana gagae, corydalla, rhodiopolis. iuxta mare limyra cum amne, in quem arycandus influit, mons masicytus, andria civitas, myra, oppida aperlae et antiphellos, quae quondam habesos, atque in recessu phellos. dein pyrrha, item xanthus, a mari [xv], flumenque eodem nomine. deinde patara, quae prius pataros, et in monte sidyma, promunturium cragus. ultra par sinus priori; ibi pinara et quae lyciam finit telmesus. lycia lxx quondam oppida habuit, nunc xxxvi habet. ex his celeberrima praeter supra dicta canas, candyba, ubi laudatur eunias nemus, podalia, choma praefluente aedesa, cyaneae, ascandiandalis, amelas, noscopium, tlos, telandrus. conprehendit in mediterraneis et cabaliam, cuius tres urbes oenianda, balbura, bubon. a telmeso asiaticum mare sive carpathium et quae proprie vocatur asia. in duas eam partes agrippa divisit: unam inclusit ab oriente phrygia et lycaonia, ab occidente aegaeo mari, a meridie aegyptio, a septentrione paphlagonia; huius longitudinem [cccclxx], latitudinem [cccxx] fecit. alteram determinavit ab oriente armenia minore, ab occidente phrygia, lycaonia, pamphylia, a septentrione provincia pontica, a meridie mari pamphylio, longam [dlxxv], latam [cccxxv].

in proxima ora caria est, mox ionia, ultra eam aeolis. caria mediae doridi circumfunditur, ad mare utroque latere ambiens. in ea promunturium pedalium, amnis glaucus, deferens telmedium, oppida daedala, crya fugitivorum, flumen axon, oppidum calynda. amnis indus, in cibyratarum iugis ortus, recipit lx perennes fluvios, torrentes vero amplius centum. oppidum caunos liberum, dein pyrnos. portus cressa, a quo rhodus insula passuum [xx]. locus loryma, oppida tisanusa, paridon, larymna, sinus thymnias, promunturium aphrodisias, oppidum hydas, sinus schoenus, regio bubassus. oppidum fuit acanthus, alio nomine dulopolis. est in promunturio cnidos libera, triopia, dein pegusa et stadia appellata. ab ea doris incipit.

sed prius terga et mediterraneas iurisdictiones indicasse conveniat. una appellatur cibyratica; ipsum oppidum phrygiae est. conveniunt eo xxv civitates, celeberrima urbe laodicea. imposita est lyco flumini, latera adluentibus asopo et capro, appellata primo diospolis, dein rhoas. reliqui in eo conventu, quos nominare non pigeat, hydrelitae,

themisones, hierapolitae. alter conventus a synnade accepit nomen; conveniunt lycaones, appiani, corpeni, dorylaei, midaei, iulienses et reliqui ignobiles populi xv. tertius apameam vadit, ante appellatam celaenas, deinde ciboton. sita est in radice montis signiae, circumfusa marsya, obrima, orba fluminibus in maeandrum cadentibus. marsyas ibi redditur, ortus ac paulo mox conditus. ubi certavit tibiarum cantu cum apolline, aulocrene est; ita vocatur convallis, [x] p. ab apamea phrygiam petentibus. ex hoc conventu deceat nominare metropolitas, dionysopolitas, euphorbenos, acmonenses, peltenos, silbianos. reliqui ignobiles viiii.

doridis in sinu leucopolis, hamaxitos, eleus, etene. dein cariae oppida pitaium, eutane, halicarnasus. sex oppida contributa ei sunt a magno alexandro, theangela, side, medmassa, vranium, pedasum, telmisum. habitatur inter duos sinus, ceramicum et iasium. inde myndos et ubi fuit palaemyndus, nariandos, neapolis, caryanda, termera libera, bargylia et, a quo sinus iasius, oppidum iasus. caria interiorum nominum fama praenitet. quippe ibi sunt oppida mylasa libera, antiochia, ubi fuere symmaethos et cranaos oppida; nunc eam circumfluunt maeander et morsynus. fuit in eo tractu et maeandropolis, est eumenia, cludro flumini adposita, glaucus amnis, lysias oppidum et orthosia, berecynthius tractus, nysa, trallis, eadem euanthia et seleucia et antiochia dicta; adluitur eudone amne, perfunditur thebaite. quidam ibi pygmaeos habitasse tradunt. praeterea sunt thydonos, pyrrha, eurome, heraclea, amyzon, alabanda libera, quae conventum eum cognominavit, stratonicea libera, labrayndos, ceramus, troezene, phorontis. longinquiores eodem foro disceptant orthronienses, alindienses, euhippini, xystiani, hydissenses, apolloniatae, trapezopolitae, aphrodisienses liberi. praeter haec sunt coscinus, harpasa, adposita fluvio harpaso, quo et trallicon, cum fuit, adluebatur.

lydia autem perfusa flexuosis maeandri amnis recursibus super ioniam procedit, phrygiae ab exortu solis vicina, ad septentrionem mysiae, meridiana parte cariam amplectens, maeonia ante appellata. celebratur maxime sardibus in latere tmoli montis, qui ante timolus appellabatur, conditis; ex quo profluente pactolo eodemque chrysorroa ac fonte tarni a maeonis civitas ipsa hyde vocitata est, clara stagno gygaeo. sardiana nunc appellatur ea iurisdictio,

conveniuntque in eam extra praedictos macedones cadieni, philadelphini et ipsi in radice tmoli cogamo flumini adpositi maeonii, tripolitani, iidem et antoniopolitae - maeandro adluuntur - , apollonhieritae, mysotimolitae et alii ignobiles.

ionia, ab iasio sinu incipiens, numerosiore ambitu litorum flectitur. in ea primus sinus basilicus, posideum promunturium et oppidum, oraculum branchidarum appellatum, nunc didymei apollinis, a litore stadiis xx, et inde clxxx miletus, ioniae caput, lelegeis ante et pityusa et anactoria nominata, super lxxxx urbium per cuncta maria genetrix nec fraudanda cive cadmo, qui primus prorsam orationem condere instituit. amnis maeander, ortus e lacu in monte aulocrene plurimisque adfusus oppidis et repletus fluminibus crebris, ita sinuosus flexibus, ut saepe credatur reverti, apamenam primum pervagatur regionem, mox eumeneticam ac deinde hyrgaleticos campos, postremo cariam, placidus omnesque eos agros fertilissimo rigans limo, ad decumum a mileto stadium lenis inlabitur mari. inde mons latmus, oppida heraclea, montis eius cognominis carice, myuus, quod primo condidisse iones narrantur athenis profecti, naulochum, priene, in ora, quae troglea appellatur, gaesus amnis, regio omnibus ionibus sacra et ideo panionia appellata; iuxta fugitivis conditum, uti nomen indicio est, phygela fuit et marathesium oppidum. supra haec magnesia maeandri cognomine insignis, thessalica magnesia orta. abest epheso [xv] p., trallibus eo amplius mmm. antea thessaloche et mandrolytia nominata et litori adposita derasidas insulas secum abstulit mari. intus et thyatira adluitur lyco, pelopia aliquando et euhippia cognominata. in ora autem matium, ephesus, amazonum opus, multis antea expetita nominibus, alopes, cum pugnatum apud troiam est, mox ortygiae, amorges. vocata et smyrna est, cognomine trachia, et haemonion et ptelea. attollitur monte pione, adluitur caystro, in cilbianis iugis orto multosque amnes deferente et stagnum pegaseum, quod phyrites amnis expellit. ab iis multitudo limi est, qua terras propagat mediisque iam campis syrien insulam adiecit. fons in urbe callippia et templum dianae conplexi e diversis regionibus duo selenuntes. ab epheso matium aliud colophoniorum et intus ipsa colophon, haleso adfluente. inde apollinis clarii fanum, lebedos - fuit et notium oppidum - , promunturium cyrenaeum, mons mimas [cl] p. excurrens

atque in continentibus campis residens. quo in loco magnus alexander intercidi planitiem eam iusserat [vii] d p. longitudine, ut duos sinus iungeret erythrasque cum mimante circumfunderet. iuxta eas fuerunt oppida pteleon, helos, dorion, nunc est aleon fluvius, corynaeum, mimantis promunturium, clazomenae, parthenie et hippi, chytrophoria appellatae, cum insulae essent. iusserat alexander idem per duo stadia continenti adnecti. interiere intus daphnus et hermesta et sipylum, quod ante tantalis vocabatur, caput maeoniae, ubi nunc est stagnum sale. obiit et archaeopolis, substituta sipylo, et inde illi colpe et huic libade. regredientibus inde abest [xii] p., ab amazone condita, restituta ab alexandro, in ora zmyrna, amne melete gaudens non procul orto. montes asiae nobilissimi in hoc tractu fere explicant se: mastusia a tergo zmyrnae et termetis olympi radicibus iunctus in dracone desinit, draco in tmolo, tmolus in cadmo, ille in tauro. a zmyrna hermus amnis campos secat et nomini suo adoptat. oritur iuxta dorylaum, phrygiae civitatem, multosque colligit fluvios, inter quos phrygem, qui nomine genti dato a caria eam disterminat, hyllum et cryon, ipsos phrygiae, mysiae, lydiae amnibus repletos. fuit in ore eius oppidum temnos, nunc in extremo sinu myrmeces scopuli, oppidum leucae in promunturio, quod insula fuit, finisque ioniae phocaea. zmyrnaeum conventum magna pars et aeoliae, quae mox dicetur, frequentat praeterque macedones hyrcani cognominati et magnetes a sipylo. verum ephesum, alterum lumen asiae, remotiores conveniunt caesarienses, metropolitae, cilbiani inferiores et superiores, mysomacedones, mastaurenses, briullitae, hypaepeni, dioshieritae.

aeolis proxima est, quondam mysia appellata, et quae hellesponto adiacet troas. ibi a phocaea ascanius portus. dein fuerat larisa, sunt cyme, myrina quae sebastopolim se vocat, et intus aegaeae, itale, posidea, neon tichos, temnos. in ora autem titanus amnis et civitas ab eo cognominata - fuit et grynia, nunc tantum portus, olim insula adprehensa - , oppidum elaea et ex mysia veniens caicus amnis, oppidum pitane, canaitis amnis. intercidere canae, lysimachea, atarnea, carene, cisthene, cilla, cocylium, thebe, astyre, chrysa, palaescepsis, gergitha, neandros; nunc est perperene civitas, heracleotes tractus, coryphas oppidum, amnes grylios, ollius, regio aphrodisias quae antea politice orgas, regio scepsis, flumen euenum,

cuius in ripis intercidere lyrnesos, miletos. in hoc tractu ide mons et in ora, quae sinum cognominavit et conventum, adramytteos, olim pedasus dicta, flumina astron, cormalos, crianos, alabastros, hieros ex ida; intus mons gargara eodemque nomine oppidum. rursus in litore antandros, edonis prius vocata, dein cimmeris, assos, eadem apollonia - fuit et palamedium oppidum - , promunturium lectum disterminans aeolida et troada. fuit et polymedia civitas, chrysa et larisa alia. zminthium templum durat. intus colone intercidit. deportant adramytteum negotia apolloniatae a rhyndaco amne, eresi, miletopolitae, poemaneni, macedones asculacae, polichnaei, pionitae, cilices mandacandeni, mysi abretteni et hellespontii appellati et alii ignobiles.

troadis primus locus hamaxitus, dein cebrenia ipsaque troas, antigonia dicta, nunc alexandria colonia romana, oppidum nee, scamander amnis navigabilis et in promunturio quondam sigeum oppidum; dein portus achaeorum, in quem influit xanthus simoenti iunctus stagnumque prius faciens palaescamander; ceteri homero celebrati, rhesus, heptaporus, caresus, rhodius, vestigia non habent. granicus diverso tractu in propontida fluit. est tamen, ut prius, scamandria civitas parva ac mm d p. remotum a portu ilium immune, unde omnis rerum claritas. extra sinum sunt rhoetea litora, rhoeteo et dardanio et arisbe oppidis habitata. fuit et achilleon oppidum, iuxta tumulum achillis conditum a mytilenaeis et mox atheniensibus, ubi classis eius steterat in sigeo. fuit et aeantion, a rhodiis conditum in altero cornu, aiace ibi sepulto xxx stadiorum intervallo a sigeo, et ipso in statione classis suae. supra aeolida et partem troadis in mediterraneo est quae vocatur teuthrania, quam mysi antiquitus tenuere. ibi caicus amnis iam dictus oritur. gens ampla per se, etiam cum totum mysia appellaretur. in ea pioniae, andera, idale, stabulum, conisium, teium, balce, tiare, teuthranie, sarnaca, haliserne, lycide, parthenium, cambre, oxyopum, lygdamum, apollonia longeque clarissimum asiae pergamum, quod intermeat selinus, praefluit cetius profusus pindaso monte. abest haud procul elaea, quam in litore diximus. pergamena vocatur eius tractus iurisdictio. ad eam conveniunt thyatireni, mossyni, mygdones, bregmeni, hierocometae, perpereni, tiareni, hierolophienses, hermocapelitae, attalenses, panteenses, apollonidienses aliaeque inhonorae civitates. a rhoeteo

dardanium oppidum parvum abest stadia lxx. inde [xviii] promunturium trapeza, unde primum concitat se hellespontus.

ex asia interisse gentes tradit eratosthenes solymorum, lelegum, bebrycum, colycantiorum, tripsedorum, isidorus arieneos et capreatas, ubi sit apamea condita a seleuco rege inter ciliciam, cappadociam, cataoniam, armeniam, et quoniam ferocissimas gentes domuisset, initio dameam vocatam.

insularum ante asiam prima est in canopico ostio nili, a canopo, menelai gubernatore, ut ferunt, dicta; altera iuncta ponte alexandriae, colonia caesaris dictatoris, pharos, quondam diei navigatione distans ab aegypto, nunc e turri nocturnis ignibus cursum navium regens: namque fallacibus vadis alexandria tribus omnino aditur alveis mari, stegano, posideo, tauro. in phoenicio deinde mari est ante iopen paria, tota oppidum, in qua obiectam beluae andromedam ferunt, et iam dicta arados, inter quam et continentem l cubita alto mari, ut auctor est mucianus, e fonte dulcis aqua tubo coriis facto usque a vado trahitur.

pamphylium mare ignobiles insulas habet, cilicium ex quinque maximis cyprum, ad ortum occasumque ciliciae ac syriae obiectam, quondam novem regnorum sedem. huius circuitum timosthenes [ccccxxvii] d p. prodidit, isidorus [ccclxxv]. longitudinem inter duo promunturia, clidas et acamanta, quod est ab occasu, artemidorus [clxii] d, timosthenes [cc]; vocatam ante acamantida philonides, cerastim xenagoras et aspeliam et amathusiam et macariam, astynomus crypton et colinian. oppida in ea xv, nea paphos, palaepaphos, curias, citium, corinaeum, salamis, amathus, lapethos, soloe, tamasos, epidaurum, chytri, arsinoe, carpasium, golgoe. fuere et cinyria, mareum, idalium. abest ab anemurio ciliciae [l]. mare quod praetenditur vocant aulona cilicium. in eodem situ elaeusa insula est et quattuor ante promunturium ex adverso syriae clides rursusque ab altero capite stiria, contra neam paphum hiera cepia, contra salamina salaminiae. in lycio autem mari idyris, telendos, attelebussa, cypriae tres steriles et dionysia, prius charaeta dicta, dein contra tauri promunturium pestiferae navigantibus chelidoniae totidem, ab iis cum oppido leucolla, pactyae, lasia, nymphais, macris, megista, cuius civitas interiit. multae deinde ignobiles, sed contra chimaeram dolichiste, choerogylion, crambusa, rhoge, xenagora viii,

daedaleon duae, cryeon tres, strongyle et contra sidyma antiochi glaucumque versus amnem lagusa, macris, didymae, helbo, scope, aspis et, in qua oppidum interiit, telandria proximaque cauno rhodusa.

sed pulcherrima est libera rhodos, circuitu [cxxv] aut, si potius isidoro credimus, [ciii], habitata urbibus lindo, camiro, ialyso, nunc rhodo. distat ab alexandria aegypti [dlxxxiii], ut isidorus tradit, ut eratosthenes, [cccclxviiii], ut mucianus [d], a cypro [clxxvi]. vocitata est antea ophiusa, asteria, aethria, trinacrie, corymbia, poeeessa, atabyria ab rege, dein macaria et oloessa. rhodiorum insulae carpathus, quae mari nomen dedit, casos, hagne, eulimna, nisyros, distans a cnido [xv] d, porphyris antea dicta, et eodem tractu media inter rhodum cnidumque syme; cingitur [xxxvii] d, portus benigne praebet viii. praeter eas circa rhodum cyclopis, teganon, cordylusa, diabatae iiii, hymos, chalce cum oppido, teutlusa, narthecusa, dimastos, progne et a cnido cisserusa, therionarcia, calydne cum tribus oppidis, notio, nisyro, mendetero, et in arconneso oppidum ceramus. in cariae ora quae vocantur argiae numero xx et hyetusa, lepsia, leros. nobilissima autem in eo sinu coos, ab halicarnaso [xv] distans, circuitu [c], ut plures existimant, merope vocata, cea, ut staphylus, meropis, ut dionysius, dein nymphaea. mons ibi prion; et nisyron abruptam illi putant, quae porphyris antea dicta est. caryanda cum oppido, nec procul ab halicarnaso pidossus; in ceramico autem sinu priaponesos, hipponesos, pserima, lampsa, aemyndus, passala, crusa, pyrraethusa, sepiusa, melano paulumque a continente distans quae vocata est cinaedopolis, probrosis ibi relictis a rege alexandro.

ioniae ora aegeas et corseas habet et icaron, de qua dictum est, laden, quae prius late vocabatur, atque inter ignobiles aliquot duas camelitas mileto vicinas, mycalae trogilias tres, philion, argennon, sandalion, samon liberam, circuitu [lxxxvii] d aut, ut isidorus, [c]. partheniam primum appellatam aristoteles tradit, postea dryusam, deinde anthemusam; aristocritus adicit melamphyllum, dein cyparissiam, alii parthenoarrhusam, stephanen. amnes in ea imbrasus, chesius, hibiethes, fontes gigartho, leucothea, mons cercetius. adiacent insulae rhypara, nymphaea, achillea.

par claritate ab ea distat [xciiii] cum oppido chios libera, quam aethaliam ephorus prisco nomine appellat, metrodorus et cleobulus

chiam a chione nympha, aliqui a nive, et macrim et pityusam. montem habet pelinnaeum, marmor chium. circuitu [cxxv] colligit, ut veteres tradidere, isidorus [viiii] adicit. posita est inter samum et lesbum, ex adverso maxime erythrarum. finitimae sunt tellusa, quam alii daphnusam scribunt, oenusa, elaphitis, euryanassa, arginusa cum oppido. iam hae circa ephesum et quae pisistrati vocantur anthinae, myonnesos, diarrheusa - in utraque oppida intercidere - , poroselene cum oppido, cerciae, halone, commone, illetia, lepria, aethre, sphaeria, procusae, bolbulae, pheate, priapos, syce, melane, aenare, sidusa, pele, drymusa, anhydros, scopelos, sycusa, marathusa, psile, perirrheusa multaeque ignobiles. clara vero in alto teos cum oppido, a chio [lxxii] d, tantundem ab erythris. iuxta zmyrnam sunt peristerides, carteria, alopece, elaeusa, bacchina, pystira, crommyonesos, megale, ante troada ascaniae, plateae tres, dein lamiae, plitaniae duae, plate, scopelos, getone, arthedon, coele, lagusae, didymae.

clarissima autem lesbos, a chio [lxv], himerte et lasia, pelasgia, aegira, aethiope, macaria appellata. fuit viiii oppidis incluta: ex his pyrrha hausta est mari, arisbe terrarum motu subversa, antissam methymna traxit in se, ipsa viiii urbibus asiae in [xxxvii] p. vicina. et agamede obiit et hiera; restant eresos, pyrrha et libera mytilene, annis md potens. tota insula circuitur, ut isidorus, [clxviii], ut veteres, [cxcv]. montes habet lepetymnum, ordymnum, macistum, creonem, olympum. a proxima continente abest [vii] d p. insulae adpositae sandalium, leucae v, ex iis cydonea cum fonte calido. arginusae ab aege [iiii] p. distant. dein phellusa, pedna. extra hellespontum adversa sigeo litori iacet tenedus, leucophrys dicta et phoenice et lyrnesos; abest a lesbo [lvi], a sigeo [xii] d.

impetum deinde sumit hellepontus, et mare incumbit, verticibus limitem fodiens, donec asiam abrumpat europae. promunturium id appellavimus trapezam. ab eo [x] p. abydum oppidum, ubi angustiae vii stadiorum. deinde percote oppidum et lampsacum, antea pityussa dictum, parium colonia quam homerus adrastiam appellavit, oppidum priapos, amnis aesepus, zelia, propontis - ita appellatur ubi se dilatat mare - , flumen granicum, artace portus ubi oppidum fuit. ultra insulam continenti iunxit alexander, in qua oppidum milesiorum cyzicum, ante vocitatum arctonnesus et dolionis et didymis, cuius a

vertice mons didymus. mox oppida placia, ariace, scylace, quorum a tergo mons olympus, mysius dictus, civitas olympena, amnes horisius et rhyndacus, ante lycus vocatus; oritur in stagno artynia iuxta miletopolim, recipit maceston et plerosque alios, asiam bithyniamque disterminans. ea appellata est cronia, dein thessalis, dein malianda et strymonis. hos homerus halizonas dixit, quando praecingitur gens mari. urbs fuit inmensa atussa nomine, nunc sunt xii civitates, inter quas gordiu come, quae iuliopolis vocatur. in ora dascylos, dein flumen gelbes et intus helgas oppidum, quae germanicopolis, alio nomine booscoete, sicut apamea, quae nunc myrlea colophoniorum, flumen echeleos, anticus troadis finis et mysiae initium. postea sinus in quo flumen ascanium, oppidum bryalion, amnes hylas et cios cum oppido eiusdem nominis, quod fuit emporium non procul accolentis phrygiae, a milesiis quidem conditum, in loco tamen qui ascania phrygiae vocabatur. quapropter non aliubi aptius de ea dicatur.

phrygia, troadi superiecta populisque a promunturio lecto ad flumen echeleum praedictis, septentrionali sui parte galatiae contermina, meridiana lycaoniae, pisidiae, mygdoniae, ab oriente cappadociam attingit. oppida ibi celeberrima praeter iam dicta ancyra, andria, celaenae, colossae, carina, cotiai+on, cerai+ne, conium, midai+um. sunt auctores transisse ex europa moesos et brygos et thynos, a quibus appellentur mysi, phryges, bithyni.

simul dicendum videtur et de galatia, quae superposita agros maiore ex parte phrygiae tenet caputque quondam eius gordium. qui partem eam insedere gallorum tolostobogi et voturi et ambitouti vocantur; qui maeoniae et paphlagoniae regionem, trogmi. praetenditur cappadocia a septentrione et solis ortu, cuius uberrimam partem occupavere tectosages. ac toto tractu gentes quidem hae, populi vero ac tetrarchiae omnes numero cxcv. oppida tectosagum ancyra, trogmorum tavium, tolostobogiorum pisinuus. praeter hos celebres attalenses, arassenses, comenses, dictienses, hierorenses, lystreni, neapolitani, oeandenses, seleucenses, sebasteni, timoniacenses, thebaseni. attingit galatia et pamphyliae cabaliam et milyas qui circa barim sunt et cyllanicum et oroandicum pisidiae tractum, item lycaoniae partem obizenen. flumina sunt in ea praeter iam dicta saggarium et gallus, a quo nomen traxere matris deum

sacerdotes.

nunc reliqua in ora. a cio intus in bithynia prusa, ab Hannibale sub olympo condita - inde nicaeam [xxv] p. interveniente ascanio lacu - , dein nicaea in ultimo ascanio sinu, quae prius olbia et prusias, item altera sub hypio monte. fuere pythopolis, parthenopolis, coryphanta. sunt in ora amnes aesius, bryazon, plataneus, areus, aesyros, geudos, qui et chrysorroas, promunturium in quo megarice oppidum fuit. inde craspedites sinus vocabatur, quoniam id oppidum velut in lacinia erat. fuit et astacum, unde et ex eo astacenus idem sinus; fuit et libyssa oppidum, ubi nunc Hannibalis tantum tumulus. est in intimo sinu nicomedia bithyniae praeclara. leucatas promunturium, quo includitur astacenus sinus, a nicomedia [xxxvii] d p., rursusque coeuntibus terris angustiae pertinentes usque ad bosporum thracium. in his calchadon libera, a nicomedia [lxii] d p., procerastis ante dicta, dein colpusa, postea caecorum oppidum, quod locum eligere nescissent, vii stadiis distante byzantio, tanto feliciore omnibus modis sede. ceterum intus in bithynia colonia apamena, agrippenses, iuliopolitae, bithynion. flumina syrium, laphias, pharnacias, alces, serinis, lilaeus, Scopas, hieros, qui bithyniam et galatiam disterminat. ultra calchadona chrysopolis fuit, dein nicopolis, a qua nomen etiamnum sinus retinet, in quo portus amyci. dein naulochum promunturium, estiae, templum neptuni. bosporus, d p. intervallo asiam europae iterum auferens, abest a calchadone [xii] d p., inde fauces primae [viii] dccl p., ubi spiropolis oppidum fuit. tenent oram omnem thyni, interiora bithyni. is finis asiae est populorumque cclxxxii, qui ad eum locum a fine lyciae numerantur. spatium hellesponti et propontidis ad bosporum thracium [ccxxxviiii] p. diximus. a calchadone sigeum isidorus [cccxxii] d p. tradit.

insulae in propontide ante cyzicum elaphonnesus, unde cyzicenum marmor, eadem neuris et proconnesus dicta. secuntur ophiusa, acanthus, phoebe, scopelos, porphyrione, halone cum oppido, delphacie, polydora, artacaeon cum oppido. est et contra nicomediam demonzesos, item ultra heracleam adversa bithyniae thynias, quam barbari bithyniam vocant. est et antiochia et contra fauces rhyndaci besbicos, [xviii] p. circuitu. est et elaea et duae rhodusae, erebinthote, megale, chalcitis, pityodes.

pontus euxinus, antea ab inhospitali feritate axinus appellatus, peculiari invidia naturae sine ulla fine indulgentis aviditati maris et ipse inter europam asiamque funditur. non fuerat satis oceano ambisse terras et partem earum aucta inanitate abstulisse, non inrupisse fractis montibus calpeque africae avolsa tanto maiora absorbuisse quam reliquerit spatia, non per hellespontum propontida infudisse iterum terris devoratis: a bosporo quoque in aliam vastitatem panditur nulla satietate, donec exspatianti lacus maeotii rapinam suam iungant. invitis hoc accidisse terris indicio sunt tot angustiae atque tam parva naturae repugnantis intervalla, ad hellespontum dccclxxv p., ad bosporos duos vel bubus meabili transitu - unde nomen ambobus - , etiam quaedam in dissociatione germanitas concors: alitum quippe cantus canumque latratus invicem audiuntur, vocis etiam humanae commercia, inter duos orbes manente conloquio, nisi cum id ipsum auferunt venti. mensuram ponti a bosporo ad maeotium lacum quidam fecere [30xiiii]30 [xxxviii] d, eratosthenes [c] minorem. agrippa a calchadone ad phasim [30x]30, inde bosporum cimmerium [ccclx]. nos intervalla generatim ponimus conperta in aevo nostro, quando etiam in ipso ore cimmerio pugnatum est.

ergo a faucibus bospori est amnis rebas, quem aliqui rhesum dixerunt. dein syris, portus calpas, sangaris fluvius ex inclutis. oritur in phrygia, accipit vastos amnes, inter quos tembrogium et gallum, idem sagiarius plerisque dictus, coralius, a quo incipiunt mariandyni, sinus oppidumque heraclea, lyco flumini adpositum - abest a ponti ore [cc] - , portus acone, veneno aconito dirus, specus acherusia, flumina paedopides, callichorum, sonautes, oppidum tium, ab heraclea [xxxviii] p., fluvius billis. ultra quem gens paphlagonia, quam pylaemeniam aliqui dixerunt, inclusam a tergo galatia, oppidum mastya milesiorum, dein cromna, quo loco enetos adicit nepos cornelius, a quibus in italia ortos cognomines eorum venetos credi debere putat, sesamon oppidum, quod nunc amastris, mons cytorus, a tio [lxiii] p., oppida cimolis, stephane, amnis parthenius. promunturium carambis vasto excursu abest a ponti ostio [cccxxv]

aut, ut aliis placuit, [cccl], tantundem a cimmerio aut, ut aliqui maluere, [cccxii] d. fuit et oppidum eodem nomine et aliud inde armine, nunc est colonia sinope, a cytoro [clxiiii], flumen varecum, gens cappadocum, oppidum caturia gazelum, amnis halys, a radicibus tauri per cataoniam cappadociamque decurrens, oppida gangre, carusa, amisum liberum, a sinope [cxxx], eiusdemque nominis sinus tanti recessus, ut asiam paene insulam faciat, [cc] haut amplius per continentem ad issicum ciliciae sinum. quo in omni tractu proditur tres tantum gentes graecas iure dici, doricam, ionicam, aeolicam, ceteras barbarorum esse. amiso iunctum fuit oppidum eupatoria, a mithridate conditum; victo eo utrumque pompeiopolis appellatum est.

cappadocia intus habet coloniam claudi caesaris archelaidem, quam praefluit amnis halys, oppida comana, quod salius, neocaesaream, quod lycus, amasiam, quod iris, in regione hoc gazacena, in colopene vero sebastiam et sebastopolim - haec parva, sed paria supra dictis - , reliqua sui parte melitam, a samiramide conditam haud procul euphrate, diocaesaream, tyana, castabala, magnopolim, zelam et sub monte argaeo mazacum, quae nunc caesarea nominatur. cappadociae pars praetenta armeniae maiori melitene vocatur, commagenis cataonia, phrygiae garsauritis, sargaurasana, cammaneni, galatiae morimene, ubi disterminat eas cappadox amnis, a quo nomen traxere antea leucosyri dicti. a neocaesarea supra dicta minorem armeniam lycus amnis disterminat. est et coeranus intus clarus, in ora autem ab amiso oppidum et flumen chadisia, lycastum, a quo themiscyrena regio, iris flumen deferens lycum. civitas ziela intus, nobilis clade triarii et victoria c. caesaris. in ora amnis thermodon, ortus ad castellum quod vocant phanorian, praeterque radices amazoni montis lapsus. fuit oppidum eodem nomine et alia quinque, amazonium, themiscyra, sotira, amasia, comana, nunc matium. gentes genetarum, chalybum, oppidum cotyorum, gentes tibareni, mossyni notis signantes corpora, gens macrocephali, oppidum cerasus, portus cordule, gentes bechires, buxeri, flumen melas, gens machorones, sideni flumenque sidenum, quo alluitur oppidum polemonium, ab amiso [cxx]. inde flumina iasonium, melanthium et ab amiso [lxxx] pharnacea oppidum, tripolis castellum et fluvius, item philocalia et sine fluvio liviopolis,

et a pharnacea [c] trapezus liberum, monte vasto clausum. ultra quod gens armenochalybes et maior armenia, [xxx] p. distans. in ora ante trapezunta flumen est pyxites, ultra vero gens sannorum heniochorum, flumen absarrum cum castello cognomine in faucibus, a trapezunte [cxl]. eius loci a tergo montium hiberia est, in ora vero heniochi, ampreutae, lazi, flumina acampseon, isis, nogrus, bathys, gentes colchorum, oppidum matium, flumen heracleum et promunturium eodem nomine clarissimusque ponti phasis. oritur in moschis, navigatur quamlibet magnis navigiis [xxxviii] d p., inde minoribus longo spatio, pontibus cxx pervius. oppida in ripis habuit conplura, celeberrima tyndarida, circaeum, cygnum et in faucibus phasim. maxime autem inclaruit aea, [xv] p. a mari, ubi hippos et cyaneos vasti amnes e diverso in eum confluunt; nunc habet surium tantum, et ipsum ab amne influente ibi cognominatum usque quo magnarum navium capacem esse diximus. et alios accipit fluvios magnitudine numeroque mirabiles, inter quos glaucum. in ore eius insula est sine nomine, ab absarro [lxx]. inde aliud flumen charien, gens saltiae, antiquis phthirophagi dicti, et alia sanni, flumen chobum, e caucaso per suanos fluens, dein rhoan, regio egritice, amnes sigama, thersos, astelephus, chrysorrhoas, gens absilae, castellum sebastopolis, a phaside [c], gens sanigarum, oppidum cygnus, flumen et oppidum penius. deinde multis nominibus heniochorum gentes.

subicitur ponti regio colica, in qua iuga caucasi ad ripaeos montes torquentur, ut dictum est, altero latere in euxinum et maeotium devexa, altero in caspium et hyrcanium mare. reliqua litora ferae nationes tenent melanchlaeni, coraxi, urbe colchorum dioscuriade iuxta fluvium anthemunta nunc deserta, quondam adeo clara, ut timosthenes in eam ccc nationes dissimilibus linguis descendere prodiderit; et postea a nostris cxxx interpretibus negotia gesta ibi. sunt qui conditam eam ab amphito et telchio, castoris ac pollucis aurigis, putent, a quibus ortam heniochorum gentem fere constat. [c] a dioscuriade oppidum heracleum distat, a sebastopoli [lxx]. achaei, mardi, cercetae, post eos seraci, cephalotomi. in intimo eo tractu pityus oppidum opulentissimum ab heniochis direptum est. a tergo eius epagerritae, sarmatarum populus in caucasi iugis, post quae sauromatae. ad hos profugerat mithridates claudio principe

narravitque thalos iis esse confines, qui ab oriente caspii maris fauces attingerent; siccari eas aestu recedente. in ora autem iuxta cercetas flumen icarus, achaei cum oppido hiero et flumine, ab heracleo [cxxxvi]. inde promunturium crunoe, a quo supercilium arduum tenent toretae, civitas sindica, ab hiero [lxvii] d, flumen setheries. inde ad bospori cimmerii introitum [lxxxviii] d.

sed ipsius paeninsulae inter pontum et maeotium lacum excurrentis non amplior [lxvii] d p. longitudo est, latitudo nusquam infra duo iugera; eonem vocant. ora ipsa bospori utrimque ex asia atque europa curvatur in maeotim. oppida in aditu bospori primo hermonasa, dein cepoe milesiorum, mox stratoclia et phanagoria ac paene desertum apaturos ultumoque in ostio cimmerium, quod antea chimerion vocabatur. inde maeotis lacus, in europa dictus.

a cimmerio accolunt maeotici, vali, serbi, serrei, scizi, gnissi. dein tanain amnem gemino ore influentem incolunt sarmatae, medorum, ut ferunt, suboles, et ipsi in multa genera divisi. primi sauromatae gynaecocratumenoe, amazonum conubia; dein naevazae, coitae, cizici, messeniani, costoboci, zecetae, zigae, tindari, thussagetae, tyrcae usque ad solitudines saltuosis convallibus asperas, ultra quas arimphaei, qui ad ripaeos pertinent montes. tanaim ipsum scythae silim vocant, maeotim temarundam, quo significant matrem maris. oppidum in tanais quoque ostio. tenuere finitima primo cares, dein clazomeni et maeones, postea panticapaeenses. sunt qui circa maeotim ad ceraunios montes has tradant gentes: a litore napitas supraque essedonas colchis iunctos montium cacuminibus, dein camacas, oranos, autacas, mazamacas, cantiocaptas, agamathas, picos, rymosolos, acascomarcos et ad iuga caucasi icatalas, imadochos, ramos, anclacas, tydios, carastaseos, authiandas; lagoum amnem ex montibus catheis, in quem defluat opharus, ibi gentes cauthadas, opharitas; amnes menotharum, imityen ex montibus cissiis; infra acdeos, carnas, vscardeos, accisos, gabros, gegaros circaque fontem imityis imityos et apartaeos. alii influxisse eo scythas auchetas, atherneos, asampatas, ab iis tanaitas et napaeos viritim deletos. aliqui flumen ocharium labi per canticos et sapaeos, tanain vero transisse satharcheos herticheos, spondolicos, synhietas, anasos, issos, cataeetas, tagoras, caronos, neripos, agandaeos, meandaraeos, satharcheos spalaeos.

peracta est interior ora ac loca amnesque, accolae: nunc reddatur ingens in mediterraneo situs, in quo multa aliter ac veteres prodituram me non eo infitias, anxia perquisita cura rebus nuper in eo situ gestis a domitio corbulone regibusque inde missis supplicibus aut regum liberis obsidibus. ordiemur autem a cappadocum gente. longissime haec ponticarum omnium introrsus recedens minorem armeniam maioremque et commagenen laevo suo latere transit, dextro vero omnes in asia dictas gentes, plurimis superfusa populis, magnoque impetu scandens ad ortum solis et tauri iuga transit lycaoniam, pisidiam, ciliciam, vadit super antiochiae tractum et usque ad cyrresticam eius regionem parte sua quae vocatur cataonia contendit. itaque ibi longitudo asiae [30xii]30 [l] efficit, latitudo [dcxl].

armenia autem maior incipit a parihedris montibus, euphrate amne, ut dictum est, aufertur cappadociae et, qua discedit euphrates, mesopotamiae haut minus claro amne tigri. utrumque fundit ipsa et initium mesopotamiae facit inter duos amnes exiturae; quod interest ibi, tenent arabes orroei. sic finem usque in adiabenen perfert, ab ea transversis iugis inclusa latitudinem in laeva pandit ad cyrum amnem transversa araxen, longitudinem vero ad minorem usque armeniam, absarro amne in pontum defluente et parihedris montibus, qui fundunt absarrum, discreta ab illa.

cyrus oritur in heniochis montibus, quos alii coraxicos vocavere, araxos eodem monte quo euphrates, [vi] p. intervallo, auctusque amne vsi et ipse, ut plures existimavere, cyro defertur in caspium mare. oppida celebrantur in minore caesarea, aza, nicopolis, in maiore arsamosata euphrati proximum, tigri carcathiocerta, in excelso autem tigranocerta, at in campis iuxta araxen artaxata. universae magnitudinem aufidius quinquagiens centena milia prodidit, claudius caesar longitudinem a dascusa ad confinium caspii maris [30xiii]30 p., latitudinem dimidium eius tigranocerta ad hiberiam. dividitur, quod certum est, in praefecturas, quas strategias vocant, quasdam ex his vel singula regna quondam, barbaris nominibus cxx. claudunt eam montes ab oriente, sed non statim cerauni nec adiabene regio. quod interest spatii, cepheni tenent; ab his iuga ultra adiabeni tenent, per convalles autem proximi armeniae sunt menobardi et moscheni. adiabenen tigris et montes invii cingunt.

ab laeva eius regio medorum est ad prospectum caspii maris. ex oceano hoc, ut suo loco dicemus, infunditur, totumque caucasis montibus cingitur. incolae per confinium armeniae nunc dicentur.

planitiem omnem a cyro usque albanorum gens tenet, mox hiberum, discreta ab iis amne ocazane in cyrum caucasis montibus defluente. praevalent oppida albaniae cabalaca, hiberiae harmastus iuxta flumen, neoris. regio thasie et thriare usque ad parihedros montes. ultra sunt colchicae solitudines, quarum a latere ad ceraunios verso armenochalybes habitant et moschorum tractus ad hiberum amnem in cyrum defluentem et infra eos sacasani et deinde macerones ad flumen absarrum. sic plana aut devexa optinentur. rursus ab albaniae confinio tota montium fronte gentes silvorum ferae et infra lupeniorum, mox diduri et sodi.

ab iis sunt portae caucasiae, magno errore multis caspiae dictae, ingens naturae opus montibus interruptis repente, ubi fores additae ferratis trabibus, subter medias amne diri odoris fluente citraque in rupe castello, quod vocatur cumania, communito ad arcendas transitu gentes innumeras, ibi loci terrarum orbe portis discluso, ex adverso maxime harmasti oppidi hiberum. a portis caucasis per montes gurdinios valli, suani, indomitae gentes, auri tamen metalla fodiunt. ab his ad pontum usque heniochorum plurima genera, mox achaeorum. ita se habet haec terrarum e clarissimis. aliqui inter pontum et caspium mare [ccclxxv] p. non amplius interesse tradiderunt, cornelius nepos [ccl]: tantis iterum angustiis infestatur asia. claudius caesar a cimmerio bosporo ad caspium mare [cl] prodidit eaque perfodere cogitasse nicatorem seleucum quo tempore sit ab ptolemaeo cerauno interfectus. a portis caucasiis ad pontum [cc] esse constat fere.

insulae in ponto planctae sive cyaneae sive symplegades; deinde apollonia thynias dicta, ut distingueretur ab ea quae est in europa - distat a continente p. m, cingitur [iii] - et contra pharnaceam chalceritis, quam graeci ariam dixerunt martique sacram et in ea volucres cum advenis pugnasse pinnarum ictu.

nunc omnibus quae sunt asiae interiora dictis ripaeos montes transcendat animus extraque litore oceani incedat. tribus hic partibus caeli adluens asiam scythicus a septentrione, ab oriente eous, a meridie indicus vocatur varieque per sinus et accolarum conplura

nomina dividitur. verum asiae quoque magna portio adposita septentrioni iniuria sideris rigens vastas solitudines habet. ab extremo aquilone ad initium orientis aestivi scythae sunt. extra eos ultraque aquilonis initia hyperboreos aliqui posuere, pluribus in europa dictos. primum inde noscitur promunturium celticae lytharmis, fluvius carambucis, ubi lassata cum siderum vi ripaeorum montium deficiunt iuga, ibique arimphaeos quosdam accepimus, haut dissimilem hyperboreis gentem. sedes illis nemora, alimenta bacae, capillus iuxta feminis virisque in probro existimatus, ritus clementes. itaque sacros haberi narrant inviolatosque esse etiam feris accolarum populis, nec ipsos modo, sed illos quoque qui ad eos profugerint. ultra eos plane iam scythae, cimmerii, cissi, anthi, georgi et amazonum gens, haec usque ad caspium et hyrcanium mare.

nam et inrumpit e scythico oceano in aversa asiae; pluribus nominibus accolarum appellatum celeberrimum est duobus, caspium et hyrcanium. non minus hoc esse quam pontum euxinum clitarchus putat, eratosthenes ponit et mensuram ab exortu et meridie per cadusiae et albaniae oram [v] cccc stadia, inde per anariacos, amardos, hyrcanos ad ostium zoni fluminis [iiii] dccc, ab eo ad ostium iaxartis mm cccc, quae summa efficit [30xv]30 [lxxv] p. artemidorus hinc detrahit [xxv] p. agrippa caspium mare gentesque quae circa sunt et cum iis armeniam, determinatas ab oriente oceano serico, ab occidente caucasi iugis, a meridie tauri, a septentrione oceano scythico, patere qua cognitum est [cccclxxx] in longitudinem, in latitudinem [ccxc] prodidit. non desunt vero qui eius maris universum circuitum a freto [30xxv]30 p. tradunt.

inrumpit autem artis faucibus et in longitudinem spatiosis atque, ubi coepit in latitudinem pandi, lunatis obliquatur cornibus, velut ad maeotium lacum ab ore descendens, sicilis, ut auctor est M. Varro, similitudine. primus sinus appellatur scythicus; utrimque enim accolunt scythae angustias et inter se commeant, hinc nomades et sauromatae multis nominibus, illinc abzoae non paucioribus. ab introitu dextra mucronem ipsum faucium tenent vdini, scytharum populus, dein per oram albani, ut ferunt, ab iasone orti, unde quod mare ibi est albanum nominatur. haec gens superfusa montibus caucasis ad cyrum amnem, armeniae confinium atque hiberiae, descendit, ut dictum est. supra maritima eius vdinorumque gentem

sarmatae, vti, aorsi, aroteres praetenduntur, quorum a tergo indicatae iam amazones sauromatides. flumina per albaniam decurrunt in mare casus et albanus, dein cambyses, in caucasis ortus montibus, mox cyrus, in coraxicis, uti diximus. oram omnem a caso praealtis rupibus accessum negare per [ccccxxv] p. auctor est agrippa. a cyro caspium mare vocari incipit; accolunt caspi.

corrigendus est in hoc loco error multorum, etiam qui in armenia res proxime cum corbulone gessere. namque ii caspias appellavere portas hiberiae, quas caucasias diximus vocari, situsque depicti et inde missi hoc nomen inscriptum habent. et neronis principis comminatio ad caspias portas tendere dicebatur, cum peteret illas, quae per hiberiam in sarmatas tendunt, vix ullo propter oppositos montes aditu ad caspium mare. sunt autem aliae caspiis gentibus iunctae, quod dinosci non potest nisi comitatu rerum alexandri magni.

namque persarum regna, quae nunc parthorum intellegimus, inter duo maria persicum et hyrcanium caucasi iugis attolluntur. utrimque per devexa laterum armeniae maiori a frontis parte, quae vergit in commagenen, cephenia, ut diximus, copulatur eique adiabene, assyriorum initium, cuius pars est arbilitis, ubi darium alexander debellavit, proxime syriae. totam eam macedones mygdoniam cognominaverunt a similitudine. oppida alexandria, item antiochia quam nesebin vocant; abest ab artaxatis [dccl] p. fuit et ninos, inposita tigri, ad solis occasum spectans, quondam clarissima. reliqua vero fronte, quae tendit ad caspium mare, atrapatene, ab armeniae otene regione discreta araxe. oppidum eius gazae, ab artaxatis [ccccl] p., totidem ab ecbatanis medorum, quorum pars sunt atrapateni.

ecbatana, caput mediae, seleucus rex condidit, a seleucia magna [dccl] p., a portis vero caspiis [xx]. reliqua medorum oppida phisganzaga, apamea, rhagiane cognominata. causa portarum nominis eadem quae supra, interruptis angusto transitu iugis ita ut vix singula meent plaustra, longitudine [viii] p., toto opere manu facto. dextra laevaque ambustis similes inpendent scopuli sitiente tractu per [xxviii] p. angustias impedit corrivatus salis e cautibus liquor atque eadem emissus; praeterea serpentium multitudo nisi hieme transitum non sinit.

adiabenis conectuntur carduchi quondam dicti, nunc cordueni,

praefluente tigri, his pratitae παρ᾽ ὁδὸν appellati, qui tenent caspias portas. iis ab latere altero occurrunt deserta parthiae et citheni iuga. mox eiusdem parthiae amoenissimus situs, qui vocatur choara. duae urbes ibi parthorum oppositae quondam medis, calliope et alia in rupe issatis; ipsum vero parthiae caput hecatompylos; abest a portis [cxxxiii] p. ita parthorum quoque regna foribus discluduntur. egressos portis excipit protinus gens caspia ad litora usque, quae nomen portis et mari dedit. laeva montuosa. ab ea gente retrorsus ad cyrum amnem produntur [ccxxv] p., ab eodem amne si subeatur ad portas, [dcc]. hunc enim cardinem alexandri magni itinerum fecere ab iis portis ad indiae principium stadia [xv] dclxxxx prodendo, ad bactra oppidum, quod appellant zariasta, mmm dcc, inde ad iaxartem amnem [v].

a caspiis ad orientem versus regio est apavortene dicta et in ea fertilitatis inclutae locus dareium, mox gentes tapyri, anariaci, staures, hyrcani, a quorum litoribus idem mare hyrcanium vocari incipit a flumine sideri. citra id amnes maziris, strator, omnia ex caucaso. sequitur regio margiane apricitatis inclutae, sola in eo tractu vitifera, undique inclusa montibus amoenis, ambitu stadiorum m d, difficilis aditu propter harenosas solitudines per [cxx] p., et ipsa contra parthiae tractum sita. in qua alexander alexandriam condiderat, qua diruta a barbaris antiochus seleuci filius eodem loco restituit syrianam interfluente margo, qui corrivatur in zotha lacu; maluerat illam antiochiam appellari. urbis amplitudo circumitur stadiis lxx. in hanc orodes romanos crassiana clade captos deduxit. ab huius excelsis per iuga caucasi protenditur ad bactros usque gens mardorum fera, sui iuris. sub eo tractu gentes orciani, commori, berdrigae, pharmacotrophi, chomarae, choamani, murrasiarae, mandruani, flumina mandrum, chindrum, ultraque chorasmi, gandari, pariani, zarangae, arasmi, marotiani, arsi, gaeli, quos graeci cadusios appellavere, matiani, oppidum heraclea, ab alexandro conditum, quod deinde subversum ac restitutum antiochus achaida appellavit, dribyces, quorum medios fines secat oxus amnis, ortus in lacu oaxo, syrmatae, oxyttagae, moci, bateni, saraparae, bactri, quorum oppidum zariastes, quod postea bactrum a flumine appellatum est. gens haec optinet aversa montis paropanisi exadversus fontes indi; includitur flumine ocho. ultra sogdiani, oppidum panda et in ultimis

eorum finibus alexandria, ab alexandro magno conditum. arae ibi sunt ab hercule ac libero patre constitutae, item Cyro et samiramide atque alexandro, finis omnium eorum ductus ab illa parte terrarum, includente flumine iaxarte, quod scythae silim vocant, alexander militesque eius tanain putavere esse. transcendit eum amnem demodamas, seleuci et antiochi regum dux, quem maxime sequimur in his, arasque apollini didymaeo statuit.

vltra sunt scytharum populi. persae illos sacas universos appellavere a proxima gente, antiqui aramios, scythae ipsi persas chorsaros et caucasum montem croucasim, hoc est nive candidum. multitudo populorum innumera et quae cum parthis ex aequo degat. celeberrimi eorum sacae, massagetae, dahae, essedones, astacae, rumnici, pestici, homodoti, histi, edones, camae, camacae, euchatae, cotieri, authusiani, psacae, arimaspi, antacati, chroasai, oetaei. ibi napaei interisse dicuntur a palaeis. nobilia apud eos flumina mandragaeum et caspasum. nec in alia parte maior auctorum inconstantia, credo propter innumeras vagasque gentes. haustum ipsius maris dulcem esse et alexander magnus prodidit et M. Varro talem perlatum pompeio iuxta res gerenti mithridatico bello, magnitudine haut dubie influentium amnium victo sale. adicit idem pompei ductu exploratum, in bactros septem diebus ex india perveniri ad bactrum flumen quod in oxum influat, et ex eo per caspium in cyrum subvectos, et v non amplius dierum terreno itinere ad phasim in pontum indicas posse devehi merces.

insulae toto eo mari multae, volgata una maxime zazata.

a caspio mari scythicoque oceano in eoum cursus inflectitur, ad orientem conversa litorum fronte. inhabitabilis eius prima pars a scythico promunturio ob nives; proxima inculta saevitia gentium. anthropophagi scythae insident humanis corporibus vescentes; ideo iuxta vastae solitudines ferarumque multitudo, haut dissimilem hominum inmanitatem obsidens. iterum deinde scythae iterumque deserta cum beluis usque ad iugum incubans mari quod vocant tabim. nec ante dimidiam ferme longitudinem eius orae, quae spectat aestivum orientem, inhabitatur illa regio. primi sunt hominum qui noscantur seres, lanicio silvarum nobiles, perfusam aqua depectentes frondium canitiem, unde geminus feminis nostris labos redordiendi fila rursusque texendi: tam multiplici opere, tam longinquo orbe

petitur ut in publico matrona traluceat. seres mites quidem, sed et ipsi feris similes coetum reliquorum mortalium fugiunt, commercia exspectant. primum eorum noscitur flumen psitharas, proximum cambari, tertium lanos, a quo promunturium chryse, sinus cirnaba, flumen atianos, sinus et gens hominum attacorum, apricis ab omni noxio adflatu seclusa collibus, eadem, qua hyperborei degunt, temperie. de iis privatim condidit volumen amometus, sicut hecataeus de hyperboreis. ab attacoris gentes phuni et thocari et, iam indorum, casiri introrsus ad scythas versi - humanis corporibus vescuntur - , nomades quoque indiae vagantur. sunt qui ab aquilone contingi ab ipsis ciconas dixere et brisaros.

sed unde plane constent gentes, hemodi montes adsurgunt indorumque gens incipit, non eoo tantum mari adiacens, verum et meridiano quod indicum appellavimus. quae pars orienti est adversa, recto praetenditur spatio ad flexum et initio indici maris [30xviii]30 [lxxv] colligit, deinde quae se flexit in meridiem, [30xxiiii]30 [lxxv], ut eratosthenes tradit, usque ad indum amnem, qui est ab occidente finis indiae. conplures autem totam eius longitudinem xl dierum noctiumque velifico navium cursu determinavere et a septentrione ad meridiem [30xxviii]30 [l], agrippa longitudinis [30xxxiii]30, latitudinis [30xiii]30 prodidit. posidonius ab aestivo solis ortu ad hibernum exortum metatus est eam, adversam galliam statuens, quam ab occidente aestivo ad occidentem hibernum metabatur, totam a favonio; itaque adversum eius venti adflatum iuvare indiam salubremque fieri haut dubia ratione docuit. alia illi caeli facies, alii siderum ortus; binae aestates in anno, binae messes, media inter illas hieme etesiarum flatus, nostra vero bruma lenes ibi aurae, mare navigabile. gentes ei urbesque innumerae, si quis omnes persequi velit. etenim patefacta est non modo alexandri magni armis regumque qui successere ei, circumvectis etiam in hyrcanium mare et caspium seleuco et antiocho praefectoque classis eorum patrocle, verum et aliis auctoribus graecis, qui cum regibus indicis morati, sicut megasthenes et dionysius a philadelpho missus, ex ea causa vires quoque gentium prodidere. non tamen est diligentiae locus: adeo diversa et incredibilia traduntur. alexandri magni comites in eo tractu indiae, quem is subegerit, scripserunt [v] oppidorum fuisse, nullum coo minus, gentium [viiii], indiamque tertiam partem esse

terrarum omnium, multitudinem populorum innumeram, probabili sane ratione: indi enim gentium prope soli numquam migravere finibus suis. colliguntur a libero patre ad alexandrum magnum reges eorum cliii annis [vi] ccccli; adiciunt et menses iii. amnium mira vastitas; proditur alexandrum nullo die minus stadia dc navigasse indo nec potuisse ante menses v enavigare adiectis paucis diebus, et tamen minorem gange esse constat. seneca, etiam apud nos temptata indiae commentatione, lx amnes eius prodidit, gentes duodeviginti centumque. par labos sit montes enumerare. iunguntur inter se imavus, hemodus, paropanisus, caucasus, a quibus tota decurrit in planitiem inmensam et aegypto similem.

verum ut terrena demonstratio intellegatur, alexandri magni vestigiis insistimus. diognetus et baeton, itinerum eius mensores, scripsere a portis caspiis hecatompylon parthorum quot diximus milia esse, inde alexandriam arion, quam urbem is rex condidit, [dlxxv], prophthasiam drangarum [cxcviiii], arachosiorum oppidum [dlxv], ortospanum [clxxv], inde ad alexandri oppidum [l] - in quibusdam exemplaribus diversi numeri reperiuntur - ; hanc urbem sub ipso caucaso esse positam; ab ea ad flumen copheta et oppidum indorum peucolatim [ccxxxvii], unde ad flumen indum et oppidum taxilla [lx], ad hydaspen fluvium clarum [cxx], ad hypasim non ignobiliorem [30xxv]30 [iiii] [ccclxxxx], qui fuit alexandri itinerum terminus, exuperato tamen amne arisque in adversa ripa dicatis. epistulae quoque regis ipsius consentiunt his. reliqua inde seleuco nicatori peragrata sunt: ad sydrum [clxviiii], iomanem amnem tantundem - aliqua exemplaria adiciunt [v] passuum - , inde ad gangen [cxii] d, ad rhodaphan [dlxviiii] - alii [cccxxv] in hoc spatio produnt - , ad callinipaza oppidum [clxvii] d - alii [cclxv] - , inde ad confluentem iomanis et gangis [dcxxv] - plerique adiciunt [xiii] d - , ad oppidum palibothra [ccccxxv], ad ostium gangis [dcxxxvii] d. gentes, quas memorare non pigeat, a montibus hemodis, quorum promunturium imaus vocatur incolarum lingua nivosum sic significante, isari, cosiri, izi et per iuga chirotosagi multarumque gentium cognomen bragmanae, quorum mactocalingae; flumina prinas et cainnas, quod in gangen influit, ambo navigabilia; gentes calingae mari proximi et supra mandaei, malli quorum mons mallus, finisque tractus eius ganges.

hunc alii incertis fontibus ut nilum rigantemque vicina eodem modo, alii in scythicis montibus nasci dixerunt; influere in eum xviiii amnes, ex iis navigabiles praeter iam dictos crenaccam, rhamnumbovam, casuagum, sonum. alii cum magno fragore ipsius statim fontes erumpere, deiectumque per scopulosa et abrupta, ubi primum molles planities contingat, in quodam lacu hospitari, inde lenem fluere, ubi minimum, [viii] p. latitudine, ubi modicum, stadiorum c, altitudine nusquam minore passuum xx, novissima gente gangaridum calingarum. regia pertalis vocatur; regi [lx] peditum, equites m, elephanti dcc in procinctu bellorum excubant. namque vita mitioribus populis indorum multipertita degitur: tellurem exercent, militiam alii capessunt, merces alii suas evehunt, externas invehunt, res publicas optumi ditissimique temperant, iudicia reddunt, regibus adsident. quintum genus, celebratae ibi et prope in religionem versae sapientiae deditum, voluntaria semper morte vitam accenso prius rogo finit. unum super haec est semiferum ac plenum laboris inmensi - a quo supra dicta continentur - venandi elephantos domandique: his arant, his vehuntur, haec maxime novere pecuaria, his militant dimicantque pro finibus; dilectum in bella vires et aetas atque magnitudo faciunt. insula in gange est magnae amplitudinis, gentem continens unam, nomine modogalingam. ultra siti sunt modubae, molindae, vberae cum oppido eiusdem nominis magnifico, modressae, praeti, calissae, sasuri, passalae, colebae, orumcolae, abali, thalutae. rex horum peditum [l], equitum [iiii], elephantorum [iiii] in armis habet. validior deinde gens andarae, plurimis vicis, xxx oppidis quae muris turribusque muniuntur, regi praebet peditum [c], equitum [ii], elephantos m. fertilissimi sunt auri dardae, setae vero et argenti. sed omnium in india prope, non modo in hoc tractu, potentiam claritatemque antecedunt prasi amplissima urbe ditissimaque palibothra, unde quidam ipsam gentem palibothros vocant, immo vero tractum universum a gange. regi eorum peditum [dc], equitum [xxx], elephantorum [viiii] per omnes dies stipendiantur, unde coniectatio ingens opum est. ab his in interiore situ monaedes et suari, quorum mons maleus, in quo umbrae ad septentrionem cadunt hieme, aestate in austrum, per senos menses. septentriones eo tractu semel anno adparere, nec nisi quindecim diebus, baeton auctor est; hoc idem pluribus locis indiae fieri

megasthenes. austrinum polum indi diamasa vocant. amnis iomanes in gangen per palibothros decurrit inter oppida methora et chrysobora. a gange versa ad meridiem plaga tinguntur sole populi, iam quidem infecti, nondum tamen aethiopum modo exusti; quantum ad indum accedunt, tantum colore praeferunt. indus statim a prasiorum gente, quorum in montanis pygmaei traduntur. artemidorus inter duos amnes [30xxi]30 interesse tradit.

indus, incolis sindus appellatus, in iugo caucasi montis quod vocatur paropanisus adversus solis ortum effusus, et ipse undeviginti recipit amnes, sed clarissimos hydaspen quattuor alios adferentem, cantabam tris, per se vero navigabiles acesinum et hypasim, quadam tamen aquarum modestia nusquam latior l stadiis aut altior xv passibus, amplissimam insulam efficiens, quae prasiane nominatur, et aliam minorem, quae patale. ipse per [30xii]30 [cl] passuum, parcissimis auctoribus, navigatur et quodam solis comitatu in occasum versus oceano infunditur. mensuram orae ad eum ponam, ut invenio, generatim, quamquam inter se nullae congruunt. ab ostio gangis ad promunturium calingon et oppidum dandaguda [dcxxv], ad tropina [30xii]30 [xxv], ad perimulae promunturium, ubi est celeberrimum indiae emporium, [dccl], ad oppidum in insula quam supra diximus patalam [dcxx].

gentes montanae inter eum et iomanem caesi, caetriboni silvestres, dein megallae, quorum regi d elephanti, peditum equitumque numerus incertus, chrysei, parasangae, asmagi, tigri fera scatentes; armant peditum [xxx], elephantos ccc, equites dccc. hos indus includit montium corona circumdatos et solitudinibus. [dcxxv] infra solitudines dari, surae, iterumque solitudines per [clxxxvii], plerumque harenis ambientibus haut alio modo quam insulas mari. infra deserta haec malthaecorae, singae, maroae, rarungae, moruni. hi montium, qui perpetuo tractu oceani in ora pertinent, incolae liberi et regum expertes multis urbibus montanos optinent colles. nareae deinde, quos claudit mons altissimus indicorum capitalia; huius incolae alio latere late auri et argenti metalla fodiunt. ab his oratae, quorum regi elephanti quidem x, sed amplae vires peditum, suarattaratae - et hi sub rege elephantos non alunt fiducia equitum peditumque - odonbaeorae, sarabastrae thorace urbe pulchra, fossis palustribus munita, per quas crocodili humani corporis avidissimi

aditum nisi ponte non dant. et aliud apud illos laudatur oppidum automula, inpositum litori quinque amnium in unum confluente concursu, emporio nobili. regi eorum elephanti m dc, peditum [cl], equitum [v]. pauperior charmarum rex elephantos lx parvasque reliquas vires habet. ab his gens pandae, sola indorum regnata feminis. unam herculi sexus eius genitam ferunt ob idque gratiorem, praecipuo regno donatam; ab ea deducentes originem imperitant ccc oppidis, peditum [cl], elephantis d. post hanc trecentarum urbium seriem derangae, posingae, butae, gogaraei, vmbrae, nereae, brangosi, nobundae, cocondae, nesei, palatitae, salobriasae, orostrae patalam insulam attingentes, a cuius extremo litore ad caspias portas [30xviiii]30 [xxv] produntur.

hinc deinde accolunt indum, adverso eo scandente demonstratione, mathoae, bolingae, gallitalutae, dimuri, megari, ardabae, mesae, abisari, silae; mox deserta in [ccl], quibus exuperatis organagae, abortae, brasuertae, et ab his solitudines prioribus pares. dein sorofages, arbae, marogomatrae, vmbritae ceaeque, quorum xii nationes singulisque binae urbes, asini, trium urbium incolae; caput eorum bucephala, alexandri regis equo, cui fuerat hoc nomen, ibi sepulto conditum. montani super hos caucaso subiecti sosaeadae, sondrae transgressisque indum et cum eo decurrentibus samarabiae, sambraceni, bisambritae, orsi, andiseni, taxilae cum urbe celebri. iam in plana demisso tractu, cui universo nomen amendae, populi quattuor, peucolitae, arsagalitae, geretae, assoi. etenim plerique ab occidente non indo amne determinant, sed adiciunt quattuor satrapias, gedrosos, arachotas, arios, paropanisidas, ultimo fine cophete fluvio, quae omnia ariorum esse aliis placet. nec non et nysam urbem plerique indiae adscribunt montemque merum, libero patri sacrum, unde origo fabulae, iovis femine editum; item aspaganos gentem, vitis et lauri et buxi pomorumque omnium in graecia nascentium fertilem. quae memoranda ac prope fabulosa de fertilitate terrae et genere frugum arborumque aut ferarum ac volucrum et aliorum animalium traduntur, suis quaeque locis in reliqua parte operis commemorabuntur, quattuor satrapiae mox paulo, ad taprobanen insulam festinante animo.

sed ante sunt aliae: patale, quam significavimus in ipsis faucibus indi, triquetra figura, [ccxx] p. latitudine; extra ostium indi chryse et

argyre, fertilis metallis, ut credo: nam quod aliqui tradidere, aureum argenteumque his solum esse, haut facile crediderim. ab his [xx] p. crocala et ab ea [xii] bibaga, ostreis ac conchyliis referta, dein coralliba, [viii] a supra dicta, multaeque ignobiles.

taprobanen alterum orbem terrarum esse diu existimatum est antichthonum appellatione. ut insulam liqueret esse alexandri magni aetas resque praestitere. onesicritus, classis eius praefectus, elephantos ibi maiores bellicosioresque quam in india gigni scripsit, megasthenes flumine dividi, incolasque palaeogonos appellari, auri margaritarumque grandium fertiliores quam indos. eratosthenes et mensuram prodidit, longitudinis [vii] stadium, latitudinis [v], nec urbes esse, sed vicos dccl. incipit ab eoo mari inter ortum occasumque solis indiae praetenta et quondam credita xx dierum navigatione a prasiana gente distare, mox, quia papyraceis navibus armamentisque nili peteretur, ad nostrarum navium cursus vii dierum intervallo taxata. mare interest vadosum, senis non amplius altitudinis passibus, sed certis canalibus ita profundum, ut nullae anchorae sidant. ob id navibus utrimque prorae, ne per angustias alvei circumagi sit necesse; magnitudo ad terna milia amphorum. siderum in navigando nulla observatio; septentrio non cernitur. volucres secum vehunt emittentes saepius meatumque earum terram petentium comitantur. nec plus quaternis mensibus anno navigant. cavent a solstitio maxime centum dies, tunc illo mari hiberno.

hactenus a priscis memorata. nobis diligentior notitia claudi principatu contigit legatis etiam ex ea insula advectis. id accidit hoc modo. anni plocami, qui maris rubri vectigal a fisco redemerat, libertus circa arabiam navigans aquilonibus raptus praeter carmaniam, xv die hippuros portum eius invectus, hospitali regis clementia sex mensum tempore inbutus adloquio percunctanti postea narravit romanos et caesarem. mirum in modum in auditis iustitiam ille suspexit, quod pari pondere denarii essent in captiva pecunia, cum diversae imagines indicarent a pluribus factos, et hoc maxime sollicitatus ad amicitiam legatos quattuor misit principe eorum rachia. ex iis cognitum, d esse oppida, portum contra meridiem adpositum oppido palaesimundo, omnium ibi clarissimo ac regio, [cc] plebis. stagnum intus megisba [ccclxxv] p. ambitu, insulas pabuli tantum fertiles conplexum; ex eo duos amnes erumpere,

palaesimundum iuxta oppidum eiusdem nominis influentem in portum tribus alveis, quinque stadiorum artissimo, xv amplissimo, alterum ad septentriones indiamque versum, cydara nomine. proximum esse indiae promunturium quod vocetur coliacum, quadridui navigatione, medio in cursu solis insula occurrente. mare id colore perviridi, praeterea fruticosum arboribus, iubas earum gubernaculis deterentibus. septentriones vergiliasque apud nos veluti in novo caelo mirabantur, ne lunam quidem apud ipsos nisi ab octava in xvi supra terram aspici fatentes; canopum lucere noctibus, sidus ingens et clarum. sed maxime mirum iis erat umbras suas in nostrum caelum cadere, non in suum, solemque a laeva oriri et in dexteram occidere potius quam e diverso. iidem narravere latus insulae quod praetenderetur indiae [x] stadiorum esse ab oriente hiberno; ultra montes hemodos seras quoque ab ipsis aspici, notos etiam commercio; patrem rachiae commeasse eo; advenis ibi feras occursare, ipsos vero excedere hominum magnitudinem, rutilis comis, caeruleis oculis, oris sono truci, nullo commercio linguae. cetera eadem quae nostri negotiatores: fluminis ulteriore ripa merces positas iuxta venalia tolli ab iis, si placeat permutatio, non aliter odio iustiore luxuriae quam si perducta mens illuc usque cogitet, quid et quo petatur et quare. sed ne taprobane quidem, quamvis extra orbem a natura relegata, nostris vitiis caret. aurum argentumque et ibi in pretio; marmor testudini simile, margaritae gemmaeque in honore; multo praestantior est totus luxuriae nostrae cumulus. ipsorum opes maiores esse dicebant, sed apud nos opulentiae maiorem usum. servum nemini, non in diem aut interdiu somnum, aedificia modice ab humo exstantia, annonam numquam augeri, non fora litesve esse, coli herculem, eligi regem a populo senecta clementiaque, liberos non habentem, et, si postea gignat, abdicari, ne fiat hereditarium regnum. rectores ei a populo xxx dari, nec nisi plurium sententia quemquam capitis damnari; sic quoque appellationem esse ad populum et lxx iudices dari: si liberent ii reum, amplius xxx iis nullam esse dignationem, gravissimo probro. regi cultum liberi patris, ceteris arabum. regem, si quid delinquat, morte multari, nullo interemente, aversantibus cunctis et commercia etiam sermonis negantibus. festa venatione absumi; gratissimam eam tigribus elephantisque constare. agros diligenter coli, vitis usum non esse,

pomis abundare. esse et in piscatu voluptatem, testudinum maxime, quarum superficie familias habitantium contegi: tanta reperiri magnitudine. vitam hominum centum annis modicam.

haec conperta de taprobane. quattuor satrapiae, quas in hunc locum distulimus, ita se habent. a proximis indo gentibus montana. capisene habuit capisam urbem, quam diruit Cyrus. arachosia cum flumine et oppido eiusdem nominis, quod quidam cufim dixere, a samiramide conditum. amnis erymandus, praefluens parabesten arachosiorum. proximos his a meridie ad partem arachotarum faciunt dexendrusos, a septentrione paropanisidas, cartana oppidum sub caucaso, quod postea tetragonis dictum. haec regio est ex adverso bactriae, ariorum deinde cuius oppidum alexandria, a conditore dictum, sydraci, dangalae, parapinae, cataces, mazi; ad caucasum cadrusi, oppidum ab alexandro conditum. infra haec omnia planiora. ab indo ariana regio, ambusta fervoribus desertisque circumdata, multa tamen interfusa opacitate cultores congregat circa duos maxime fluvios, tonberon et arosapen. oppidum artacoana, arius amnis, qui praefluit alexandriam ab alexandro conditam. patet oppidum stadia xxx multoque pulchrius sicut antiquius artacabene, iterum ab antiocho munitum, stadia quinquaginta. dorsigi gens; amnes pharnacotis, ophradus; prophthasia, oppidum zarasparum, drangae, euergetae, zarangae, gedrusi, oppida peucolis, lyphorta, methorcum; deserta; amnis manain, acutri gens, flumen eorum, gens orbi, flumen navigabile pomanus pandarum finibus, item cabirus suarorum, ostio portuosum, oppidum condigramma, flumen cophes. influunt in eum navigabilia saddaros, parospus, sodamus. arianae partem esse daritim aliqui volunt mensuramque produnt utriusque longitudinem [30xviii]30, latitudinem dimidio minorem quam indiae. alii gedrusos et sires posuere per [cxxxviii] p., mox ichthyophagos oritas propria, non indorum, lingua loquentes per [cc] p. ichthyophagos omnes alexander vetuit piscibus vivere. deinde posuere arbiorum gentem per [cc] p. ultra deserta; dein carmania ac persis atque arabia.

sed priusquam generatim haec persequamur, indicari convenit quae prodidit onesicritus classe alexandri circumvectus in mediterranea persidis ex india, enarrata proxime a iuba, deinde eam navigationem, quae his annis comperta servatur hodie.

onesicriti et nearchi navigatio nec nomina omnia habet mansionum nec spatia, primumque xylinepolis ab alexandro condita, unde ceperunt exordium, iuxta quod flumen aut ubi fuerit non satis explanatur. haec tamen digna memoratu produntur ab iis; oppidum a nearcho conditum in navigatione et flumen arbium navium capax; contra insula, distans lxx stadiis, alexandria condita a leonnato iussu alexandri in finibus gentis, argeruus portu salubri, flumen tonberum navigabile, circa quod pasirae; deinde ichthyophagi tam longo tractu, ut xxx dierum spatio praenavigaverint; insula quae solis appellatur et eadem nympharum cubile, rubens, in qua nullum non animal absumitur incertis causis; ori gens, flumen carmaniae hyctanis, portuosum et auro fertile. ab eo primum septentriones apparuisse adnotavere, arcturum neque omnibus cerni noctibus nec totis umquam. achaemenidas usque illo tenuisse. aeris et ferri metalla et arrenici ac mini exerceri. inde promunturium carmaniae est, ex quo in adversam oram ad gentem arabiae macas traiectus distat [l] p.; insulae tres, quarum oracta tantum habitatur aquosa, a continente [xxv] p., insulae quattuor iam in sinu ante persida - circa has hydri marini vicenum cubitorum adnatantes terruere classem - , insula athotadrus, item gauratae, in quibus gyani gens; flumen hyperis in medio sinu persico, onerariarum navium capax, flumen sitioganus, quo pasargadas septimo die navigatur, flumen navigabile phristimus, insula sine nomine, flumen granis modicarum navium - per susianen fluit, dextra eius accolunt dexi montani, qui bitumen perficiunt - , flumen zarotis, ostio difficili nisi peritis, insulae duae parvae; inde vadosa navigatio, palustri similis, per euripos tamen quosdam peragitur; ostium euphratis, lacus quem faciunt eulaeus et tigris iuxta characen, inde tigri susa. festos dies ibi agentem alexandrum invenerunt septimo mense post quam digressus ab iis fuerat patalis, tertio navigationis. sic alexandri classis navigavit; postea ab syagro arabiae promunturio patalen favonio, quem hippalum ibi vocant, peti certissimum videbatur, [30xiii]30 [xxxii] p. aestimatione.

secuta aetas propiorem cursum tutioremque iudicavit, si ab eodem promunturio sigerum portum indiae peteret, diuque ita navigatum est, donec conpendia invenit mercator lucroque india admota est: quippe omnibus annis navigatur, sagittariorum cohortibus inpositis; etenim piratae maxime infestabant. nec pigebit totum cursum ab aegypto

exponere, nunc primum certa notitia patescente: digna res, nullo anno minus hs [30d]30 imperii nostri exhauriente india et merces remittente, quae apud nos centiplicato veneant. mm p. ab alexandria abest oppidum iuliopolis; inde navigant nilo coptum [cccviiii] p., qui cursus etesiis flantibus peragitur xii diebus. a copto camelis itur, aquationum ratione mansionibus dispositis: prima appellatur hydreuma [xxxii], secunda in monte diei itinere, tertia in altero hydreumate a copto [lxxxv], deinde in monte; mox ad hydreuma apollinis a copto [clxxxiiii], rursus in monte; mox ad novum hydreuma a copto [ccxxxvi]. est et aliud hydreuma vetus - trogodyticum nominatur - , ubi praesidium excubat deverticulo duum milium; distat a novo hydreumate [vii]. inde berenice oppidum, ubi portus rubri maris, a copto [cclvii] p. sed quia maior pars itineris conficitur noctibus propter aestus et stativis dies absumuntur, totum a copto berenicen iter duodecimo die peragitur. navigare incipiunt aestate media ante canis ortum aut ab exortu protinus veniuntque tricesimo circiter die ocelim arabiae aut canen turiferae regionis. est et tertius portus qui vocatur muza, quem indica navigatio non petit nec nisi turis odorumque arabicorum mercatores. intus oppidum, regia eius, appellatur sapphar, aliudque save. indos autem petentibus ultilissimum est ab oceli egredi; inde vento hippalo navigant diebus xl ad primum emporium indiae muzirim. non expetendum propter vicinos piratas, qui optinent locum nomine nitrias, neque est abundans mercibus; praeterea longe a terra abest navium statio, lintribusque adferuntur onera et egeruntur. regnabat ibi, cum proderem haec, caelobothras. alius utilior portus gentis neacyndon, qui vocatur becare. ibi regnabat pandion, longe ab emporio in mediterraneo distante oppido quod vocatur modura. regio autem, ex qua piper monoxylis lintribus becaren convehunt, vocatur cottonara. quae omnia gentium portuumve aut oppidorum nomina apud neminem priorum reperiuntur, quo apparet mutari locorum status. ex india renavigant mense aegyptio tybi incipiente, nostro decembri, aut utique mechiris aegyptii intra diem sextum, quod fit intra idus ianuarias nostras: ita evenit ut eodem anno remeent. navigant autem ex india vento volturno et, cum intravere rubrum mare, africo vel austro. nunc revertemur ad propositum.

carmaniae oram patere duodeciens quinquaginta milia passuum

nearchus scripsit. ab initio eius ad flumen sabim [c] p.; inde vineas coli et arva ad flumen ananim xxv milium spatio; regio vocatur armuzia. oppida carmaniae zetis et alexandria.

inrumpit deinde et in hac parte geminum mare in terras, quod rubrum dixere nostri, graeci erythrum a rege erythra aut, ut alii, solis repercussu talem reddi existimantes colorem, alii ab harena terraque, alii tali aquae ipsius natura. sed in duos dividitur sinus. is qui ab oriente est persicus appellatur, [30xxv]30 circuitu, ut eratosthenes tradit; ex adverso est arabia, cuius [30xv]30 longitudo. rursus altero ambitur sinu arabico nominato. oceanum qui influit azanium appellant. persicum introitu [v] latitudinis, alii [iiii] fecerunt. ab eo ad intimum sinum recto cursu [30xi]30 [xxv] propemodum constat esse et situm eius humani capitis effigie. onesicritus et nearchus ab indo amne in sinum persicum atque illinc babylonem euphratis paludibus scripserunt [30xvii]30 esse.

in carmaniae angulo chelonophagi, testudinum superficie casas tegentes, carne vescentes. a flumine arabi promunturium ipsum inhabitant, praeter capita toto corpore hirti coriisque piscium vestiti. ab horum tractu indiam versus caecandrus, deserta insula, in oceano [l] p. traditur iuxtaque eam freto interfluente stoidis, quaestuosa margaritis. a promunturio carmanis iunguntur harmozaei. quidam interponunt arbios, [ccccxxi] p. toto litore. ibi portus macedonum et arae alexandri in promunturio. amnes siccanas, dein dratinus et salsum. ab eo promunturium themisteas; insula aphrodisias habitatur. inde persidis initium ad flumen oratim, quo dividitur ab elymaide. contra persidem insulae psilos, cassandra, aracha cum monte praealto neptuno sacra. ipsa persis adversus occasum sita optinet litore [dl] p., etiam in luxum dives, in parthorum iam pridem translata nomen. horum de imperio nunc in paucis.

regna parthorum duodeviginti sunt omnia; ita enim dividunt provincias circa duo, ut diximus, maria, rubrum a meridie, hyrcanium a septentrione. ex his xi, quae superiora dicuntur, incipiunt a confinio armeniae caspiisque litoribus, pertinent ad scythas, cum quibus ex aequo degunt; reliqua vii regna inferiora appellantur. quod ad parthos attinet, semper fuit parthyaea in radicibus montium saepius dictorum, qui omnes eas gentes praetexunt. habet ab ortu arios, a meridie carmaniam et arianos, ab

occasu pratitas medos, a septentrione hyrcanos, undique desertis cincta. ulteriores parthi nomades appellantur. citra deserta ab occasu urbes eorum quas diximus, issatis et calliope, ab oriente aestivo pyropum, ab hiberno maria, in medio hecatompylos, arsace, regio nisiaea parthyenes nobilis, ubi alexandropolis a conditore.

necessarium est hoc in loco signare et medorum situm terrarumque faciem circumagere ad persicum mare, quo facilius dein reliqua noscantur. namque media, ab occasu transversa oblique parthiae occurrens, utraque regna praecludit. habet ergo ipsa ab ortu caspios et parthos, a meridie sittacenen et susianen, persida, ab occasu adiabenen, ab septentrione armeniam. persae rubrum mare semper accoluere, propter quod is sinus persicus vocatur. regio ibi maritima ceribobus; qua vero ipsa subit ad medos, climax megale appellatur locus arduo montis ascensu per gradus, introitu angusto, ad persepolim, caput regni, dirutam ab alexandro. praeterea habet in extremis finibus laodiceam ab antiocho conditam. inde ad orientem magi optinent phrasargida castellum, in quo cyri sepulchrum; est et horum ecbatana oppidum, translatum ab dario rege ad montes. inter parthos et arianos excurrunt paraetaceni. his gentibus et euphrate inferiora regna cluduntur. reliqua dicemus a mesopotamia, excepto mucrone eius arabumque populis in priore dictis volumine.

mesopotamia tota assyriorum fuit, vicatim dispersa praeter babylona et ninum. macedones eam in urbes congregavere propter ubertatem soli. oppida praeter iam dicta habet seleuciam, laodiceam, artemitam; item in arabum gente qui orroei vocantur et mardani antiochiam, quae a praefecto mesopotamiae nicanore condita arabis vocatur. iunguntur his arabes introrsus eldamari, supra quos ad pallacontam flumen bura oppidum, salmani et masei arabes; gordyaeis vero iuncti azoni, per quos zerbis fluvius in tigrim cadit, azonis silices montani et orontes, quorum ad occidentem oppidum gaugamela, item suae in rupibus. supra silicas sitrae, per quos lycus ex armenia fertur; ab sitris ad hibernum exortum azochis oppidum, mox in campestribus oppida diospege, polytelia, stratonicea, anthemus. in vicinia euphratis nicephorion, quod diximus, alexander iussit condi propter loci opportunitatem. dicta est et in zeugmate apamea, ex qua orientem petentes excipit oppidum caphrena munitum, quondam stadiorum lxx amplitudine et satraparum regia

appellatum, quo tributa conferebantur, nunc in arcem redactum. durant, ut fuere, thebata et, ductu pompei magni terminus romani imperi, oruros, a zeugmate [l] cc. sunt qui tradunt euphraten gobaris praefecti opere diductum esse ubi diximus findi, ne praecipiti cursu babylona infestaret, ab assyriis vero universis appellatum narmalchan, quod significat regium flumen. qua dirivatur, oppidum fuit agranis e maximis, quod diruere persae. babylon, chaldaicarum gentium caput, diu summam claritatem inter urbes obtinuit toto orbe, propter quod reliqua pars mesopotamiae assyriaeque babylonia appellata est, [lx] p. amplexa ii muris ducenos pedes altis, quinquagenos latis, in singulos pedes ternis digitis mensura ampliore quam nostra, interfluo euphrate, mirabili opere utroque. durat adhuc ibi iovis beli templum; inventor hic fuit sideralis scientiae. cetero ad solitudinem rediit exhausta vicinitate seleuciae, ob id conditae a nicatore intra xl lapidem in confluente euphratis fossa perducti atque tigris, quae tamen babylonia cognominatur, libera hodie ac sui iuris macedonumque moris. ferunt ei plebis urbanae [dc] esse, situm vero moenium aquilae pandentis alas, agrum totius orientis fertilissimum. invicem ad hanc exhauriendam ctesiphontem iuxta tertium ab ea lapidem in chalonitide condidere parthi, quod nunc caput est regnorum, et postquam nihil proficiebatur, nuper vologesus rex aliud oppidum vologesocertam in vicino condidit. sunt etiamnum in mesopotamia oppida hipparenum, chaldaeorum doctrina et hoc, sicut babylon, iuxta fluvium narragam qui cadit in narragam, unde civitati nomen. muros hipparenorum persae diruere. orcheni quoque, tertia chaldaeorum doctrina, in eodem situ locantur ad meridiem versi. ab his notitae et orothophanitae et gnesiochartae.

euphrate navigari babylonem e persico mari [ccccxii] p. tradunt nearchus et onesicritus; qui vero postea scripsere, ad seleuciam [ccccxl]; iuba a babylone characen [clxxv] d. fluere aliqui ultra babylona continuo alveo, prius quam distrahitur ad rigua, [lxxxvii], universo autem cursu [30xii]30 p. inconstantiam mensurae diversitas auctorum facit, cum persae quoque schoenos et parasangas alii alia mensura determinent. ubi desiit alveo munire, ad confinium characis accedente tractu, statim infestant attali latrones, arabum gens, ultra quos scenitae, ambitu vero euphratis nomades arabiae usque ad deserta syriae, unde in meridiem flecti eum diximus, solitudines

palmyrenas relinquentem. seleucia abest a capite mesopotamiae euphrate navigantibus [30xi]30 [xxv] p., a mari rubro, si tigri navigetur, [cccxx], a zeugmate [dccxxiiii], zeugma ab seleucia syriae ad nostrum litus [clxxv]. haec est ibi latitudo terrarum inter duo maria, parthici vero regni [dccccxliiii].

est etiamnum oppidum mesopotamiae in ripa tigris circa confluentes, quod vocant digbam. sed et de tigri ipso dixisse conveniat.

oritur in regione armeniae maioris, fonte conspicuo in planitie. loco nomen elegosine est; ipsi qua tardior fluit diglito; unde concitatur, a celeritate tigris incipit vocari: ita appellant medi sagittam. influit in lacum aretissam, omnia inlata pondera sustinentem et nitrum nebulis exhalantem. unum genus ei piscium est, idque transcurrentis non miscetur alveo, sicut neque e tigri pisces in lacum transnatant. fertur autem et cursu et colore dissimilis transvectusque occurrente tauro monte in specum mergitur subterque lapsus a latere altero eius erumpit. locus vocatur zoaranda; eundem esse manifestum, quod demersa perfert. alterum deinde transit lacum, qui thospites appellatur, rursusque in cuniculos mergitur, post [xxii] p. circa nymphaeum redditur. tam vicinum arsaniae fluere eum in regione arrhene claudius caesar auctor est, ut, cum intumuere, confluant nec tamen misceantur leviorque arsanias innatet mmmm ferme spatio, mox divisus in euphraten mergatur. tigris autem, ex armenia acceptis fluminibus claris parthenia ac nicephorione, arabas orroeos adiabenosque disterminans et quam diximus mesopotamiam faciens, lustratis montibus gordyaeorum circa apameam mesenes oppidum, citra seleuciam babyloniam [cxxv] p. divisus in alveos duos, altero meridiem ac seleuciam petit mesenen perfundens, altero ad septentrionem flexus eiusdem gentis tergo campos cauchas secat. ubi remeavere aquae, pasitigris appellatur, postea recipit ex media choaspen atque, ut diximus, inter seleuciam et ctesiphontem vectus in lacus chaldaicos se fundit eosque [lxii] p. amplitudine implet; mox vasto alveo profusus dextra characis oppidi infertur mari persico [x] p. ore. inter duorum amnium ostia [xxv] p. fuere, ut alii tradunt, [vii], utroque navigabili. sed longo tempore euphraten praeclusere orcheni et accolae agros rigantes, nec nisi per tigrim defertur in mare.

proxima tigri regio parapotamia appellatur. in ea dictum est de

mesene; oppidum eius dabitha. cui iungitur chalonitis cum ctesiphonte, non palmetis modo, verum et olea pomisque arbusta. ad eam pervenit zagrus mons, ex armenia inter medos adiabenosque veniens supra paraetacenen et persida. chalonitis abest a perside [ccclxxx] p.; tantum a caspio mari et a syria abesse conpendio itineris aliqui tradunt. inter has gentes atque mesenen sittacene est, eadem arbelitis et palaestine dicta. oppidum eius sittace graecorum, ab ortu et sabdata, ab occasu autem antiochia inter duo flumina tigrim et tornadotum, item apamea, cui nomen antiochus matris suae inposuit; tigri circumfunditur haec, dividitur archoo. infra est susiane, in qua vetus regia persarum susa, a dario hystaspis filio condita; abest ab seleucia babylonia [ccccl] p., tantundem ab ecbatanis medorum per montem carbantum. in septentrionali tigris alveo oppidum est barbitace; abest a susis cxxxv p. ibi mortalium soli auri miro odio contrahunt id defodiuntque, ne cui sit in usu. susianis ad orientem versus iunguntur oxii latrones et mizaeorum xl populi, liberae feritatis. supra eos parent parthis mardi et saitae ii qui praetenduntur supra elymaida, quam persidi in ora iunximus. susa a persico mari absunt [ccl] p. qua subiit ad eam classis alexandri pasitigri, vicus ad lacum chaldaicum vocatur aple, unde susa navigatione [lxii] d p. absunt. susianis ab oriente proximi sunt cossiaei, supra cossiaeos ad septentrionem massabatene sub monte cambalido, qui est caucasi ramus, inde mollissimo transitu in bactros.

susianen ab elymaide disterminat amnis eulaeus, ortus in medis modicoque spatio cuniculo conditus ac rursus exortus et per massabatenen lapsus. circumit arcem susorum ac dianae templum augustissimum illis gentibus, et ipse in magna caerimonia, siquidem reges non ex alio bibunt et ob id in longinqua portant. recipit amnes hedyphon praeter asylum persarum venientem, adunam ex susianis. oppidum iuxta eum magoa, a charace [xv] p.; quidam hoc in extrema susiane ponunt solitudinibus proximum. infra eulaeum elymais est in ora iuncta persidi, a flumine orati ad characem [ccxl] p. oppida eius seleucia et sostrate, adposita monti chasiro. oram, quae praeiacet, minorum syrtium vice diximus inaccessam caeno, plurimum limi deferentibus brixa et ortacia amnibus, madente et ipsa elymaide in tantum, ut nullus sit nisi circuitu eius ad persidem aditus. infestatur et serpentibus, quos flumina deportant. pars eius maxime invia

characene vocatur ab oppido arabiae claudente regna ea, de quo dicemus exposita prius m. agrippae sententia. namque is mediam et parthiam et persidem ab oriente indo, ab occidente tigri, a septentrione tauro caucasio, a meridie rubro mari terminatas patere in longitudinem [30xiii]30 [xx] p., in latitudinem [dcccxl] prodidit, praeterea per se mesopotamiam, ab oriente tigri, ab occasu euphrate, a septentrione tauro, a meridie mari persico inclusam, longitudine [dccc] p., latitudine [ccclx].

charax, oppidum persici sinus intimum, a quo arabia eudaemon cognominata excurrit, habitatur in colle manu facto inter confluentes dextra tigrim, laeva eulaeum, [ii] p. laxitate. conditum est primum ab alexandro magno, colonis ex urbe regia durine, quae tum interiit, deductis, militum inutilibus ibi relictis; alexandriam appellari iusserat pagumque pellaeum a patria sua, quem proprie macedonum fecerat. flumina id oppidum expugnavere; postea restituit antiochus quintus regum et suo nomine appellavit, iterumque infestatum spaosines sagdodonaci filius, rex finitimorum arabum, quem iuba satrapen antiochi fuisse falso tradit, oppositis molibus restituit nomenque suum dedit, emunito situ iuxta in longitudinem [vi] p., in latitudinem paulo minus. prius fuit a litore stadiis x - maritimum etiam vipsania porticus habet - , iuba vero prodente [l] p.; nunc abesse a litore [cxx] legati arabum nostrique negotiatores, qui inde venere, adfirmant. nec ulla in parte plus aut celerius profecere terrae fluminibus invectae. magis id mirum est, aestu longe ultra id accedente non repercussas. hoc in loco genitum esse dionysium, terrarum orbis situs recentissimum auctorem, quem ad commentanda omnia in orientem praemiserit Divus Augustus ituro in armeniam ad parthicas arabicasque res maiore filio, non me praeterit nec sum oblitus sui quemque situs diligentissimum auctorem visum nobis introitu operis: in hac tamen parte arma romana sequi placet nobis iubamque regem, ad eundem gaium caesarem scriptis voluminibus de eadem expeditione arabica.

arabia, gentium nulli postferenda amplitudine, longissime a monte amano e regione ciliciae commagenesque descendit, ut diximus, multis gentibus eorum deductis illo a tigrane magno, sponte vero ad mare nostrum litusque aegyptium, ut docuimus, nec non et in media syriae ad libanum montem penetrantibus nubaeis, quibus iunguntur

ramisi, dein teranei, dein patami. ipsa vero paeninsula arabia, inter duo maria rubrum persicumque procurrens, quodam naturae artificio ad similitudinem atque magnitudinem italiae mari circumfusa, in eandem etiam caeli partem nulla differentia spectat, haec quoque in illo situ felix. populos eius a nostro mari usque ad palmyrenae solitudines diximus: reliqua nunc inde peragemus.

nomadas infestatoresque chaldaeorum scenitae, ut diximus, cludunt, et ipsi vagi, sed a tabernaculis cognominati, quae ciliciis metantur ubi libuit. deinde nabataei oppidum incolunt, petram nomine, in convalle paulo minus [ii] p. amplitudinis, circumdatum montibus inaccessis, amne interfluente. abest ab gaza oppido litoris nostri [dc], a sinu persico [cxxxv]. huc convenit utrumque bivium, eorum qui ex syria palmyram petiere et eorum qui a gaza venerunt. a petra incoluere omani ad characen usque, oppidis quondam claris ab samiramide conditis abaesamide et soractia; nunc sunt solitudines. deinde est oppidum quod characenorum regi paret in pasitigris ripa, forat nomine, in quod a petra conveniunt, characenque inde [xii] p. secundo aestu navigant, e parthico autem regno navigantibus vicus teredon. infra confluentem euphratis et tigris laeva fluminis chaldaei optinent, dextra nomades scenitae. quidam et alia duo oppida longis intervallis tigri praenavigari tradunt, barbatiam, mox dumatham, quod abesse a petra dierum x navigatione. nostri negotiatores dicunt characenorum regi parere et apameam, sitam ubi restagnatio euphratis cum tigri confluat; itaque molientes incursionem parthos operibus obiectis inundatione arceri.

nunc a charace dicemus oram, epiphani primum exquisitam. locus ubi euphratis ostium fuit, flumen salsum, promunturium caldone, voragini similius quam mari aestuarium per [l] orae, flumen achenum, deserta [c] p. usque ad insulam icarum, sinus capeus, quem accolunt gaulopes et gattaei, sinus gerrhaicus, oppidum gerrha, [v] p. amplitudine; turres habet ex salis quadratis molibus. a litore [l] regio attene, ex adverso tylos insula, totidem milibus a litore, plurimis margaritis celeberrima cum oppido eiusdem nominis, iuxtaque altera minor, a promunturio eius [xii] d p. ultra magnas aspici insulas tradunt, ad quas non sit perventum; huius ambitum [cxii] d p., a perside longius abesse, adiri uno alveo angusto. insula ascliae, gentes nochaeti, zurazi, borgodi, catharraei, nomades, flumen cynos. ultra

navigationem inconpertam ab eo latere propter scopulos tradit iuba praetermissa mentione oppidi omanorum batrasavaves et omanae, quod priores celebrem portum carmaniae fecere, item homnae et attanae, quae nunc oppida maxime celebrari a persico mari nostri negotiatores dicunt. a flumine canis, ut iuba, mons adusto similis, gentes epimaranitae, mox ichthyophagi, insula deserta, gentes bathymi ... eblythaei montes, insula omoemus, portus mochorbae, insulae etaxalos, inchobriche, gens cadaei, insulae sine nominibus multae, celebres vero isura, rhinnea et proxima, in qua scriptae sunt stelae lapideae litteris incognitis, coboea portus, bragae insulae desertae, gens taludaei, dabanegoris regio, mons orsa cum portu, sinus duatas, insulae multae, mons tricoryphos, regio chardaleon, insulae solanades, cachina, item ichthyophagorum. dein clari, litus mamaeum, ubi auri metalla, regio canauna, gentes apitami, casani, insula devade, fons coralis, carphati, insulae alaea, amnamethus, gens darae, insulae chelonitis, ichthyophagon multae, odanda deserta, basa, multae sabaeorum. flumina thanar, amnum, insulae doricae, fontes daulotos, dora, insulae pteros, labatanis, coboris, sambrachate et oppidum eodem nomine in continente. a meridie insulae multae, maxima camari, flumen musecros, portus laupas, scenitae sabaei, insulae multae, emporium eorum acila, ex quo in indiam navigatur, regio amithoscatta, damnia, mizi maiores et minores, drymatina, macae; horum promunturium contra carmaniam distat [l] p. mira res ibi traditur; numenium, ab antiocho rege mesenae praepositum, ibi vicisse eodem die classe aestuque reverso iterum equitatu contra persas dimicantem et gemina tropaea eodem in loco iovi ac neptuno statuisse. insula in alto obiacet ogyris, clara erythra rege ibi sepulto; distat a continente [cxxv] p., circumitur [cxii] d. nec minus altera clara in azanio mari dioscuridu, distans a syagro extumo promunturio [cclxxx]. reliqui in continente a noto etiamnum autaridae, in montes viii dierum transitus, gens larendani et catabani, gebbanitae pluribus oppidis, sed maximis nagia et thomna, templorum lxv; haec est amplitudinis significatio. promunturium, a quo ad continentem trogodytarum [l], thoani, actaei, chatramotitae, tonabaei, antiadalaei, lexianae, agraei, cerbani, sabaei, arabum propter tura clarissimi, ad utraque maria porrectis gentibus. oppida eorum in rubro litore merme, marma, corolia, sabbatha; intus oppida nascus, cardava,

carnus et, quo merces odorum deferunt, thomala. pars eorum atramitae, quorum caput sabota lx templa muris includens; regia tamen est omnium marebbata. sinum optinent [xciiii], refertum insulis odoriferis. atramitis in mediterraneo iunguntur minaei. mare accolunt et aelamitae oppido eiusdem nominis, iis iuncti chaculatae, oppidum sibi, quod graeci apaten vocant, arsi, codani, vadaei oppido magno, barasasaei, lechieni, sygaros insula, quam canes non intrant expositique circa litora errando moriuntur. sinus intimus, in quo laeanitae, qui nomen ei dedere; regia eorum agra et in sinu laeana vel, ut alii, aelana: nam et ipsum sinum nostri laeaniticum scripsere, alii aelaniticum, artemidorus alaeniticum, iuba leaniticum. circuitus arabiae a charace laeana colligere proditur [30xlvii]30 [lxv] p., iuba paulo minus [30xl]30 putat. latissima est a septentrione inter oppida heroum et characem. nam et reliqua mediterranea eius dicantur. nabataeis thimaneos iunxerunt veteres, nunc sunt taveni, suelleni, araceni, arreni oppido in quod negotiatio omnis convenit, hemnatae, avalitae, oppida domata, haegra, thamudaei, oppidum baclanaza, chariattaei, toali, oppidum phodaca, minaei, a rege cretae minoe, ut existimant, originem trahentes, quorum carmei; oppidum [xiiii] p. maribba, paramalacum, et ipsum non spernendum, item canon. rhadamaei - et horum origo rhadamanthus putatur, frater minois - , homeritae mesala oppido, hamiroei, gedranitae, amphryaei, lysanitae, bachylitae, samnaei, amaitaei oppidis nessa et chenneseri, zamareni oppidis sagiatta, canthace, bacaschami riphearina oppido, quo vocabulo hordeum appellant, autaei, ethravi, cyrei elmataeis oppido, chodae aiathuri in montibus oppido [xxv] p., in quo fons aenuscabales, quod significat camelorum, oppidum ampelome, colonia milesiorum, athrida oppidum, calingi, quorum mariba oppidum significat dominos omnium, oppida pallon, murannimal iuxta flumen, per quod euphraten emergere putant, gentes agraei, ammoni, oppidum athenae, caunaravi, quod significat ditissimos armento, chorranitae, cesani, choani. fuerunt et graeca oppida arethusa, larisa, chalcis, deleta variis bellis.

romana arma solus in eam terram adhuc intulit aelius gallus ex equestri ordine, nam c. caesar Augusti filius prospexit tantum arabiam. gallus oppida diruit, non nominata auctoribus qui ante scripserunt, negranam, nestum, nescam, magusum, caminacum,

labaetiam et supra dictam maribam circuitu [vi], item caripetam, quo longissime processit. cetera explorata retulit: nomadas lacte et ferina carne vesci, reliquos vinum ut indos palmis exprimere, oleam sesamae. numerosissimos esse homeritas, minaeis fertiles agros palmetis arbustos, in pecore divitias. cerbanos et agraeos armis praestare, maxime chatramotitas. carreis latissimos et fertilissimos agros, sabaeos ditissimos silvarum fertilitate odorifera, auri metallis, agrorum riguis, mellis ceraeque proventu. de odoribus suo dicemus volumine. arabes mitrati degunt aut intonso crine; barba abraditur praeterquam in superiore labro; aliis et haec intonsa. mirumque dictu, ex innumeris populis pars aequa in commerciis aut latrociniis degit. in universum gentes ditissimae, ut apud quas maximae opes romanorum parthorumque subsidant, vendentibus quae e mari aut silvis capiunt nihilque invicem redimentibus.

nunc reliquam oram arabiae contrariam persequemur. timosthenes totum sinum quadridui navigatione in longitudinem taxavit, bidui in latitudinem, angustias [vii] d p.; eratosthenes ab ostio [30xii]30 in quamque partem; artemidorus arabiae latere [30xvii]30 [l], trogodytico vero [30xi]30 [lxxxvii] d p. ptolemaida usque; agrippa [30xvii]30 [xxxii] sine differentia laterum. plerique latitudinem [cccclxxv] prodiderunt, faucesque hiberno orienti obversas alii [iiii], alii [vii] d, alii [xii] patere.

situs autem ita se habet: a sinu laeanitico alter sinus quem arabes aean vocant, in quo heroon oppidum est. fuit et cambysu inter nelos et marchadas, deductis eo aegris exercitus. gens tyro, daneon portus, ex quo navigabilem alveum perducere in nilum, qua parte ad delta dictum decurrit, [lxii] d intervallo, quod inter flumen et rubrum mare interest, primus omnium sesostris aegypti rex cogitavit, mox darius persarum, deinde ptolemaeus sequens, qui et duxit fossam latitudine pedum c, altitudine xxx, in longitudinem [xxxvii] d p. usque ad fontes amaros; ultra deterruit inundationis metus, excelsiore tribus cubitis rubro mari conperto quam terra aegypti. aliqui non eam adferunt causam, sed ne inmisso mari corrumperetur aqua nili, quae sola potus praebet. nihilo minus iter totum terreno frequentatur a mari aegyptio, quod est triplex; unum a pelusio per harenas, in quo, nisi calami defixi regant, via non reperitur, subinde aura vestigia operiente; alterum ultra casium montem, quod a [lx] p. redit in

pelusiacam viam - accolunt arabes autaei - ; tertium a gerrho, quod agipsum vocant, per eosdem arabas [lx] propius, sed asperum montibus et inops aquarum. eae omnes viae arsinoen ducunt, conditam sororis nomine in sinu carandra a ptolemaeo philadelpho, qui primus trogodyticen excussit; amnem qui arsinoen praefluit ptolemaeum appellavit. mox oppidum parvum est aenum - alii pro hoc philoterias scribunt - , deinde sunt asaraei, ex trogodytarum conubiis arabes feri, insulae sapirine, scytala, mox deserta ad myos hormon, ubi fons tatnos, mons aeas, insula iambe, portus multi, berenice oppidum, matris philadelphi nomine, ad quod iter a copto diximus, arabes autaei et gebadaei. trogodytice, quam prisci midoen, alii midioen dixere, mons pentedactylos, insulae stenae dirae aliquot, halonesi non pauciores, cardamine, topazos, quae gemmae nomen dedit. sinus insulis refertus: ex his quae mareu vocantur, aquosae, quae eratonos, sitientes; regum hi praefecti fuere. introrsus candaei, quos ophiophagos vocant, serpentibus vesci adsueti; neque alia regio fertilior est earum. iuba, qui videtur diligentissime persecutus haec, omisit in hoc tractu - nisi exemplarium vitium est - berenicen alteram, quae panchrysos cognominata est, et tertiam, quae epi dires, insignem loco: est enim sita in cervice longe procurrente, ubi fauces rubri maris [vii] d p. ab arabia distant. insula ibi citis, topazum ferens et ipsa. ultra silvae, ubi ptolemais, a philadelpho condita ad venatus elephantorum, ob id epi theras cognominata, iuxta lacum monoleum. haec est regio secundo volumine a nobis significata, in qua xlv diebus ante solstitium totidemque postea hora sexta consumuntur umbrae et in meridiem reliquis horis cadunt, ceteris diebus in septentrionem, cum in berenice quam primam posuimus ipso die solstitii sexta hora umbrae in totum absumantur nihilque adnotetur aliud novi, [dcii] p. intervallo a ptolemaide: res ingentis exempli locusque subtilitatis inmensae, mundo ibi deprehenso, cum indubitata ratione umbrarum eratosthenes mensuram terrae prodere inde conceperit. hinc azanium mare, promunturium quod aliqui hippalum scripsere, lacus mandalum, insula colocasitis et in alto multae, in quibus testudo plurima. oppidum sace, insula daphnidis, oppidum aduliton; aegyptiorum hoc servi profugi a dominis condidere. maximum hic emporium trogodytarum, etiam aethiopum; abest a ptolemaide v dierum navigatione. deferunt plurimum ebur,

rhinocerotum cornua, hippopotamiorum coria, chelium testudinum, sphingia, mancipia. supra aethiopas aroteras insulae quae aliaeu vocantur, item bacchias et antibacchias et stratioton. hinc in ora aethiopiae sinus incognitus, quod miremur, cum ulteriora mercatores scrutentur, promunturium in quo fons cucios, expetitus navigantibus; ultra isidis portus, decem dierum remigio ab oppido adulitarum distans; in eum trogodytis myrra confertur. insulae ante portum duae pseudopylae vocantur, interiores totidem pylae; in altera stelae lapideae litteris ignotis. ultra sinus avalitu, dein insula diodori et aliae desertae, per continentem quoque deserta, oppidum gaza, promunturium et portus mossylites, quo cinnamum devehitur. hucusque sesostris exercitum duxit. aliqui unum aethiopiae oppidum ultra ponunt in litore baragaza.

a mossylico promunturio atlanticum mare incipere vult iuba praeter mauretanias suas gadis usque navigandum coro, cuius tota sententia hoc in loco subtrahenda non est. a promunturio indorum quod vocetur lepte acra, ab aliis drepanum, proponit recto cursu praeter exustam ad malichu insulam [30xv]30 p. esse, inde ad locum quem vocant sceneos [ccxxv] p., inde ad insulas adanu [cl]: sic fieri ad apertum mare [30xviii]30 [lxxv] p. reliqui omnes propter ardorem solis navigari posse non putaverunt. quin et commercia ipsa infestant ex insulis arabes, ascitae appellati, quoniam bubulos utres binos insternentes ponte piraticam exercent sagittis venenatis. gentes trogodytarum idem iuba tradit therothoas a venatu dictos, mirae velocitatis, sicut ichthyophagos, natantes ceu maris animalia, bangenos, zangenas, thalibas, saxinas, sirechas, daremas, domazenes. quin et accolas nili a syene non aethiopum populos, sed arabum esse dicit usque meroen; solis quoque oppidum, quod non procul memphi in aegypti situ diximus, arabas conditores habere. sunt qui et ulteriorem ripam aethiopiae auferant adnectantque africae. ripas autem incoluere propter aquam. nos relicto cuique intellegendi arbitrio oppida quo traduntur ordine utrimque ponemus a syene.

et prius arabiae latere gens catadupi, deinde syenitae, oppida tacompson, quam quidam appellarunt thaticen, aramum, sesamos, andura, nasarduma, aindoma come cum arabeta et boggia, leupitorga, tantarene, emeae, chindita, noa, goploa, gistate, megadale, premni, nups, direa, patigga, bacata, dumana, radata, in quo felis aurea pro

deo colebatur, boron, in mediterraneo mallo proximum meroae. sic prodidit bion. iuba aliter: oppidum munitum megatichos inter aegyptum et aethiopiam, quod arabes mirsion vocaverunt, dein tacompson, aramum, sesamum, pide, mamuda, orambim iuxta bituminis fontem, amodata, prosda, parenta, mania, tessata, gallas, zoton, grau comen, emeum, pidibotas, aendondacometas, nomadas in tabernaculis viventes, cistaepen, magadalen, parvam primin, nups, direlin, patingan, breves, magasneos, egasmala, cramda, denna, cadeum, atthena, batta, alanam, macua, scammos, goram in insula, ab iis abale, androgalim, serem, mallos, agocem.

ex africae latere tradita sunt eodem nomine tacompsos altera sive pars prioris, mogore, saea, aedosa, penariae, primis, magassa, buma, linthuma, spintum, sidop, censoe. pindicitor, acug, orsum, suara, maumarum, vrbim, mulon, quod oppidum graeci hypaton vocarunt, pagoarca, zamnes, unde elephanti incipiant, mambli, berressa, coetum. fuit quondam et epis oppidum contra meroen, antequam bion scriberet deletum.

haec sunt prodita usque meroen, ex quibus hoc tempore nullum prope utroque latere exstat. certe solitudines nuper renuntiavere principi neroni missi ab eo milites praetoriani cum tribuno ad explorandum, inter reliqua bella et aethiopicum cogitanti. intravere autem et eo arma romana Divi Augusti temporibus duce p. petronio, et ipso equestris ordinis praefecto aegypti. is oppida expugnavit, quae sola invenimus quo dicemus ordine, pselcin, primi, bocchin, forum cambusis, attenam, stadissim, ubi nilus praecipitans se fragore auditum accolis aufert. diripuit et napata. longissime autem a syene progressus est [dccclxx] p. nec tamen arma romana ibi solitudinem fecerunt: aegyptiorum bellis attrita est aethiopia vicissim imperitando serviendoque, clara et potens etiam usque ad troiana bella memnone regnante. et syriae imperitasse eam nostroque litori aetate regis cephei patet andromedae fabulis.

simili modo et de mensura eius varia prodidere, primus dalion ultra meroen longe subvectus, mox aristocreon et bion et basilis, simonides minor etiam quinquennio in meroe moratus, cum de aethiopia scriberet. nam timosthenes, classium philadelphi praefectus, sine mensura dierum lx a syene meroen iter prodidit, eratosthenes [dcxxv], artemidorus [dc], sebosus ab aegypti extremis

[30xvi]30 [lxxv], unde proxime dicti [30xii]30 [l]. verum omnis haec finita nuper disputatio est, quoniam a syene [dcccc lxxv] neronis exploratores renuntiavere his modis: a syene hieran sycaminon [liiii] p., inde tama [lxxii] regione euonymiton aethiopum, primi [cxx], acinam [lxiiii], pitaram [xxv], tergedum [cvi]. insulam gagauden esse in medio eo tractu; inde primum visas aves psittacos et ab altera, quae vocetur artigula, animal sphingion, a tergedo cynocephalos. inde nabata [lxxx]; oppidum id parvum inter praedicta solum. ab eo ad insulam meroen [ccclx]. herbas circa meroen demum viridiores, silvarumque aliquid apparuisse et rhinocerotum elephantorumque vestigia. ipsum oppidum meroen ab introitu insulae abesse [lxx] p., iuxtaque aliam insulam tadu dextro subeuntibus alveo, quae portum faceret. aedificia oppidi pauca; regnare feminam candacen, quod nomen multis iam annis ad reginas transiit; delubrum hammonis et ibi religiosum et toto tractu sacella. cetero cum potirentur rerum aethiopes, insula ea magnae claritatis fuit. tradunt armatorum [ccl] dare solitam, artificum [iii]. alii reges aethiopum xlv esse hodie traduntur. universa vero gens aetheria appellata est, deinde atlantia, mox a vulcani filio aethiope. animalium hominumque monstrificas effigies circa extremitates eius gigni minime mirum, artifici ad formanda corpora effigiesque caelandas mobilitate ignea. ferunt certe ab orientis parte intima gentes esse sine naribus, aequali totius oris planitie, alias superiore labro orbas, alias sine linguis. pars etiam ore concreto et naribus carens uno tantum foramine spirat potumque calamis avenae trahit et grana eiusdem avenae sponte provenientis ad vescendum. quibusdam pro sermone nutus motusque membrorum est. quibusdam ante ptolemaeum lathyrum regem aegypti ignotus fuit usus ignium. quidam et pygmaeorum gentem prodiderunt inter paludes ex quibus nilus oriretur. in ora autem ubi dicemus continui montes ardentibus similes rubent.

trogodytis et rubro mari a meroe tractus omnis superponitur, a napata tridui itinere ad rubrum litus, aqua pluvia ad usum conpluribus locis servata, fertilissima regione quae interest auri. ulteriora atabuli, aethiopum gens, tenent. dein contra meroen megabarri, quos aliqui adiabaros nominavere; oppidum habent apollinis. pars eorum nomades quae elephantis vescitur. ex adverso in africae parte macrobii, rursus a megabarris memnones et dabelli

dierumque xx intervallo critensi. ultra eos dochi, dein gymnetes, semper nudi, mox anderae, mattitae, mesaches; hi pudore atri coloris tota corpora rubrica inlinunt. at ex africae parte medimni, dein nomades, cynocephalorum lacte viventes, alabi, syrbotae, qui octonum cubitorum esse dicuntur. aristocreon libyae latere a meroe oppidum tollen dierum v itinere tradit; inde dierum xii esar oppidum aegyptiorum qui psammetichum fugerint; in eo prodente se [ccc] habitasse; contra in arabico latere diaron oppidum esse eorum. bion autem sapen vocat quod ille esar; et ipso nomine advenas significari. caput eorum in insula sembobitin, et tertium in arabia sinat. inter montes autem et nilum simbarri sunt, phalliges, in ipsis vero montibus asachae multis nationibus. abesse a mari dicuntur dierum v itinere; vivunt elephantorum venatu. insula in nilo sembritarum reginae paret. ab ea nubaei aethiopes dierum viii itinere; oppidum eorum nilo inpositum tenupsis. sesambri, apud quos quadrupedes omnes sine auribus, etiam elephanti. at ex africae parte ptonebari, ptoemphani, qui canem pro rege habent, motu eius imperia augurantes, harusbi oppido longe ab nilo sito, postea archisarmi, phalliges, marigarri, chasamari. bion et alia oppida in insulis tradit: a sembobiti meroen versus dierum toto itinere xx proximae insulae oppidum seberritarum sub regina et aliud asara, alterius oppidum darden; tertiam medoen vocant, in qua oppidum asel, quartam eodem quo oppidum nomine garroen. inde per ripas oppida nautis, modum, demadatin, secundum, collocat, secande, navectabe cum agro psegipta, candragori, arabam, summaram. regio supra sirbitum, ubi desinunt montes, traditur a quibusdam habere maritimos aethiopas, nisicathas, nisitas, quod significat ternum et quaternum oculorum viros, non quia sic sint, sed quia sagittis praecipua contemplatione utantur. ab ea vero parte nili, quae supra syrtes maiores oceanumque meridianum protendatur, dalion vacathos esse dicit, pluvia tantum aqua utentes, cisoros, logonporos ab oecalicibus dierum v itinere, vsibalchos, isbelos, perusios, ballios, cispios. reliqua deserta, dein fabulosa: ad occidentem versus nigroe, quorum rex unum oculum in fronte habeat, agriophagi, pantherarum leonumque maxime carnibus viventes, pamphagi, omni mandentes, anthropophagi, humana carne vescentes, cynamolgi caninis capitibus, artabatitae quadrupedes, ferarum modo vagi, deinde hesperioe, perorsi et quos in mauretaniae

confinio diximus. pars quaedam aethiopum locustis tantum vivit fumo et sale duratis in annua alimenta; hi quadragesimum vitae annum non excedunt.

aethiopum terram universam cum mari rubro patere in longitudinem [30xxi]30 [lxx] p., in latitudinem cum superiore aegypto [30xii]30 [xcvi] agrippa existimavit. quidam longitudinem ita diviserunt: a meroe sirbitum xii dierum navigationem, ab ea xv ad dabellos, ab his ad oceanum aethiopicum vi dierum iter. in totum ab oceano ad meroen [dcxxv] p. esse inter auctores fere convenit, inde syenen quantum diximus. sita est aethiopia ab oriente hiberno ad occidentem hibernum. meridiano cardine silvae, hebeno maxime, virent. a media eius parte imminens mari mons excelsus aeternis ardet ignibus, theon ochema dictus graecis. a quo navigatione quadridui promunturium quod hesperu ceras vocatur, confine africae iuxta aethiopas hesperios. quidam et in eo tractu modicos colles amoena opacitate vestitos aegipanum satyrorumque produnt.

insulas toto eo mari et ephorus conplures esse tradidit et eudoxus et timosthenes, clitarchus vero alexandro regi renuntiatam adeo divitem, ut equos incolae talentis auri permutarent, alteram ubi sacer mons opacus silva repertus esset, destillante arboribus odore mirae suavitatis. contra sinum persicum cerne nominatur insula adversa aethiopiae, cuius neque magnitudo neque intervallum a continente constat; aethiopas tantum populos habere proditur. ephorus auctor est a rubro mari navigantes in eam non posse propter ardores ultra quasdam columnas - ita appellantur parvae insulae - provehi. polybius in extrema mauretania contra montem atlantem a terra stadia viii abesse prodidit cernen, nepos cornelius ex adverso maxime carthaginis a continente p. m, non ampliorem circuitu [ii]. traditur et alia insula contra montem atlantem, et ipsa atlantis appellata. ab ea v dierum praenavigatione solitudines ad aethiopas hesperios et promunturium quod vocavimus hesperu ceras, inde primum circumagente se terrarum fronte in occasum ac mare atlanticum. contra hoc quoque promunturium gorgades insulae narrantur, gorgonum quondam domus, bidui navigatione distantes a continente, ut tradit xenophon lampsacenus. penetravit in eas hanno poenorum imperator prodiditque hirta feminarum corpora, viros pernicitate evasisse; duarum gorgadum cutes argumenti et miraculi

gratia in iunonis templo posuit, spectatas usque ad carthaginem captam. ultra has etiamnum duae hesperidum insulae narrantur, adeoque omnia circa hoc incerta sunt, ut statius sebosus a gorgonum insulis praenavigatione atlantis dierum xl ad hesperidum insulas cursum prodiderit, ab his ad hesperu ceras unius. nec mauretaniae insularum certior fama est. paucas modo constat esse ex adverso autololum a iuba repertas, in quibus gaetulicam purpuram tinguere instituerat.

sunt qui ultra eas fortunatas putent esse quasdamque alias, quo in numero idem sebosus etiam spatia conplexus iunoniam abesse a gadibus [dccl] p. tradit, ab ea tantundem ad occasum versus pluvialiam caprariamque; in pluvialia non esse aquam nisi ex imbri. ab iis [ccl] fortunatas contra laevam mauretaniae in viii horam solis; vocari invallem a convexitate et planasiam a specie, invallis circuitu [ccc] p.; arborum ibi proceritatem ad cxl pedes adulescere. iuba de fortunatis ita inquisivit: sub meridiem quoque positas esse prope occasum, a purpurariis [dcxxv] p., sic ut [ccl] supra occasum navigetur, dein per [ccclxxv] ortus petatur. primam vocari ombrion, nullis aedificiorum vestigiis; habere in montibus stagnum, arbores similes ferulae, ex quibus aqua exprimatur, e nigris amara, ex candidioribus potui iucunda. alteram insulam iunoniam appellari; in ea aediculam esse tantum lapide exstructam. ab ea in vicino eodem nomine minorem, deinde caprariam, lacertis grandibus refertam. in conspectu earum esse ninguariam, quae hoc nomen acceperit a perpetua nive, nebulosam. proximam ei canariam vocari a multitudine canum ingentis magnitudinis - ex quibus perducti sunt iubae duo - ; apparere ibi vestigia aedificiorum. cum omnes autem copia pomorum et avium omnis generis abundent, hanc et palmetis caryotas ferentibus ac nuce pinea abundare; esse copiam et mellis, papyrum quoque et siluros in amnibus gigni. infestari eas beluis, quae expellantur adsidue, putrescentibus.

et abunde orbe terrae extra intra indicato colligenda in artum mensura aequorum videtur. polybius a gaditano freto longitudinem directo cursu ad os maeotis [30xxxiiii]30 [xxxvii] d prodidit, ab eodem initio siciliam [30xii]30 [l], cretam [ccclxxv], rhodum [clxxxvii] d, chelidonias tantundem, cyprum [cccxxv], inde syriae seleuciam pieriam [cxv], quae computatio efficit [30xxiiii]30 [xl].

agrippa hoc idem intervallum a freto gaditano ad sinum issicum per longitudinem derectam [30xxxiiii]30 [xl] taxat, in quo haud scio an sit error numeri, quoniam idem a siculo freto alexandriam cursus [30xiii]30 [l] tradidit. universus autem circuitus per sinus dictos ab eodem exordio colligit intra maeotim lacum [30clv]30 [viiii], artemidorus adicit [dcclvi], idem cum maeotide [30clxxiii]30 [xc] p. esse tradidit. haec est mensura inermium et pacata audacia fortunam provocantium hominum.

nunc ipsarum partium magnitudo conparabitur, utcumque difficultatem adferet auctorum diversitas, aptissime tamen spectabitur ad longitudinem latitudine addita. est ergo ad hoc praescriptum europae magnitudo ... longitudo [30lxxxvii]30 [xiiii]. africae - ut media ex omni varietate prodentium sumatur computatio - efficit longitudo [30xxxvii]30 [xcviii]; latitudo, qua colitur, nusquam [ccl] excedit. sed quoniam in cyrenaica eius parte [dccccx] eam fecit agrippa, deserta eius ad garamantas usque, qua noscebantur, complectens, universa mensura, quae veniet in comparationem, [30xlvii]30 [viii] efficit. asiae longitudo in confesso est [30l]30 [xiii] dccl; latitudo sane computetur ab aethiopico mari alexandriam iuxta nilum sitam, ut per meroen et syenen mensura currat, [30xviii]30 [lxxv]. apparet ergo europam paulo minus dimidia asiae parte maiorem esse quam asiam, eandem altero tanto et sexta parte africae ampliorem quam africam. quod si misceantur omnes summae, liquido patebit europam totius terrae tertiam esse partem et octavam paulo amplius, asiam vero quartam et quartam decimam, africam autem quintam et insuper sexagesimam.

his addemus etiamnum unam graecae inventionis scientiam vel exquisitissimae subtilitatis, ut nihil desit in spectando terrarum situ indicatisque regionibus noscatur et cum qua cuique siderum societas sit sive cognatio dierum ac noctium quibusque inter se pares umbrae et aequa mundi convexitas. ergo reddetur hoc etiam, terraeque universae in membra caeli digerentur. plura sunt autem segmenta mundi, quae nostri circulos appellavere, graeci parallelos.

principium habet indiae pars versa ad austrum. patet usque arabiam et rubri maris accolas. continentur gedrosi, carmani, persae, elymaei, parthyene, aria, susiane, mesopotamia, seleucia cognominata babylonia, arabia ad petras usque, syria coele,

pelusium, aegypti inferiora, quae chora vocatur, alexandria, africae maritima, cyrenaica oppida omnia, thapsus, hadrumetum, clupea, carthago, vtica, uterque hippo, numidia, mauretania utraque, atlanticum mare, columnae herculis. in hoc caeli circumplexu aequinoctii die medio umbilicus, quem gnomonem vocant, vii pedes longus umbram non amplius iiii pedes longam reddit, noctis vero dieique longissima spatia xiiii horas aequinoctiales habent, brevissima ex contrario x.

sequens circulus incipit ab india vergente ad occasum, vadit per medios parthos, persepolim, citima persidis, arabiam citeriorem, iudaeam, libani montis accolas, amplectitur babylonem, idumaeam, samariam, hierosolyma, ascalonem, iopen, caesaream, phoenicen, ptolemaidem, sidonem, tyrum, berytum, botryn, tripolim, byblum, antiochiam, laodiceam, seleuciam, ciliciae maritima, cypri austrina, cretam, lilybaeum in sicilia, septentrionalia africae et numidiae. umbilicus, aequinoctio xxxv pedum, umbram xxiiii pedes longam facit, dies autem noxque maxima xiiii horarum aequinoctialium est accedente bis quinta parte unius horae.

tertius circulus ab indis imavo proximis oritur. tendit per caspias portas, mediae proxima, cataoniam, cappadociam, taurum, amanum, issum, cilicias portas, solos, tarsum, cyprum, pisidiam, pamphyliam, siden, lycaoniam, lyciam, patara, xanthum, caunum, rhodum, coum, halicarnassum, cnidum, dorida, chium, delum, cycladas medias, gythium, malean, argos, laconicam, elim, olympiam, messaniam peloponnesi, syracusas, catinam, siliciam mediam, sardiniae austrina, carteiam, gadis. gnomonis c unciae umbram lxxvii unciarum faciunt. longissimus dies est aequinoctialium horarum xiiii atque dimidiae cum tricesima unius horae.

quarto subiacent circulo quae sunt ab altero latere imavi, cappadociae austrina, galatia, mysia, sardis, zmyrna, sipylus, tmolus mons, lydia, caria, ionia, trallis, colophon, ephesus, miletus, chios, samos, icarium mare, cycladum septentrio, athenae, megara, corinthus, sicyon, achaia, patrae, isthmus, epirus, septentrionalia siciliae, narbonensis galliae exortiva, hispaniae maritima a carthagine nova et inde ad occasum. gnomoni xxi pedum respondent umbrae xvi pedum. longissimus dies habet aequinoctiales horas xiiii et tertias duas unius horae.

quinto continentur segmento ab introitu caspii maris bactri, hiberia, armenia, mysia, phrygia, hellespontus, troas, tenedus, abydos, scepsis, ilium, ida mons, cyzicum, lampsacum, sinope, amisum, heraclea in ponto, paphlagonia, lemnus, imbrus, thasus, cassandria, thessalia, macedonia, larisa, amphipolis, thessalonice, pella, edesus, beroea, pharsalia, carystum, euboea boeotum, chalcis, delphi, acarnania, aetolia, apollonia, brundisium, tarentum, thurii, locri, regium, lucani, neapolis, puteoli, tuscum mare, corsica, baliares, hispania media. gnomoni septem pedes, umbris sex. magnitudo diei summa horarum aequinoctialium xv.

sexta comprehensio, qua continetur urbs roma, amplectitur caspias gentes, caucasum, septentrionalia armeniae, apolloniam supra rhyndacum, nicomediam, nicaeam, calchadonem, byzantium, lysimacheam, cherronesum, melanem sinum, abderam, samothraciam, maroneam, aenum, bessicam, thraciam, maedicam, paeoniam, illyrios, durrachium, canusium, apuliae extuma, campaniam, etruriam, pisas, lunam, lucam, genuam, liguriam, antipolim, massiliam, narbonem, tarraconem, hispaniam tarraconensem mediam et inde per lusitaniam. gnomoni pedes viiii, umbrae viii. longissima diei spatia horarum aequinoctialium xv addita viiii parte unius horae aut, ut nigidio placuit, quinta.

septima divisio ab altera caspii maris ora incipit, vadit super callatim, bosporum, borysthenen, tomos, thraciae aversa, triballos, illyrici reliqua, hadriaticum mare, aquileiam, altinum, venetiam, vicetiam, patavium, veronam, cremonam, ravennam, anconam, picenum, marsos, paelignos, sabinos, vmbriam, ariminum, bononiam, placentiam, mediolanum omniaque ab appennino, transque alpis galliam aquitanicam, viennam, pyrenaeum, celtiberiam. umbilico xxxv pedum umbrae xxxvi, ut tamen in parte venetiae exaequetur umbra gnomoni. amplissima diei spatia horarum aequinoctialium xv et quintarum partium horae trium.

hactenus antiquorum exacta celebravimus. sequentium diligentissimi quod superest terrarum supra tribus adsignavere segmentis, a tanai per maeotim lacum et sarmatas usque borysthenen atque ita per dacos partemque germaniae, gallias oceani litora amplexi, quod esset horarum xvi, alterum per hyperboreos et britanniam horarum xvii, postremum scythicum a ripaeis iugis in

thylen, in quo dies continuarentur, ut diximus, noctesque per vices. iidem et ante principia quae fecimus posuere circulos duos: primum per insulam meroen et ptolemaidem in rubro mari ad elephantorum venatus conditam, ubi longissimus dies xii horarum esset dimidia hora amplior, secundum per syenen aegypti euntem, qui esset horarum xiii, iidemque singulis dimidia horarum spatia usque ad ultimum adiecere circulis.

et hactenus de terris.

mundus et in eo terrae, gentes, maria, ... insignia, insulae, urbes ad hunc modum se habent, animantium in eodem natura nullius prope partis contemplatione minore, etsi ne hic quidem omnia exsequi humanus animus queat.

principium iure tribuetur homini, cuius causa videtur cuncta alia genuisse natura, magna, saeva mercede contra tanta sua munera, non ut sit satis aestimare, parens melior homini an tristior noverca fuerit. ante omnia unum animantium cunctorum alienis velat opibus. ceteris sua varie tegimenta tribuit, testas, cortices, coria, spinas, villos, saetas, pilos, plumam, pinnas, squamas, vellera; truncos etiam arboresque cortice, interdum gemino, a frigoribus et calore tutata est: hominem tantum nudum et in nuda humo natali die abicit ad vagitus statim et ploratum, nullumque tot animalium aliud ad lacrimas, et has protinus vitae principio; at hercule risus praecox ille et celerrimus ante xl diem nulli datur. ab hoc lucis rudimento quae ne feras quidem inter nos genitas vincula excipiunt et omnium membrorum nexus; itaque feliciter natus iacet manibus pedibusque devinctis, flens animal ceteris imperaturum, et a suppliciis vitam auspicatur unam tantum ob culpam, qua natum est. heu dementia ab his initiis existimantium ad superbiam se genitos! prima roboris spes primumque temporis munus quadripedi similem facit. quando homini incessus! quando vox! quando firmum cibis os! quam diu palpitans vertex, summae inter cuncta animalia inbecillitatis iudicium! iam morbi totque medicinae contra mala excogitatae, et hae quoque subinde novitatibus victae! et cetera sentire naturam suam, alia pernicitatem usurpare, alia praepetes volatus, alia nare: hominem nihil scire, nihil sine doctrina, non fari, non ingredi, non vesci, breviterque non aliud naturae sponte quam flere! itaque multi extitere qui non nasci optimum censerent aut quam ocissime aboleri. uni animantium luctus est datus, uni luxuria et quidem innumerabilibus modis ac per singula membra, uni ambitio, uni avaritia, uni inmensa vivendi cupido, uni superstitio, uni sepulturae cura atque etiam post se de futuro. nulli vita fragilior, nulli rerum omnium libido maior, nulli pavor confusior, nulli rabies acrior. denique cetera animantia in

suo genere probe degunt. congregari videmus et stare contra dissimilia: leonum feritas inter se non dimicat, serpentium morsus non petit serpentes, ne maris quidem beluae ac pisces nisi in diversa genera saeviunt. at hercule homini plurima ex homine sunt mala.

et de universitate quidem generis humani magna ex parte in relatione gentium diximus. neque enim ritus moresque nunc tractabimus innumeros ac totidem paene quot sunt coetus hominum, quaedam tamen haut omittenda duco maximeque longius ab mari degentium, in quibus prodigiosa aliqua et incredibilia multis visum iri haud dubito. quis enim aethiopas ante quam cerneret credidit aut quid non miraculo est, cum primum in notitiam venit quam multa fieri non posse prius quam sunt facta iudicantur naturae vero rerum vis atque maiestas in omnibus momentis fide caret, si quis modo partes eius ac non totam complectatur animo. ne pavonis ac tigrium pantherarumque maculas et tot animalium picturas commemorem, parvum dictu, sed inmensum aestimatione, tot gentium sermones, tot linguae, tanta loquendi varietas, ut externus alieno paene non sit hominis vice! iam in facie vultuque nostro cum sint decem aut paulo plura membra, nullas duas in tot milibus hominum indiscretas effigies existere, quod ars nulla in paucis numero praestet adfectando! nec tamen ego in plerisque eorum obstringam fidem meam potiusque ad auctores relegabo, qui dubiis reddentur omnibus, modo ne sit fastidio graecos sequi, tanto maiore eorum diligentia vel cura vetustiore.

esse scytharum genera et quidem plura, quae corporibus humanis vescerentur, indicavimus. id ipsum incredibile fortasse, ni cogitemus in medio orbe terrarum ac sicilia et italia fuisse gentes huius monstri, cyclopas et laestrygonas, et nuperrime trans alpis hominem immolari gentium earum more solitum, quod paulum a mandendo abest. sed iuxta eos, qui sunt ad septentrionem versi, haut procul ab ipso aquilonis exortu specuque eius dicto, quem locum ges clithron appellant, produntur arimaspi, quos diximus, uno oculo in fronte media insignes. quibus adsidue bellum esse circa metalla cum grypis, ferarum volucri genere, quale vulgo traditur, eruente ex cuniculis aurum, mira cupiditate et feris custodientibus et arimaspis rapientibus, multi, sed maxime inlustres herodotus et aristeas proconnesius scribunt. super alios autem anthropophagos scythas in

quadam convalle magna imavi montis regio est quae vocatur abarimon, in qua silvestres vivunt homines aversis post crura plantis, eximiae velocitatis, passim cum feris vagantes. hos in alio non spirare caelo ideoque ad finitimos reges non pertrahi neque ad alexandrum magnum pertractos baeton itinerum eius mensor prodidit. priores anthropophagos, quos ad septentrionem esse diximus, decem dierum itinere supra borysthenen amnem ossibus humanorum capitum bibere cutibusque cum capillo pro mantelibus ante pectora uti isigonus nicaeensis. idem in albania gigni quosdam glauca oculorum acie, a pueritia statim canos, qui noctu plus quam interdiu cernant. idem itinere dierum xiii supra borysthenen sauromatas tertio die cibum capere semper.

crates pergamenus in hellesponto circa parium genus hominum fuisse, quos ophiogenes vocat, serpentium ictus contactu levare solitos et manu inposita venena extrahere corpori. Varro etiamnum esse paucos ibi, quorum salivae contra ictus serpentium medeantur. similis et in africa psyllorum gens fuit, ut agatharchides scribit, a psyllo rege dicta, cuius sepulcrum in parte syrtium maiorum est. horum corpori ingenitum fuit virus exitiale serpentibus et cuius odore sopirent eas; mos vero liberos genitos protinus obiciendi saevissimis earum eoque genere pudicitiam coniugum experiendi, non profugientibus adulterino sanguine natos serpentibus. haec gens ipsa quidem prope internicione sublata est a nasamonibus, qui nunc eas tenent sedes. genus tamen hominum ex iis, qui profugerant aut cum pugnatum est afuerant, hodieque remanet in paucis. simile et in italia marsorum genus durat, quos a circae filio ortos ferunt et ideo inesse iis vim naturalem eam. et tamen omnibus hominibus contra serpentes inest venenum: ferunt ictas saliva ut ferventis aquae contactu fugere; quod si in fauces penetraverit, etiam mori, idque maxime humani ieiuni oris.

supra nasamonas confinesque illis machlyas androgynos esse utriusque naturae, inter se vicibus coeuntes, calliphanes tradit. aristoteles adicit dextram mammam iis virilem, laevam muliebrem esse. in eadem africa familias quasdam effascinantium isigonus et nymphodorus, quorum laudatione intereant probata, arescant arbores, emoriantur infantes. esse eiusdem generis in triballis et illyris adicit isigonus, qui visu quoque effascinent interemantque quos diutius

intueantur, iratis praecipue oculis, quod eorum malum facilius sentire puberes; notabilius esse quod pupillas binas in oculis singulis habeant. huius generis et feminas in scythia, quae bitiae vocantur, prodit apollonides. phylarchus et in ponto thibiorum genus multosque alios eiusdem naturae, quorum notas tradit in altero oculo geminam pupillam, in altero equi effigiem; eosdem praeterea non posse mergi, ne veste quidem degravatos. haut dissimile iis genus pharmacum in aethiopia damon, quorum sudor tabem contactis corporibus afferat. feminas quidem omnes ubique visu nocere quae duplices pupillas habeant, cicero quoque apud nos auctor est. adeo naturae, cum ferarum morem vescendi humanis visceribus in homine genuisset, gignere etiam in toto corpore et in quorundam oculis quoque venena placuit, ne quid usquam mali esset quod in homine non esset.

haut procul urbe roma in faliscorum agro familiae sunt paucae quae vocantur hirpi. hae sacrificio annuo, quod fit ad montem soractem apollini, super ambustam ligni struem ambulantes non aduruntur et ob id perpetuo senatus consulto militiae omniumque aliorum munerum vacationem habent. quorundam corpori partes nascuntur ad aliqua mirabiles, sicut pyrro regi pollex in dextro pede, cuius tactu lienosis medebatur. hunc cremari cum reliquo corpore non potuisse tradunt conditumque loculo in templo.

praecipue india aethiopumque tractus miraculis scatent. maxima in india gignuntur animalia. indicio sunt canes grandiores ceteris. arbores quidem tantae proceritatis traduntur, ut sagittis superiaci nequeant - et facit ubertas soli, temperies caeli, aquarum abundantia, si libeat credere, ut sub una fico turmae condantur equitum - , harundines vero tantae proceritatis, ut singula internodia alveo navigabili ternos interdum homines ferant. multos ibi quina cubita constat longitudine excedere, non expuere, non capitis aut dentium aut oculorum ullo dolore adfici, raro aliarum corporis partium: tam moderato solis vapore durari. philosophos eorum, quos gymnosophistas vocant, ab exortu ad occasum perstare contuentes solem inmobilibus oculis, ferventibus harenis toto die alternis pedibus insistere. in monte, cui nomen est nulo, homines esse aversis plantis octonos digitos in singulis habentes auctor est megasthenes; in multis autem montibus genus hominum capitibus caninis ferarum

pellibus velari, pro voce latratum edere, unguibus armatum venatu et aucupio vesci; horum supra centum viginti milia fuisse prodente se ctesias scribit, et in quadam gente indiae feminas semel in vita parere genitosque confestim canescere. idem hominum genus, qui monocoli vocarentur, singulis cruribus, mirae pernicitatis ad saltum; eosdem sciapodas vocari, quod in maiore aestu humi iacentes resupini umbra se pedum protegant. non longe eos a trogodytis abesse, rursusque ab his occidentem versus quosdam sine cervice oculos in umeris habentes. sunt et satyri subsolanis indorum montibus (catarcludorum dicitur regio), pernicissimum animal, iam quadripedes, iam recte currentes humana effigie; propter velocitatem nisi senes aut aegri non capiuntur. choromandarum gentem vocat tauron silvestrem, sine voce, stridoris horrendi, hirtis corporibus, oculis glaucis, dentibus caninis. eudoxus in meridianis indiae viris plantas esse cubitales, feminis adeo parvas, ut struthopodes appellentur. megasthenes gentem inter nomadas indos narium loco foramina tantum habentem, anguium modo loripedem, vocari sciratas. ad extremos fines indiae ab oriente circa fontem gangis astomorum gentem sine ore, corpore toto hirtam vestiri frondium lanugine, halitu tantum viventem et odore, quem naribus trahant. nullum illis cibum nullumque potum, radicum tantum florumque varios odores et silvestrium malorum, quae secum portant longiore itinere, ne desit olfactus; graviore paulo odore haut difficulter exanimari. super hos extrema in parte montium trispithami pygmaeique narrantur, ternas spithamas longitudine, hoc est ternos dodrantes, non excedentes, salubri caelo semperque vernante montibus ab aquilone oppositis, quos a gruibus infestari homerus quoque prodidit. fama est insidentes arietum caprarumque dorsis armatos sagittis veris tempore universo agmine ad mare descendere et ova pullosque earum alitum consumere; ternis expeditionem eam mensibus confici; aliter futuris gregibus non resisti. casas eorum luto pinnisque et ovorum putaminibus construi. aristoteles in cavernis vivere pygmaeos tradit, cetera de iis ut reliqui. cyrnos indorum genus isigonus annis centenis quadragenis vivere, item aethiopas macrobios et seras existimat et qui athon montem incolant, hos quidem, quia viperinis carnibus alantur; itaque nec capiti nec vestibus eorum noxia corpori inesse animalia. onesicritus, quibus locis indiae umbrae non sint, corpora hominum cubitorum

quinum et binorum palmorum existere, et vivere annos cxxx nec senescere, sed ut medio aevo mori. crates pergamenus indos, qui centenos annos excedant, gymnetas appellat, non pauci macrobios. ctesias gentem ex his, quae appelletur pandae, in convallibus sitam annos ducenos vivere, in iuventa candido capillo, qui in senectute nigrescat, contra alios quadragenos non excedere annos, iunctos macrobiis, quorum feminae semel pariant. idque et agatharchides tradit, praeterea locustis eos ali et esse pernices. mandorum nomen iis dedit clitarchus, et megasthenes trecentos quoque eorum vicos adnumerat. feminas septimo aetatis anno parere, senectam quadragesimo accidere. artemidorus in taprobane insula longissimam vitam sine ullo corporis languore traduci. duris indorum quosdam cum feris coire mixtosque et semiferos esse partus. in calingis eiusdem indiae gente quinquennes concipere feminas, octavum vitae annum non excedere. et alibi cauda villosa homines nasci pernicitatis eximiae, alios auribus totos contegi.

oritas ab indis arabis fluvius disterminat. hi nullum alium cibum novere quam piscium, quos unguibus dissectos sole torreant atque ita panem ex iis faciant, ut refert clitarchus. trogodytas super aethiopiam velociores equis esse pergamenus crates, item aethiopas octona cubita longitudine excedere; syrbotas vocari gentem eam. nomadum aethiopum secundum flumen astragum ad septentrionem vergentium gens menisminorum appellata abest ab oceano dierum itinere viginti. animalium, quae cynocephalos vocamus, lacte vivit, quorum armenta pascit maribus interemptis praeterquam subolis causa. in africae solitudinibus hominum species obviae subinde fiunt momentoque evanescunt.

haec atque talia ex hominum genere ludibria sibi, nobis miracula ingeniosa fecit natura. ex singulis quidem quae facit in dies ac prope horas, quis enumerare valeat ad detegendam eius potentiam satis sit inter prodigia posuisse gentes. hinc ad confessa in homine pauca.

tergeminos nasci certum est horatiorum curiatiorumque exemplo. super inter ostenta ducitur praeterquam in aegypto, ubi fetifer potu nilus amnis. proxime supremis Divi Augusti fausta quaedam e plebe ostiae duos mares, totidem feminas enixa famem, quae consecuta est, portendit haud dubie. reperitur et in peloponneso quinos quater enixa, maioremque partem ex omni eius vixisse partu. et in aegypto

septenos uno utero simul gigni auctor est trogus.

gignuntur et utriusque sexus quos hermaphroditos vocamus, olim androgynos vocatos et in prodigiis habitos, nunc vero in deliciis. pompeius magnus in ornamentis theatri mirabiles fama posuit effigies, ob id diligentius magnorum artificum ingeniis elaboratas, inter quas legitur eutychis a xx liberis rogo inlata trallibus, enixa xxx partus, alcippe elephantum. quamquam id inter ostenta est. namque et serpentem peperit inter initia marsici belli ancilla, et multiformes pluribus modis inter monstra partus eduntur. claudius caesar scribit hippocentaurum in thessalia natum eodem die interisse, et nos principatu eius adlatum illi ex aegypto in melle vidimus. est inter exempla in uterum protinus reversus infans sagunti quo anno deleta ab Hannibale est.

ex feminis mutari in mares non est fabulosum. invenimus in annalibus P. Licinio Crasso c. cassio longino cos. casini puerum factum ex virgine sub parentibus iussuque haruspicum deportatum in insulam desertam. licinius mucianus prodidit visum a se argis arescontem, cui nomen arescusae fuisse, nupsisse etiam, mox barbam et virilitatem provenisse uxoremque duxisse; eiusdem sortis et zmyrnae puerum a se visum. ipse in africa vidi mutatum in marem nuptiarum die l. consitium civem thysdritanum, vivebatque cum proderem haec.

* ... editis geminis raram esse aut puerperae aut puerperio praeterquam alteri vitam; si vero utriusque sexus editi sint gemini, rariorem utrique salutem. feminas celerius gigni quam mares, sicuti celerius senescere. saepius in utero moveri mares et in dextera fere geri parte, in laeva feminas.

ceteris animantibus statum et pariendi et partus gerendi tempus est; homo toto anno et incerto gignitur spatio, alius septimo mense, alius octavo et usque ad initia undecimi. ante septimum mensem haut umquam vitalis est. septimo non nisi pridie posterove pleniluni die aut interlunio concepti nascuntur. tralaticium in aegypto est et octavo gigni, iam quidem et in italia tales partus esse vitales, contra priscorum opiniones. variant haec pluribus modis. vistilia, gliti ac postea pomponi atque orfiti clarissimorum civium coniunx, ex iis quattuor partus enixa septimo semper mense, genuit suillium rufum undecimo, corbulonem septimo, utrumque consulem, postea

caesoniam, gai principis coniugem, octavo. in quo mensum numero genitis intra quadragensimum diem maximus labor, gravidis autem quarto et octavo mense, letalesque in iis abortus. masurius auctor est l. papirium praetorem secundo herede lege agente bonorum possessionem contra eum dedisse, cum mater partum se tredecim mensibus diceret tulisse, quoniam nullum certum tempus pariendi statutum videretur.

a conceptu decimo die dolores capitis, oculorum vertigines tenebraeque, fastidium in cibis, redundatio stomachi indices sunt hominis inchoati. melior color marem ferenti et facilior partus, motus in utero quadragensimo die. contraria omnia in altero sexu, ingestabile onus, crurum et inguinis levis tumor, primus autem xc die motus. sed plurimum languoris in utroque sexu capillum germinante partu et in plenilunio, quod tempus editos quoque infantes praecipue infestat. adeoque incessus atque omne quicquid dici potest in gravida refert, ut salsioribus cibis usae carentem unguiculis partum edant et, si respiravere, difficilius enitantur. oscitatio quidem in enixu letalis est, sicut sternuisse a coitu abortivum.

miseret atque etiam pudet aestimantem quam sit frivola animalium superbissimi origo, cum plerisque abortus causa odor a lucernarum fiat extinctu. his principiis nascuntur tyranni, his carnifex animus! tu qui corporis viribus fidis, tu qui fortunae munera amplexaris et te ne alumnum quidem eius existimas, sed partum, tu cuius imperatoria est mens, tu qui te deum credis aliquo successu tumens, tanti perire potuisti! atque etiam hodie minoris potes, quantulo serpentis ictus dente aut etiam, ut anacreon poeta, acino uvae passae, ut fabius senator praetor, in lactis haustu uno pilo strangulatus. is demum profecto vitam aequa lance pensitabit, qui semper fragilitatis humanae memor fuerit.

in pedes procidere nascentem contra naturam est, quo argumento eos appellavere agrippas ut aegri partus, qualiter et m. agrippam ferunt genitum, unico prope felicitatis exemplo in omnibus ad hunc modum genitis. quamquam is quoque adversa pedum valitudine, misera iuventa, exercito aevo inter arma mortesque ac noxia accessu, infelici terris stirpe omni, sed per utrasque agrippinas maxime, quae gaium, quae domitium neronem principes genuere totidem faces generis humani, praeterea brevitate aevi, quinquagensimo uno raptus

anno in tormentis adulteriorum coniugis socerique praegravi servitio, luisse augurium praeposteri natalis existimatur. neronem quoque, paulo ante principem et toto principatu suo hostem generis humani, pedibus genitum scribit parens eius agrippina. ritus naturae hominem capite gigni, mos est pedibus efferri.

auspicatius enecta parente gignuntur, sicut scipio africanus prior natus primusque caesarum a caeso matris utero dictus, qua de causa et caesones appellati. simili modo natus et manilius, qui carthaginem cum exercitu intravit. vopiscos appellabant e geminis qui retenti utero nascerentur altero interempto abortu. namque maxima, etsi rara, circa hoc miracula existunt.

praeter mulierem pauca animalia coitum novere gravida; unum quidem omnino aut alterum superfetat. extat in monimentis et medicorum et quibus talia consectari curae fuit uno abortu duodecim puerperia egesta. sed ubi paululum temporis inter duos conceptus intercessit, utrumque perfertur, ut in hercule et iphicle fratre eius apparuit et in ea quae gemino partu alterum marito similem alterumque adultero genuit, item in proconnesia ancilla, quae eiusdem diei coitu alterum domino similem, alterum procuratori eius, et in alia, quae iusto partu quinque mensum alterum edidit, rursus in alia, quae septem mensum edito puerperio insecutis in mensibus geminos enixa est.

iam illa vulgata sunt: varie ex integris truncos gigni, ex truncis integros; eadem parte truncos, signa quaedam naevosque et cicatrices etiam regenerari, quarto partu dacorum originis nota in brachio reddita (in lepidorum gente tres, intermisso ordine, obducto membrana oculo genitos accepimus); similes quidem alios avo, et ex geminis quoque alterum patri, alterum matri, annoque post genitum maiori similem fuisse ut geminum; quasdam sibi similes semper parere, quasdam viro, quasdam nulli, quasdam feminam patri, marem sibi. indubitatum exemplum est nicaei nobilis pyctae byzanti geniti, qui, adulterio aethiopis nata matre nihil a ceteris colore differente, ipse avum regeneravit aethiopem.

similitudinum quidem inmensa reputatio est et in qua credantur multa fortuita pollere, visus, auditus, memoria haustaeque imagines sub ipso conceptu. cogitatio etiam utriuslibet animum subito transvolans effingere similitudinem aut miscere existimatur, ideoque

plures in homine quam in ceteris omnibus animalibus differentiae, quoniam velocitas cogitationum animique celeritas et ingenii varietas multiformes notas inprimit, cum ceteris animantibus inmobiles sint animi et similes omnibus singulis in suo cuique genere. antiocho regi syriae e plebe nomine artemo in tantum similis fuit, ut laodice coniunx regia necato iam antiocho mimum per eum commendationis regnique successionis peregerit. magno pompeio vibius quidam e plebe et publicius etiam servitute liberatus indiscreta prope specie fuere similes, illud os probum reddentes ipsumque honorem eximiae frontis. qualis causa patri quoque eius menogenis coci sui cognomen inposuit, iam strabonis a specie oculorum habentis vitium imitato item servo; scipioni serapionis indiderat suarii negotiatoris vile mancipium. eiusdem familiae scipioni post eum nomen salvitto mimus dedit, sicut spinther secundarum tertiarumque pamphilus collegio lentuli et metelli consulum, in quo perquam inportune fortuitum hoc quoque fuit, duorum simul consulum in scaena imagines cerni. e diverso l. plancus orator histrioni rubrio cognomen inposuit, rursus curioni patri burbuleius itemque messalae censorio menogenes, perinde histriones. surae quidem proconsulis etiam rictum in loquendo intractionemque linguae et sermonis tumultum, non imaginem modo, piscator quidam in sicilia reddidit. cassio severo, celebri oratori, armentari murmillonis obiecta similitudo est. modo in iunia domo gallionem a castellano liberto non discernebat, nec a sannio mimo paride cognominato agrippinum senatorem. toranius mango antonio iam triumviro eximios forma pueros, alterum in asia genitum, alterum trans alpis, ut geminos vendidit: tanta unitas erat. postquam deinde sermone puerorum detecta fraude a furente increpitus antonio est, inter alia magnitudinem preti conquerente (nam ducentis erat mercatus sestertiis), respondit versutus ingenii mango, id ipsum se tanti vendidisse, quoniam non esset mira similitudo in ullis eodem utero editis; diversarum quidem gentium natales tam concordi figura reperire super omnem esse taxationem; adeoque tempestivam admirationem intulit, ut ille proscriptor animus, modo et contumelia furens, non aliud in censu magis ex fortuna sua duceret.

est quaedam privatim dissociatio corporum, et inter se steriles, ubi cum aliis iunxere se, gignunt, sicut Augustus et livia. item alii

aliaeque feminas tantum generant aut mares, plerumque et alternant, sicut gracchorum mater duodeciens et agrippina germanici noviens. aliis sterilis est iuventa, aliis semel in vita datur gignere. quaedam non perferunt partus, quales, si quando medicina et cura vicere, feminam fere gignunt. Divus Augustus in reliqua exemplorum raritate neptis suae nepotem vidit genitum quo excessit anno, m. silanum, qui, cum asiam obtineret post consulatum neronis principis successione, veneno eius interemptus est. q. metellus macedonicus, cum sex liberos relinqueret, xi nepotes reliquit, nurus vero generosque et omnes, qui se patris appellatione salutarent, xxvii. in actis temporum Divi Augusti invenitur duodecimo consulatu eius l.que sulla collega a. d. iii. idus aprilis c. crispinium hilarum ex ingenua plebe faesulana cum liberis viii, in quo numero filiae duae fuere, nepotibus xxvii, pronepotibus xviii, neptibus viii, praelata pompa tum omnibus, in capitolio immolasse.

mulier post quinquagensimum annum non gignit, maiorque pars xl profluvium genitale sistit. nam in viris masinissam regem post lxxxvi annum generasse filium, quem methimannum appellaverit, clarum est, catonem censorium octogensimo exacto e filia salonis clientis sui. qua de causa aliorum eius liberum propago liciniani sunt cognominati, hi saloniani, ex quis uticensis fuit. nuper etiam l. volusio saturnino in urbis praefectura extincto notum est e cornelia scipionum gentis volusium saturninum, qui fuit consul, genitum post lxii annum. et usque ad lxxv apud ignobiles vulgaris reperitur generatio.

solum autem animal menstruale mulier est; inde unius utero quas appellaverunt molas. ea est caro informis, inanima, ferri ictum et aciem respuens. movetur sistitque et menses, ut partus, alias letalis, alias una senescens, aliquando alvo citatiore excidens. simile quiddam et viris in ventre gignitur, quod vocant scirron, sicut oppio capitoni praetorio viro. sed nihil facile reperiatur mulierum profluvio magis monstrificum. acescunt superventu musta, sterilescunt tactae fruges, moriuntur insita, exuruntur hortorum germina, fructus arborum, quibus insidere, decidunt, speculorum fulgor aspectu ipso hebetatur, acies ferri praestringitur, eboris nitor, alvi apium moriuntur, aes etiam ac ferrum robigo protinus corripit odorque dirus aera, et in rabiem aguntur gustato eo canes atque insanabili veneno

morsus inficitur. quin et bituminum sequax alioqui ac lenta natura in lacu iudaeae, qui vocatur asphaltites, certo tempore anni supernatans non quit sibi avelli, ad omnem contactum adhaerens praeterquam filo ... , quem tale virus infecerit. etiam formicis, animali minimo, inesse sensum eius ferunt abicique gustatas fruges nec postea repeti. et hoc tale tantumque omnibus tricenis diebus malum in muliere existit et trimenstri spatio largius, quibusdam vero saepius mense, sicut aliquis numquam. sed tales non gignunt, quando haec est generando homini materia, germine e maribus coaguli modo hoc in sese glomerante, quod deinde tempore ipso animatur corporaturque. ergo cum gravidis fluxit, invalidi aut non vitales partus eduntur aut saniosi, ut auctor est nigidius; - (idem lac feminae non corrumpi alenti partum, si ex eodem viro rursus conceperit, arbitratur) - incipiente autem hoc statu aut desinente conceptus facillimi traduntur. fecunditatis in feminis praerogativum accepimus inunctis medicamine oculis salivam infici.

ceterum editis primores septimo mense gigni dentes priusque in supera fere parte, haud dubium est, septimo eosdem decidere anno aliosque suffici, quosdam et cum dentibus nasci, sicut m’. curium, qui ob id dentatus cognominatus est, et cn. papirium carbonem, praeclaros viros. in feminis ea res inauspicati fuit exempli regum temporibus. cum ita nata esset valeria, exitio civitati in quam delata esset futuram responso haruspicum vaticinante, suessam pometiam illa tempestate florentissimam deportata est, veridico exitu consecuto. - (quasdam concreto genitali gigni infausto omine cornelia gracchorum mater indicio est) - aliqui vice dentium continuo osse gignuntur, sicuti prusiae regis bithynorum filius superna parte oris. dentes autem in tantum invicti sunt ignibus, ut nec crementur cum reliquo corpore, iidemque flammis indomiti cavantur tabe pituitae. candorem trahunt quodam medicamine. usu atteruntur multoque prius in aliquis deficiunt. nec cibo tantum et alimentis necessarii, quippe vocis sermonisque regimen primores tenent, concentu quodam excipientes ictum linguae serieque structurae atque magnitudine mutilantes mollientesve aut hebetantes verba et, cum defuere, explanationem omnem adimentes. quin et augurium in hac esse creditur parte. triceni bini viris adtribuuntur excepta turdulorum gente: quibus plures fuere, longiora promitti vitae putant spatia. feminis minor numerus: quibus in dextra parte gemini superne a

canibus cognominati, fortunae blandimenta pollicentur, sicut in agrippina domiti neronis matre; contra in laeva. - (hominem prius quam genito dente cremari mos gentium non est) - sed mox plura de hoc, cum membratim historia decurret.

risisse eodem die quo genitus esset unum hominum accepimus zoroastren; eidem cerebrum ita palpitasse, ut inpositam repelleret manum, futurae praesagio scientiae.

in trimatu suo cuique dimidiam esse mensuram futurae certum est. in plenum autem cuncto mortalium generi minorem in dies fieri propemodum observatur rarosque patribus proceriores, consumente ubertatem seminum exustione, in cuius vices nunc vergat aevum. in creta terrae motu rupto monte inventum est corpus stans xlvi cubitorum, quod alii orionis, alii oti esse tradunt. orestis corpus oraculi iussu refossum vii cubitorum fuisse monumentis creditur. iam vero ante annos prope mille vates ille homerus non cessavit minora corpora mortalium quam prisca conqueri. naevii pollionis amplitudinem annales non tradunt, sed quia populi concursu paene sit interemptus, vice prodigii habitum. procerissimum hominum aetas nostra divo claudio principe gabbaram nomine ex arabia advectum novem pedum et totidem unciarum vidit. fuere sub Divo Augusto semipede addito, quorum corpora eius miraculi gratia in conditorio sallustianorum adservabantur hortorum; pusioni et secundillae erant nomina. eodem praeside minimus homo duos pedes et palmum conopas nomine in deliciis iuliae neptis eius fuit, et mulier andromeda, liberta iuliae augustae. manium maximum et m. tullium equites romanos binum cubitorum fuisse auctor est M. Varro, et ipsi vidimus in loculis adservatos. sesquipedales gigni, quosdam longiores, in trimatu inplentes vitae cursum, haud ignotum est.

invenimus in monumentis salamine euthymenis filium in tria cubita triennio adcrevisse, incessu tardum, sensu hebetem, puberem etiam factum, voce robusta, absumptum contractione membrorum subita triennio circumacto. ipsi non pridem vidimus eadem ferme omnia praeter pubertatem in filio corneli taciti, equitis romani belgicae galliae rationes procurantis. ἐκτραπέλους graeci vocant eos; in latio non habent nomen.

quod sit homini spatium a vestigio ad verticem, id esse pansis manibus inter longissimos digitos observatum est, sicuti vires dextra

parte maiores, quibusdam aequas utraque, aliquis laeva manu praecipuas, nec id umquam in feminis; mares praestare pondere et defuncta viventibus corpora omnium animalium et dormientia vigilantibus; virorum cadavera supina fluitare, feminarum prona, velut pudori defunctarum parcente natura.

concretis quosdam ossibus ac sine medullis vivere accepimus. signum eorum esse nec sitim sentire nec sudorem emittere, quamquam et voluntate scimus sitim victam equitemque romanum iulium viatorem e vocontiorum gente foederata in pupillaribus annis aquae subter cutem fusae morbo prohibitum umore a medicis naturam fecisse consuetudinem atque in senecta caruisse potu. nec non et alii multa sibi imperavere.

ferunt Crassum, avum Crassi in parthis interempti, numquam risisse, ob id agelastum vocatum, sicuti nec flesse multos. socratem clarum sapientia eodem semper visum vultu nec aut hilaro magis aut turbato. exit hic animi tenor aliquando in rigorem quendam torvitatemque naturae duram et inflexibilem affectusque humanos adimit, quales ἀπαθεῖς graeci vocant, multos eius generis experti, - quod mirum sit - auctores maxime sapientiae, diogenen cynicum, pyrrhonem, heraclitum, timonem, hunc quidem etiam in totius odium generis humani evectum. sed haec parva naturae insignia in multis varia cognoscuntur, ut in antonia drusi numquam expuisse, in pomponio consulari poeta non ructasse. - (quibus natura concreta sunt ossa, qui sunt rari admodum, cornei vocantur) -

corpore vesco, sed eximiis viribus tritanum, in gladiatorio ludo samnitium armatura celebrem, filiumque eius militem magni pompei et rectos et traversos cancellatim toto corpore habuisse nervos, in brachiis etiam manibusque, auctor est Varro prodigiosa virium relatione atque etiam hostem ab eo ex provocatione dimicante inermi dextera superatum et postremo correptum uno digito in castra tralatum. at vinnius valens meruit in praetorio Divi Augusti centurio, vehicula vini culleis onusta, donec exinanirentur, sustinere solitus, carpenta adprehensa una manu retinere, obnixus contra nitentibus iumentis, et alia mirifica facere, quae insculpta monumento eius spectantur. idem M. Varro: “rusticelius”, inquit, “hercules appellatus mulum suum tollebat, fufius salvius duo centenaria pondera pedibus, totidem manibus et ducenaria duo umeris contra scalas ferebat.” nos

quoque vidimus athanatum nomine prodigiosae ostentationis quingenario thorace plumbeo indutum cothurnisque quingentum pondo calciatum per scaenam ingredi. milonem athletam, cum constitisset, nemo vestigio educebat, malum tenenti modo digitum corrigebat.

cucurrisse mcxl stadia ab athenis lacedaemonem biduo philippidem magnum erat, donec anystis cursor lacedaemonius et philonides alexandri magni a sicyone elim uno die mcccv cucurrerunt. nunc quidem in circo quosdam [clx] passuum tolerare non ignoramus nuperque fonteio et vipstano cos. annos viii genitum a meridie ad vesperam [lxxv] passuum cucurrisse. cuius rei admiratio ita demum solida perveniat, si quis cogitet nocte ac die longissimum iter vehiculis tib. neronem emensum festinantem ad drusum fratrem aegrotum in germaniam. ea fuerunt [cc] passuum.

oculorum acies vel maxime fidem excedentia invenit exempla. in nuce inclusam iliadem homeri carmen in membrana scriptum tradit cicero. idem fuisse qui perviderent [cxxxv] passuum. huic et nomen M. Varro reddit: strabonem vocatum; solitum autem punico bello a lilybaeo siciliae promunturio, exeunte classe e carthaginis portu, etiam numerum navium dicere. callicrates ex ebore formicas et alia tam parva fecit animalia, ut partes eorum a ceteris cerni non possent. myrmecides quidem in eodem genere inclaruit quadriga ex eadem materia, quam musca integeret alis, fabricata et nave, quam apicula pinnis absconderet.

auditus unum exemplum habet mirabile proelium, quo sybaris deleta est, eo die quo gestum erat auditum olympiae. nam fama cimbricae victoriae castoresque, romam qui persicam victoriam ipso die quo contigit nuntiavere, visus et numinum fuere praesagia.

patientia corporis, ut est crebra sors calamitatium, innumera documenta peperit, clarissimum in feminis leaenae meretricis, quae torta non indicavit harmodium et aristogitonem tyrannicidas, in viris anaxarchi, qui, simili de causa cum torqueretur, praerosam dentibus linguam unamque spem indicii in tyranni os expuit.

memoria necessarium maxime vitae bonum cui praecipua fuerit, haut facile dictu est, tam multis eius gloriam adeptis. Cyrus rex omnibus in exercitu suo militibus nomina reddidit, l. scipio populo romano, cineas pyrrhi regis legatus senatui et equestri ordini romae

postero die quam advenerat. mithridates, duarum et viginti gentium rex, totidem linguis iura dixit, pro contione singulas sine interprete adfatus. charmadas quidem in graecia quae quis exegerat volumina in bibliothecis legentis modo repraesentavit. ars postremo eius rei facta et inventa est a simonide melico, consummata a metrodoro scepsio, ut nihil non isdem verbis redderetur auditum. nec aliud est aeque fragile in homine: morborum et casus iniurias atque etiam metus sentit, alias particulatim, alias universa. ictus lapide oblitus est litteras tantum; ex praealto tecto lapsus matris et adfinium propinquorumque cepit oblivionem, alius aegrotus servorum, etiam sui vero nominis messala corvinus orator. itaque saepe deficere temptat ac meditatur vel quieto corpore et valido. somno quoque serpente amputatur, ut inanis mens quaerat ubi sit loci.

animi vigore praestantissimum arbitror genitum caesarem dictatorem, nec virtutem constantiamque nunc commemoro nec sublimitatem omnium capacem quae caelo continentur, sed proprium vigorem celeritatemque quodam igne volucrem. scribere aut legere, simul dictare et audire solitum accepimus, epistulas vero tantarum rerum quaternas pariter dictare librariis aut, si nihil aliud ageret, septenas. idem signis conlatis bis et quinquagiens dimicavit, solus m. marcellum transgressus, qui undequadragiens dimicavit. nam praeter civiles victorias undeciens centena et nonaginta duo milia hominum occisa proeliis ab eo non equidem in gloria posuerim, tantam etiam coactam humani generis iniuriam, quod ita esse confessus est ipse bellorum civilium stragem non prodendo.

iustius pompeio magno tribuatur dcccxlvi naves piratis ademisse: caesari proprium et peculiare sit praeter supra dicta clementiae insigne, qua usque ad paenitentiam omnes superavit. idem magnanimitatis perhibuit exemplum, cui comparari non possit aliud. spectacula enim edita effusasque opes aut operum magnificentiam in hac parte enumerare luxuriae faventis est: illa fuit vera et incomparabilis invicti animi sublimitas, captis apud pharsaliam pompei magni scriniis epistularum iterumque apud thapsum scipionis concremasse ea optima fide atque non legisse.

verum ad decus imperii romani, non solum ad viri unius, pertinet victoriarum pompei magni titulos omnes triumphosque hoc in loco nuncupari, aequato non modo alexandri magni rerum fulgore, sed

etiam herculis prope ac liberi patris. igitur sicilia recuperata, unde primum sullanus in rei publicae causa exoriens auspicatus est, africa vero tota subacta et in dicionem redacta magnique nomine in spolium inde capto, eques romanus, id quod antea nemo, curru triumphali revectus et statim ad solis occasum transgressus, excitatis in pyrenaeo tropaeis, oppida dccclxxvi ab alpibus ad fines hispaniae ulterioris in dicionem redacta victoriae suae adscripsit et maiore animo sertorium tacuit, belloque civili, quod omnia externa conciebat, extincto iterum triumphales currus eques r. induxit, totiens imperator ante quam miles. postea ad tota maria et deinde solis ortus missus hos retulit patriae titulos more sacris certaminibus vincentium - neque enim ipsi coronantur, sed patrias suas coronant - , hos ergo honores urbi tribuit in delubro minervae, quod ex manubiis dicabat:

hoc est breviarium eius ab oriente. triumphi vero, quem duxit a. d. iii kal. oct. m. pisone m. messala cos., praefatio haec fuit:

“cvm oram maritimam praedonibvs liberasset et imperivm maris popvlo romano restitvisset ex asia ponto armenia paphlagonia cappadocia cilicia syria scythis ivdaeis albanis hiberia insvla creta basternis et svper haec de rege mithridate atqve tigrane trivmphavit”.

summa summarum in illa gloria fuit (ut ipse in contione dixit, cum de rebus suis disseret) asiam ultimam provinciarum accepisse eandemque mediam patriae reddidisse. si quis e contrario simili modo velit percensere caesaris res, qui maior illo apparuit, totum profecto terrarum orbem enumeret, quod infinitum esse conveniet.

ceteris virtutum generibus varie et multi fuere praestantes. cato primus porciae gentis tres summas in homine res praestitisse existimatur, ut esset optimus orator, optimus imperator, optimus senator, quae mihi omnia, etiamsi non prius, attamen clarius fulsisse in scipione aemiliano videntur, dempto praeterea plurimorum odio, quo cato laboravit. itaque sit proprium catonis quater et quadragiens causam dixisse, nec quemquam saepius postulatum et semper absolutum.

fortitudo in quo maxime exstiterit inmensae quaestionis est, utique si poetica recipiatur fabulositas. q. ennius t. caecilium teucrum fratremque eius praecipue miratus propter eos sextum decimum adiecit annalem. l. siccius dentatus, qui tribunus plebei fuit sp. tarpeio a. aternio cos. haud multo post exactos reges, vel

numerosissima suffragia habet centiens viciens proeliatus, octiens ex provocatione victor, quadraginta quinque cicatricibus adverso corpore insignis, nulla in tergo. idem spolia cepit xxxiiii, donatus hastis puris duodeviginti, phaleris viginti quinque, torquibus tribus et octoginta, armillis clx, coronis xxvi, in iis civicis xiiii, aureis octo, muralibus, tribus, obsidionali una, fisco aeris, x captivis et viginti simul bubus, imperatores novem ipsius maxime opera triumphantes secutus, praeterea (quod optimum in operibus eius reor) uno ex ducibus t. romilio ex consulatu ad populum convicto male imperatae rei militaris.

haut minora forent capitolini decora, ni perdidisset illa exitu vitae. ante decem et septem annos bina ceperat spolia. primus omnium eques muralem acceperat coronam, sex civicas, xxxvii dona, xxiii cicatrices adverso corpore exceperat, p. servilium magistrum equitum servaverat, ipse vulneratus umerum, femur. super omnia capitolium summamque rem in eo solus a gallis servaverat, si non regno suo servasset.

verum in his sunt quidem virtutis opera magna, sed maiora fortunae. m. sergio, ut equidem arbitror, nemo quemquam hominum iure praetulerit, licet pronepos catilina gratiam nomini deroget. secundo stipendio dextram manum perdidit; stipendiis duobus ter et viciens vulneratus est, ob id neutra manu, neutro pede satis utilis, uno tantum salvus, plurimis postea stipendiis debilis miles. bis ab Hannibale captus - neque enim cum quolibet hoste res fuit - , bis vinculorum eius profugus, in viginti mensibus nullo non die in catenis aut compedibus custoditus. sinistra manu sola quater pugnavit, uno die duobus equis insidente eo suffossis. dextram sibi ferream fecit eaque religata proeliatus cremonam obsidione exemit, placentiam tutatus est, duodena castra hostium in gallia cepit, quae omnia ex oratione eius apparent habita cum in praetura sacris arceretur a collegis ut debilis, quos hic coronarum acervos constructurus hoste mutato! etenim plurimum refert, in quae cuiusque virtus tempora inciderit. quas trebia ticinusve aut trasimennus civicas dedere quae cannis corona merita, unde fugisse virtutis summum opus fuit ceteri profecto victores hominum fuere, sergius vicit etiam fortunam.

ingeniorum gloriae quis possit agere dilectum per tot

disciplinarum genera et tantam rerum operumque varietatem, nisi forte homero vate graeco nullum felicius extitisse convenit, sive operis forma sive materie aestimetur itaque alexander magnus - etenim insignibus iudiciis optime citraque invidiam tam superba censura peragetur - inter spolia darii persarum regis unguentorum scrinio capto, quod erat auro, margaritis gemmisque pretiosum, varios eius usus amicis demonstrantibus, quando taedebat unguenti bellatorem et militia sordidum: “immo hercule,” inquit, “librorum homeri custodiae detur,” ut pretiosissimum humani animi opus quam maxime diviti opere servaretur. idem pindari vatis familiae penatibusque iussit parci, cum thebas raperet, aristotelis philosophi patriam suam credidit tantaeque rerum claritati tam benignum testimonium miscuit. archilochi poetae interfectores apollo arguit delphis. sophoclem tragici cothurni principem defunctum sepelire liber pater iussit, obsidentibus moenia lacedaemoniis, lysandro eorum rege in quiete saepius admonito ut pateretur humari delicias suas. requisivit rex, qui supremum diem athenis obissent, nec difficulter ex his quem deus significasset intellexit pacemque funeri dedit.

platoni sapientiae antistiti dionysius tyrannus, alias saevitiae superbiaeque natus, vittatam navem misit obviam, ipse quadrigis albis egredientem in litore excepit. viginti talentis unam orationem isocrates vendidit. aeschines atheniensis summus orator, cum accusationem, qua fuerat usus, rhodiis legisset, legit et defensionem demosthenis, qua in illud pulsus fuerat exilium, mirantibusque tum magis fuisse miraturos dixit, si ipsum orantem audivissent, calamitate testis ingens factus inimici. thucydiden imperatorem athenienses in exilium egere, rerum conditorem revocavere, eloquentiam mirati cuius virtutem damnaverant. magnum et menandro in comico socco testimonium regum aegypti et macedoniae contigit classe et per legatos petito, maius ex ipso, regiae fortunae praelata litterarum conscientia.

perhibuere et romani proceres etiam exteris testimonia. cn. pompeius confecto mithridatico bello intraturus posidonii sapientiae professione clari domum forem percuti de more a lictore vetuit et fasces litterarum ianuae summisit is cui se oriens occidensque summiserat. cato censorius in illa nobili trium sapientiae procerum

ab athenis legatione audito carneade quam primum legatos eos censuit dimittendos, quoniam illo viro argumentante quid veri esset haut facile discerni posset. quanta morum commutatio! ille semper alioquin universos ex italia pellendos censuit graecos, at pronepos eius uticensis cato unum ex tribunatu militum philosophum, alterum ex cypria legatione deportavit, eandemque linguam ex duobus catonibus in illo abegisse, in hoc importasse memorabile est.

sed et nostrorum gloriam percenseamus. prior africanus q. ennii statuam sepulcro suo inponi iussit clarumque illud nomen, immo vero spolium ex tertia orbis parte raptum, in cinere supremo cum poetae titulo legi. Divus Augustus carmina vergili cremari contra testamenti eius verecundiam vetuit, maiusque ita vati testimonium contigit quam si ipse sua probavisset. M. Varronis in bibliotheca, quae prima in orbe ab asinio pollione ex manubiis publicata romae est, unius viventis posita imago est, haut minore, ut equidem reor, gloria, principe oratore et cive ex illa ingeniorum quae tunc fuit multitudine uni hanc coronam dante quam cum eidem magnus pompeius piratico ex bello navalem dedit. innumerabilia deinde sunt exempla romana, si persequi libeat, cum plures una gens in quocumque genere eximios tulerit quam ceterae terrae. sed quo te, m. tulli, piaculo taceam, quove maxime excellentem insigni praedicem quo potius quam universi populi illius gentium amplissimi testimonio, e tota vita tua consulatus tantum operibus electis te dicente legem agrariam, hoc est alimenta sua, abdicarunt tribus; te suadente roscio theatralis auctori legis ignoverunt notatasque se discrimine sedis aequo animo tulerunt; te orante proscriptorum liberos honores petere puduit; tuum catilina fugit ingenium; tu m. antonium proscripsisti. salve primus omnium parens patriae appellate, primus in toga triumphum linguaeque lauream merite et facundiae latiarumque litterarum parens aeque (ut dictator caesar, hostis quondam tuus, de te scripsit) omnium triumphorum laurea maiorem, quanto plus est ingenii romani terminos in tantum promovisse quam imperii.

reliquis animi bonis praestitere ceteros mortales: sapientia ob id cati, corculi apud romanos cognominati, apud graecos socrates, oraculo apollinis pythii praelatus cunctis. rursus mortales oraculorum societatem dedere chiloni lacedaemonio tria praecepta eius delphis

consecrando aureis litteris, quae sunt haec: “nosse se quemque,” et “nihil nimium cupere, comitemque aeris alieni atque litis esse miseriam.” quin et funus eius, cum victore filio olympiae expirasset gaudio, tota graecia prosecuta est.

divinitas et quaedam caelitum societas nobilissima ex feminis in sibylla fuit, ex viris in melampode apud graecos, apud romanos in marcio.

vir optimus semel a condito aevo iudicatus est scipio nasica ab iurato senatu, idem in toga candida bis repulsa notatus a populo. in summa ei in patria mori non licuit, non hercule magis quam extra vincula illi sapientissimo ab apolline iudicato socrati.

pudicissima femina semel matronarum sententia iudicata est sulpicia paterculi filia, uxor fulvi flacci, electa ex centum praeceptis quae simulacrum veneris ex sibyllinis libris dedicaret, iterum religionis experimento claudia inducta romam deum matre.

pietatis exempla infinita quidem toto orbe extitere, sed romae unum, cui comparari cuncta non possint. humilis in plebe et ideo ignobilis puerpera, supplicii causa carcere inclusa matre cum impetrasset aditum, a ianitore semper excussa ante, ne quid inferret cibi, deprehensa est uberibus suis alens eam. quo miraculo matris salus donata pietati est, ambaeque perpetuis alimentis, et locus ille eidem consecratus deae, c. quinctio m’. acilio cos. templo pietatis extructo in illius carceris sede, ubi nunc marcelli theatrum est. gracchorum pater anguibus prehensis in domo, cum responderetur ipsum victurum alterius sexus interempto: “immo vero,” inquit, “meum necate, cornelia enim iuvenis est et parere adhuc potest.” hoc erat uxori parcere et rei publicae consulere; idque mox consecutum est. m. lepidus appuleiae uxoris caritate post repudium obiit. p. rutilius morbo levi impeditus nuntiata fratris repulsa in consulatus petitione ilico expiravit. p. catienus philotimus patronum adeo dilexit, ut heres omnibus bonis institutus in rogum eius se iaceret.

variarum artium scientia innumerabiles enituere, quos tamen attingi par sit florem hominum libantibus: astrologia berosus, cui ob divinas praedictiones athenienses publice in gymnasio statuam inaurata lingua statuere; grammatica apollodorus, cui amphictyones graeciae honorem habuere; hippocrates medicina, qui venientem ab illyriis pestilentiam praedixit discipulosque ad auxiliandum circa

urbes dimisit, quod ob meritum honores illi quos herculi decrevit graecia. eandem scientiam in cleombroto ceo ptolemaeus rex megalensibus sacris donavit centum talentis servato antiocho rege. magna et critobulo fama est extracta philippi regis oculo sagitta et citra deformitatem oris curata orbitate luminis, summa autem asclepiadi prusiensi condita nova secta, spretis legatis et pollicitationibus mithridatis regis, reperta ratione qua vinum aegris medetur, relato e funere homine et conservato, sed maxime sponsione facta cum fortuna, ne medicus crederetur, si umquam invalidus ullo modo fuisset ipse. et vicit suprema in senecta lapsu scalarum exanimatus.

grande et archimedi geometricae ac machinalis scientiae testimonium m. marcelli contigit interdicto, cum syracusae caperentur, ne violaretur unus, nisi fefellisset imperium militaris inprudentia. laudatus est et chersiphron gnosius aede ephesi dianae admirabili fabricata, philon athenis armamentario cd navium, ctesibius pneumatica ratione et hydraulicis organis repertis, dinochares metatus alexandro condente in aegypto alexandriam. idem hic imperator edixit ne quis ipsum alius quam Apelles pingeret, quam pyrgoteles scalperet, quam lysippus ex aere duceret. quae artes pluribus inclaruere exemplis. aristidis thebani pictoris unam tabulam centum talentis rex attalus licitus est, octoginta emit duas caesar dictator, mediam et aiacem timomachi, in templo veneris genetricis dicaturus. candaules rex bularchi picturam magnetum exitii, haut mediocris spati, rependit auro. rhodum non incendit rex demetrius expugnator cognominatus, ne tabulam protogenis cremaret a parte ea muri locatam. Praxiteles marmore nobilitatus est cnidiaque venere praecipue vesano amore cuiusdam iuvenis insigni et Nicomedis aestimatione regis grandi cnidiorum aere alieno permutare eam conati. Phidiae iuppiter olympius cotidie testimonium perhibet, mentori capitolinus et diana ephesia, quibus fuere consecrata artis eius vasa.

pretium hominis in servitio geniti maximum ad hanc diem, quod equidem conpererim, fuit grammaticae artis, daphnin attio pisaurense vendente et M. Scauro principe civitatis iii [dcc] licente. excessere hoc in nostro aevo, nec modice, histriones, sed hi libertatem suam mercati, quippe cum iam apud maiores roscius histrio iii [d] annua

meritasse prodatur, nisi si quis in hoc loco desiderat armeniaci belli paulo ante propter tiridaten gesti dispensatorem, quem nero iii [30cxxx]30 manumisit. sed hoc pretium belli, non hominis, fuit tam hercules quam libidinis, non formae, paezontem e spadonibus seiani iii [30d]30 mercante clutorio prisco. quam quidem iniuriam lucri fecit ille mercatus in luctu civitatis, quoniam arguere nulli vacabat.

gentium in toto orbe praestantissima una omnium virtute haud dubie romana extitit. felicitas cui praecipua fuerit homini, non est humani iudicii, cum prosperitatem ipsam alius alio modo et suopte ingenio quisque determinet. si verum facere iudicium volumus ac repudiata omni fortunae ambitione decernere, nemo mortalium est felix. abunde agitur atque indulgenter a fortuna deciditur cum eo, qui iure dici non infelix potest. quippe ut alia non sint, certe ne lassescat fortuna metus est, quo semel recepto solida felicitas non est. quid, quod nemo mortalium omnibus horis sapit utinamque falsum hoc et non ut a vate dictum quam plurimi iudicent! vana mortalitas et ad circumscribendam se ipsam ingeniosa conputat more thraciae gentis, quae calculos colore distinctos pro experimento cuiusque diei in urnam condit ac supremo die separatos dinumerat atque ita de quoque pronuntiat. quid, quod iste calculi candore illo laudatus dies originem mali habuit quam multos accepta adflixere imperia! quam multos bona perdidere et ultimis mersere suppliciis, ista nimirum bona, cum interim illa hora in gaudio fuit! ita est profecto: alius de alio iudicat dies et tantum supremus de omnibus, ideoque nullis credendum est. quid, quod bona malis paria non sunt etiam pari numero, nec laetitia ulla minimo maerore pensanda heu vana et inprudens diligentia! numerus dierum conparatur, ubi quaeritur pondus!

una feminarum in omni aevo lampido lacedaemonia reperitur, quae regis filia, regis uxor, regis mater fuerit, una berenice, quae filia, soror, mater olympionicarum; una familia curionum, in qua tres continua serie oratores extiterint, una fabiorum, in qua tres continui principes senatus, m. fabius ambustus, fabius rullianus filius, q. fabius gurges nepos.

cetera exempla fortunae variantis innumera sunt. etenim quae facit magna gaudia nisi ex malis aut quae mala inmensa nisi ex ingentibus gaudiis servavit proscriptum a sulla m. fidustium senatorem annis

xxxvi, sed iterum proscriptura. superstes sullae vixit, sed usque ad antonium, constatque nulla alia de causa ab eo proscriptum quam quia proscriptus fuisset. triumphare p. ventidium de parthis voluit quidem solum, sed eundem in triumpho asculano cn. pompei duxit puerum, quamquam masurius auctor est bis in triumpho ductum, cicero mulionem castrensis furnariae fuisse, plurimi iuventam inopem in caliga militari tolerasse. fuit et balbus cornelius maior consul, sed accusatus atque de iure virgarum in eum iudice in consilium misso, primus externorum atque etiam in oceano genitorum usus illo honore, quem maiores latio quoque negaverint. est et l. fulvius inter insignia exempla, tusculanorum rebellantium consul, eodemque honore, cum transisset, exornatus confestim a populo romano, qui solus eodem anno, quo fuerat hostis, romae triumphavit ex iis quorum consul fuerat. unus hominum ad hoc aevi felicis sibi cognomen adseruit l. sulla, civili nempe sanguine ac patriae oppugnatione adoptatus. et quibus felicitatis inductus argumentis quod proscribere tot milia civium ac trucidare potuisset o prava interpretatio et futuro tempore infelix! non melioris sortis tunc fuere pereuntes, quorum miseremur hodie, cum sullam nemo non oderit age, non exitus vitae eius omnium proscriptorum ab illo calamitate crudelior fuit erodente se ipso corpore et supplicia sibi gignente quod ut dissimulaverit et supremo somnio eius, cui inmortuus quodammodo est, credamus ab uno illo invidiam gloria victam, hoc tamen nempe felicitati suae defuisse confessus est quod capitolium non dedicavisset.

q. metellus in ea oratione, quam habuit supremis laudibus patris sui l. metelli pontificis, bis consulis, dictatoris, magistri equitum, xv viri agris dandis, qui plurimos elephantos ex primo punico bello duxit in triumpho, scriptum reliquit decem maximas res optimasque, in quibus quaerendis sapientes aetatem exigerent, consummasse eum: voluisse enim primarium bellatorem esse, optimum oratorem, fortissimum imperatorem, auspicio suo maximas res geri, maximo honore uti, summa sapientia esse, summum senatorem haberi, pecuniam magnam bono modo invenire, multos liberos relinquere et clarissimum in civitate esse; haec contigisse ei nec ulli alii post romam conditam. longum est refellere et supervacuum abunde uno casu refutante, siquidem is metellus orbam luminibus exegit

senectam, amissis incendio, cum palladium raperet ex aede vestae, memorabili causa, sed eventu misero. quo fit ut infelix quidem dici non debeat, felix tamen non possit. tribuit ei populus romanus quod nulli alii ab condito aevo, ut, quotiens in senatum iret, curru veheretur ad curiam: magnum ei et sublime, sed pro oculis datum.

huius quoque q. metelli, qui illa de patre dixit, filius inter rara felicitatis humanae exempla numeratur: nam praeter honores amplissimos cognomenque macedonici a quattuor filiis inlatus rogo, uno praetorio, tribus consularibus, duobus triumphalibus, uno censorio, quae singula quoque paucis contigere. in ipso tamen flore dignationis suae ab c. atinio labeone, cui cognomen fuit macerioni, tribuno plebis, quem e senatu censor eiecerat, revertens e campo meridiano tempore vacuo foro et capitolio ad tarpeium raptus, ut praecipitaretur, convolante quidem tam numerosa illa cohorte, quae patrem eum appellabat, sed, ut necesse erat in subito, tarde et tamquam in exequias, cum resistendi sacroque sanctum repellendi ius non esset, virtutis suae opera et censurae periturus, aegre tribuno, qui intercederet, reperto a limine ipso mortis revocatus alieno beneficio postea vixit, bonis inde etiam consecratis a damnato suo, tamquam parum esset faucium reste intortarum, expressi per aures sanguinis poenam exactam esse. equidem et africani sequentis inimicum fuisse inter calamitates duxerim, ipso teste macedonico, siquidem dixit: “ite filii, celebrate exequias, numquam civis maioris funus videbitis.” et hoc dicebat iam baliaricis, diadematis, iam macedonicus ipse. verum ut illa sola iniuria aestimetur, quis hunc iure felicem dixerit, periclitatum ad libidinem inimici, nec africani saltem, perire quos hostes vicisse tanti fuit aut quos non honores currusque illa sua violentia fortuna retroegit, per mediam urbem censore tracto - etenim sola haec morandi ratio fuerat - , tracto in capitolium idem, in quod triumphans ipse deorum exuviis ne captivos quidem sic traxerat maius hoc scelus felicitate consecuta factum est, periclitato macedonico vel funus tantum tale perdere, in quo a triumphalibus liberis portaretur in rogum velut exequiis quoque triumphans. nulla est profecto solida felicitas, quam contumelia ulla vitae rupit, nedum tanta. quod superest, nescio morum gloriae an indignationis dolori accedat, inter tot metellos tam sceleratam c. atini audaciam semper fuisse inultam.

in Divo quoque Augusto, quem universa mortalitas in hac censura nuncupet, si diligenter aestimentur cuncta, magna sortis humanae reperiantur volumina: repulsa in magisterio equitum apud avunculum et contra petitionem eius praelatus lepidus, proscriptionis invidia ob collegium in triumviratu pessimorum civium, nec aequa saltem portione, sed praegravi antonio, philippensi proelio morbi, fuga et triduo in palude aegroti et (ut fatentur agrippa ac maecenas) aqua subter cutem fusa turgidi latebra, naufragia sicula et alia ibi quoque in spelunca occultatio, iam in navali fuga urguente hostium manu preces proculeio mortis admotae, cura perusinae contentionis, sollicitudo martis actiaci, pannonicis bellis ruina e turri, tot seditiones militum, tot ancipites morbi corporis, suspecta marcelli vota, pudenda agrippae ablegatio, totiens petita insidiis vita, incusatae liberorum mortes luctusque non tantum orbitate tristis, adulterium filiae et consilia parricidae palam facta, contumeliosus privigni neronis secessus, aliud in nepte adulterium; iuncta deinde tot mala: inopia stipendi, rebellio illyrici, servitiorum dilectus iuventutis penuria, pestilentia urbis, fames italiae, destinatio expirandi et quadridui inedia maior pars mortis in corpus recepta; iuxta haec variana clades et maiestatis eius foeda suggillatio, abdicatio postumi agrippae post adoptionem, desiderium post relegationem, inde suspicio in fabium arcanorumque proditionem, hinc uxoris et tiberii cogitationes, suprema eius cura. in summa deus ille caelumque nescio adeptus magis an meritus herede hostis sui filio excessit.

subeunt in hac reputatione delphica oracula velut ad castigandam hominum vanitatem ab deo emissa. duo sunt haec: “pedium felicissimum, qui pro patria proxime occubuisset;” iterum a gyge rege tunc amplissimo terrarum consulti: “aglaum psophidium esse feliciorem.” senior hic in angustissimo arcadiae angulo parvum, sed annuis victibus large sufficiens praedium colebat, numquam ex eo egressus atque, ut e vitae genere manifestum est, minima cupidine minimum in vita mali expertus.

consecratus est vivus sentiensque eiusdem oraculi iussu et iovis deorum summi adstipulatu euthymus pycta, semper olympiae victor et semel victus. patria ei locri in italia; ibi imaginem eius et olympiae alteram eodem die tactam fulmine callimachum ut nihil aliud miratum video deumque iussisse sacrificare, quod et vivo factitatum

et mortuo, nihilque de eo mirum aliud quam hoc placuisse dis.

de spatio atque longinquitate vitae hominum non locorum modo situs, verum et tempora ac sua cuique sors nascendi incertum fecere. hesiodus, qui primus aliqua de hoc prodidit, fabulose, ut reor, multa hominum aevo praeferens, cornici novem nostras attribuit aetates, quadruplum eius cervis, id triplicatum corvis, et reliqua fabulosius in phoenice ac nymphis. anacreon poeta arganthonio tartesiorum regi cl tribuit annos, cinyrae cypriorum decem annis amplius, aegimio cc, theopompus epimenidi gnosio clvii; hellanicus quosdam in aetolia epiorum gentis ducenos explere, cui adstipulatur damastes memorans pictoreum ex his praecipuum corpore viribusque etiam ccc vixisse, ephorus arcadum reges tricenis annis, alexander cornelius dandonem quendam in illyrico d vixisse, xenophon in periplo lutmiorum insulae regem dc atque, ut parce mentitus, filium eius dccc. quae omnia inscitia temporum acciderunt. annum enim alii aestate determinabant et alterum hieme, alii quadripertitis temporibus, sicut arcades, quorum anni trimenstres fuere, quidam lunae senio, ut aegyptii. itaque apud eos et singula milia annorum vixisse produntur. sed ut ad confessa transeamus, arganthonium gaditanum lxxx annis regnasse prope certum est; putant quadragensimo coepisse. masinissam lx annis regnasse indubitatum est, gorgian siculum cviii vixisse. q. fabius maximus lxiii annis augur fuit. m. perpenna et nuper l. volusius saturninus omnium, quos in consulatu sententiam rogaverant, superstites fuere. perpenna septem reliquit ex iis quos censor legerat; vixit annos lxxxxviii. qua in re et illud adnotare succurrit, unum omnino quinquennium fuisse quo senator nullus moreretur, cum flaccus et albinus censores lustrum condidere, usque ad proximos censores, ab anno urbis dlxxviiii. m. valerius corvinus centum annos inplevit, cuius inter primum et sextum consulatum xlvi anni fuere. idem sella curuli semel ac viciens sedit, quotiens nemo alius. aequavit eius vitae spatia metellus pontifex.

et ex feminis livia rutili lxxxxvii annos excessit, statilia claudio principe ex nobili domo lxxxxviiii, terentia ciceronis ciii, clodia ofili cxv, haec quidem etiam enixa quindeciens. lucceia mima c annis in scaena pronuntiavit. galeria copiola emboliaria reducta est in scaenam c. poppaeo q. sulpicio cos. ludis pro salute Divi Augusti votivis annum ciiii agens; producta fuerat tirocinio a m. pomponio

aedile plebis c. mario cn. carbone cos. ante annos xci, a magno pompeio magni theatri dedicatione anus pro miraculo reducta. sammullam quoque cx annis vixisse auctor est pedianus asconius. minus miror stephanionem, qui primus togatus saltare instituit, utrisque saecularibus ludis saltivisse, Divi Augusti et quos claudius caesar consulatu suo quarto fecit, quando lxiii non amplius anni interfuere, quamquam et postea diu vixit. in tmoli montis cacumine, quod vocant tempsin, cl annis vivere mucianus auctor est, totidem annorum censum claudi caesaris censura t. fullonium bononiensem, idque collatis censibus, quos ante detulerat, vitaeque argumentis - etenim curae principi id erat - verum apparuit.

poscere videtur locus ipse sideralis scientiae sententiam. epigenes cxii annos inpleri negavit posse, berosus excedi cxvi. durat et ea ratio, quam petosiris ac necepsos tradidere (tetartemorion appellant a trium signorum portione), qua posse in italiae tractu cxxiiii annos vitae contingere apparet. negavere illi quemquam lxxxx partium exortivam mensuram (quod anaphoras vocant) transgredi, et has ipsas incidi occursu maleficorum siderum aut etiam radiis eorum solisque. aesculapi rursus secta, quae stata vitae spatia a stellis accipi dicit, quantum plurimum tribuat, incertum est. rara autem esse dicunt longiora quidem tempora, quoniam momentis horarum insignibus lunae dierum, ut vii atque xv, quae nocte ac die observantur, ingens turba nascatur scansili annorum lege occidua, quam climacteras appellant, non fere ita genitis liiii annum excedentibus.

primum ergo ipsius artis inconstantia declarat quam incerta res sit. accedunt experimenta recentissimi census, quem intra quadriennium imperatores caesares vespasiani pater filiusque censores egerunt. nec sunt omnia vasaria excutienda; mediae tantum partis inter appenninum padumque ponemus exempla: cxx annos parmae tres edidere, brixilli unus, cxxv parmae duo, cxxx placentiae unus, faventiae una mulier, cxxxv bononiae l. terentius m. filius, arimini vero m. aponius cxl, tertulla cxxxvii. citra placentiam in collibus oppidum est veleiatium, in quo cx annos sex detulere, quattuor vero centenos vicenos, unus cxl, m. mucius m. filius galeria felix. ac ne pluribus moremur in re confessa, in regione italiae octava centenum annorum censi sunt homines liiii, centenum denum homines xiiii, centenum vicenum quinum homines duo, centenum tricenum

homines quattuor, centenum tricenum quinum aut septenum totidem, centenum quadragenum homines tres.

alia mortalitatis inconstantia: homerus eadem nocte natos hectorem et polydamanta tradidit, tam diversae sortis viros. c. mario cn. carbone iii cos. a. d. v kal. iunias m. caelius rufus et c. licinius calvus eadem die geniti sunt, oratores quidem ambo, sed tam dispari eventu. hoc etiam isdem horis nascentibus in toto mundo cotidie evenit, pariterque domini ac servi gignuntur, reges et inopes.

p. cornelius rufus, qui consul cum m'. curio fuit, dormiens oculorum visum amisit, cum id sibi accidere somniaret. e diverso pheraeus iason deploratus a medicis vomicae morbo, cum mortem in acie quaereret, vulnerato pectore medicinam invenit ex hoste. q. fabius maximus consul apud flumen isaram proelio commisso adversus allobrogum arvernorumque gentes a. d. vi idus augustas, [cxxx] perduellium caesis, febri quartana liberatus est in acie. incertum ac fragile nimirum est hoc munus naturae, quicquid datur nobis, malignum vero et breve etiam in iis quibus largissime contigit, universum utique aevi tempus intuentibus. quid, quod aestimatione nocturnae quietis dimidio quisque spatio vitae suae vivit, pars aequa morti similis exigitur aut poena est, nisi contigit quies nec reputantur infantiae anni, qui sensu carent, non senectae in poenam vivacis, tot periculorum genera, tot morbi, tot metus, tot curae, totiens invocata morte, ut nullum frequentius sit votum. natura vero nihil hominibus brevitate vitae praestitit melius. hebescunt sensus, membra torpent, praemoritur visus, auditus, incessus, dentes etiam ac ciborum instrumenta, et tamen vitae hoc tempus adnumeratur. ergo pro miraculo et id solitarium reperitur exemplum xenophili musici, centum et quinque annis vixisse sine ullo corporis incommodo. at hercule reliquis omnibus per singulas membrorum partes, qualiter nullis aliis animalibus, certis pestifer calor remeat horis aut rigor, neque horis modo, sed et diebus noctibusque trinis quadrinisve, etiam anno toto. atque etiam morbus est aliquantisper sapientiam mori. morbis quoque enim quasdam leges natura posuit: quadrini circuitus febrem numquam bruma, numquam hibernis mensibus incipere, quosdam post sexagensimum vitae spatium non accedere; aliis pubertate deponi, feminis praecipue; senes minime sentire pestilentiam. namque et universis gentibus ingruunt morbi et

generatim modo servitiis, modo procerum ordini aliosque per gradus. qua in re observatum a meridianis partibus ad occasum solis pestilentiam semper ire nec umquam aliter fere, non hieme, nec ut ternos excedat menses. iam signa letalia in furoris morbo risum, sapientiae vero aegritudine fimbriarum curam et stragulae vestis plicaturas, a somno moventium neglectum, praefandi umoris e corpore effluvium, in oculorum quidem et narium aspectu indubitata maxime atque etiam supino adsidue cubitu, venarum inaequabili aut formicante percussu, quaeque alia hippocrati principi medicinae observata sunt. et cum innumerabilia sint mortis signa, salutis securitatisque nulla sunt, quippe cum censorius cato ad filium de validis quoque observationem ut ex oraculo aliquo prodiderit, senilem iuventam praematurae mortis esse signum. morborum vero tam infinita est multitudo, ut pherecydes syrius serpentium multitudine ex corpore eius erumpente expiraverit. quibusdam perpetua febris est, sicut c. maecenati; eidem triennio supremo nullo horae momento contigit somnus. antipater sidonius poeta omnibus annis uno die tantum natali corripiebatur febre et eo consumptus est satis longa senecta.

aviola consularis in rogo revixit et, quoniam subveniri non potuerat praevalente flamma, vivus crematus est. similis causa in l. lamia praetorio viro traditur. nam c. aelium tuberonem praetura functum a rogo relatum messala rufus et plerique tradunt. haec est condicio mortalium. ad has et eius modi occasiones fortunae gignimur, uti de homine ne morti quidem debeat credi. reperimus inter exempla hermotimi clazomenii animam relicto corpore errare solitam vagamque e longinquo multa adnuntiare, quae nisi a praesente nosci non possent, corpore interim semianimi, donec cremato eo inimici, qui cantharidae vocabantur, remeanti animae veluti vaginam ademerint; aristeae etiam visam evolantem ex ore in proconneso corvi effigie, magna quae sequitur hanc fabulositate. quam equidem et in gnosio epimenide simili modo accipio, puerum aestu et itinere fessum in specu septem et quinquaginta dormisse annis, rerum faciem mutationemque mirantem velut postero die experrectum, hinc pari numero dierum senio ingruente, ut tamen in septimum et quinquagesimum atque centesimum vitae duraret annum. feminarum sexus huic malo videtur maxime opportunus

conversione volvae, quae si corrigatur, spiritus restituitur, huc pertinet nobile illud apud graecos volumen heraclidis septem diebus feminae exanimis ad vitam revocatae. Varro quoque auctor est xxviro se agros dividente capuae quendam, qui efferretur foro, domum remeasse pedibus. hoc idem aquini accidisse. romae quoque corfidium, materterae suae maritum, funere locato revixisse et locatorem funeris ab eo elatum. adicit miracula, quae tota indicasse conveniat: e duobus fratribus equestris ordinis corfidiis maiori accidisse ut videretur expirasse, apertoque testamento recitatum heredem minorem funeri institisse; interim eum, qui videbatur exstinctus, plaudendo concivisse ministeria et narrasse a fratre se venisse, commendatam sibi filiam ab eo, demonstratum praeterea quo in loco defodisset aurum nullo conscio, et rogasse ut iis funebribus, quae comparasset, efferretur. hoc eo narrante fratris domestici propere adnuntiavere exanimatum illum, et aurum ubi dixerat repertum est. plena praeterea vita est his vaticiniis, sed non conferenda, cum saepius falsa sint, sicut ingenti exemplo docebimus. bello siculo gabienus caesaris classium fortissimus, captus a sexto pompeio, iussu eius incisa cervice et vix cohaerente, iacuit in litore toto die. deinde, cum advesperavisset, gemitu precibusque congregata multitudine petiit uti pompeius ad se veniret aut aliquem ex arcanis mitteret; se enim ab inferis remissum habere quae nuntiaret. misit plures pompeius ex amicis, quibus gabienus dixit inferis dis placere pompei causas et partes pias; proinde eventum futurum quem optaret: hoc se nuntiare iussum; argumentum fore veritatis quod peractis mandatis protinus expiraturus esset. idque ita evenit. post sepulturam quoque visorum exempla sunt, nisi quod naturae opera, non prodigia, consectamur.

in primis autem miraculo sunt summaque frequentia mortes repentinae - hoc est summa vitae felicitas - , quas esse naturales docebimus. plurimas prodidit verrius, nos cum dilectu modum servabimus. gaudio obiere praeter chilonem, de quo diximus, sophocles et dionysius siciliae tyrannus, uterque accepto tragicae victoriae nuntio, mater illa cannensi filio incolume viso contra nuntium falsum; pudore diodorus sapientiae dialecticae professor, lusoria quaestione non protinus ab interrogatione stilponis dissoluta. nullis evidentibus causis obiere, dum calciantur matutino, duo

caesares, praetor et praetura perfunctus dictatoris caesaris pater - hic pisis exanimatus est, ille romae - , q. fabius maximus in consulatu suo pridie kal. ian., in cuius locum c. rebilus paucissimarum horarum consulatum petiit, item c. volcatius gurges senator, omnes adeo sani atque tempestivi, ut de progrediendo cogitarent, q. aemilius lepidus iam egrediens incusso pollice limini cubiculi, c. aufustius egressus, cum in senatum iret, offenso pede in comitio. legatus quoque, qui rhodiorum causam in senatu magna cum admiratione oraverat, in limine curiae protinus expiravit progredi volens, cn. baebius tamphilus, praetura et ipse functus, cum a puero quaesisset horas, aulus pompeius in capitolio, cum deos salutasset, m'. iuventius thalna consul, cum sacrificaret, c. servilius pansa, cum staret in foro ad tabernam hora diei secunda in p. fratrem innixus, baebius iudex, dum vadimonium differri iubet, m. terentius corax, dum tabellas scribit in foro. nec non et proximo anno, dum consulari viro in aurem dicit, eques romanus ante apollinem eboreum qui est in foro Augusti, super omnes c. iulius medicus, dum inunguit, specillum per oculum trahens, a. manlius torquatus consularis, cum in cena placentam adpeteret, l. tuccius medicus valla, dum mulsi potionem haurit, appius saufeius, e balineo reversus cum mulsum bibisset ovumque sorberet, p. quintius scapula, cum apud aquilium gallum cenaret, decimus saufeius scriba, cum domi suae pranderet. cornelius gallus praetorius et t. hetereius eques romanus in venere obiere et, quos nostra adnotavit aetas, duo equestris ordinis in eodem pantomimo mystico, tum forma praecellente. operosissima tamen securitas mortis in m. ofilio hilaro ab antiquis traditur. comoediarum histrio is, cum populo admodum placuisset natali die suo conviviumque haberet, edita cena calidam potionem in pultario poposcit simulque personam eius diei acceptam intuens coronam e capite suo in eam transtulit, tali habitu rigens nullo sentiente, donec adcubantium proximus tepescere potionem admoneret.

haec felicia exempla, at contra miseriarum innumera: l. domitius clarissimae gentis apud massiliam victus, corfinii captus ab eodem caesare, veneno poto propter taedium vitae, postquam biberat, omni opere ut viveret adnisus est. invenitur in actis, felice russei auriga elato, in rogum eius unum e faventibus iecisse se, frivolum dictu, ne hoc gloriae artificis daretur, adversis studiis copia odorum corruptum

criminantibus. cum ante non multo m. lepidus nobilissimae stirpis, quem diverti anxietate diximus mortuum, flammae vi e rogo eiectus recondi propter ardorem non potuisset, iuxta sarmentis aliis nudus crematus est.

ipsum cremare apud romanos non fuit veteris instituti: terra condebantur. at postquam longinquis bellis obrutos erui cognovere, tunc institutum. et tamen multae familiae priscos servavere ritus, sicut in cornelia nemo ante sullam dictatorem traditur crematus, idque voluisse veritum talionem eruto c. mari cadavere. sepultus vero intellegatur quoquo modo conditus, humatus vero humo contectus.

post sepulturam vanae manium ambages. omnibus a supremo die eadem quae ante primum, nec magis a morte sensus ullus aut corpori aut animae quam ante natalem. eadem enim vanitas in futurum etiam se propagat et in mortis quoque tempora ipsa sibi vitam mentitur, alias inmortalitatem animae, alias transfigurationem, alias sensum inferis dando et manes colendo deumque faciendo qui iam etiam homo esse desierit, ceu vero ullo modo spirandi ratio ceteris animalibus distet aut non diuturniora in vita multa reperiantur, quibus nemo similem divinat inmortalitatem. quod autem corpus animae per se quae materia ubi cogitatio illi quo modo visus, auditus aut qui tangit quis usus ex iis aut quod sine iis bonum quae deinde sedes quantave multitudo tot saeculis animarum velut umbrarum puerilium ista delenimentorum avidaeque numquam desinere mortalitatis commenta sunt. similis et de adservandis corporibus hominum ac revivescendi promisso democriti vanitas, qui non revixit ipse. quae, malum, ista dementia est iterari vitam morte quaeve genitis quies umquam, si in sublimi sensus animae manet, inter inferos umbrae perdit profecto ista dulcedo credulitasque praecipuum naturae bonum, mortem, ac duplicat obituri dolorem etiam post futuri aestimatione. etenim si dulce vivere est, cui potest esse vixisse at quanto facilius certiusque sibi quemque credere, specimen securitatis antegenitali sumere experimento!

consentaneum videtur, priusquam digrediamur a natura hominum, indicare quae cuiusque inventa sint. emere ac vendere mercurius, vindemiare instituit liber pater; idem diadema, regium insigne, et triumphum invenit; ceres frumenta, cum antea glande vescerentur, eadem molere et conficere in attica, ut alii, et in sicilia, ob id dea

iudicata. eadem prima leges dedit, ut alii putavere, rhadamanthus.

litteras semper arbitror assyrias fuisse, sed alii apud aegyptios a mercurio, ut gellius, alii apud syros repertas volunt, utrique in graeciam attulisse e phoenice cadmum sedecim numero, quibus troiano bello palameden adiecisse quattuor hac figura ΖΥΦΧ, totidem post eum simoniden melicum ΨΞΩΘ, quarum omnium vis in nostris recognoscitur. aristoteles decem et octo priscas fuisse et duas ab epicharmo additas *x*z quam a palamede mavult. anticlides in aegypto invenisse quendam nomine menen tradit, [xv] annorum ante phoronea, antiquissimum graeciae regem, idque monumentis adprobare conatur. e diverso epigenes apud babylonios [dccxx] annorum observationes siderum coctilibus laterculis inscriptas docet, gravis auctor in primis; qui minimum, berosus et critodemus, [ccccxc]. ex quo apparet aeternus litterarum usus. in latium eas attulerunt pelasgi.

laterarias ac domus constituerunt primi euryalus et hyperbius fratres athenis; antea specus erant pro domibus. gellio toxius caeli filius lutei aedificii inventor placet, exemplo sumpto ab hirundinum nidis. oppidum cecrops a se appellavit cecropiam, quae nunc est arx athenis. aliqui argos a phoroneo rege ante conditum volunt, quidam et sicyonem, aegyptii vero multo ante apud ipsos diospolin. tegulas invenit cinyra, agriopae filius, et metalla aeris, utrumque in insula cypro, item forcipem, martulum, vectem, incudem; puteos danaus ex aegypto advectus in graeciam qua vocabatur argos dipsion; lapicidinas cadmus thebis aut, ut theophrastus, in phoenice; thrason muros; turres, ut aristoteles, cyclopes, tirynthii, ut theophrastus; aegyptii textilia, inficere lanas sardibus lydi, fusos in lanificio closter, filius arachnae, linum et retia arachne, fulloniam artem nicias megarensis, sutrinam tychius boeotius. medicinam aegyptii apud ipsos volunt repertam, alii per arabum, babylonis et apollinis filium, herbariam et medicamentariam a chirone, saturni et philyrae filio. aes conflare et temperare aristoteles lydum scythen monstrasse, theophrastus delam phrygem putant, aerariam fabricam alii chalybas, alii cyclopas, ferrum hesiodus in creta eos qui vocati sunt dactyli idaei. argentum invenit erichthonius atheniensis, ut alii, aeacus; auri metalla et flaturam cadmus phoenix ad pangaeum montem, ut alii, thoas aut aeacus in panchaia aut sol oceani filius, cui gellius

medicinae quoque inventionem ex metallis assignat. plumbum ex cassiteride insula primus adportavit midacritus. fabricam ferrariam invenerunt cyclopes, figlinas coroebus atheniensis, in iis orbem anarcharsis scythes, ut alii, hyperbius corinthius. fabricam materiariam daedalus et in ea serram, asciam, perpendiculum, terebram, glutinum, ichthyocollam; normam autem et libellam et tornum et clavem theodorus samius, mensuras et pondera phidon argivus aut palamedes, ut maluit gellius; ignem e silice pyrodes cilicis filius, eundem adservare ferula prometheus; vehiculum cum quattuor rotis phryges, mercaturas poeni, culturas vitium et arborum eumolpus atheniensis, vinum aquae misceri staphylus sileni filius, oleum et trapetas aristaeus atheniensis, idem mella; bovem et aratrum buzyges atheniensis, ut alii, triptolemus; regiam civitatem aegyptii, popularem attici post theseum. tyrannus primus fuit phalaris agraganti. servitium invenere lacedaemonii. iudicium capitis in areopago primum actum est.

proelium afri contra aegyptios primi fecere fustibus, quos vocant phalangas. clupeos invenerunt proetus et acrisius inter se bellantes sive chalcus athamantis filius, loricam midias messenius, galeam, gladium, hastam lacedaemonii, ocreas et cristas cares. arcum et sagittam scythen iovis filium, alii sagittas persen persei filium invenisse dicunt, lanceas aetolos, iaculum cum ammento aetolum martis filium, hastas velitares tyrrenum, eundem pilum, penthesileam amazonem securim, pisaeum venabula et in tormentis scorpionem, cretas catapultam, syrophoenicas ballistam et fundam, aeneam tubam pisaeum tyrreni, testudines artemonem clazomenium, equum (qui nunc aries appellatur) in muralibus machinis epium ad troiam, equo vehi bellerophontem, frenos et strata equorum pelethronium, pugnare ex equo thessalos, qui centauri appellati sunt, habitantes secundum pelium montem. bigas prima iunxit phrygum natio, quadrigas erichthonius. ordinem exercitus, signi dationem, tesseras, vigilias palamedes invenit troiano bello, specularum significationem eodem sinon, inducias lycaon, foedera theseus.

auguria ex avibus car, a quo caria appellata; adiecit ex ceteris animalibus orpheus, aruspicia delphus, ignispicia amphiaraus, extispicia avium tiresias thebanus, interpretationem ostentorum et somniorum amphictyon. astrologiam atlans libyae filius, ut alii,

aegyptii, ut alii, assyrii, sphaeram in ea milesius anaximander, ventorum rationem aeolus hellenis filius. musicam amphion, fistulam et monaulum pan mercuri, obliquam tibiam midas in phrygia, geminas tibias marsyas in eadem gente, lydios modulos amphion, dorios thamyras thrax, phrygios marsyas phryx, citharam amphion, ut alii, orpheus, ut alii, linus. septem chordis primum cecinit iii ad iiii primas additis terpander, octavam simonides addidit, nonam Timotheus. cithara sine voce cecinit thamyris primus, cum cantu amphion, ut alii, linus. citharoedica carmina conposuit terpander. cum tibiis canere voce troezenius ardalus instituit. saltationem armatam curetes docuere, pyrrichen pyrrus, utramque in creta. versum heroum pythio oraculo debemus. de poematum origine magna quaestio; ante troianum bellum probantur fuisse. prosam orationem condere pherecydes syrius instituit Cyri regis aetate, historiam cadmus milesius; ludos gymnicos in arcadia lycaon, funebres acastus in iolco, post eum theseus in isthmo, hercules olympiae; athleticam pittheus, pilam lusoriam gyges lydus; picturam aegyptii et in graecia euchir, daedali cognatus, ut aristoteli placet, ut theophrasto, polygnotus atheniensis.

nave primus in graeciam ex aegypto danaus advenit; antea ratibus navigabatur inventis in mari rubro inter insulas a rege erythra. reperiuntur qui mysos et troianos priores excogitasse in hellesponto putent, cum transirent adversus thracas. etiam nunc in britannico oceano vitiles corio circumsutae fiunt, in nilo ex papyro ac scirpo et harundine. longa nave iasonem primum navigasse philostephanus auctor est, hegesias parhalum, ctesias samiramin, archemachus aegaeonem, biremem damastes erythraeos fecisse, triremem thucydides aminoclen corinthium, quadriremem aristoteles carthaginienses, quinqueremem mnesigiton salaminios, sex ordinum xenagoras syracusios, ab ea ad decemremem mnesigiton alexandrum magnum, ad duodecim ordines philostephanus ptolemaeum soterem, ad quindecim demetrium antigoni, ad xxx ptolemaeum philadelphum, ad xl ptolemaeum philopatorem, qui tryphon cognominatus est. onerariam hippus tyrius invenit, lembum cyrenenses, cumbam phoenices, celetem rhodii, cercyrum cyprii. siderum observationem in navigando phoenices, remum copae, latitudinem eius plataeae, vela icarus, malum et antennam daedalus,

hippegum samii aut pericles atheniensis, tectas longas thasii; antea ex prora tantum et puppi pugnabatur. rostra addidit pisaeus tyrreni, ancoram eupalamus, eandem bidentem anacharsis, harpagones et manus pericles atheniensis, adminicula gubernandi tiphys. classe princeps depugnavit minos. - animal occidit primus hyperbius martis filius, prometheus bovem. -

gentium consensus tacitus primus omnium conspiravit, ut ionum litteris uteretur. veteres graecas fuisse easdem paene quae nunc sint latinae, indicio erit delphica antiqui aeris, quae est hodie in palatio dono principum, minervae dicata in bibliotheca cum inscriptione tali: ΝΑΥΣΙΚΡΑΤΗΣ ... αΝΕΘΕΤΟ ... τΑΙ ... δΙΟΣ ... κΟΡΑΙ ... τΑΝ ... δΕΚΑΤΑΝ ...

sequens gentium consensus in tonsoribus fuit, sed romanis tardior. in italiam ex sicilia venere post romam conditam anno cccliiii adducente p. titinio mena, ut auctor est Varro; antea intonsi fuere. primus omnium radi cotidie instituit africanus sequens; Divus Augustus cultris semper usus est.

tertius consensus fuit in horarum observatione, iam hic ratione accedens, quando et a quo in graecia reperta, diximus secundo volumine. serius etiam hic romae contigit. xii tabulis ortus tantum et occasus nominantur, post aliquot annos adiectus est et meridies, accenso consulum id pronuntiante, cum a curia inter rostra et graecostasin prospexisset solem; a columna maenia ad carcerem inclinato sidere supremam pronuntiavit, sed hoc serenis tantum diebus, usque ad primum punicum bellum. princeps solarium horologium statuisse ante xii annos quam cum pyrro bellatum est ad aedem quirini l. papirius cursor, cum eam dedicaret a patre suo votam, a fabio vestale proditur. sed neque facti horologii rationem vel artificem significat nec unde translatum sit aut apud quem scriptum id invenerit. M. Varro primum statutum in publico secundum rostra in columna tradit bello punico primo a m'. valerio messala cos. catina capta in sicilia, deportatum inde post xxx annos quam de papiriano horologio traditur, anno urbis cccclxxxx. nec congruebant ad horas eius lineae, paruerunt tamen ei annis undecentum, donec q. marcius philippus, qui cum l. paulo fuit censor, diligentius ordinatum iuxta posuit, idque munus inter censoria opera gratissima acceptum est. etiam tum tamen nubilo

incertae fuere horae usque ad proximum lustrum. tunc scipio nasica collega laenati primus aqua divisit horas aeque noctium ac dierum idque horologium sub tecto dicavit anno urbis dxcv. tam diu populo romano indiscreta lux fuit.

nunc praevertemur ad reliqua animalia primumque terrestria.

LIBER VIII

ad reliqua transeamus animalia et primum terrestria.

maximum est elephans proximumque humanis sensibus, quippe intellectus illis sermonis patrii et imperiorum obedientia, officiorum quae didicere memoria, amoris et gloriae voluptas, immo vero, quae etiam in homine rara, probitas, prudentia, aequitas, religio quoque siderum solisque ac lunae veneratio. auctores sunt in mauretaniae saltibus ad quendam amnem, cui nomen est amilo, nitescente luna nova greges eorum descendere ibique se purificantes sollemniter aqua circumspergi atque ita salutato sidere in silvas reverti vitulorum fatigatos prae se ferentes. alienae quoque religionis intellectu creduntur maria transituri non ante naves conscendere quam invitati rectoris iureiurando de reditu, visique sunt fessi aegritudine, quando et illas moles infestant morbi, herbas supini in caelum iacientes, veluti tellure precibus allegata. nam, quod ad docilitatem attinet, regem adorant, genua submittunt, coronas porrigunt. indis arant minores, quos appellant nothos.

romae iuncti primum subiere currum pompei magni africano triumpho, quod prius india victa triumphante libero patre memoratur. procilius negat potuisse pompei triumpho iunctos egredi porta. germanici caesaris munere gladiatorio quosdam etiam inconditos meatus edidere saltantium modo. vulgare erat per auras arma iacere, non auferentibus ventis, atque inter se gladiatorios congressus edere aut lascivienti pyrriche conludere. postea et per funes incessere, lecticis etiam ferentes quaterni singulos puerperas imitantes, plenisque homine tricliniis accubitum iere per lectos ita libratis vestigiis, ne quis potantium attingeretur. certum est unum tardioris ingeni in accipiendis quae tradebantur, saepius castigatum verberibus, eadem illa meditantem noctu repertum. mirum et adversis quidem funibus subire, sed maxime regredi, utique pronis. mucianus iii consul auctor est aliquem ex iis et litterarum ductus graecarum didicisse solitumque perscribere eius linguae verbis: “ipse ego haec scripsi et spolia celtica dicavi,” itemque se vidente puteolis, cum advecti e nave egredi cogerentur, territos spatio pontis procul a continente porrecti, ut sese longinquitatis aestimatione fallerent,

aversos retrorsus isse.

praedam ipsi in se expetendam sciunt solam esse in armis suis, quae iuba cornua appellat, herodotus tanto antiquior et consuetudo melius dentes. quam ob rem deciduos casu aliquo vel senecta defodiunt. hoc solum ebur est; cetero et in his quoque, qua corpus intexit, vilitas ossea. quamquam nuper ossa etiam in laminas secari coepere paenuria: etenim rara amplitudo iam dentium praeterquam ex india reperitur; cetera in nostro orbe cessere luxuriae. dentium candore intellegitur iuventa. circa hos beluis summa cura: alterius mucroni parcunt, ne sit proeliis hebes, alterius operario usu fodiunt radices, inpellunt moles; circumventique a venantibus primos constituunt quibus sint minimi, ne tanti proelium putetur, postea fessi inpactos arbori frangunt praedaque se redimunt.

mirum in plerisque animalium scire quare petantur, sed et fere cuncta quid caveant. elephans homine obvio forte in solitudine et simpliciter oberrante clemens placidusque etiam demonstrare viam traditur; idem vestigio hominis animadverso prius quam homine intremescere insidiarum metu, subsistere ab olfactu, circumspectare, iras proflare nec calcare, sed erutum proximo tradere, illum sequenti, simili nuntio usque ad extremum, tunc agmen circumagi et reverti aciemque derigi. adeo omnium odori durare virus illud maiore ex parte ne nudorum quidem pedum. sic et tigris, etiam feris ceteris truculenta atque ipsa elephanti quoque spernens vestigia, hominis viso transferre dicitur protinus catulos, quonam modo agnito, ubi ante conspecto illo quem timet etenim tales silvas minime frequentari certum est. sane mirentur ipsam vestigii raritatem. sed unde sciunt timendi esse immo vero cur vel ipsius conspectum paveant, tanto viribus, magnitudine, velocitate praestantiores nimirum haec est natura rerum, haec potentia eius, saevissimas ferarum maximasque numquam vidisse, quod debeant timere, et statim intellegere, cum sit timendum.

elephanti gregatim semper ingrediuntur. ducit agmen maximus natu, cogit aetate proximus. amnem transituri minimos praemittunt, ne maiorum ingressu atterente alveum crescat gurgiti altitudo. antipater auctor est duos antiocho regi in bellicis usibus celebres etiam cognominibus fuisse; etenim novere ea. certe cato, cum imperatorum nomina annalibus detraxerit, eum, qui fortissime

proeliatus esset in punica acie, surum tradidit vocatum altero dente mutilato. antiocho vadum fluminis experienti renuit aiax, alioqui dux agminis semper. tum pronuntiatum eius fore principatum qui transisset, ausumque patroclum ob id phaleris argenteis, quo maxime gaudent, et reliquo omni primatu donavit. ille, qui notabatur, inedia mortem ignominiae praetulit. mirus namque pudor est, victusque vocem fugit victoris, terram ac verbenas porrigit. pudore numquam nisi in abdito coeunt, mas quinquennis, femina decennis. initur autem biennio quinis, ut ferunt, cuiusque anni diebus, nec amplius; sexto perfunduntur amne, non ante reduces ad agmen. nec adulteria novere nullave propter feminas inter se proelia ceteris animalibus pernicialia, nec quia desit illis amoris vis, namque traditur unus amasse quandam in aegypto corollas vendentem ac, ne quis vulgariter electam putet, mire gratam aristophani celeberrimo in arte grammatica, alius menandrum syracusanum incipientis iuventae in exercitu ptolemaei, desiderium eius, quotiens non videret, inedia testatus. et unguentariam quandam dilectam iuba tradit. omnium amoris fuere argumenta gaudium a conspectu blanditiaeque inconditae, stipes, quas populus dedisset, servatae et in sinum effusae. nec mirum esse amorem quibus sit memoria. idem namque tradit agnitum in senecta multos post annos qui rector in iuventa fuisset; idem divinationem quandam iustitiae, cum bocchus rex triginta elephantis totidem, in quos saevire instituerat, stipitibus adligatos obiecisset, procursantibus inter eos qui lacesserent, nec potuisse effici ut crudelitatis alienae ministerio fungerentur.

elephantos italia primum vidit pyrri regis bello et boves lucas appellavit in lucanis visos anno urbis cccclxxii, roma autem in triumpho vii annis ad superiorem numerum additis, eadem plurimos anno dii victoria l. metelli pontificis in sicilia de poenis captos. cxlii fuere aut, ut quidam, cxx, travecti ratibus quas doliorum consertis ordinibus inposuerat. verrius eos pugnasse in circo interfectosque iaculis tradit paenuria consilii, quoniam neque ali placuisset neque donari regibus; l. piso inductos dumtaxat in circum atque, ut contemptus eorum increscerent, ab operariis hastas praepilatas habentibus per circum totum actos. nec quid deinde iis factum sit auctores explicant qui non putant interfectos.

clara est unius e romanis dimicatio adversus elephantum, cum

Hannibal captivos nostros dimicare inter sese coegisset. namque unum qui supererat obiecit elephanto, et ille dimitti pactus, si interemisset, solus in harena congressus magno poenorum dolore confecit. Hannibal, cum famam eius dimicationis contemptum adlaturam beluis intellegeret, equites misit qui abeuntem interficerent. proboscidem eorum facillime amputari pyrri proeliorum experimentis patuit. romae pugnasse fenestella tradit primum omnium in circo claudi pulchri aedilitate curuli m. antonio a. postumio cos. anno urbis dclv, item post annos viginti lucullorum aedilitate curuli adversus tauros. pompei quoque altero consulatu, dedicatione templi veneris victricis, viginti pugnavere in circo aut, ut quidam tradunt, xviii, gaetulis ex adverso iaculantibus, mirabili unius dimicatione, qui pedibus confossis repsit genibus in catervas, abrepta scuta iaciens in sublime, quae decidentia voluptati spectantibus erant in orbem circumacta, velut arte, non furore beluae, iacerentur. magnum et in altero miraculum fuit uno ictu occiso; pilum autem sub oculo adactum in vitalia capitis venerat. universi eruptionem temptavere, non sine vexatione populi, circumdatis claustris ferreis. qua de causa caesar dictator postea simile spectaculum editurus euripis harenam circumdedit, quos nero princeps sustulit equiti loca addens. sed pompeiani amissa fugae spe misericordiam vulgi inenarrabili habitu quaerentes supplicavere quadam sese lamentatione conplorantes, tanto populi dolore, ut oblitus imperatoris ac munificentiae honori suo exquisitae flens universus consurgeret dirasque pompeio, quas ille mox luit, inprecaretur. pugnavere et caesari dictatori tertio consulatu eius viginti contra pedites d iterumque totidem turriti cum sexagenis propugnatoribus, eodem quo priore numero peditum et pari equitum ex adverso dimicante, postea singuli principibus claudio et neroni in consummatione gladiatorum.

ipsius animalis tanta narratur clementia contra minus validos, ut in grege pecudum occurrentia manu dimoveat, ne quod obterat inprudens. nec nisi lacessiti nocent idque cum gregatim semper ambulent, minime ex omnibus solivagi. equitatu circumventi infirmos aut fessos vulneratosve in medium agmen recipiunt, acie, velut imperio aut ratione per vices subeunte.

capti celerrime mitificantur hordei suco. capiuntur autem in india unum ex domitis agente rectore, qui deprehensum solitarium

abactumve a grege verberet ferum: quo fatigato transcendit in eum nec secus ac priorem regit. africa foveis capit, in quas deerrante aliquo protinus ceteri congerunt ramos, moles devolvunt, aggeres construunt omnique vi conantur extrahere. ante domitandi gratia reges equitatu cogebant in vallem manu factam et longo tractu fallacem, cuius inclusos ripis fossisque fame domabant. argumentum erat ramus homine porrigente clementer acceptus. nunc dentium causa pedes eorum iaculantur alioqui mollissimos. trogodytae contermini aethiopiae, qui hoc solo venatu aluntur, propinquas itineri eorum conscendunt arbores; inde totius agminis novissimum speculati extremas in clunes desiliunt. laeva adprehenditur cauda, pedes stipantur in sinistro femine: ita pendens alterum poplitem dextra caedit ac praeacuta bipenni hoc crure tardato profugiens alterius poplitis nervos ferit, cuncta praeceleri pernicitate peragens. alii tutiore genere, sed magis fallaci, ingentes arcus intentos defigunt humi longius; hos praecipui viribus iuvenes continent, alii conixi pari conatu contendunt ac praetereuntibus sagittarum venabula infigunt, mox sanguinis vestigiis secuntur.

elephantorum generis feminae multo pavidiores. domantur autem rabidi fame et verberibus, elephantis aliis admotis, qui tumultuantem catenis coerceant. et alias circa coitus maxime efferantur et stabula indorum dentibus sternunt. quapropter arcent eos coitu feminarumque pecuaria separant, quae haut alio modo quam armentorum habent. domiti militant et turres armatorum in dorsis ferunt magnaque ex parte orientis bella conficiunt: prosternunt acies, proterunt armatos. iidem minimo suis stridore terrentur vulneratique et territi retro semper cedunt, haut minore partium suarum pernicie. indicum africi pavent nec contueri audent, nam et maior indicis magnitudo est.

decem annis gestare in utero vulgus existimat, aristoteles biennio nec amplius quam semel gignere pluresque quam singulos, vivere ducenis annis et quosdam ccc. iuventa eorum a sexagesimo incipit. gaudent amnibus maxime et circa fluvios vagantur, cum alioqui nare propter magnitudinem corporis non possint. iidem frigoris inpatientes; maximum hoc malum inflationemque et profluvium alvi nec alia morborum genera sentiunt. olei potu tela, quae corpori eorum inhaereant, decidere invenio, a sudore autem facilius

adhaerescere. et terram edisse iis tabificum est, nisi saepius mandant; devorant autem et lapides; truncos quidem gratissimo in cibatu habent. palmas excelsiores fronte prosternunt atque ita iacentium absumunt fructum. mandunt ore, spirant et bibunt odoranturque haut inproprie appellata manu. animalium maxime odere murem et, si pabulum in praesepio positum attingi ab eo videre, fastidiunt. cruciatum in potu maximum sentiunt hausta hirudine, quam sanguisugam vulgo coepisse appellari adverto. haec ubi in ipso animae canali se fixit, intolerando adficit dolore. durissimum dorso tergus, ventri molle, saetarum nullum tegimentum, ne in cauda quidem praesidium abigendo taedio muscarum (namque id et tanta vastitas sentit), sed cancellata cutis, et invitans id genus animalium odore. ergo cum extentis recepere examina, artatis in rugas repente cancellis comprehensas enecant. hoc iis pro cauda, iuba, villo est. dentibus ingens pretium et deorum simulacris lautissima ex his materia. invenit luxuria commendationem et aliam expetiti in callo manus saporis, haud alia de causa, credo, quam quia ipsum ebur sibi mandere videtur. magnitudo dentium videtur quidem in templis praecipua, sed tamen in extremis africae, qua confinis aethiopiae est, postium vicem in domiciliis praebere saepesque in his et pecorum stabulis pro palis elephantorum dentibus fieri polybius tradidit auctore gulusa regulo.

elephantos fert africa ultra syrticas solitudines et in mauretania, ferunt aethiopes et trogodytae, ut dictum est, sed maximos india bellantesque cum iis perpetua discordia dracones tantae magnitudinis et ipsos, ut circumplexu facili ambiant nexuque nodi praestringant. conmoritur ea dimicatio, victusque conruens conplexum elidit pondere.

mira animalium pro se cuique sollertia astutissima. ascendendi in tantam altitudinem difficultas draconi; itaque tritum iter ad pabula speculatus ab excelsa se arbore inicit. scit ille inparem sibi luctatum contra nexus; itaque arborum aut rupium attritum quaerit. cavent hoc dracones ob idque gressus primum alligant cauda: resolvunt illi nodos manu; at hi in ipsas nares caput condunt pariterque spiritum praecludunt et mollissimas lancinant partes. iidem obvii deprehensi in adversos erigunt se oculosque maxime petunt. ita fit ut plerumque caeci ac fame et maeroris tabe confecti reperiantur. quam quis aliam

tantae discordiae causam attulerit nisi naturam spectaculum sibi paria conponentem

est et alia dimicationis huius fama. elephantis frigidissimum esse sanguinem; ob id aestu torrente praecipue draconibus expeti. quam ob rem in amnes mersos insidiari bibentibus coortosque inligata manu in aurem morsum defigere, quoniam is tantum locus defendi non possit manu. dracones esse tantos, ut totum sanguinem capiant, itaque elephantos ab iis ebibi siccatosque concidere et dracones inebriatos opprimi conmorique.

generat eos aethiopia indicis pares, vicenum cubitorum. id modo mirum, unde cristatos iuba crediderit. asachaei vocantur aethiopes apud quos maxime nascuntur; narrantque in maritimis eorum quaternos quinosque inter se cratium modo inplexos erectis capitibus velificantes ad meliora pabula arabiae vehi fluctibus.

megasthenes scribit in india serpentes in tantam magnitudinem adolescere, ut solidos hauriant cervos taurosque, metrodorus circa rhyndacum amnem in ponto, supervolantes ut quamvis alte perniciterque alites haustu raptas absorbeant. nota est in punicis bellis ad flumen bagradam a regulo imperatore ballistis tormentisque, ut oppidum aliquod, expugnata serpens cxx pedum longitudinis; pellis eius maxillaeque usque ad bellum numantinum duravere romae in templo. faciunt his fidem in italia appellatae bovae in tantam amplitudinem exeuntes, ut divo claudio principe occisae in vaticano solidus in alvo spectatus sit infans. aluntur primo bubuli lactis suctu, unde nomen traxere.

ceterorum animalium, quae modo convecta undique italiae contigere saepius, formas nihil attinet scrupulose referre. paucissima scythia gignit inopia fruticum, pauca contermina illi germania, insignia tamen boum ferorum genera, iubatos bisontes excellentique et vi et velocitate uros, quibus inperitum volgus bubalorum nomen inponit, cum id gignat africa vituli potius cervique quadam similitudine. septentrio fert et equorum greges ferorum, sicut asinorum asia et africa, praeterea alcen iumento similem, ni proceritas aurium et cervicis distinguat; item natam in scadinavia insula nec umquam visam in hoc orbe, multis tamen narratam achlin haud dissimilem illi, set nullo suffraginum flexu, ideoque non cubantem et adclinem arbori in somno eaque incisa ad insidias capi,

alias velocitatis memoratae. labrum ei superius praegrande; ob id retrograditur in pascendo, ne in priora tendens involvatur. tradunt in paeonia feram quae bonasus vocetur, equina iuba, cetera tauro similem, cornibus ita in se flexis, ut non sint utilia pugnae. quapropter fuga sibi auxiliari reddentem in ea fimum, interdum et trium iugerum longitudine, cuius contactus sequentes ut ignis aliquis amburat.

mirum pardos, pantheras, leones et similia condito in corporis vaginas unguium mucrone, ne refringantur hebetenturve, ingredi aversisque falculis currere nec nisi in adpetendo protendere. leoni praecipua generositas tunc, cum colla armosque vestiunt iubae; id enim aetate contingit e leone conceptis. quos vero pardi generavere, semper insigni hoc carent; simili modo feminae. magna his libido coitus et ob hoc maribus ira. africa haec maxime spectat, inopia aquarum ad paucos amnes congregantibus se feris. ideo multiformes ibi animalium partus, varie feminis cuiusque generis mares aut vi aut voluptate miscente: unde etiam vulgare graeciae dictum semper aliquid novi africam adferre. odore pardi coitum sentit in adultera leo totaque vi consurgit in poenam; idcirco ea culpa flumine abluitur aut longius comitatur. semel autem edi partum, lacerato unguium acie utero in enixu, volgum credidisse video.

aristoteles diversa tradit, vir quem in his magna secuturus ex parte praefandum reor. alexandro magno rege inflammato cupidine animalium naturas noscendi delegataque hac commentatione aristoteli, summo in omni doctrina viro, aliquot milia hominum in totius asiae graeciaeque tractu parere iussa, omnium quos venatus, aucupia piscatusque alebant quibusque vivaria, armenta, alvaria, piscinae, aviaria in cura erant, ne quid usquam genitum ignoraretur ab eo. quos percunctando quinquaginta ferme volumina illa praeclara de animalibus condidit. quae a me collecta in artum cum iis, quae ignoraverat, quaeso ut legentes boni consulant, in universis rerum naturae operibus medioque clarissimi regum omnium desiderio cura nostra breviter peregrinantes. is ergo tradit leaenam primo fetu parere quinque catulos ac per annos singulis minus, ab uno sterilescere. informes minimasque carnes magnitudine mustellarum esse initio, semenstres vix ingredi posse nec nisi bimenstres moveri; in europa autem inter acheloum tantum mestumque amnes leones esse, sed

longe viribus praestantiores iis quos africa aut syria gignant.

leonum duo genera, compactile et breve crispioribus iubis. hos pavidiores esse quam longos simplicique villo; eos contemptores vulnerum. urinam mares crure sublato reddere ut canes. gravem odorem, nec minus halitum. raros in potu vesci alternis diebus, a saturitate interim triduo cibis carere. quae possint, in mandendo solida devorare, nec capiente aviditatem alvo coniectis in fauces unguibus extrahere aut si fugiendum in satietate habeant. vitam iis longam docet argumento, quod plerique dentibus defecti reperiantur. polybius, aemiliani comes, in senecta hominem ab his adpeti refert, quoniam ad persequendas feras vires non suppetant; tunc obsidere africae urbes, eaque de causa cruci fixos vidisse se cum scipione, quia ceteri metu poenae similis absterrerentur eadem noxa.

leoni tantum ex feris clementia in supplices. prostratis parcit et, ubi saevit, in viros potius quam in feminas fremit, in infantes non nisi magna fame. credit iuba pervenire intellectum ad eos precum; in captivam certe gaetuliae reducem audivit multorum in silvis impetum esse mitigatum adloquio ausae dicere, se feminam, profugam, infirmam, supplicem animalis omnium generosissimi ceterisque imperitantis, indignam eius gloria praedam. varia circa hoc opinio ex ingenio cuiusque vel casu, mulceri alloquiis feras, quippe cum etiam serpentes extrahi cantu cogique in poenam verum falsumne sit, non vita decreverit. leonum animi index cauda, sicut et equorum aures; namque et has notas generosissimo cuique natura tribuit. inmota ergo placido, clemens blandienti, quod rarum est: crebrior enim iracundia, cuius in principio terra verberatur, incremento terga ceu quodam incitamento flagellantur. vis summa in pectore. ex omni vulnere sive ungue inpresso sive dente ater profluit sanguis. iidem satiati innoxii sunt. generositas in periculis maxime deprehenditur, non illo tantum modo, quo spernens tela diu se terrore solo tuetur ac velut cogi testatur cooriturque non tamquam periculo coactus, sed tamquam amentiae iratus. illa nobilior animi significatio: quamlibet magna canum et venantium urguente vi contemptim restitansque cedit in campis et ubi spectari potest; idem ubi virgulta silvasque penetravit, acerrimo cursu fertur velut abscondente turpitudinem loco. dum sequitur, insilit saltu, quo in fuga non utitur. vulneratus observatione mira percussorem novit et in quantalibet multitudine adpetit; eum

vero, qui telum quidem miserit, sed non vulneraverit, correptum rotatumque sternit nec vulnerat. cum pro catulis feta dimicat, oculorum aciem traditur defigere in terram, ne venabula expavescat. cetero dolis carent et suspicione nec limis intuentur oculis aspicique simili modo nolunt. creditum est a moriente humum morderi lacrimamque leto dari. atque hoc tale tamque saevum animal rotarum orbes circumacti currusque inanes et gallinaceorum cristae cantusque etiam magis terrent, sed maxime ignes. aegritudinem fastidii tantum sentit, in qua medetur ei contumelia, in rabiem agente adnexarum lascivia simiarum; gustatus deinde sanguis in remedio est.

leonum simul plurium pugnam romae princeps dedit scaevola p. f. in curuli aedilitate, centum autem iubatorum primus omnium l. sulla, qui postea dictator fuit, in praetura. post eum pompeius magnus in circo dc, in iis iubatorum cccxv, caesar dictator cccc.

capere eos ardui erat quondam operis, foveisque maxime. principatu claudii casus rationem docuit, pudendam paene talis ferae nomine, a pastore gaetuliae sago contra ingruentis impetum obiecto, quod spectaculum in harenam protinus tralatum est, vix credibili modo torpescente tanta illa feritate quamvis levi iniectu operto capite, ita ut devinciatur non repugnans. videlicet omnis vis constat in oculis, quo minus mirum sit a lysimacho alexandri iussu simul incluso strangulatum leonem. iugo subdidit eos primusque romae ad currum iunxit m. antonius, et quidem civili bello, cum dimicatum esset in pharsaliis campis, non sine ostento quodam temporum, generosos spiritus iugum subire illo prodigio significante. nam quod ita vectus est cum mima cytheride, super monstra etiam illarum calamitatium fuit. primus autem hominum leonem manu tractare ausus et ostendere mansuefactum hanno e clarissimis poenorum traditur damnatusque illo argumento, quoniam nihil non persuasurus vir tam artificis ingenii videbatur et male credi libertas ei, cui in tantum cessisset etiam feritas.

sunt vero et fortuitae eorum quoque clementiae exempla. mentor syracusanus in syria, leone obvio suppliciter volutante, attonitus pavore, cum refugienti undique fera opponeret sese et vestigia lamberet adulanti similis, animadvertit in pede eius tumorem vulnusque. extracto surculo liberavit cruciatu. pictura casum hunc testatur syracusis. simili modo elpis samius natione in africam

delatus nave, iuxta litus conspecto leone hiatu minaci, arborem fuga petit libero patre invocato, quoniam tum praecipuus votorum locus est, cum spei nullus est. set neque profugienti, cum potuisset, fera institerat et procumbens ad arborem hiatu, quo terruerat, miserationem quaerebat. os morsu avidiore inhaeserat dentibus cruciabatque inedia, non tantum poena in ipsis eius telis, suspectantem ac velut mutis precibus orantem, dum fortuitis fidens non est contra feram multoque diutius miraculo quam metu cessatum est. degressus tandem evellit praebenti et qua maxime opus esset adcommodanti. traduntque, quamdiu navis ea in litore steterit, retulisse gratiam venatus adgerendo. qua de causa libero patri templum in samo elpis sacravit, quod ab eo facto graeci κεχηνὸτος ... διονὺσου appellavere. miremur postea vestigia hominum intellegi a feris, cum etiam auxilia ab uno animalium sperent cur enim non ad alia iere aut unde medicas manus hominis sciunt nisi forte vis malorum etiam feras omnia experiri cogit.

aeque memorandum et de panthera tradit demetrius physicus: iacentem in media via hominis desiderio repente apparuisse patri cuiusdam philini, adsectatoris sapientiae; illum pavore coepisse regredi, feram vero circumvolutari non dubie blandientem seseque conflictantem maerore qui etiam in panthera intellegi posset. feta erat, catulis procul in foveam delapsis. primum ergo miserationis fuit non expavescere, proximum et curam intendere, secutusque qua trahebat vestem unguium levi iniectu, ut causam doloris intellexit simulque salutis suae mercedem, exemit catulos, ea cum his prosequente usque extra solitudines deductus laeta atque gestiente, ut facile appareret gratiam referre et nihil in vicem inputare, quod etiam in homine rarum est.

haec fidem et democrito adferunt, qui thoantem in arcadia servatum a dracone narrat. nutrierat eum puer dilectum admodum, parensque serpentis naturam et magnitudinem metuens in solitudines tulerat, in quibus circumvento latronum insidiis agnitoque voce subvenit. nam quae de infantibus ferarum lacte nutritis, cum essent expositi, produntur, sicut de conditoribus nostris a lupa, magnitudini fatorum accepta fieri aequius quam ferarum naturae arbitror.

panthera et tigris macularum varietate prope solae bestiarum spectantur, ceteris unus ac suus cuique generi color est, leonum

tantum in syria niger. pantheris in candido breves macularum oculi. ferunt odore earum mire sollicitari quadripedes cunctas, sed capitis torvitate terreri; quam ob rem occultato eo reliqua dulcedine invitatas corripiunt. sunt qui tradant in armo iis similem lunae esse maculam crescentem in orbem seque cavantem pari modo. nunc varias et pardos, qua mares sunt, appellant in eo omni genere, creberrimo in africa syriaque. quidam ab his pantheras candore solo discernunt, nec adhuc aliam differentiam inveni.

senatus consultum fuit vetus, ne liceret africanas in italiam advehere. contra hoc tulit ad populum cn. aufidius tribunus plebis permisitque circensium gratia inportare. primus autem Scaurus aedilitate sua varias cl universas misit, dein pompeius magnus ccccx, Divus Augustus ccccxx. idem q. tuberone paulo fabio maximo cos. iiii non. mai. theatri marcelli dedicatione tigrim primus omnium romae ostendit in cavea mansuefactam, divus vero claudius simul iiii.

tigrim hyrcani et indi ferunt, animal velocitatis tremendae et maxime cognitae, dum capitur totus eius fetus, qui semper numerosus est. ab insidiante rapitur equo quam maxime pernici atque in recentes subinde transfertur. at ubi vacuum cubile reperit feta - maribus enim subolis cura non est - , fertur praeceps odore vestigans. raptor adpropinquante fremitu abicit unum ex catulis; tollit illa morsu et pondere etiam ocior acta remeat iterumque consequitur ac subinde, donec in navem regresso inrita feritas saevit in litore.

camelos inter armenta pascit oriens, quarum duo genera, bactriae et arabiae; differunt, quod illae bina habent tubera in dorso, hae singula et sub pectore alterum, cui incumbant. dentium superiore ordine, ut boves, carent in utroque genere. omnes autem iumentorum ministeriis dorso funguntur atque etiam equitatus in proeliis. velocitas ut equo, sed sua cuique mensura sicuti vires. nec ultra adsuetum procedit spatium nec plus instituto onere recipit. odium adversus equos gerunt naturale. sitim et quadriduo tolerant inplenturque, cum bibendi occasio est, et in praeteritum et in futurum, obturbata proculcatione prius aqua: aliter potu non gaudent. vivunt quinquagenis annis, quaedam et centenis. utrimque rabiem et ipsae sentiunt. castrandi genus etiam feminas, quae bello praeparentur, inventum est: fortiores ita fiunt coitu negato.

harum aliqua similitudo in duo transfertur animalia. nabun aethiopes vocant collo similem equo, pedibus et cruribus bovi, camelo capite, albis maculis rutilum colorem distinguentibus, unde appellata camelopardalis, dictatoris caesaris circensibus ludis primum visa romae. ex eo subinde cernitur, aspectu magis quam feritate conspicua, quare etiam ovis ferae nomen invenit.

pompei magni primum ludi ostenderunt chama, quem galli rufium vocabant, effigie lupi, pardorum maculis. iidem ex aethiopia quas vocant κήπους, quarum pedes posteriores pedibus humanis et cruribus, priores manibus fuere similes. hoc animal postea roma non vidit.

isdem ludis et rhinoceros unius in nare cornus, qualis saepe, visus. alter hic genitus hostis elephanto cornu ad saxa limato praeparat se pugnae, in dimicatione alvum maxime petens, quam scit esse molliorem. longitudo ei par, crura multo breviora, color buxeus.

lyncas vulgo frequentes et sphingas, fusco pilo, mammis in pectore geminis, aethiopia generat multaque alia monstris similia, pinnatos equos et cornibus armatos, quos pegasos vocant, crocotas velut ex cane lupoque conceptos, omnia dentibus frangentes protinusque devorata conficientes ventre, cercopithecos nigris capitibus, pilo asini et dissimiles ceteris voce, indicos boves unicornes tricornesque, leucrocotam, pernicissimam feram asini feri magnitudine, clunibus cervinis, collo, cauda, pectore leonis, capite melium, bisulca ungula, ore ad aures usque rescisso, dentium locis osse perpetuo - (hanc feram humanas voces tradunt imitari. apud eosdem et quae vocatur eale, magnitudine equi fluviatilis, cauda elephanti, colore nigra vel fulva, maxillis apri, maiora cubitalibus cornua habens mobilia, quae alterna in pugna sistit variatque infesta aut obliqua, utcumque ratio monstravit) - , sed atrocissimos tauros silvestres, maiores agrestibus, velocitate ante omnes, colore fulvos, oculis caeruleis, pilo in contrarium verso, rictu ad aures dehiscente iuxta cornua mobilia. tergori duritia silicis, omne respuens vulnus. feras omnes venantur, ipsi non aliter quam foveis capti feritate semper intereunt. apud eosdem nasci ctesias scribit quam mantichoran appellat, triplici dentium ordine pectinatim coeuntium, facie et auriculis hominis, oculis glaucis, colore sanguineo, corpore leonis, cauda scorpionis modo spicula infigentem, vocis ut si

misceatur fistulae et tubae concentus, velocitatis magnae, humani corporis vel praecipue adpetentem. in india et boves solidis ungulis, unicornes, et feram nomine axin hinnulei pelle pluribus candidioribusque maculis, sacrorum liberi patris - (orsaei indi simias candentes toto corpore venantur) - , asperrimam autem feram monocerotem, reliquo corpore equo similem, capite cervo, pedibus elephanto, cauda apro, mugitu gravi, uno cornu nigro media fronte cubitorum duum eminente. hanc feram vivam negant capi.

apud hesperios aethiopas fons est nigris, ut plerique existimavere, nili caput, ut argumenta quae diximus persuadent. iuxta hunc fera appellatur catoblepas, modica alioqui ceterisque membris iners, caput tantum praegrave aegre ferens - id deiectum semper in terram - , alias internicio humani generis, omnibus, qui oculos eius videre, confestim expirantibus.

eadem et basilisci serpentis est vis. cyrenaica hunc generat provincia, duodecim non amplius digitorum magnitudine, candida in capite macula ut quodam diademate insignem. sibilo omnes fugat serpentes nec flexu multiplici, ut reliquae, corpus inpellit, sed celsus et erectus in medio incedens. necat frutices, non contactos modo, verum et adflatos, exurit herbas, rumpit saxa: talis vis malo est. creditum quondam ex equo occisum hasta et per eam subeunte vi non equitem modo, sed equum quoque absumptum. atque huic tali monstro - saepe enim enectum concupivere reges videre - mustellarum virus exitio est: adeo naturae nihil placuit esse sine pare. inferciunt has cavernis facile cognitis soli tabe. necant illae simul odore moriunturque, et naturae pugna conficitur.

sed in italia quoque creditur luporum visus esse noxius vocemque homini, quem priores contemplentur, adimere ad praesens. inertes hos parvosque africa et aegyptus gignunt, asperos trucesque frigidior plaga. homines in lupos verti rursusque restitui sibi falsum esse confidenter existimare debemus aut credere omnia quae fabulosa tot saeculis conperimus. unde tamen ista vulgo infixa sit fama in tantum, ut in maledictis versipelles habeat, indicabitur. euanthes, inter auctores graeciae non spretus, scribit arcadas tradere ex gente anthi cuiusdam sorte familiae lectum ad stagnum quoddam regionis eius duci vestituque in quercu suspenso tranare atque abire in deserta transfigurarique in lupum et cum ceteris eiusdem generis congregari

per annos viiii. quo in tempore si homine se abstinuerit, reverti ad idem stagnum et, cum tranaverit, effigiem recipere, ad pristinum habitum addito novem annorum senio. id quoque adicit, eandem recipere vestem. mirum est quo procedat graeca credulitas! nullum tam inpudens mendacium est, ut teste careat. item apollas, qui olympionicas scripsit, narrat demaenetum parrhasium in sacrificio, quod arcades iovi lycaeo humana etiamtum hostia faciebant, immolati pueri exta degustasse et in lupum se convertisse, eundem x anno restitutum athleticae se exercuisse in pugilatu victoremque olympia reversum. quin et caudae huius animalis creditur vulgo inesse amatorium virus exiguo in villo eumque, cum capiatur, abici nec idem pollere nisi viventi dereptum. dies, quibus coeat, toto anno non amplius duodecim. eundem in fame vesci terra inter auguria; ad dexteram commeantium praeciso itinere si pleno id ore fecerit, nullum ominum praestantius. sunt in eo genere qui cervari vocantur, qualem e gallia in pompei magni harena spectatum diximus. huic quamvis in fame mandenti, si respexerit, oblivionem cibi subrepere aiunt digressumque quaerere aliud.

quod ad serpentes attinet, vulgatum est colorem eius plerasque terrae habere, in qua occultentur. innumera esse genera. cerastis corpore eminere cornicula saepe quadrigemina, quorum motu, reliquo corpore occulto, sollicitent ad se aves. geminum caput amphisbaenae, hoc est et a cauda, tamquam parum esset uno ore fundi venenum. aliis squamas esse, aliis picturas, omnibus exitiale virus. iaculum ex arborum ramis vibrari, nec pedibus tantum pavendas serpentes, sed ut missile volare tormento. colla aspidum intumescere, nullo ictus remedio praeterquam si confestim partes contactae amputentur. unus huic tam pestifero animali sensus vel potius affectus est: coniugia ferme vagantur, nec nisi cum pari vita est. itaque alterutra interempta incredibilis ultionis alteri cura: persequitur interfectorem unumque eum in quantolibet populi agmine notitia quadam infestat, perrumpit omnes difficultates, permeat spatia nec nisi amnibus arcetur aut praeceleri fuga.

non est fateri rerum natura largius mala an remedia genuerit. iam primum hebetes oculos huic malo dedit, eosque non in fronte adversos cernere, sed in temporibus - itaque excitatur saepius auditu quam visu - , deinde internecivum bellum cum ichneumone. notum

est animal hac gloria maxime, in eadem natum aegypto. mergit se limo saepius siccatque sole, mox ubi pluribus eodem modo se coriis loricavit, in dimicationem pergit. in ea caudam attollens ictus inritos aversus excipit, donec obliquo capite speculatus invadat in fauces. nec hoc contentus aliud haud mitius debellat animal.

crocodilum habet nilus, quadripes malum et terra pariter ac flumine infestum. unum hoc animal terrestre linguae usu caret, unum superiore mobili maxilla inprimit morsum, alias terribile pectinatim stipante se dentium serie. magnitudine excedit plerumque duodeviginti cubita. parit ova quanta anseres, eaque extra eum locum semper incubat praedivinatione quadam, ad quem summo auctu eo anno egressurus est nilus. nec aliud animal ex minore origine in maiorem crescit magnitudinem. et unguibus autem armatus est, contra omnes ictus cute invicta. dies in terra agit, noctes in aqua, teporis utrumque ratione. hunc saturum cibo piscium et semper esculento ore in litore somno datum parva avis, quae trochilos ibi vocatur, rex avium in italia, invitat ad hiandum pabuli sui gratia, os primum eius adsultim repurgans, mox dentes et intus fauces quoque ad hanc scabendi dulcedinem quam maxime hiantes, in qua voluptate somno pressum conspicatus ichneumon, per easdem fauces ut telum aliquod inmissus, erodit alvum.

similis crocodilo, sed minor etiam ichneumone, est in nilo natus scincos, contra venena praecipuus antidotis, item ad inflammandam virorum venerem.

verum in crocodilo maior erat pestis quam ut uno esset eius hoste natura contenta. itaque et delphini inmeantes nilo, quorum dorso tamquam ad hunc usum cultellata inest pinna, abigentes eos praedam ac velut in suo tantum amne regnantes, alioqui inpares viribus ipsi, astu interimunt. callent enim in hoc cuncta animalia sciuntque non sua modo commoda, verum et hostium adversa, norunt sua tela, norunt occasiones partesque dissidentium inbelles. in ventre mollis est tenuisque cutis crocodilo: ideo se ut territi mergunt delphini subeuntesque alvum illa secant spina. quin et gens hominum est huic beluae adversa in ipso nilo, a tentyri insula, in qua habitat, appellata. mensura eorum parva, sed praesentia animi in hoc tantum usu mira. terribilis haec contra fugaces belua est, fugax contra sequentes. sed adversum ire soli hi audent, quin et flumini innatant dorsoque

equitantium modo inpositi hiantibus resupino capite ad morsum addita in os clava, a dextra ac laeva tenentes extrema eius utrimque, ut frenis in terram agunt captivos ac voce etiam sola territos cogunt evomere recentia corpora ad sepulturam. itaque uni ei insulae crocodili non adnant olfactuque eius generis hominum, ut psyllorum serpentes, fugantur. hebetes oculos hoc animal dicitur habere in aqua, extra acerrimi visus, quattuorque menses hiemis semper inedia tramittere in specu. quidam hoc unum quamdiu vivat crescere arbitrantur; vivit autem longo tempore.

maior altitudine in eodem nilo belua hippopotamius editur, ungulis binis quales bubus, dorso equi et iuba et hinnitu, rostro resimo, cauda et dentibus aprorum aduncis, sed minus noxiis, tergoris ad scuta galeasque inpenetrabilis, praeterquam si umore madeant. depascitur segetes destinatione ante, ut ferunt, determinatas in diem et ex agro ferentibus vestigiis, ne quae revertenti insidiae comparentur.

primus eum et quinque crocodilos romae aedilitatis suae ludis M. Scaurus temporario euripo ostendit. hippopotamius in quadam medendi parte etiam magister exstitit. adsidua namque satietate obesus exit in litus recenti harundinum caesura speculatum atque, ubi acutissimam vidit stirpem, inprimens corpus venam quandam in crure vulnerat atque ita profluvio sanguinis morbidum alias corpus exonerat et plagam limo rursus obducit.

simile quiddam et volucris in eadem aegypto monstravit, quae vocatur ibis, rostri aduncitate per eam partem se perluens, qua reddi ciborum onera maxime salubre est. nec haec sola: multis animalibus reperta sunt usui futura et homini. dictamnum herbam extrahendis sagittis cervi monstravere percussi eo telo pastuque herbae eius eiecto; iidem percussi a phalangio, quod est aranei genus, aut aliquo simili cancros edendo sibi medentur. est et ad serpentium ictus praecipua qua se lacerti, quotiens cum his conseruere pugnam, vulnerati refovent. chelidoniam visui saluberrimam hirundines monstravere vexatis pullorum oculis illa medentes. testudo cunilae, quam bubulam vocant, pastu vires contra serpentes refovet, mustella ruta in murium venatu cum iis dimicatione conserta. ciconia origano, hedera apri in morbis sibi medentur et cancros vescendo maxime mari eiectos. anguis, hiberno situ membrana corporis obducta,

feniculi suco inpedimentum illud exuit nitidusque vernat. exuit autem a capite primum nec celerius quam uno die et nocte, replicans, ut extra fiat membranae quod fuerit intus. idem hiberna latebra visu obscurato maratho herbae se adfricans oculos inunguit ac refovet; si vero squamae obtorpuere, spinis iuniperi se scabit. draco vernam nausiam silvestris lactucae suco restinguit. pantheras per fricatas carnes aconito barbari venantur. occupat ilico fauces earum angor, quare pardalianches id venenum appellavere quidam; at fera contra hoc excrementis hominis sibi medetur, et alias tam avida eorum, ut a pastoribus ex industria in aliquo vase suspensa altius, quam ut queat saltu attingere, iaculando se appetendoque deficiat et postremo expiret, alioqui vivacitatis adeo lentae, ut eiectis interaneis diu pugnet. elephans, chamaeleone concolori frondi devorato, occurrit oleastro huic veneno suo. ursi cum mandragorae mala gustavere, formicas lambunt. cervus herba cinare venenatis pabulis resistit. palumbes, graculi, merulae, perdices lauri folio annuum fastidium purgant, columbae, turtures et gallinacei herba quae vocatur helxine, anates, anseres ceteraeque aquaticae herba siderite, grues et similes iunco palustri. corvus occiso chamaeleone, qui etiam victori suo nocet, lauro infestum virus extinguit.

milia praeterea, utpote cum plurimis animalibus eadem natura rerum caeli quoque observationem et ventorum, imbrium, tempestatum praesagia alia alio modo dederit, quod persequi inmensum est, aeque scilicet quam reliquam cum singulis hominum societatem. siquidem et pericula praemonent non fibris modo extisque, circa quod magna mortalium portio haeret, sed alia quadam significatione. ruinis inminentibus musculi praemigrant, aranei cum telis primi cadunt. auguria quidem artem fecere apud romanos et sacerdotum collegium vel maxime sollemne. est inter ea locis rigentibus et volpes, animal alioqui sollertia dirum. amnes gelatos lacusque non nisi ad eius itum reditumque transeunt. observatum eam aure ad glaciem adposita coniectare crassitudinem gelus. nec minus clara exitii documenta sunt etiam contemnendis animalibus. M. Varro auctor est a cuniculis suffossum in hispania oppidum, a talpis in thessalia, ab ranis civitatem in gallia pulsam, ab locustis in africa, ex gyara cycladum insula incolas a muribus fugatos, in italia amynclas a serpentibus deletas. citra cynamolgos aethiopas late

deserta regio est, a scorpionibus et solipugis gente sublata, et a scolopendris abactos rhoetienses auctor est theophrastus. sed ad reliqua ferarum genera redeamus.

hyaenis utramque esse naturam et alternis annis mares, alternis feminas fieri, parere sine mare vulgus credit, aristoteles negat. collum ut iuba in continuitatem spinae porrigitur flectique nisi circumactu totius corporis non quit. multa praeterea mira traduntur, sed maxime sermonem humanum inter pastorum stabula adsimulare nomenque alicuius addiscere, quem evocatum foris laceret, item vomitionem hominis imitari ad sollicitandos canes quos invadat. ab uno animali sepulcra erui inquisitione corporum. feminam raro capi. oculis mille esse varietates colorumque mutationes. praeterea umbrae eius contactu canes obmutescere, et quibusdam magicis artibus omne animal, quod ter lustraverit, in vestigio haerere.

huius generis coitu leaena aethiopica parit corocottam, similiter voces imitantem hominum pecorumque. acies ei perpetua, in utraque parte oris nullis gingivis, dente continuo: ne contrario occursu hebetetur, capsarum modo includitur. hominum sermones imitari et mantichoram in aethiopia auctor est iuba.

hyaenae plurimae gignuntur in africa, quae et asinorum silvestrium multitudinem fundit. mares in eo genere singuli feminarum gregibus imperitant; timent libidinis aemulos et ideo gravidas custodiunt morsuque natos mares castrant. contra gravidae latebras petunt et parere furto cupiunt gaudentque copia libidinis.

easdem partes sibi ipsi pontici amputant fibri periculo urgente, ob hoc se peti gnari; castoreum id vocant medici. alias animal horrendi morsus arbores iuxta flumina ut ferro caedit, hominis parte conprehensa non ante quam fracta concrepuerint ossa morsus resolvit. cauda piscium his, cetera species lutrae. utrumque aquaticum, utrique mollior pluma pilus.

ranae quoque rubetae, quarum et in terra et in umore vita, plurimis refertae medicaminibus, deponere ea adsidue ac resumere pastu dicuntur, venena tantum semper sibi reservantes.

similis et vitulo marino victus in mari ac terra, simile fibris et ingenium. evomit fel suum ad multa medicamenta utile, item coagulum ad comitiales morbos, ob ea se peti prudens. theophrastus auctor est anguis modo et stelliones senectutem exuere itaque

protinus devorare praeripientes comitiali morbo remedia. eosdem innocui ferunt in graecia morsus, noxios esse in sicilia.

cervis quoque est sua malignitas, quamquam placidissimo animalium. urgente vi canum ultro confugiunt ad hominem et in pariendo semitas minus cavent humanis vestigiis tritas quam secreta ac feris opportuna. conceptus earum post arcturi sidus. octonis mensibus ferunt partus, interim et geminos. a conceptu separant se, at mares relicti rabie libidinis saeviunt, fodiunt scrobes. tunc rostra eorum nigrescunt, donec aliqui abluant imbres. feminae autem ante partum purgantur herba quadam, quae seselis dicitur, faciliore ita utentes utero; a partu duas, quae tamnus et seselis appellantur, pastae redeunt ad fetum: illis imbui lactis primos volunt sucos quacumque de causa. editos partus exercent cursu et fugam meditari docent, ad praerupta ducunt saltumque demonstrant. iam mares soluti desiderio libidinis avide petunt pabula; ubi se praepingues sensere, latebras quaerunt fatentes incommodum pondus. et alias semper in fuga adquiescunt stantesque respiciunt, cum prope ventum est, rursus fugae praesidia repetentes. hoc fit intestini dolore tam infirmi, ut ictu levi rumpatur intus. fugiunt autem latratu canum audito secunda semper aura, ut vestigia cum ipsis abeant. mulcentur fistula pastorali et cantu, cum erexere aures, acerrimi auditus, cum remisere, surdi. cetero animal simplex et omnium rerum miraculo stupens in tantum, ut equo aut bucula accedente propius hominem iuxta venantem non cernant aut, si cernant, arcum ipsum sagittasque mirentur. maria trameant gregatim nantes porrecto ordine et capita inponentes praecedentium clunibus vicibusque ad terga redeuntes. hoc maxime notatur a cilicia cyprum traicientibus. nec vident terras, sed in odorem earum natant. cornua mares habent solique animalium omnibus annis stato veris tempore amittunt. ideo sub ista die quam maxime invia petunt: latent amissis velut inermes, sed et hi bono suo invidentes. dextrum cornu negant inveniri ceu medicamento aliquo praeditum, idque mirabilius fatendum est, cum et in vivariis mutent omnibus annis. defodi ab iis putant. accensi autem utrius libeat odore et serpentes fugantur et comitiales morbi deprehenduntur. indicia quoque aetatis in illis gerunt, singulos annis adicientibus ramos usque ad sexennes; ab eo tempore similia revivescunt, nec potest aetas discerni; sed dentibus senecta declaratur: aut enim paucos aut

nullos habent nec in cornibus imis ramos, alioqui ante frontem prominere solitos iunioribus. non decidunt castratis cornua nec nascuntur, erumpunt autem renascentibus tuberibus primo aridae cuti similia, dein teneris increscunt ferulis harundineas in paniculas molli plumata lanugine. quamdiu carent iis, noctibus procedunt ad pabula. increscentia solis vapore durant ad arbores subinde experientes; ubi placuit robur, in aperta prodeunt. captique iam sunt hedera in cornibus viridante, ex attritu arborum ut in aliquo ligno teneris, dum experiuntur, innata. sunt aliquando et candido colore, qualem fuisse traditur q. sertorii cervam, quam esse fatidicam hispaniae gentibus persuaserat. et his cum serpente pugna: vestigant cavernas nariumque spiritu extrahunt renitentes. ideo singulare abigendis serpentibus odor adusto cervino cornu, contra morsus vero praecipuum remedium ex coagulo hinnulei matris in utero occisi. vita cervis in confesso longa, post c annos aliquibus denuo captis cum torquibus aureis, quos alexander magnus addiderat, adopertis iam cute in magna obesitate. febrium morbos non sentit hoc animal, quin et medetur huic timori. quasdam modo principes feminas scimus omnibus diebus matutinis carnem eam degustare solitas et longo aevo caruisse febribus, quod ita demum existimant ratum, si vulnere uno interierit.

est eadem specie, barba tantum et armorum villo distans, quem tragelaphon vocant, non alibi quam iuxta phasim amnem nascens.

cervos africa propemodum sola non gignit, at chamaeleonem et ipsa, quamquam frequentior est indiae. figura et magnitudo erat lacerti, nisi crura essent recta et excelsiora. latera ventri iunguntur ut piscibus; et spina simili modo eminet. rostrum, ut in parvo, haut absimile suillo, cauda praelonga, in tenuitatem desinens, inplicans se viperinis orbibus, ungues adunci, motus tardior ut testudini, corpus asperum ceu crocodilo, oculi in recessu cavo, tenui discrimine, praegrandes et corpori concolores. numquam eos operit nec pupillae motu, sed totius oculi versatione circumaspicit. ipse celsus hianti semper ore solus animalium nec cibo nec potu alitur nec alio quam ae+ris alimento, rictu terrifico fere, innoxius alioqui. et coloris natura mirabilior: mutat namque eum subinde et oculis et cauda et toto corpore redditque semper quemcumque proxime attingit praeter rubrum candidumque; defuncto pallor est. caro in capite et maxillis et ad commissuram caudae admodum exigua nec aliubi toto corpore;

sanguis in corde et circa oculos tantum; viscera sine splene. hibernis mensibus latet, ut lacertae.

mutat colores et scytharum tarandrus nec aliud ex iis quae pilo vestiuntur, nisi in indis lycaon, cui iubata traditur cervix. nam thoes - luporum id genus est procerius longitudine, brevitate crurum dissimile, velox saltu, venatu vivens, innocuum homini - habitum, non colorem, mutant, per hiemes hirti, aestate nudi. tarandro magnitudo quae bovi est, caput maius cervino nec absimile, cornua ramosa, ungulae bifidae, villus magnitudine ursorum, sed, cum libuit sui coloris esse, asini similis. tergori tanta duritia, ut thoraces ex eo faciant. colorem omnium arborum, fruticum, florum locorumque reddit metuens in quibus latet, ideoque raro capitur. mirum esset habitum corpori tam multiplicem dari, mirabilius est et villo.

hystrices generat india et africa, spinea contectas cute irenaceorum genere, sed hystrici longiores aculei et, cum intendit cutem, missiles. ora urgentium figit canum et paulo longius iaculatur. hibernis autem se mensibus condit, quae natura multis et ante omnia ursis.

eorum coitus hiemis initio nec vulgari quadripedum more, sed ambobus cubantibus conplexisque; dein secessus in specus separatim, in quibus pariunt xxx die plurimum quinos. hi sunt candida informisque caro, paulo muribus maior, sine oculis, sine pilo; ungues tantum prominent. hanc lambendo paulatim figurant. nec quicquam rarius quam parientem videre ursam. ideo mares quadragenis diebus latent, feminae quaternis mensibus. specus si non habuere, ramorum fruticumque congerie aedificant, inpenetrabiles imbribus mollique fronde constratos. primis diebus bis septenis tam gravi somno premuntur, ut ne vulneribus quidem excitari queant. tunc mirum in modum veterno pinguescunt. illi sunt adipes medicaminibus apti contraque defluvium capilli tenaces. ab his diebus residunt ac priorum pedum suctu vivunt. fetus rigentes adprimendo pectori fovent non alio incubitu quam ad ova volucres. mirum dictu, credit theophrastus per id tempus coctas quoque ursorum carnes, si adserventur, increscere; cibi nulla tunc argumenta nec nisi umoris minimum in alvo inveniri, sanguinis exiguas circa corda tantum guttas, reliquo corpori nihil inesse. procedunt vere, sed mares praepingues, cuius rei causa non prompta est, quippe ne

somno quidem saginatis, praeter xiiii dies, ut diximus. exeuntes herbam quandam arum nomine laxandis intestinis, alioqui concretis, devorant friantque surculos dentibus praedomantes ora. oculi eorum hebetantur, qua maxime causa favos expetunt, ut convulneratum ab apibus os levet sanguine gravedinem illam. invalidissimum urso caput, quod leoni firmissimum. ideo urgente vi praecipitaturi se ex aliqua rupe manibus cooperto iaciuntur ac saepe in harena colapho infracto exanimantur. cerebro veneficium inesse hispaniae credunt occisorumque in spectaculis capita cremant testato, quoniam potum in ursinam rabiem agat. ingrediuntur et bipedes; arborem aversi derepunt. tauros ex ore cornibusque eorum omnibus pedibus suspensi pondere fatigant. nec alteri animalium in maleficio stultitia sollertior. annalibus notatum est m. pisone m. messala cos. a. d. xiiii kal. oct. domitium ahenobarbum aedilem curulem ursos numidicos centum et totidem venatores aethiopas in circo dedisse. miror adiectum numidicos fuisse, cum in africa ursum non gigni constet.

conduntur hieme et pontici mures, dumtaxat albi, quorum palatum in gustu sagacissimum auctores quonam modo intellexerint miror. conduntur et alpini, quibus magnitudo melium est, sed hi pabulo ante in specus convecto, cum quidem narrant alternos marem ac feminam subrosae conplexos fascem herbae supinos, cauda mordicus adprehensa, invicem detrahi ad specum ideoque illo tempore detrito esse dorso. sunt his pares et in aegypto similiterque resident in clunes et binis pedibus gradiuntur prioribusque ut manibus utuntur.

praeparant hiemi et irenacei cibos ac volutati supra iacentia poma adfixa spinis, unum amplius tenentes ore, portant in cavas arbores. iidem mutationem aquilonis in austrum condentes se in cubile praesagiunt. ubi vero sensere venantem, contracto ore pedibusque ac parte omni inferiore, qua raram et innocuam habent lanuginem, convolvuntur in formam pilae, ne quid conprehendi possit praeter aculeos. in desperatione vero urinam in se reddunt tabificam, tergori suo spinisque noxiam, propter hoc se capi gnari. quam ob rem exinanita prius urina venari ars est, et tum praecipua dos tergori, alias corrupto, fragili, putribus spinis atque deciduis, etiam si vivat subtractus fuga. ob id non nisi in novissima spe maleficio eo perfunditur, quippe et ipsi odere suum veneficium, ita parcentes sibi terminumque supremum opperientes, ut ferme ante captivitas

occupet. calidae postea aquae adspersu resolvitur pila, adprehensusque pes alter e posterioribus suspendiosa fame necat. aliter non est occidere et tergori parcere. ipsum animal non, ut remur plerique, vitae hominum supervacuum est, si non sint illi aculei, frustra vellerum mollitia in pecude mortalibus data: hac cute expoliuntur vestes. magnum fraus et ibi lucrum monopolio invenit, de nulla re crebrioribus senatus consultis nulloque non principe adito querimoniis provincialibus.

vrinae et duobus aliis animalibus ratio mira. leontophonon accipimus vocari parvum nec aliubi nascens quam ubi leo gignitur, quo gustato tanta illa vis et ceteris quadripedum imperitans ilico expiret. ergo corpus eius exustum adspergunt aliis carnibus polentae modo insidiantes ferae necantque etiam cinere: tam contraria est pestis. haut inmerito igitur odit leo visumque frangit et citra morsum exanimat; ille contra urinam spargit, prudens hanc quoque leoni exitialem. lyncum umor ita redditus, ubi gignuntur, glaciatur arescitve in gemmas carbunculis similes et igneo colore fulgentes, lyncurium vocatas atque ob id sucino a plerisque ita generari prodito. novere hoc sciuntque lynces et invidentes urinam terra operiunt, eoque celerius solidatur illa.

alia sollertia in metu melibus: sufflatae cutis distentu ictus hominum et morsus canum arcent.

provident tempestatem et sciuri obturatisque, qua spiraturus est ventus, cavernis ex alia parte aperiunt fores. de cetero ipsis villosior cauda pro tegumento est. ergo in hiemes aliis provisum pabulum, aliis pro cibo somnus.

serpentium vipera sola terra dicitur condi, ceterae arborum aut saxorum cavis. et alias vel annua fame durant, algore modo dempto. omnia secessus tempore veneno orba dormiunt. simili modo et cocleae, illae quidem iterum et aestatibus, adhaerentes maxime saxis aut, etiam iniuria resupinatae avolsaeque, non tamen exeuntes. in baliaribus vero insulis cavaticae appellatae non prorepunt e cavis terrae - neque herba vivunt - , sed uvae modo inter se cohaerent. est et aliud genus minus vulgare adhaerente operculo eiusdem testae se operiens. obrutae terra semper hae et circa maritimas tantum alpes quondam effossae coepere iam erui et in veliterno. omnium tamen laudatissimae in astypalaea insula.

lacertae, inimicissimum genus cocleis, negantur semenstrem vitam excedere. lacerti arabiae cubitales, in indiae vero nyso monte xxiiii in longitudinem pedum, colore fulvi aut punicei aut caerulei.

ex his quoque animalibus, quae nobiscum degunt, multa sunt cognitu digna, fidelissimumque ante omnia homini canis atque equus. pugnasse adversus latrones canem pro domino accepimus confectumque plagis a corpore non recessisse, volucres ac feras abigentem. ab alio in epiro agnitum in conventu percussorem domini laniatuque et latratu coactum fateri scelus. garamantum regem canes cc ab exilio reduxere proeliati contra resistentes. propter bella colophonii itemque castabalenses cohortes canum habuere. hae primae dimicabant in acie numquam detrectantes; haec erant fidissima auxilia nec stipendiorum indiga. canes defendere cimbris caesis domus eorum plaustris inpositas. canis iasone lycio interfecto cibum capere noluit inediaque consumptus est. is vero, cui nomen hyrcani reddit duris, accenso regis lysimachi rogo iniecit se flammae, similiterque hieronis regis. memorat et pyrrhum, gelonis tyranni canem, philistus; memoratur et icomedis bithyniae regis, uxore eius cosingi lacerata propter lasciviorem cum marito iocum. apud nos vulcatium nobilem, qui cascellium ius civile docuit, asturcone e suburbano redeuntem, cum advesperavisset, canis a grassatore defendit; item caelium senatorem aegrum placentiae ab armatis oppressum, nec prius ille vulneratus est quam cane interempto. sed super omnia in nostro aevo actis p. r. testatum appio iunio et p. silio cos., cum animadverteretur ex causa neronis germanici filii in titium sabinum et servitia eius, unius ex his canem nec in carcere abigi potuisse nec a corpore recessisse abiecti, in gradibus gemitoriis maestos edentem ululatus magna populi romani corona, ex qua cum quidam ei cibum obiecisset, ad os defuncti tulisse. innatavit idem, cadavere in tiberim abiecto, sustentare conatus, effusa multitudine ad spectandam animalis fidem.

soli dominum novere et ignotum quoque, si repente veniat, intellegunt; soli nomina sua, soli vocem domesticam agnoscunt. itinera quamvis longa meminere, nec ulli praeter hominem memoria maior. impetus eorum et saevitia mitigatur ab homine considente humi. plurima alia in iis cotidie vita invenit, sed in venatu sollertia et sagacitas praecipua est. scrutatur vestigia atque persequitur,

comitantem ad feram inquisitorem loro trahens, qua visa quam silens et occulte, set quam significans demonstratio est cauda primum, deinde rostro! ergo etiam senecta fessos caecosque ac debiles sinu ferunt, ventos et odorem captantes protendentesque rostra ad cubilia.

e tigribus eos indi volunt concipi et ob id in silvis coitus tempore alligant feminas. primo et secundo fetu nimis feroces putant gigni, tertio demum educant. hoc idem e lupis galli, quorum greges suum quisque ductorem e canibus et ducem habent. illum in venatu comitantur, illi parent; namque inter se exercent etiam magisteria. - (certum est iuxta nilum amnem currentes lambere, ne crocodilorum aviditati occasionem praebeant) - indiam petenti alexandro magno rex albaniae dono dederat inusitatae magnitudinis unum, cuius specie delectatus iussit ursos, mox apros et deinde dammas emitti, contemptim inmobili iacente eo, qua segnitia tanti corporis offensus imperator generosi spiritus interemi eum iussit. nuntiavit hoc fama regi. itaque alterum mittens addidit mandata, ne in parvis experiri vellet, sed in leone elephantove: duos sibi fuisse, hoc interempto praeterea nullum fore. nec distulit alexander leonemque fractum protinus vidit. postea elephantum iussit induci, haut alio magis spectaculo laetatus. horrentibus quippe villis per totum corpus ingenti primum latratu intonuit, mox ingruit adsultans contraque membra exurgens hinc et illinc artifici dimicatione, qua maxime opus esset, infestans atque evitans, donec adsidua rotatum vertigine adflixit, ad casum eius tellure concussa.

canum generi bis anno partus. iusta ad pariendum annua aetas. gerunt uterum sexagenis diebus. gignunt caecos et, quo largiore aluntur lacte, eo tardiorem visum accipiunt, non tamen umquam ultra xxi diem nec ante septimum. quidam tradunt, si unus gignatur, nono die cernere, si gemini, decumo itemque in singulos adici totidem tarditatis ad lucem dies, et ab ea quae sit femina ex primipara genita faunos cerni. optimus in fetu qui novissimus cernere incipit aut quem primum fert in cubile feta.

rabies canum sirio ardente homini pestifera, ut diximus, ita morsis letali aquae metu. quapropter obviam itur per xxx eos dies, gallinaceo maxime fimo inmixto canum cibis aut, si praevenerit morbus, veratro. a morsu vero unicum remedium, oraculo quodam nuper repertum, radix silvestris rosae, quae cynorrhoda appellatur.

columella auctor est, si xl die quam sit natus castretur morsu cauda summusque eius articulus auferatur spinae nervo exempto, nec caudam crescere nec canes rabidos fieri. canem locutum in prodigiis, quod equidem adnotaverim, accepimus et serpentem latrasse, cum pulsus tarquinius est regno.

eidem alexandro et equi magna raritas contigit. bucephalan eum vocarunt sive ab aspectu torvo sive ab insigni taurini capitis armo inpressi. xiii talentis ferunt ex philonici pharsalii grege emptum, etiam tum puero capto eius decore. neminem hic alium quam alexandrum regio instratu ornatus recepit in sedem, alias passim recipiens. idem in proeliis memoratae cuiusdam perhibetur operae, thebarum oppugnatione vulneratus in alium transire alexandrum non passus, multa praeterea eiusdem modi, propter quae rex defuncto ei duxit exequias urbemque tumulo circumdedit nomine eius. nec caesaris dictatoris quemquam alium recepisse dorso equus traditur, idemque similes humanis pedes priores habuisse, hac effigie locatus ante veneris genetricis aedem. fecit et Divus Augustus equo tumulum, de quo germanici caesaris carmen est. agrigenti conplurium equorum tumuli pyramides habent. equum adamatum a samiramide usque in coitum iuba auctor est. scythici quidem equitatus equorum gloria strepunt: occiso regulo ex provocatione dimicante hostem, cum ad spoliandum venisset, ab equo eius ictibus morsuque confectum; alium detracto oculorum operimento et cognito cum matre coitu petiisse praerupta atque exanimatum. aequa ex causa in reatino agro laceratum prorigam invenimus. namque et cognationum intellectus his est, atque in grege prioris anni sororem libentius etiam quam matrem equa comitatur. docilitas tanta est, ut universus sybaritani exercitus equitatus ad symphoniae cantum saltatione quadam moveri solitus inveniatur. iidem praesagiunt pugnam et amissos lugent dominos: lacrimas interdum desiderio fundunt. interfecto Nicomede rege equus eius inedia vitam finivit. phylarchus refert centaretum e galatis, in proelio occiso antiocho, potitum equo eius conscendisse ovantem, at illum indignatione accensum domitis frenis, ne regi posset, praecipitem in abrupta isse exanimatumque una. philistus a dionysio relictum in caeno haerentem, ut se evellisset, secutum vestigia domini examine apium iubae inhaerente, eoque ostento tyrannidem a dionysio occupatam.

ingenia eorum inenarrabilia. iaculantes obsequia experiuntur difficiles conatus corpore ipso nisuque iuvantium; item tela humi collecta equiti porrigunt. nam in circo ad currus iuncti non dubie intellectum adhortationis et gloriae fatentur. claudi caesaris saecularium ludorum circensibus, excusso in carceribus auriga albati corace, occupavere primatum, optinuere opponentes, effundentes omniaque contra aemulos, quae debuissent peritissimo auriga insistente, facientes, cum puderet hominum artes ab equis vinci, peracto legitimo cursu ad cretam stetere. maius augurium apud priscos plebeis circensibus excusso auriga ita, ut si staret, in capitolium cucurrisse equos aedemque ter lustrasse; maximum vero eodem pervenisse a veis cum palma et corona, effuso ratumenna qui ibi vicerat, unde postea nomen portae est. sarmatae longinquo itineri inedia pridie praeparant eos, potum exiguum inpertientes, atque ita per centena milia et quinquaginta continuo cursu euntibus insident.

vivunt annis quidam quinquagenis, feminae minore spatio; eaedem quinquennio finem crescendi capiunt, mares anno addito. forma equorum, quales maxime legi oporteat, pulcherrime quidem vergilio vate absoluta est; sed et nos diximus in libro de iaculatione equestri condito, et fere inter omnes constare video. diversa autem circo ratio quaeritur. itaque cum bimi in alio subiungantur imperio, non ante quinquennes ibi certamen accipit.

partum in eo genere undenis mensibus ferunt, duodecimo gignunt. coitus verno aequinoctio bimo utrimque vulgaris, sed a trimatu firmior partus. generat mas ad annos xxxiii, utpote cum a circo post vicesimum annum mittantur ad subolem. opunte et ad xl durasse tradunt adiutum modo in attollenda priore parte corporis. sed ad generandum paucis animalium minor fertilitas. qua de causa intervalla admissurae dantur, nec tamen quindecim initus eiusdem anni valet tolerare. equarum libido extinguitur iuba tonsa. gignunt annis omnibus ad quadragesimum. vixisse equum lxxv annos proditur. in hoc genere gravida stans parit praeterque ceteras fetum diligit. et sane equis amoris innasci venefi cium, hippomanes appellatum, in fronte, caricae magnitudine, colore nigro, quod statim edito partu devorat feta aut partum ad ubera non admittit. si quis praereptum habeat, olfactu in rabiem id genus agitur. amissa parente in grege armenti reliquae fetae educant orbum. terram attingere ore

triduo proximo quam sit genitus negant posse. quo quis acrior, in bibendo nares mergit. scythae per bella feminis uti malunt, quoniam urinam cursu non inpedito reddant.

constat in lusitania circa olisiponem oppidum et tagum amnem equas favonio flante obversas animalem concipere spiritum, idque partum fieri et gigni pernicissimum ita, sed triennium vitae non excedere. in eadem hispania gallaica gens est et asturica; equini generis his sunt quos tieldones vocamus; minore forma appellatos asturcones gignunt, quibus non vulgaris in cursu gradus, sed mollis alterno crurum explicatu glomeratio, unde equis tolutim carpere incursum traditur arte.

equo fere qui homini morbi, praeterque vesicae conversio, sicut omnibus in genere veterino.

asinum [cccc] nummum emptum q. axio senatori auctor est M. Varro, haut scio an omnium pretio animalium victo. opera sine dubio generi munifica, arando quoque, sed mularum maxime progeneratione. patria etiam spectatur in his, arcadicis in achaia, in italia reatinis. ipsum animal frigoris maxime inpatiens. ideo non generatur in ponto, nec aequinoctio verno, ut cetera pecua, admittitur, sed solstitio. mares in remissione operis deteriores. partus a tricensimo mense ocissimus, sed a trimatu legitimus, totidem quot equae et isdem mensibus et simili modo. sed incontinens uterus urina genitale reddit, ni cogatur in cursum verberibus a coitu. raro geminos parit. paritura lucem fugit et tenebras quaerit, ne conspiciatur ab homine. gignit tota vita, quae est ei ad tricensimum annum. partus caritas summa, sed aquarum taedium maius: per ignes ad fetus tendunt, eaedem, si rivus minimus intersit, horrent etiam pedes omnino tinguere. nec nisi adsuetos potant fontes quae sunt in pecuariis, atque ita ut sicco tramite ad potum eant. nec pontes transeunt per raritatem eorum tralucentibus fluviis, mirumque dictu, sitiunt et si mutentur aquae; ut bibant cogendae exorandaeve sunt. nec nisi spatiosa in cubitu laxitas tuta; varia namque somnio visa concipiunt ictu pedum crebro, qui nisi per inane emicuit, repulsu durioris materiae clauditatem ilico adfert. quaestus ex iis opima praedia exuperat. notum est in celtiberia singulas quadringentena milia nummum enixas, mularum maxime partu. aurium referre in iis et palpebrarum pilos aiunt; quamvis enim unicolori reliquo corpore,

totidem tamen colores, quot ibi fuere, reddi. pullos earum epulari maecenas instituit, multum eo tempore praelatos onagris. post eum interiit auctoritas saporis asino. - moriente visu celerrime id genus deficit. -

ex asino et equa mula gignitur mense xiii, animal viribus in labores eximium. ad tales partus equas neque quadrimis minores neque decennibus maiores legunt arcerique utrumque genus ab altero narrant nisi in infantia eius generis quod ineat lacte hausto. quapropter subreptos pullos in tenebris equarum uberi asinarumve eculeos admovent. gignitur autem mula et ex equo et asina, sed effrenis et tarditatis indomitae. lenta omnia et e vetulis. conceptum ex equo secutus asini coitus abortu perimit, non item asini equus. feminas a partu optime septimo die inpleri observatum, mares fatigatos melius inplere. quae non prius, quam dentes quos pullinos appellant iaciat, conceperit, sterilis intellegitur et quae non primo initu generare coeperit. equo et asina genitos mares hinnulos antiqui vocabant contraque mulos quos asini et equae generarent. observatum ex duobus diversis generibus nata tertii generis fieri et neutri parentium esse similia eaque ipsa, quae sunt ita nata, non gignere in omni animalium genere; idcirco mulas non parere. est in annalibus nostris peperisse saepe, verum prodigii loco habitum. theophrastus vulgo parere in cappadocia tradit, sed esse id animal ibi sui generis. mulae calcitratus inhibetur vini crebriore potu. in plurium graecorum est monumentis cum equa muli coitu natum quod vocaverint ginnum, id est parvum mulum. generantur ex equa et onagris mansuefactis mulae veloces in cursu, duritia eximia pedum, verum strigoso corpore, indomito animo. sed generator onagro et asina genitus omnes antecellit. onagri in phrygia et lycaonia praecipui. pullis eorum ceu praestantibus sapore africa gloriatur, quos lalisiones appellat. mulum lxxx annis vixisse atheniensium monimentis apparet; gavisi namque, cum templum in arce facerent, quod derelictus senecta scandentia iumenta comitatu nisuque exhortaretur, decretum fecere ne frumentarii negotiatores ab incerniculis eum arcerent.

bubus indicis camelorum altitudo traditur, cornua in latitudinem quaternorum pedum. in nostro orbe epiroticis laus maxima a pyrrhi, ut ferunt, iam inde regis cura. id consecutus est non ante

quadrimatum ad partus vocando; praegrandes itaque fuere et hodieque reliquiae stirpium durant. at nunc anniculae fecunditatem poscuntur, tolerantius tamen bimae, tauri generationem quadrimi. inplent singuli denas eodem anno. tradunt, si a coitu in dexteram partem abeant tauri, generatos mares esse; si in laevam, feminas. conceptio uno initu peragitur, quae si forte pererravit, xx post diem marem femina repetit. pariunt mense x; quicquid ante genitum, inutile est. sunt auctores ipso conplente decumum mensem die parere. gignunt raro geminos. coitus a delphini exortu a. d. pr. non. ianuarias diebus xxx, aliquis et autumno, gentibus quidem quae lacte vivunt ita dispensatus, ut omni tempore anni supersit id alimentum. tauri non saepius quam bis die ineunt. boves animalium soli et retro ambulantes pascuntur, apud garamantas quidem haut aliter. vita feminis xv annis longissima, maribus xx. robur in quinquennatu. lavatione calidae aquae traduntur pinguescere et si quis incisa cute spiritum harundine in viscera adigat. non degeneres existimandi etiam minus laudato aspectu: plurimum lactis alpinis, quibus minimum corporis, plurimum laboris capite, non cervice, iunctis. syriacis non sunt palearia, sed gibber in dorso. carici quoque in parte asiae, foedi visu tubere super armos a cervicibus eminente, luxatis cornibus, excellentes in opere narrantur, cetero nigri coloris candidive ad laborem damnantur. tauris minora quam bubus cornua tenuioraque. domitura boum in trimatu, postea sera, ante praematura. optime cum domito iuvencus inbuitur. socium enim laboris agrique culturae habemus hoc animal, tantae apud priores curae, ut sit inter exempla damnatus a populo romano die dicta, qui concubino procaci rure omassum edisse se negante occiderat bovem, actusque in exilium tamquam colono suo interempto.

tauris in aspectu generositas torva fronte, auribus saetosis, cornibus in procinctu dimicationem poscentibus. sed tota comminatio prioribus in pedibus. stat ira gliscente alternos replicans spargensque in alvum harenam et solus animalium eo stimulo ardescens. vidimus ex imperio dimicantes et iocose demonstratos rotari, cornibus cadentes excipi iterumque regi, modo iacentes ex humo tolli bigarumque etiam curru citato velut aurigas insistere. thessalorum gentis inventum est equo iuxta quadripedante cornu intorta cervice tauros necare; primus id spectaculum dedit romae caesar dictator.

hinc victimae opimae et lautissima deorum placatio. huic tantum animali omnium, quibus procerior, cauda non statim nato consummatae ut ceteris mensurae: crescit uni, donec ad vestigia ima perveniat. quam ob rem victimarum probatio in vitulo, ut articulum suffraginis contingat; breviore non litant. hoc quoque notatum, vitulos ad aras umeris hominis adlatos non fere litare, sicut nec claudicante nec aliena hostia deos placari nec trahente se ab aris. est frequens in prodigiis priscorum bovem locutum, quo nuntiato senatum sub diu haberi solitum.

bos in aegypto etiam numinis vice colitur; apin vocant. insigne ei in dextro latere candicans macula cornibus lunae crescere incipientis, nodus sub lingua, quem cantharum appellant. non est fas eum certos vitae excedere annos, mersumque in sacerdotum fonte necant quaesituri luctu alium, quem substituant, et donec invenerint maerent derasis etiam capitibus; nec tamen umquam diu quaeritur. inventus deducitur memphin a sacerdotibus c. delubra ei gemina, quae vocant thalamos, auguria populorum: alterum intrasse laetum est, in altero dira portendit. responsa privatis dat e manu consulentium cibum capiendo. germanici caesaris manum aversatus est haut multo postea extincti. cetero secretus, cum se proripuit in coetus, incedit submotu lictorum, gregesque puerorum comitantur carmen honori eius canentium; intellegere videtur et adorari velle. hi greges repente lymphati futura praecinunt. femina bos ei semel anno ostenditur, suis et ipsa insignibus, quamquam aliis, semperque eodem die et inveniri eam et extingui tradunt. memphi est locus in nilo, quem a figura vocant phialam, omnibus annis ibi auream pateram argenteamque mergentes diebus quos habent natales apis. septem hi sunt, mirumque neminem per eos a crocodilis attingi, octavo post horam diei sextam redire beluae feritatem.

magna et pecori gratia vel in placamentis deorum vel in usu vellerum. ut boves victum hominum excolunt, ita corporum tutela pecori debetur. generatio bimis utrimque ad novenos annos, quibusdam et ad x; primiparis minores fetus. coitus omnibus ab arcturi occasu, id est a. d. iii idus maias, ad aquilae occasum, id est x kal. augustas. gerunt partum diebus cl; postea concepti invalidi. cordos vocabant antiqui post id tempus natos. multi hibernos agnos praeferunt vernis, quoniam magis intersit ante solstitium quam ante

brumam firmos esse, solumque hoc animal utiliter bruma nasci. arieti naturale agnas fastidire, senectam ovium consectari, et ipse melior senecta, mutilus quoque utilior. ferocia eius cohibetur cornu iuxta aurem terebrato. dextro teste praeligato feminas generat, laevo mares. tonitrua solitariis ovibus abortus inferunt; remedium congregare eas, ut coetu iuventur. aquilonis flatu mares concipi dicunt, austri feminas, atque in eo genere arietum maxime spectantur ora, quia cuius coloris sub lingua habuere venas, eius et lanicium in fetu est variumque, si plures fuere. et mutatio aquarum potusque variat.

ovium summa genera duo, tectum et colonicum, illud mollius, hoc in pascuo delicatius, quippe non tectum rubis vexatur. operimenta ei ex arabicis praecipua. lana autem laudatissima apula et quae in italia graeci pecoris appellatur, alibi italica; tertium locum milesiae oves optinent. apulae breves villo nec nisi paenulis celebres; circa tarentum canusiumque summam nobilitatem habent, in asia vero eodem genere laudiceae. alba circumpadanis nulla praefertur, nec libra centenos nummos ad hoc aevi excessit ulla. oves non ubique tondentur; durat quibusdam in locis vellendi mos. colorum plura genera, quippe cum desint etiam nomina iis quas nativas appellant aliquot modis: hispania nigri velleris praecipuas habet, pollentia iuxta alpes cani, asia rutili, quas erythraeas vocant, item baetica, canusium fulvi, tarentum et suae pulliginis. sucidis omnibus medicata vis. histriae liburniaeque pilo propior quam lanae, pexis aliena vestibus et quam salacia scutulato textu commendat in lusitania. similis circa piscinas provinciae narbonensis, similis et in aegypto, ex qua vestis detrita usu pingitur rursusque aevo durat. est et hirtae pilo crasso in tapetis antiquissima gratia iam; certe iis usos homerus auctor est. aliter haec galli pingunt, aliter parthorum gentes. lanae et per se coactae vestem faciunt et, si addatur acetum, etiam ferro resistunt, immo vero etiam ignibus novissimo sui purgamento. quippe aenis polientium extracta in tomenti usum veniunt, galliarum, ut arbitror, invento; certe gallicis hodie nominibus discernitur. nec facile dixerim qua id aetate coeperit; antiquis enim torus e stramento erat, qualiter etiam nunc in castris. gausapae patris mei memoria coepere, amphimallia nostra sicut villosa etiam ventralia. nam tunica lati clavi in modum gausapae texi nunc primum incipit. lanarum nigrae nullum colorem bibunt. de reliquarum infectu suis locis

dicemus in conchyliis maris aut herbarum natura.

lanam in colu et fuso tanaquilis, quae eadem gaia caecilia vocata est, in templo sancus durasse prodente se auctor est M. Varro factamque ab ea togam regiam undulatam in aede fortunae, qua ser. tullius fuerat usus. inde factum ut nubentes virgines comitaretur colus compta et fusus cum stamine. ea prima texuit rectam tunicam, quales cum toga pura tironi induuntur novaeque nuptae. undulata vestis prima e lautissimis fuit; inde sororiculata defluxit. togas rasas phryxianasque Divi Augusti novissimis temporibus coepisse scribit fenestella. crebrae papaveratae antiquiorem habent originem iam sub lucilio poeta in torquato notatae. praetextae apud etruscos originem invenere. trabeis usos accipio reges; pictae vestes iam apud homerum sunt iis, et inde triumphales natae. acu facere id phryges invenerunt, ideoque phrygioniae appellatae sunt. aurum intexere in eadem asia invenit attalus rex, unde nomen attalicis. colores diversos picturae intexere babylon maxime celebravit et nomen inposuit. plurimis vero liceis texere, quae polymita appellant, alexandria instituit, scutulis dividere gallia. metellus scipio tricliniaria babylonica sestertium octingentis milibus venisse iam tunc ponit in catonis criminibus, quae neroni principi quadragiens sestertio nuper stetere. servi tulli praetextae, quibus signum fortunae ab eo dicatae coopertum erat, duravere ad seiani exitum, mirumque fuit neque diffluxisse eas neque teredinum iniurias sensisse annis quingentis sexaginta. vidimus iam et viventium vellera purpura, cocco, conchylio sesquipedalibus libris infecta, velut illa sic nasci cogente luxuria.

in ipsa ove satis generositas ostenditur brevitate crurum, ventris vestitu. is quibus nudus esset, apicas vocabant damnabantque. syriae cubitales ovium caudae plurimumque in ea parte lanicii. castrari agnos nisi quinquemenstres praematurum existimatur.

est in hispania, sed maxime corsica, non absimile pecori genus musmonum, caprino villo quam pecoris velleri propius, quorum e genere et ovibus natos prisci umbros vocaverunt. infirmissimum pecori caput, quam ob rem aversum a sole pasci cogendum, quoniam stultissima animalium lanata: qua timuere ingredi, unum cornu raptum sequuntur. vita longissima anni x, in aethiopia xiii. capris eodem loco xi, in reliquo orbe plurimum octoni. utrumque genus intra quartum coitum impletur.

caprae pariunt et quaternos, sed raro admodum; ferunt v mensibus, ut oves. capri pinguitudine sterilescunt. ante trimos minus utiliter generant et in senecta nec ultra quadriennium. incipiunt septimo mense et adhuc lactentes. mutilum in utroque sexu utilius. primus in die coitus non implet, sequens efficacior ac deinde. concipiunt novembri mense, ut martio pariant turgescentibus virgultis, aliquando anniculae, semper bimae, nisi in trimatu inutiles. pariunt octonis annis. abortus frigori obnoxius. oculos suffusos capra iunci punctu sanguine exonerat, caper rubi. sollertiam eius animalis mucianus visam sibi prodidit in ponte praetenui duabus obviis e diverso: cum circumactum angustiae non caperent nec reciprocationem longitudo in exilitate caecam, torrente rapido minaciter subterfluente, alteram decubuisse atque ita alteram proculcatae supergressam. mares quam maxime simos, longis auribus infractisque, armis quam villosissimis probant; feminarum generositatis insigne laciniae corporibus e cervice binae dependentes. non omnibus cornua, sed quibus sunt, in his et indicia annorum per incrementa nodorum. mutilis lactis maior ubertas. auribus eas spirare, non naribus, nec umquam febri carere archelaus auctor est. ideo fortassis anima iis quam ovibus ardentior calidioresque concubitus. tradunt et noctu non minus cernere quam interdiu: ideo, si caprinum iecur vescantur, restitui vespertinam aciem iis quos nyctalopas vocant. in cilicia circaque syrtes villo tonsili vestiuntur. capras in occasum declini sole in pascuis negant contueri inter sese, sed aversas iacere, reliquis autem horis adversas et inter cognationes. dependet omnium mento villus, quem aruncum vocant. hoc si quis adprehensam ex grege unam trahat, ceterae stupentes spectant; id evenit et cum quandam herbam aliqua ex iis momorderit. morsus earum arbori est exitialis. olivam lambendo quoque sterilem faciunt eaque ex causa minervae non immolantur.

suilli pecoris admissura a favonio ad aequinoctium vernum, aetas octavo mense, quibusdam in locis etiam quarto, usque ad octavum annum. partus bis anno, tempus utero quattuor mensum, numerus fecunditati ad vicenos, sed educare nequeunt tam multos. diebus x circa brumam statim dentatos nasci nigidius tradit. implentur uno coitu, qui et geminatur propter facilitatem aboriendi. remedium, ne prima subatione neque ante flaccidas aures coitus fiat. mares non

ultra trimatum generant. feminae senectute fessae cubantes coeunt. comesse fetus in his non est prodigium. suis fetus sacrificio die quinto purus est, pecoris die vii, bovis xxx. coruncanius ruminales hostias, donec bidentes fierent, puras negavit. suem oculo amisso putant cito extingui; alioqui vita ad xv annos, quibusdam et vicenos. verum efferantur, et alias obnoxium genus morbis, anginae maxime et strumae. index suis invalidae cruor in radice saetae dorso evolsae, caput obliquum in incessu. paenuriam lactis praepingues sentiunt et primo fetu minus sunt numerosae. in luto volutatio generi grata. intorta cauda; id etiam notatum, facilius litare in dexterum quam in laevum detorta. pinguescunt lx diebus, sed magis tridui inedia saginatione orsa. animalium hoc maxime brutum animamque ei pro sale datam non inlepide existimabatur. compertum agnitam vocem suarii furto abactis, mersoque navigio inclinatione lateris unius remeasse. quin et duces in urbe forum nundinarium domosque petere discunt, et feri sapiunt vestigia palude confundere, urina fugam levare. castrantur feminae quoque, sicuti et cameli, post bidui inediam suspensae pernis prioribus vulva recisa; celerius ita pinguescunt. adhibetur et ars iecori feminarum sicut anserum, inventum m. apici, fico arida saginatis ac satie necatis repente mulsi potu dato. neque alio ex animali numerosior materia ganeae: quinquaginta prope sapores, cum ceteris singuli. hinc censoriarum legum paginae interdictaque cenis abdomina, glandia, testiculi, vulvae, sincipita verrina, ut tamen publili mimorum poetae cena, postquam servitutem exuerat, nulla memoretur sine abdomine, etiam vocabulo suminis ab eo inposito.

placuere autem et feri sues. iam catonis censoris orationes aprunum exprobrant callum. in tres tamen partes diviso media ponebatur, lumbus aprunus appellata. solidum aprum romanorum primus in epulis adposuit p. servilius, pater eius rulli, qui ciceronis consulatu legem agrariam promulgavit: tam propinqua origo nunc cotidianae rei est. et hoc annales notarunt, horum scilicet ad emendationem morum, quibus non tota quidem cena, sed in principio bini ternique pariter manduntur apri.

vivaria eorum ceterarumque silvestrium primus togati generis invenit fulvius lippinus; in tarquiniensi feras pascere instituit, nec diu imitatores defuere l. lucullus et q. hortensius.

sues ferae semel anno gignunt. maribus in coitu plurima asperitas. tunc inter se dimicant indurantes attritu arborum costas lutoque se tergorantes. feminae in partu asperiores, et fere similiter in omni genere bestiarum. apris maribus non nisi anniculis generatio. in india cubitales dentium flexus; gemini ita ex rostro, totidem a fronte, ceu vituli cornua, exeunt. pilus aereo similis agrestibus, ceteris niger. at in arabia suillum genus non vivit.

in nullo genere aeque facilis mixtura cum fero, qualiter natos antiqui hybridas vocabant ceu semiferos, ad homines quoque, ut c. antonium ciceronis in consulatu collegam, appellatione tralata. non in suibus autem tantum, sed in omnibus quoque animalibus, cuiuscumque generis ullum est placidum, eiusdem invenitur et ferum, utpote cum hominum etiam silvestrium tot genera praedicta sint. caprae tamen in plurimas similitudines transfigurantur. sunt caprae, sunt rupicaprae, sunt ibices pernicitatis mirandae, quamquam onerato capite vastis cornibus gladiorum ceu vaginis. in haec se librat, ut tormento aliquo rotatus, in petras potissimum, e monte aliquo in alium transilire quaerens, atque recussu pernicius quo libuit exultat. sunt et oryges, soli quibusdam dicti contrario pilo vestiri et ad caput verso. sunt et dammae et pygargi et strepsicerotes multaque alia haut dissimilia. sed illa alpes, haec transmarini situs mittunt.

simiarum quoque genera plura. hominis figurae proxima caudis inter se distinguntur. mira sollertia visco inungui laqueisque calciari imitatione venantium tradunt, mucianus et latrunculis lusisse, fictas cera nuces visu distinguere; lunam cavam triste esse quibus in eo genere cauda sit, novam exultatione adorari. nam defectum siderum et ceterae pavent quadripedes. simiarum generi praecipua erga fetum adfectio. gestant catulos quae mansuefactae intra domos peperere, omnibus demonstrant tractarique gaudent, gratulationem intellegentibus similes, itaque magna ex parte conplectendo necant. efferatior cynocephalis natura sicut satyris. callitriches toto paene aspectu differunt; barba est in facie, cauda late fusa primori parte. hoc animal negatur vivere in alio quam aethiopiae quo gignitur caelo.

et leporum plura sunt genera. in alpibus candidi, quibus hibernis mensibus pro cibatu nivem credunt esse; certe liquescente ea rutilescunt annis omnibus, et est alioqui animal intolerandi rigoris alumnum. leporum generis sunt et quos hispania cuniculos appellat,

fecunditatis innumerae famemque baliarum insulis populatis messibus adferentis. - (fetus ventri exectos vel uberibus ablatos, non repurgatis interaneis, gratissimo in cibatu habent; laurices vocant) - certum est baliaricos adversus proventum eorum auxilium militare a Divo Augusto petisse. magna propter venatum eum viverris gratia est; iniciunt eas in specus, qui sunt multifores in terra - unde et nomen animali - , atque ita eiectos superne capiunt. archelaus auctor est, quot sint corporis cavernae ad excrementa lepori, totidem annos esse aetatis; varius certe numerus reperitur. idem utramque vim singulis inesse ac sine mare aeque gignere. benigna circa hoc natura innocua et esculenta animalia fecunda generavit. lepus, omnium praedae nascens, solus praeter dasypodem superfetat, aliud educans, aliud in utero pilis vestitum, aliud inplume, aliud inchoatum gerens pariter. nec non et vestes leporino pilo facere temptatum est, tactu non perinde molli ut in cute, propter brevitatem pili dilabidas. hi mansuescunt raro, cum feri dici iure non possint; complura namque sunt nec placida nec fera, sed mediae inter utrumque naturae, ut in volucribus hirundines, apes, in mari delphini.

quo in genere multi et hos incolas domuum posuere mures, haut spernendum in ostentis etiam publicis animal. adrosis lanuvi clipeis argenteis marsicum portendere bellum, carboni imperatori apud clusium fasceis, quibus in calciatu utebatur, exitium. plura eorum genera in cyrenaica regione, alii lata fronte, alii acuta, alii irenaceorum genere pungentibus pilis. theophrastus auctor est, in gyara insula, cum incolas fugaverint, ferrum quoque rosisse eos, id quod natura quadam et ad chalybas facere in ferrariis officinis. aurariis quidem in metallis ob hoc alvos eorum excidi semperque furtum id deprehendi; tantam esse dulcedinem furandi. venisse murem cc denariis casilinum obsidente Hannibale eumque qui vendiderat fame interisse, emptorem vixisse annales tradunt. cum candidi provenere, laetum faciunt ostentum. nam sauricum occentu dirimi auspicia annales refertos habemus. saurices et ipsos hieme condi auctor est nigidius, sicut glires, quos censoriae leges princepsque M. Scaurus in consulatu non alio modo cenis ademere quam conchylia aut ex alio orbe convectas aves. semiferum et ipsum animal, cui vivaria in doliis idem qui apris instituit. qua in re notatum, non congregare se nisi populares eiusdem silvae et, si

misceantur alienigenae amne vel monte discreti, interire dimicando. genitores suos fessos senecta alunt insigni pietate. senium finitur hiberna quiete - conditi enim et hi cubant - , rursus aestate iuvenescunt. similis et nitelis quies est hieme.

mirum rerum naturam non solum alia aliis dedisse terris animalia, sed in eodem quoque situ quaedam aliquis locis negasse. in mesia silva italiae non nisi in parte reperiuntur hi glires. in lycia dorcades non transeunt montes sexis vicinos, onagri limitem qui cappadociam a cilicia dividit. in hellesponto in alienos fines non commeant cervi, et circa arginusam elaphum montem non excedunt, auribus etiam in monte fissis. in poroselene insula viam mustelae non transeunt. item boeotiae lebadeae inlatae solum ipsum fugiunt, quae iuxta in orchomeno tota arva subruunt, talpae. quarum e pellibus cubicularia vidimus stragula: adeo ne religio quidem a portentis submovet delicias. in ithaca lepores inlati moriuntur extremis quidem in litoribus, in ebuso cuniculi, scatentibus iuxta hispania baliaribusque. cyrenis mutae fuere ranae; inlatis e continente vocalibus durat genus earum. mutae sunt etiamnum in seripho insula; eaedem alio tralatae canunt, quod accidere et in lacu thessaliae sicandro tradunt. in italia muribus araneis venenatus est morsus; eosdem ulterior appennino regio non habet. iidem ubicumque sunt, orbitam si transiere, moriuntur. in olympo macedoniae monte non sunt lupi nec in creta insula; ibi quidem nec vulpes ursive atque omnino nullum maleficum animal praeter phalangium. in araneis id genus dicemus suo loco. mirabilius in eadem insula cervos praeterquam in cydoneatarum regione non esse, item apros et attagenas, irenaceos, in africa autem nec apros nec cervos nec capreas nec ursos.

iam quaedam animalia indigenis innoxia advenas interemunt, sicut serpentes parvi in myrinthe, quos terra nasci proditur. item in syria angues circa euphratis maxime ripas dormientes syros non attingunt aut, etiamsi calcati momordere, non sentiuntur malefici, aliis cuiuscumque gentis infesti, avide et cum cruciatu exanimantes, quam ob rem et syri non necant eos. contra in latmo cariae monte aristoteles tradit a scorpionibus hospites non laedi, indigenas interemi. sed reliquorum quoque animalium et praeterea terrestrium dicemus genera.

animalium, quae terrestria appellavimus hominum quadam consortione degentia, indicata natura est. ex reliquis minimas esse volucres convenit. quam ob rem prius aequorum, amnium stagnorumque dicentur.

sunt autem conplura in his maiora etiam terrestribus. causa evidens umoris luxuria. alia sors alitum quibus vita pendentibus. in mari autem, tam late supino mollique ac fertili nutrimento, accipiente causas genitales e sublimi semperque pariente natura pleraque etiam monstrifica reperiuntur, perplexis et in semet aliter atque aliter nunc flatu nunc fluctu convolutis seminibus atque principiis, vera ut fiat vulgi opinio, quicquid nascatur in parte naturae ulla, et in mari esse praeterque multa quae nusquam alibi. rerum quidem, non solum animalium, simulacra inesse licet intellegere intuentibus uvam, gladium, serras, cucumin vero et colore et odore similem, quo minus miremur equorum capita in tam parvis eminere cocleis.

plurima autem et maxima animalia in indico mari, ex quibus ballaenae quaternum iugerum, pristes ducenum cubitorum, quippe ubi locustae quaterna cubita impleant, anguillae quoque in gange amne tricenos pedes. sed in mari beluae circa solstitia maxime visuntur. tunc illic ruunt turbines, tunc imbres, tunc deiectae montium iugis procellae ab imo vertunt maria pulsatasque ex profundo beluas cum fluctibus volvunt tanta, ut alias thynnorum, multitudine, ut magni alexandri classis haut alio modo quam hostium acie obvia contrarium agmen adversa fronte derexerit: aliter sparsis non erat evadere. non voce, non sonitu, non ictu, sed fragore terrentur nec nisi ruina turbantur. cadara appellatur rubri maris paeninsula ingens; huius obiectu vastus efficitur sinus, xii dierum et noctium remigio enavigatus ptolemaeo regi, quando nullius aurae recipit afflatum. huius loci quiete praecipue ad inmobilem magnitudinem beluae adolescunt. gedrosos, qui arabim amnem accolunt, alexandri magni classium praefecti prodiderunt in domibus fores maxillis beluarum facere, ossibus tecta contignare, ex quibus multa quadragenum cubitorum longitudinis reperta. exeunt et pecori similes beluae ibi in terram pastaeque radices fruticum remeant et quaedam

equorum, asinorum, taurorum capitibus, quae depascuntur sata.

maximum animal in indico mari pristis et ballaena est, in gallico oceano physeter, ingentis columnae modo se attollens altiorque navium velis diluviem quandam eructans, in gaditano oceano arbor, in tantum vastis dispansa ramis, ut ex ea causa fretum numquam intrasse credatur. apparent et rotae appellatae a similitudine, quaternis distinctae hae radiis, modiolos earum oculis duobus utrimque claudentibus.

tiberio principi nuntiavit olisiponensium legatio ob id missa, visum auditumque in quodam specu concha canentem tritonem qua noscitur forma. et nereidum falsa non est, squamis modo hispido corpore etiam qua humanam effigiem habet. namque haec in eodem spectata litore est, cuius morientis etiam cantum tristem accolae audivere longe, et Divo Augusto legatus galliae conplures in litore apparere exanimes nereidas scripsit. auctores habeo in equestri ordine splendentes, visum ab iis in gaditano oceano marinum hominem toto corpore absoluta similitudine; ascendere eum navigia nocturnis temporibus statimque degravari quas insederit partes et, si diutius permaneat, etiam mergi. tiberio principe contra lugdunensis provinciae litus in insula simul trecentas amplius beluas reciprocans destituit oceanus, mirae varietatis et magnitudinis, nec pauciores in santonum litore interque reliquas elephantos et arietes candore tantum cornibus adsimulatis, nereidas vero multas. turranius prodidit expulsam beluam in gaditana litora, cuius inter duas pinnas ultimae caudae cubita sedecim fuissent, dentes eiusdem cxx, maximi dodrantium mensura, minimi semipedum. beluae, cui dicebatur exposita fuisse andromeda, ossa romae apportata ex oppido iudaeae iope ostendit inter reliqua miracula in aedilitate sua M. Scaurus longitudine pedum xl, altitudine costarum indicos elephantos excedente, spinae crassitudine sesquipedali.

ballaenae et in nostra maria penetrant. in gaditano oceano non ante brumam conspici eas tradunt, condi autem statis temporibus in quodam sinu placido et capaci, mire gaudentes ibi parere. hoc scire orcas, infestam iis beluam et cuius imago nulla repraesentatione exprimi possit alia quam carnis inmensae dentibus truculentae. inrumpunt ergo in secreta ac vitulos earum aut fetas vel etiamnum gravidas lancinant morsu incursuque ceu liburnicarum rostris

fodiunt. illae ad flexum inmobiles, ad repugnandum inertes et pondere suo oneratae, tunc quidem et utero graves pariendive poenis invalidae, solum auxilium novere in altum profugere et se tuto defendere oceano. contra orcae occurrere laborant seseque opponere et caveatas angustiis trucidare, in vada urguere, saxis inlidere. spectantur ea proelia ceu mari ipso sibi irato, nullis in sinu ventis, fluctibus vero ad anhelitus ictusque quantos nulli turbines volvant. orca et in portu ostiensi visa est oppugnata a claudio principe. venerat tum exaedificante eo portum, invitata naufragiis tergorum advectorum e gallia, satiansque se per conplures dies alveum in vado sulcaverat, adtumulata fluctibus in tantum, ut circumagi nullo modo posset et, dum saginam persequitur in litus fluctibus propulsam, emineret dorso multum super aquas carinae vice inversae. praetendi iussit caesar plagas multiplices inter ora portus profectusque ipse cum praetorianis cohortibus populo romano spectaculum praebuit, lanceas congerente milite e navigiis adsultantibus, quorum unum mergi vidimus reflatu beluae oppletum unda.

ora ballaenae habent in frontibus ideoque summa aqua natantes in sublime nimbos efflant. spirant autem confessione omnium et paucissima alia in mari, quae internorum viscerum pulmonem habent, quoniam sine eo spirare animal nullum putatur. nec piscium branchias habentes anhelitum reddere ac per vices recipere existimant quorum haec opinio est, nec multa alia genera etiam branchiis carentia, in qua sententia fuisse aristotelem video et multis persuasisse doctrina insignibus. nec me protinus huic opinioni eorum accedere haut dissimulo, quoniam et pulmonum vice alia possint spirabilia inesse viscera ita volente natura, sicut et pro sanguine est multis alius umor. in aquas quidem penetrare vitalem hunc halitum quis miretur, qui etiam reddi ab his eum cernat et in terras quoque, tanto spissiorem naturae partem, penetrare argumento animalium quae semper defossa vivunt, ceu talpae accedunt apud me certe efficacia ut credam, etiam omnia in aquis spirare naturae suae sorte, primum saepe adnotata piscium aestivo calore quaedam anhelatio et alia tranquillo velut oscitatio, ipsorum quoque, qui sunt in adversa opinione, de somno piscium confessio - quis enim sine respiratione somno locus - , praeterea bullantium aquarum sufflatio lunaeque effectu concharum quoque corpora augescentia. super omnia est quod

esse auditum et odoratum piscibus non erit dubium, ex ae+ris utrumque materia. odorem quidem non aliud quam infectum ae+ra intellegi possit. quam ob rem de his opinetur ut cuique libitum erit. branchiae non sunt ballaenis nec delphinis. haec duo genera fistula spirant, quae ad pulmonem pertinet, ballaenis a fronte, delphinis a dorso. et vituli marini, quos vocant phocas, spirant ac dormiunt in terra; item testudines, de quibus mox plura.

velocissimum omnium animalium, non solum marinorum, est delphinus, ocior volucre, acrior telo, ac nisi multum infra rostrum os illi foret medio paene in ventre, nullus piscium celeritatem eius evaderet. sed adfert moram providentia naturae, quia nisi resupini atque conversi non corripiunt, quae causa praecipue velocitatem eorum ostendit. nam cum fame conciti fugientem in vada ima persecuti piscem diutius spiritum continuere, ut arcu missi ad respirandum emicant tantaque vi exiliunt, ut plerumque vela navium transvolent. vagantur fere coniugia; pariunt catulos decimo mense aestivo tempore, interim et binos. nutriunt uberibus, sicut ballaena, atque etiam gestant fetus infantia infirmos; quin et adultos diu comitantur magna erga partum caritate. adolescunt celeriter, x annis putantur ad summam magnitudinem pervenire. vivunt et tricenis, quod cognitum praecisa cauda in experimentum. abduntur tricenis diebus circa canis ortum occultanturque incognito modo, quod eo magis mirum est, si spirare in aqua non queunt. solent in terram erumpere, incerta de causa, nec statim tellure tacta moriuntur multoque ocius fistula clausa. lingua est iis contra naturam aquatilium mobilis, brevis atque lata, haut differens suillae. pro voce gemitus humano similis, dorsum repandum, rostrum simum. qua de causa nomen simonis omnes miro modo agnoscunt maluntque ita appellari.

delphinus non homini tantum amicum animal, verum et musicae arti, mulcetur symphoniae cantu, set praecipue hydrauli sono. hominem non expavescit ut alienum, obviam navigiis venit, adludit exultans, certat etiam et quamvis plena praeterit vela. Divo Augusto principe lucrinum lacum invectus pauperis cuiusdam puerum ex baiano puteolos in ludum litterarium itantem, cum meridiano immorans appellatum eum simonis nomine saepius fragmentis panis, quem ob iter ferebat, adlexisset, miro amore dilexit. pigeret referre,

ni res maecenatis et fabiani et flavi alfii multorumque esset litteris mandata. quocumque diei tempore inclamatus a puero, quamvis occultus atque abditus, ex imo advolabat pastusque e manu praebebat ascensuro dorsum, pinnae aculeos velut vagina condens, receptumque puteolos per magnum aequor in ludum ferebat simili modo revehens pluribus annis, donec morbo extincto puero subinde ad consuetum locum ventitans tristis et maerenti similis ipse quoque, quod nemo dubitaret, desiderio expiravit. alius intra hos annos africo litore hipponis diarruti simili modo ex hominum manu vescens praebensque se tractandum et adludens nantibus inpositosque portans unguento perunctus a flaviano proconsule africae et sopitus, ut apparuit, odoris novitate fluctuatusque similis exanimi caruit hominum conversatione ut iniuria fugatus per aliquot menses, mox reversus in eodem miraculo fuit. iniuriae potestatum in hospitales ad visendum venientium hipponenses in necem eius conpulerunt. ante haec similia de puero in iaso urbe memorantur, cuius amore spectatus longo tempore, dum abeuntem in litus avide sequitur, in harenam invectus expiravit. puerum alexander magnus babylone neptunio sacerdotio praefecit, amorem illum numinis propitii fuisse interpretatus. in eadem urbe iaso hegesidemus scribit et alium puerum hermian nomine similiter maria perequitantem, cum repentinae procellae fluctibus exanimatus esset, relatum, delphinumque causam leti fatentem non reversum in maria atque in sicco expirasse. hoc idem et naupacti accidisse theophrastus tradit. nec modus exemplorum: eadem amphilochi et tarentini de pueris delphinisque narrant. quae faciunt ut credatur, arionem quoque citharoedicae artis, interficere nautis in mari parantibus ad intercipiendos eius quaestus, eblanditum uti prius caneret cithara, congregatis cantu delphinis cum se iecisset in mare, exceptum ab uno taenarum in litus pervectum.

est provinciae narbonensis et in nemausiensi agro stagnum latera appellatum, ubi cum homine delphini societate piscantur. innumera vis mugilum stato tempore angustis faucibus stagni in mare erumpit observata aestus reciprocatione. qua de causa praetendi non queunt retia, eaque moles ponderis nullo modo toleretur, etiamsi non sollertia insidietur tempori. simili ratione in altum protinus tendunt, quod vicino gurgite efficitur, locumque solum pandendis retibus

habilem effugere festinant. quod ubi animadvertere piscantes - concurrit autem multitudo temporis gnara et magis etiam voluptatis huius avida - totusque populus e litore quanto potest clamore conciet simonem in spectaculi eventum, celeriter delphini exaudiunt desideria aquilonum flatu vocem prosequente, austro vero tardius ex adverso referente; set tum quoque inproviso in auxilium advolare properant. apparet acies, quae protinus disponitur in loco, ubi coniectus est pugnae. opponunt sese ab alto trepidosque in vada urgent: tum piscatores circumdant retia furcisque sublevant. mugilum nihilo minus velocitas transilit: at illos excipiunt delphini et occidisse ad praesens contenti cibos in victoriam differunt. opere proelium fervet, includique retibus se fortissime urgentes gaudent ac, ne id ipsum fugam hostium stimulet, inter navigia et retia natantesve homines ita sensim elabuntur, ut exitus non aperiant. saltu, quod est alias blandissimum iis, nullus conatur evadere, ni summittantur sibi retia. egressus protinus ante vallum proeliatur. ita peracta captura quos interemere diripiunt. sed enixioris operae quam in unius diei praemium conscii sibi opperiuntur in posterum nec piscibus tantum, sed et intrita panis e vino satiantur.

quae de eodem genere piscandi in iasio sinu mucianus tradit, hoc differunt, quod ultro neque inclamati praesto sint partesque e manibus accipiant et suum quaeque cumba e delphinis socium habeat, quamvis noctu et ad faces. ipsis quoque inter se publica est societas. capto a rege cariae alligatoque in portu ingens reliquorum convenit multitudo maestitia quadam, quae posset intellegi, miserationem petens, donec dimitti rex eum iussit. quin et parvos semper aliquis grandior comitatur ut custos, conspectique iam sunt defunctum portantes, ne laceraretur a beluis.

delphinorum similitudinem habent qui vocantur thursiones. distant et tristitia quidem aspectus - abest enim illa lascivia - , maxime tamen rostris canicularum maleficentiae adsimulati.

testudines tantae magnitudinis indicum mare emittit, uti singularum superficie habitabiles casas integant atque inter insulas rubri praecipue maris his navigent cumbis. capiuntur multis quidem modis, sed maxime evectae in summa pelagi antemeridiano tempore blandito, eminente toto dorso per tranquilla fluitantes, quae voluptas libere spirandi in tantum fallit oblitas sui, ut solis vapore siccato

cortice non queant mergi invitaeque fluitent opportunae venantium praedae. ferunt et pastum egressas noctu avideque saturatas lassari atque, ut remeaverint matutino, summa in aqua obdormiscere; id prodi stertentium sonitu. tum adnatare tacite leniterque singulis ternos; a duobus in dorsum verti, a tertio laqueum inici supinae atque ita e terra a pluribus trahi. in phoenicio mari haut ulla difficultate capiuntur ultroque veniunt stato tempore anni in amnem eleutherum effusa multitudine.

dentes non sunt testudini, set rostri margines acuti, superna parte inferiorem claudente pyxidum modo. in mari conchyliis vivunt, tanta oris duritia, ut lapides comminuant, in terram egressae herbis. pariunt ova avium ovis similia ad centena numero eaque defossa extra aquas et cooperta terra, pavita hac pectore et complanata, incubant noctibus. educunt fetus annuo spatio. quidam oculis spectandoque ova foveri ab iis putant, feminas coitum fugere, donec mas festucam aliquam inponat aversae. trogodytae cornigeras habent, ut in lyra adnexis cornibus latis, sed mobilibus, quorum in natando remigio se adiuvant; chelium id vocatur, eximiae testudinis, sed rarae. namque scopuli praeacuti chelonophagos terrent, trogodytae autem, ad quos adnant, ut sacras adorant. sunt et terrestres, quae ob id in operibus chersinae vocantur, in africae desertis, qua parte maxime sitientibus harenis squalent, roscido, ut creditur, umore viventes. neque aliud ibi animal provenit.

testudinum putamina secare in laminas lectosque et repositoria iis vestire carvilius pollio instituit, prodigi et sagacis ad luxuriae instrumenta ingenii.

aquatilium tegumenta plura sunt. alia corio et pilo integuntur ut vituli et hippopotami, alia corio tantum ut delphini, cortice ut testudines, silicum duritia ut ostreae et conchae, crustis ut locustae, crustis et spinis ut echini, squamis ut pisces, aspera cute ut squatina, qua lignum et ebora poliuntur, molli ut murenae, alia nulla ut polypi.

quae pilo vestiuntur, animal pariunt, ut pristis, ballaena, vitulus. hic parit in terra, pecudum more secundas partus reddit. initu canum modo cohaeret; parit nonnumquam geminis plures, educat mammis fetum. non ante duodecimum diem deducit in mare, ex eo subinde adsuefaciens. interficiuntur difficulter nisi capite eliso. ipsis in sono mugitus - unde nomen vituli - , accipiunt tamen disciplinam

vocemque pariter et iussu populum salutant incondito fremitu, nomine vocati respondent. nullum animal graviore somno premitur. pinnis, quibus in mari utuntur, humi quoque vice pedum serpunt. pelles eorum etiam detractas corpori sensum aequorum retinere tradunt semperque aestu maris recedente inhorrescere, praeterea dextrae pinnae vim soporiferam inesse somnosque adlicere subditam capiti. - pilo carentium duo omnino animal pariunt, delphinus ac vipera.

piscium species sunt lxxiiii, praeter crustis intecta, quae sunt xxx. de singulis alias dicemus; nunc enim naturae tractantur insignium.

praecipua magnitudine thynni. invenimus talenta xv pependisse, eiusdem caudae latitudinem duo cubita et palmum. fiunt et in quibusdam amnium haut minores, silurus in nilo, isox in rheno, attilus in pado, inertia pinguescens ad mille aliquando libras, catenato captus hamo nec nisi boum iugis extractus. atque hunc minimus, appellatus clupea, venam quandam eius in faucibus mira cupidine appetens morsu exanimat. silurus grassatur, ubicumque est, omne animal appetens, equos innatantes saepe demergens. praecipue in moeno germaniae amne protelis boum et in danuvio marris extrahitur, porculo marino simillimus. et in borysthene memoratur praecipua magnitudo, nullis ossibus spinisve intersitis, carne praedulci. in gange indiae platanistas vocant, rostro delphini et cauda, magnitudine autem xvi cubitorum. in eodem esse statius sebosus haut modico miraculo adfert vermes, branchiis binis sex cubitorum, caeruleos, qui nomen a facie traxerunt. his tantas esse vires, ut elephantos ad potus venientes mordicus comprehensa manu eorum abstrahant.

thynni mares sub ventre non habent pinnam. intrant e magno mari pontum verno tempore gregatim, nec alibi fetificant. cordyla appellatur partus, qui fetas redeuntes in mare autumno comitatur; limosae vero aut e luto pelamydes incipiunt vocari et, cum annuum excessere tempus, thynni. hi membratim caesi cervice et abdomine commendantur atque clidio, recenti dumtaxat et tum quoque gravi ructu. cetera parte plenis pulpamentis sale adservantur. melandrya vocantur quercus assulis similia. vilissima ex his quae caudae proxima, quia pingui carent, probatissima quae faucibus. at in alio pisce circa caudam exercitatissima. pelamydes in apolectos

particulatimque consectae in genera cybiorum dispertiuntur.

piscium genus omne praecipua celeritate adolescit, maxime in ponto. causa multitudo amnium dulces inferentium aquas. amiam vocant cuius incrementum singulis diebus intellegitur. cum thynnis haec et pelamydes in pontum ad dulciora pabula intrant gregatim suis quaeque ducibus, et primi omnium scombri, quibus est in aqua sulpureus color, extra qui ceteris. hispaniae cetarias hi replent, thynnis non commeantibus.

sed in pontum nulla intrat bestia piscibus malefica praeter vitulos et parvos delphinos. thynni dextera ripa intrant, exeunt laeva. id accidere existimatur, quia dextro oculo plus cernant, utroque natura hebeti. est in euripo thracii bospori, quo propontis euxino iungitur, in ipsis europam asiamque separantis freti angustiis saxum miri candoris, a vado ad summa perlucens, iuxta calchedonem in latere asiae. huius aspectu repente territi semper adversum byzantii promunturium, ex ea causa appellatum aurei cornus, praecipiti petunt agmine. itaque omnis captura byzantii est, magna calchedonis penuria, m passibus medii interfluentis euripi. opperiuntur autem aquilonis flatum, ut secundo fluctu exeant e ponto, nec nisi intrantes portum byzantium capiuntur. bruma non vagantur; ubicumque deprehensi, usque ad aequinoctium ibi hibernant. iidem saepe navigia velis euntia comitantes mira quadam dulcedine per aliquot horarum spatia et passuum milia a gubernaculis spectantur, ne tridente quidem in eos saepius iacto territi. quidam eos, qui hoc e thynnis faciant, pompilos vocant. multi in propontide aestivant, pontum non intrant; item soleae, cum rhombi intrent, nec saepia est, cum lolligo reperiatur; saxatilium turdus et merula desunt, sicut conchylia, cum ostreae abundent. omnia autem hibernant in aegaeo. intrantium pontum soli non remeant trichiae - graecis enim plerisque nominibus uti par erit, quando aliis atque aliis eosdem diversi appellavere tractus - , sed hi soli in histrum mare subeunt et ex eo subterraneis eius venis in hadriaticum mare defluunt, itaque et illic descendentes nec umquam subeuntes e mari visuntur.

thynnorum captura est a vergiliarum exortu ad arcturi occasum. reliquo tempore hiberno latent in gurgitibus imis, nisi tepore aliquo evocati aut pleniluniis. pinguescunt et in tantum, ut dehiscant. vita longissima iis bienni.

animal est parvum scorpionis effigie, aranei magnitudine. hoc se et thynno et ei qui gladius vocatur, crebro delphini magnitudinem excedenti, sub pinna adfigit aculeo tantoque infestat dolore, ut in naves saepenumero exiliant. quod et alias faciunt aliorum vim timentes mugiles maxime, tam praecipuae velocitatis, ut transversa navigia interim superiaciant.

sunt et in hac parte naturae auguria, sunt et piscibus praescita. siculo bello ambulante in litore augusto piscis e mari ad pedes eius exilivit, quo argumento vates respondere, neptunum patrem adoptante tum sibi sexto pompeio - tanta erat navalis rei gloria - , sub pedibus caesaris futuros qui maria tempore illo tenerent.

piscium feminae maiores quam mares. in quodam genere omnino non sunt mares, sicut erythinis et channis; omnes enim ovis gravidae capiuntur. vagantur gregatim fere cuiusque generis squamosi. capiuntur ante solis ortum: tum maxime piscium fallitur visus. noctibus quies, set inlustribus aeque quam die cernunt. aiunt et si teratur gurges interesse capturae; itaque plures secundo tractu capi quam primo. gustu olei maxime, dein modicis imbribus gaudent alunturque. quippe et harundines, quamvis in palude prognatae, non tamen sine imbre adolescunt, et alias ubicumque pisces in eadem aqua adsidui, si non adfluat, exanimantur.

praegelidam hiemem omnes sentiunt, sed maxime qui lapidem in capite habere existimantur, ut lupi, chromis, sciaena, phagri. cum asperae hiemes fuere, multi caeci capiuntur. itaque his mensibus iacent speluncis conditi, sicut in genere terrestrium retulimus, maxime hippurus et coracini, hieme non capti praeterquam statis diebus paucis et isdem semper, item murena et orphus, conger, percae et saxatiles omnes. terra quidem, hoc est vado maris excavato, condi per hiemes torpedinem, psettam, soleam tradunt.

quidam rursus aestus inpatientia mediis fervoribus sexagenis diebus latent, ut glaucus, aselli, auratae. fluviatilium silurus caniculae exortu sideratur, et alias semper fulgure sopitur; hoc et in mari accidere cyprino putant. et alioqui totum mare sentit exortum eius sideris, quod maxime in bosporo apparet. alga enim et pisces superferuntur, omniaque ab imo versa.

mugilum natura ridetur in metu capite abscondito totos se occultari credentium. isdem tam incauta salacitas, ut in phoenice et in

narbonensi provincia coitus tempore e vivariis marem linea longinqua per os ad branchias religata emissum in mare eademque linea retractum feminae sequantur ad litus rursusque feminam mares partus tempore.

apud antiquos piscium nobilissimus habitus acipenser, unus omnium squamis ad os versis contra quam in nando meant, nullo nunc in honore est, quod equidem miror, cum sit rarus inventu. quidam eum elopem vocant.

postea praecipuam auctoritatem fuisse lupo et asellis nepos cornelius et laberius poeta mimorum tradidere. luporum laudatissimi qui appellantur lanati a candore mollitiaque carnis. asellorum duo genera, callariae minores et bacchi, qui non nisi in alto capiuntur, ideo praelati prioribus. at in lupis in amne capti praeferuntur.

nunc principatus scaro datur, qui solus piscium dicitur ruminare herbisque vesci atque non aliis piscibus, carpathio maxime mari frequens. promunturium troadis lectum numquam sponte transit. inde advectos tiberio claudio principe optatus e libertis eius praefectus classis inter ostiensem et campaniae oram sparsos disseminavit, quinquennio fere cura adhibita, ut capti redderentur mari. postea frequentes inveniuntur italiae litore, non antea ibi capti, admovetque sibi gula sapores piscibus satis et novum incolam mari dedit, ne quis peregrinas aves romae parere miretur. proxima est mensa iecori dumtaxat mustelarum, quas, mirum dictu, inter alpis quoque lacus raetiae brigantinus aemulas marinis generat.

ex reliqua nobilitate et gratia maxima est et copia mullis, sicut magnitudo modica, binasque libras ponderis raro admodum exuperant nec in vivariis piscinisque crescunt. septentrionalis tantum hos et proxima occidentis parte gignit oceanus. cetero genera eorum plura; nam et alga vescuntur et ostreis et limo et aliorum piscium carne, et barba gemina insigniuntur inferiori labro. lutarium ex iis vilissimi generis appellant; hunc semper comitatur sargus nomine alius piscis et caenum fodiente eo excitatum devorat pabulum. nec litorariis gratia. laudatissimi conchylium sapiunt. nomen iis fenestella a colore mulleorum calciamentorum datum putat. pariunt ter annis; certe totiens fetura apparet. mullum expirantem versicolori quadam et numerosa varietate spectari proceres gulae narrant, rubentium squamarum multiplici mutatione pallescentem, utique si

vitro spectetur inclusus. m. apicius, ad omne luxus ingenium natus, in sociorum garo - nam ea quoque res cognomen invenit - necari eos praecellens putavit atque e iecore eorum allecem excogitare.

provocavit - id enim est facilius dixisse quam quis vicerit - asinius celer e consularibus hoc pisce prodigos omnes gaio principe unum mercatus hs [viii] mullum. quae reputatio aufert traversum animum ad contemplationem eorum, qui in conquestione luxus coquos emi singulos pluris quam equos quiritabant. at nunc coci trium horum pretiis parantur et coquorum pisces, nullusque prope iam mortalis aestimatur pluris quam qui peritissime censum domini mergit. mullum lxxx librarum in mari rubro captum licinius mucianus prodidit, quanti mercatura eum luxuria suburbanis litoribus inventum

est et haec natura, ut alii alibi pisces principatum optineant, coracinus in aegypto, zaeus, idem faber appellatus, gadibus, circa ebusum salpa, obscenus alibi et qui nusquam percoqui possit nisi ferula verberatus; in aquitania salmo fluviatilis marinis omnibus praefertur.

piscium alii branchias multiplices habent, alii simplices, alii duplices. his aquam emittunt acceptam ore. senectutis indicium squamarum duritia, quae non sunt omnibus similes. duo lacus italiae in radicibus alpium larius et verbannus appellantur, in quibus pisces omnibus annis vergiliarum ortu existunt squamis conspicui crebris atque praeacutis, clavorum caligarium effigie, nec amplius quam circa eum mensem visuntur.

miratur et arcadia suum exocoetum, appellatum ab eo quod in siccum somni causa exeat. circa clitorium vocalis hic traditur et sine branchiis, idem aliquis adonis dictus.

exeunt in terram et qui marini mures vocantur et polypi et murenae, quin et in indiae fluminibus certum genus piscium ac deinde resilit. nam in stagna et amnes transeundi plerisque evidens ratio est, ut tutos fetus edant, quia non sint ibi qui devorent partus fluctusque minus saeviant. has intellegi ab iis causas servarique temporum vices magis miretur, si quis reputet quoto cuique hominum nosci uberrimam esse capturam sole transeunte piscium signum.

marinorum alii sunt plani, ut rhombi, soleae ac passeres, qui ab rhombis situ tantum corporum differunt - dexter hic resupinatis est

illis, passeri laevus - , alii longi, ut murena, conger. ideo pinnarum quoque fiunt discrimina, quae pedum vice sunt datae piscibus, nullis supra quaternas, quibusdam binae, aliquis nullae. in fucino tantum lacu piscis est qui octonis pinnis natat. binae omnino longis et lubricis, ut anguillis et congris, aliis nullae, ut murenis, quibus nec branchiae. haec omnia flexuoso corporum inpulsu ita mari utuntur, ut serpentes terra, et in sicco quoque repunt; ideo etiam vivaciora talia. et e planis aliqua non habent pinnas, ut pastinacae - ipsa enim latitudine natant - et quae mollia appellantur, ut polypi, quoniam pedes illis pinnarum vicem praestant.

anguillae octonis vivunt annis. durant et sine aqua, quinis et senis diebus aquilone spirante, austro paucioribus ... ant hieme, eadem in exigua aqua non tolerant neque in turbida. ideo circa vergilias maxime capiuntur fluminibus tum praecipue turbidis. pascuntur noctibus. exanimes piscium solae non fluitant. lacus est italiae benacus in veronensi agro mincium amnem tramittens, ad cuius emersus annuo tempore, octobri fere mense, autumnali sidere, ut palam est, hiemato lacu, fluctibus glomeratae volvuntur in tantum mirabili multitudine, ut in excipulis eius fluminis ob hoc ipsum fabricatis singulorum milium reperiantur globi.

murena quocumque mense parit, cum ceteri pisces stato pariant. ova eius citissime crescunt. in sicca litora elapsas vulgus coitu serpentium impleri putat. aristoteles zmyrum vocat marem qui generet; discrimen esse quod murena varia et infirma sit, zmyrus unicolor et robustus dentesque et extra os habeat. in gallia septentrionali murenis omnibus dextera in maxilla septenae maculae ad formam septentrionis aureo colore fulgent, dumtaxat viventibus, pariterque cum anima extinguuntur. invenit in hoc animali documenta saevitiae vedius pollio, eques romanus ex amicis Divi Augusti, vivariis earum inmergens damnata mancipia, non tamquam ad hoc feris terrarum non sufficientibus, sed quia in alio genere totum pariter hominem distrahi spectare non poterat. ferunt aceti gustu praecipue eas in rabiem agi. tenuissimum iis tergus, contra anguillis crassius, eoque verberari solitos tradit verrius praetextatos et ob id multam iis dici non institutum.

planorum piscium alterum est genus, quod pro spina cartilaginem habet, ut raiae, pastinacae, squatinae, torpedo et quos bovis, lamiae,

aquilae, ranae nominibus graeci appellant. quo in numero sunt squali quoque, quamvis non plani. haec graece in universum σελάχη appellavit aristoteles primus hoc nomine iis inposito. nos distinguere non possumus, nisi si cartilaginea appellare libeat. omnia autem carnivora sunt talia et supina vescuntur, ut in delphinis diximus, et cum ceteri pisces ova pariant, hoc genus solum, ut ea quae cete appellant, animal parit, excepta quam ranam vocant.

est parvus admodum piscis adsuetus petris, echeneis appellatus. hoc carinis adhaerente naves tardius ire creduntur, inde nomine inposito. quam ob causam amatoriis quoque veneficiis infamis est et iudiciorum ac litium mora, quae crimina una laude pensat fluxus gravidarum utero sistens partusque continens ad puerperium. in cibos tamen non admittitur. pedes eum habere arbitrantur, aristoteles ... it apposita pinnarum similitudine. mucianus muricem esse latiorem purpura, neque aspero neque rotundo ore neque in angulos prodeunte rostro, sed sicut concha utroque latere sese colligente. quibus inhaerentibus plenam venti stetisse navem periandri portantem, ut castrarentur, nobiles pueros; conchas, quae id praestiterint, apud cnidiorum venerem coli. trebius niger pedalem esse et crassitudine quinque digitorum, naves morari; praeterea hanc esse vim eius adservati in sale, ut aurum, quod deciderit in altissimos puteos, admotus extrahat.

mutant colorem candidum menae et fiunt aestate nigriores. mutat et phycis, reliquo tempore candida, vere varia. eadem piscium sola nidificat ex alga atque in nido parit.

volat sane perquam similis volucri hirundo, item miluus, subit in summa maria piscis ex argumento appellatus lucerna, linguaque ignea per os exerta tranquillis noctibus relucet. attollit e mari sesquipedanea fere cornua quae ab iis nomen traxit. rursus draco marinus, captus atque inmissus in harenam, cavernam sibi rostro mira celeritate excavat.

piscium sanguine carent de quibus dicemus. sunt autem tria genera: primum quae mollia appellantur, dein contecta crustis tenuibus, postremo testis conclusa duris. mollia sunt lolligo, saepia, polypus et cetera generis eius. his caput inter pedes et ventrem, pediculi octoni omnibus. saepiae et lolligini pedes duo ex his longissimi et asperi, quibus ad ora admovent cibos et in fluctu se

velut ancoris stabiliunt, cetera cirri, quibus venantur.

lolligo etiam volitat extra aquam se efferens, quod et pectunculi faciunt, sagittae modo. - saepiarum generi mares varii et nigriores constantiaeque maioris. percussae tridente feminae auxiliantur, at femina icto mare fugit. ambo autem, ubi sensere se adprehendi, effuso atramento, quod pro sanguine iis est, infuscata aqua absconduntur.

polyporum multa genera. terreni maiores quam pelagii. omnibus bracchiis ut pedibus ac manibus utuntur, cauda vero, quae est bisulca et acuta, in coitu. et polypis fistula in dorso, qua tramittunt mare, eamque modo in dexteram partem, modo in sinistram transferunt. natant obliqui in caput, quod praedurum est sufflatione viventibus. cetero per bracchia velut acetabulis dispersis haustu quodam adhaerescunt; tenent supini, ut avelli non queant. vada non adprehendunt, et grandibus minor tenacitas. soli mollium in siccum exeunt, dumtaxat asperum; levitatem odere. vescuntur conchyliorum carne, quorum conchas conplexu crinium frangunt; itaque praeiacentibus testis cubile eorum deprehenditur. et cum alioqui brutum habeatur animal, ut quod ad manum hominis adnatet, in re quodammodo familiari callet. omnia in domum conportat, dein putamina erosa carne egerit adnatantesque pisciculos ad ea venatur. colorem mutat ad similitudinem loci, et maxime in metu. ipsum bracchia sua rodere falsa opinio est - id enim a congris evenit ei - , sed renasci, sicut colotis et lacertis caudas, haut falsum.

inter praecipua autem miracula est qui vocatur nautilos, ab aliis pompilos. supinus in summa aequorum pervenit, ita se paulatim adsubrigens, ut emissa omni per fistulam aqua velut exoneratus sentina facile naviget. postea prima duo bracchia retorquens membranam inter illa mirae tenuitatis extendit, qua velificante in aura, ceteris subremigans bracchiis, media se cauda ut gubernaculo regit. ita vadit alto liburnicarum gaudens imagine, si quid pavoris interveniat, hausta se mergens aqua.

polyporum generis est ozaena dicta a gravi capitis odore, ob hoc maxime murenis eam consectantibus.

polypi binis mensibus conduntur. ultra bimatum non vivunt. pereunt autem tabe semper, feminae celerius et fere a partu.

non sunt praetereunda et l. lucullo proconsule baeticae conperta

de polypis, quae trebius niger e comitibus eius prodidit: avidissimos esse concharum, illas ad tactum conprimi, praecidentes bracchia eorum, ultroque escam ex praedante capere. carent conchae visu omnique sensu alio quam cibi et periculi. insidiantur ergo polypi apertis inpositoque lapillo extra corpus, ne palpitatu eiciatur: ita securi grassantur extrahuntque carnes. illae se contrahunt, sed frustra, discuneatae. tanta sollertia animalium hebetissimis quoque est. praeterea negat ullum atrocius esse animal ad conficiendum hominem in aqua. luctatur enim conplexu et sorbet acetabulis ac numeroso suctu trahit, cum in naufragos urinantesve impetum cepit. sed si invertatur, elanguescit vis; exporrigunt enim se resupinati. cetera, quae idem retulit, monstro propiora possunt videri. carteiae in cetariis adsuetus exire e mari in lacus eorum apertos atque ibi salsamenta populari - mire omnibus marinis expetentibus odorem quoque eorum, qua de causa et nassis inlinuntur - , convertit in se custodum indignationem adsiduitate furti inmodicam. saepes erant obiectae, sed has transcendebat per arborem nec deprehendi potuit nisi canum sagacitate. hi redeuntem circumvasere noctu, concitique custodes expavere novitatem. primum omnium magnitudo inaudita erat, dein colos muria obliti, odore diri. quis ibi polypum exspectasset aut ita cognosceret cum monstro dimicare sibi videbantur. namque et adflatu terribili canes agebat, nunc extremis crinibus flagellatos, nunc robustioribus bracchiis clavarum modo incussos, aegreque multis tridentibus confici potuit. ostendere lucullo caput eius, dolii magnitudine, amphorarum xv capax, atque, ut ipsius trebi verbis utar, “barbas, quas vix utroque bracchio conplecti esset, clavarum modo torosas, longas pedum xxx, acetabulis sive caliculis urnalibus pelvium modo, dentes magnitudini respondentes.” reliquiae adservatae miraculo pependere pondo dcc. saepias quoque et lolligines eiusdem magnitudinis expulsas in litus illud idem auctor est. in nostro mari lolligines quinum cubitorum capiuntur, saepiae binum. neque his bimatu longior vita.

navigeram similitudinem et aliam in propontide visam sibi prodidit mucianus: concham esse acatii modo carinatam, inflexa puppe, prora rostrata. in hanc condi nauplium, animal saepiae simile, ludendi societate sola. duobus hoc fieri generibus: tranquillo enim vectorem demissis palmulis ferire ut remis; si vero flatus invitet,

easdem in usum gubernaculi porrigi pandique buccarum sinus aurae. huius voluptatem esse ut ferat, illius ut regat, simulque eam descendere in duo sensu carentia, nisi forte tristi - id etenim constat - omine navigantium humana calamitas in causa est.

locustae crusta fragili muniuntur in eo genere quod caret sanguine. latent mensibus quinis. similiter cancri, qui eodem tempore occultantur, et ambo veris principio senectutem anguium more exuunt renovatione tergorum. cetera in undis natant, locustae reptantium modo fluitant, si nullus ingruat metus, recto meatu, cornibus, quae sunt propria rotunditate praepilata, ad latera porrectis; isdem erectis in pavore oblique in latera procedunt. cornibus inter se dimicant. unum hoc animalium, nisi vivum ferventi aqua incoquatur, fluida carne non habet callum. vivunt petrosis locis, cancri mollibus. hieme aprica litora sectantur, aestate in opaca gurgitum recedunt. omnia eius generis hieme laeduntur, autumno et vere pinguescunt et plenilunio magis, quia noctes sidus tepido fulgore mitificat.

cancrorum genera carabi, astaci, maeae, paguri, heracleotici, leones et alia ignobiliora. carabi cauda a ceteris cancris distant. in phoenice hippoe vocantur, tantae velocitatis, ut consequi non sit. cancris vita longa, pedes octoni, omnes in obliquum flexi. feminae primus pes duplex, mari simplex. praeterea bina bracchia denticulatis forcipibus. superior pars in primoribus his movetur, inferiore inmobili. dexterum bracchium omnibus maius. universi aliquando congregantur. os ponti evincere non valent; quam ob rem egressi circumeunt apparetque tritum iter. pinotheras vocatur minimus ex omni genere, ideo opportunus iniuriae. huic sollertia est inanium ostrearum testis se condere et, cum adcreverit, migrare in capaciores. cancri in pavore et retrorsi pari velocitate redeunt. dimicant inter se ut arietes adversis cornibus incursantes. contra serpentium ictus medentur. sole cancri signum transeunte et ipsorum, cum exanimati sint, corpus transfigurari in scorpiones narratur in sicco. ex eodem genere sunt echini, quibus spinae pro pedibus. ingredi est iis in orbem volvi, itaque detritis saepe aculeis inveniuntur. ex his echinometrae appellantur quorum spinae longissimae, calyces minimi. nec omnibus idem vitreus color. circa toronen candidi nascuntur, spina parva. ova omnium amara, quina numero. ora in medio corpore in terram versa. tradunt saevitiam maris praesagire

eos correptisque opperiri lapillis, mobilitatem pondere stabilientes; nolunt volutatione spinas atterere. quod ubi videre nautici, statim pluribus ancoris navigia infrenant.

in eodem genere cocleae aquatiles terrestresque, exerentes se domicilio binaque ceu cornua protendentes contrahentesque, oculis carent, itaque corniculis praetemptant iter. pectines in mari ex eodem genere habentur, reconditi et ipsi magnis frigoribus ac magnis aestibus, unguesque velut igne lucentes in tenebris, etiam in ore mandentium.

firmioris iam testae murices et concharum genera, in quibus magna ludentis naturae varietas. tot colorum differentiae, tot figurae planis, concavis, longis, lunatis, in orbem circumactis, dimidio orbe caesis, in dorsum elatis, levibus, rugatis, denticulatis, striatis, vertice muricatim intorto, margine in mucronem emisso, foris effuso, intus replicato, iam distinctione virgulata, crinita, crispa, canaliculatim, pectinatim divisa, imbricatim undata, cancellatim reticulata, in obliquum, in rectum expansa, densata, porrecta, sinuata, brevi nodo ligatis, toto latere conexis, ad plausum apertis, ad bucinum recurvis. navigant ex iis veneriae praebentesque concavam sui partem et aurae opponentes per summa aequorum velificant. saliunt pectines et extra volitant seque et ipsi carinant.

sed quid haec tam parva commemoro, cum populatio morum atque luxuria non aliunde maior quam e concharum genere proveniat iam quidem ex tota rerum natura damnosissimum ventri mare est tot modis, tot mensis, tot piscium saporibus, quis pretia capientium periculo fiunt. sed quota haec portio est reputantibus purpuras, conchylia, margaritas! parum scilicet fuerat in gulas condi maria, nisi manibus, auribus, capite totoque corpore a feminis iuxta virisque gestarentur. quid mari cum vestibus, quid undis fluctibusque cum vellere non recte recipit haec nos rerum natura nisi nudos esto, sit tanta ventri cum eo societas: quid tergori parum est, nisi qui vescimur periculis etiam vestiamur adeo per totum corpus anima hominis quaesita maxime placent.

principium ergo columenque omnium rerum pretii margaritae tenent. indicus maxime has mittit oceanus inter illas beluas tales tantasque, quas diximus, per tot maria venientes, tam longo terrarum tractu et tantis solis ardoribus. atque indis quoque in insulas petuntur

et admodum paucas. fertilissima est taprobane et stoidis, ut diximus in circuitu mundi, item perimula, promunturium indiae. praecipue autem laudantur circa arabiam in persico sinu maris rubri.

origo atque genitura conchae sunt, haut multum ostrearum conchis differentes. has ubi genitalis anni stimularit hora, pandentes se quadam oscitatione impleri roscido conceptu tradunt, gravidas postea eniti, partumque concharum esse margaritas pro qualitate roris accepti. si purus influxerit, candorem conspici; si vero turbidus, et fetum sordescere; eundem pallere caelo minante. conceptum ex eo quippe constare, caelique iis maiorem societatem esse quam maris: inde nubilum trahi colorem aut pro claritate matutina serenum. si tempestive satientur, grandescere et partus; si fulguret, conprimi conchas ac pro ieiunii modo minui; si vero etiam tonuerit, pavidas ac repente conpressas quae vocant physemata efficere, specie modo inani inflata sine corpore; hos esse concharum abortus. sani quidem partus multiplici constant cute, non inproprie callum ut existimari corporis possit. itaque et purgantur a peritis. miror ipso tantum eas caelo gaudere, sole rufescere candoremque perdere ut corpus humanum. quare praecipuum custodiunt pelagiae, altius mersae quam ut penetrent radii. flavescunt tamen et illae senecta rugisque torpescunt, nec nisi in iuventa constat ille qui quaeritur vigor. crassescunt etiam in senecta conchisque adhaerescunt nec his evelli queunt nisi lima. quibus una tantum est facies et ab ea rotunditas, aversis planities, ob id tympania nominantur. cohaerentes videmus in conchis hac dote unguenta circumferentibus. cetero in aqua mollis unio, exemptus protinus durescit.

concha ipsa, cum manum vidit, conprimit sese operitque opes suas, gnara propter illas se peti, manumque, si praeveniat, acie sua abscidat, nulla iustiore poena, et aliis munita suppliciis, quippe inter scopulos maior pars invenitur, in alto quoque comitantibus marinis canibus, nec tamen aures feminarum arcentur. quidam tradunt sicut apibus, ita concharum examinibus singulas magnitudine et vetustate praecipuas esse veluti duces, mirae ad cavendum sollertiae. has urinantium cura peti, illis captis facile ceteras palantes retibus includi, multo deinde obrutas sale in vasis fictilibus; rosa carne omni nucleos quosdam corporum, hoc est uniones, decidere in ima.

vsu atteri non dubium est coloremque indiligentia mutare. dos

omnis in candore, magnitudine, orbe, levore, pondere, haut promptis rebus in tantum, ut nulli duo reperiantur indiscreti: unde nomen unionum romanae scilicet inposuere deliciae, nam id apud graecos non est, ne apud barbaros quidem, inventores rei eius, aliud quam margaritae. et in candore ipso magna differentia: clarior in rubro mari repertis, in indico specularium lapidum squamas adsimulant, alias magnitudine praecellentes. summa laus coloris est exaluminatos vocari. et procerioribus sua gratia est. elenchos appellant fastigata longitudine alabastrorum figura in pleniorem orbem desinentes. hos digitis suspendere et binos ac ternos auribus feminarum gloria est, subeuntque luxuriae eius nomina externa, exquisita perdito nepotatu, si quidem, cum id fecere, crotalia appellant, ceu sono quoque gaudeant et collisu ipso margaritarum; cupiuntque iam et pauperes, lictorem feminae in publico unionem esse dictitantes. quin et pedibus, nec crepidarum tantum obstragulis, set totis socculis addunt. neque enim gestare iam margaritas, nisi calcent ac per uniones etiam ambulent, satis est.

in nostro mari reperiri solebant crebrius circa bosporum thracium, rufi ac parvi in conchis quas myas appellant. at in acarnania quae vocatur pina gignit, quo apparet non uno conchae genere nasci. namque et iuba tradit arabicis concham esse similem pectini insecto, hirsutam echinorum modo, ipsum unionem in carne grandini similem. conchae non tales ad nos adferuntur. nec in acarnania autem laudati reperiuntur, enormes et feri colorisque marmorei. meliores circa actium, sed et hi parvi, et in mauretaniae maritimis. alexander polyhistor et sudines senescere eos putant coloremque expirare.

firmum corpus esse manifestum est, quod nullo lapsu franguntur. non autem semper in media carne reperiuntur, sed aliis atque aliis locis, vidimusque iam in extremis etiam marginibus velut e concha exeuntes et in quibusdam quaternos quinosque. pondus ad hoc aevi semunciae pauci singulis scripulis excessere. in britannia parvos atque decolores nasci certum est, quoniam divus iulius thoracem, quem veneri genetrici in templo eius dicavit, ex britannicis margaritis factum voluerit intellegi.

lolliam paulinam, quae fuit gai principis matrona, ne serio quidem aut sollemni caerimoniarum aliquo apparatu, sed mediocrium etiam sponsalium cena, vidi smaragdis margaritisque opertam, alterno textu

fulgentibus toto capite, crinibus spira, auribus, collo monilibus, digitis. quae summa quadringentiens hs colligebat, ipsa confestim parata mancupationem tabulis probare. nec dona prodigi principis fuerant, sed avitae opes, provinciarum scilicet spoliis partae. hic est rapinarum exitus, hoc fuit quare m. lollius infamatus regum muneribus in toto oriente interdicta amicitia a gaio caesare augusti filio venenum biberet, ut neptis eius quadringentiens hs operta spectaretur ad lucernas! computet nunc aliquis ex altera parte quantum curius aut fabricius in triumphis tulerint, imaginetur illorum fercula, ex altera parte lolliam, unam imperii mulierculam, accubantem: non illos curru detractos quam in hoc vicisse malit nec haec summa luxuriae exempla sunt. duo fuere maximi uniones per omne aevum; utrumque possedit cleopatra, aegypti reginarum novissima, per manus orientis regum sibi traditos. haec, cum exquisitis cotidie antonius saginaretur epulis, superbo simul ac procaci fastu, ut regina meretrix lautitiam eius omnem apparatumque obtrectans, quaerente eo, quid adstrui magnificentiae posset, respondit una se cena centiens hs absumpturam. cupiebat discere antonius, sed fieri posse non arbitrabatur. ergo sponsionibus factis postero die, quo iudicium agebatur, magnificam alias cenam, ne dies periret, sed cotidianam, antonio apposuit inridenti computationemque expostulanti. at illa corollarium id esse et consumpturam eam cenam taxationem confirmans solamque se centiens hs cenaturam, inferri mensam secundam iussit. ex praecepto ministri unum tantum vas ante eam posuere aceti, cuius asperitas visque in tabem margaritas resolvit. gerebat auribus cum maxime singulare illud et vere unicum naturae opus. itaque expectante antonio, quidnam esset actura, detractum alterum mersit ac liquefactum obsorbuit. iniecit alteri manum l. plancus, iudex sponsionis eius, eum quoque parante simili modo absumere, victumque antonium pronuntiavit omine rato. comitatur fama unionis eius parem, capta illa tantae quaestionis victrice regina, dissectum, ut esset in utrisque veneris auribus romae in pantheo dimidia eorum cena. non ferent hanc palmam spoliabunturque etiam luxuriae gloria. prior id fecerat romae in unionibus magnae taxationis clodius, tragoedi aesopi filius, relictus ab eo in amplis opibus heres, ne triumviratu suo nimis superbiat antonius paene histrioni comparatus, et quidem nulla sponsione ad

hoc producto (quo magis regium fiat), sed ut experiretur in gloriam palati, quidnam saperent margaritae. atque ut mire placuere, ne solus hoc sciret, singulos uniones convivis quoque absorbendos dedit.

romae in promiscuum ac frequentem usum venisse alexandria in dicionem redacta, primum autem coepisse circa sullana tempora minutas et viles fenestella tradit, manifesto errore, cum aelius stilo circa iugurthinum bellum unionum nomen inponi cum maxime grandibus margaritis prodat.

et hoc tamen aeternae prope possessionis est; sequitur heredem, in mancipatum venit ut praedium aliquod: conchylia et purpuras omnis hora atterit, quibus eadem mater luxuria paria paene et margaritis pretia fecit.

purpurae vivunt annis plurimum septenis. latent sicut murices circa canis ortum tricenis diebus. congregantur verno tempore mutuoque attritu lentorem cuiusdam cerae salivant. simili modo et murices, sed purpurae florem illum tinguendis expetitum vestibus in mediis habent faucibus. liquoris hic minimi est candida vena, unde pretiosus ille bibitur nigrantis rosae colore sublucens; reliquum corpus sterile. vivas capere contendunt, quia cum vita sucum eum evomunt. et maioribus quidem purpuris detracta concha auferunt, minores cum testa vivas frangunt, ita demum eum expuentes. tyri praecipuus hic asiae, meninge africae et gaetulo litore oceani, in laconica europae. fasces huic securesque romanae viam faciunt, idemque pro maiestate pueritiae est, distinguit ab equite curiam, dis advocatur placandis omnemque vestem inluminat, in triumphali miscetur auro. quapropter excusata et purpurae sit insania. sed unde conchyliis pretia, quis virus grave in fuco, color austerus in glauco et irascenti similis mari

lingua purpurae longitudine digitali, qua pascitur perforando reliqua conchylia: tanta duritia aculeo est. aquae dulcedine necantur et sicubi flumen inmergitur; alioqui captae et diebus quinquagenis vivunt saliva sua. conchae omnes celerrime crescunt, praecipue purpurae: anno magnitudinem implent.

quod si hactenus transcurrat expositio, fraudatam profecto se luxuria credat nosque indiligentiae damnet. quam ob rem persequemur etiam officinas, ut, tamquam in victu frugum noscitur ratio, sic omnes qui istis gaudent in praemio vitae suae calleant.

concharum ad purpuras et conchylia - eadem enim est materia, sed distat temperamento - duo sunt genera: bucinum minor concha ad similitudinem eius qua bucini sonus editur - unde et causa nomini - , rotunditate oris in margine incisa; alterum purpura vocatur canaliculato procurrente rostro et canaliculi latere introrsus tubulato, qua proseratur lingua. praeterea clavatum est ad turbinem usque aculeis in orbem septenis fere, qui non sunt bucino, sed utrisque orbes totidem, quot habeant annos. bucinum non nisi petris adhaeret circaque scopulos legitur.

purpurae nomine alio pelagiae vocantur. earum genera plura pabulo et solo discreta: lutense putre limo et algense nutritum alga, vilissimum utrumque. melius taeniense in taeniis maris collectum, hoc quoque tamen etiamnum levius atque dilutius. calculense appellatur a calculo in mari, mire aptum conchyliis, et longe optimum purpuris dialutense, id est vario soli genere pastum. capiuntur autem purpurae parvulis rarisque textu veluti nassis in alto iactis. inest his esca, clusiles mordacesque conchae, ceu mitulos videmus. has semineces, sed redditas mari avido hiatu revivescentes, appetunt purpurae porrectisque linguis infestant. at illae aculeo exstimulatae claudunt sese conprimuntque mordentia. ita pendentes aviditate sua purpurae tolluntur.

capi eas post canis ortum aut ante vernum tempus utilissimum, quoniam, cum cerificavere, fluxos habent sucos. sed id tinguentium officinae ignorant, cum summa vertatur in eo. eximitur postea vena quam diximus, cui addi salem necessarium, sextarios ferme centenas in libras; macerari triduo iustum, quippe tanto maior vis, quanto recentior, fervere in plumbo, singulasque amphoras centenas aquae, quingentenas medicaminis libras aequali ac modico vapore torreri et ideo longinquae fornacis cuniculo. ita despumatis subinde carnibus, quas adhaesisse venis necesse est, decimo ferme die liquata cortina vellus elutriatum mergitur in experimentum et, donec spei satis fiat, uritur liquor. rubens color nigrante deterior. quinis lana potat horis rursusque mergitur carminata, donec omnem ebibat saniem. bucinum per se damnatur, quoniam fucum remittit: pelagio ad modum alligatur nimiaeque eius nigritiae dat austeritatem illam nitoremque qui quaeritur cocci. ita permixtis viribus alterum altero excitatur aut adstringitur. summa medicaminum in libras ... vellerum bucini

ducenae et e pelagio cxi. ita fit amethysti colos eximius ille. at tyrius pelagio primum satiatur inmatura viridique cortina, mox permutatur in bucino. laus ei summa in colore sanguinis concreti, nigricans aspectu idemque suspectu refulgens. unde et homero purpureus dicitur sanguis.

purpurae usum romae semper fuisse video, sed romulo in trabea. nam toga praetexta et latiore clavo tullum hostilium e regibus primum usum etruscis devictis satis constat. nepos cornelius, qui Divi Augusti principatu obiit: “me,” inquit, “iuvene violacea purpura vigebat, cuius libra denariis centum venibat, nec multo post rubra tarentina. huic successit dibapha tyria, quae in libras denariis mille non poterat emi. hac p. lentulus spinther aedilis curulis primus in praetexta usus inprobabatur. qua purpura quis non iam,” inquit, “tricliniaria facit” spinther aedilis fuit urbis conditae anno dcxci Cicerone consule. dibapha tunc dicebatur quae bis tincta esset, veluti magnifico inpendio, qualiter nunc omnes paene commodiores purpurae tinguuntur.

in conchyliata veste cetera eadem sine bucino, praeterque ius temperatur aqua et pro indiviso humani potus excremento. dimidia et medicamina adduntur. sic gignitur laudatus ille pallor saturitate fraudata tantoque dilutior, quanto magis vellera esuriunt.

pretia medicamento sunt quidem pro fertilitate litorum viliora, non tamen usquam pelagii centenas libras quinquagenos nummos excedere et bucini centenos sciant qui ista mercantur inmenso.

set alia e fine initia, iuvatque ludere inpendio et lusus geminare miscendo iterumque et ipsa adulterare adulteria naturae, sicut testudines tinguere, argentum auro confundere, ut electra fiant, addere his aera, ut corinthia. non est satis abstulisse gemmae nomen amethystum; rursum absolutum inebriatur tyrio, ut sit ex utroque nomen inprobum simulque luxuria duplex, et cum confecere conchylia transire melius in tyrium putant. paenitentia hoc primo debet invenisse, artifice mutante quod damnabat. inde ratio nata, votum quoque factum e vitio portentosis ingeniis, et gemina demonstrata via luxuriae, ut color alius operiretur alio, suavior ita fieri leniorque dictus; quin et terrena miscere coccoque tinctum tyrio tinguere, ut fieret hysginum. coccum galatiae, rubens granum, ut dicemus in terrestribus, aut circa emeritam lusitaniae in maxima

laude est. verum, ut simul peragantur nobilia pigmenta, anniculo grano languidus sucus, idem a quadrimo evanidus. ita nec recenti vires neque senescenti. abunde tractata est ratio qua se virorum iuxta feminarumque forma credit amplissimam fieri.

concharum generis et pina est. nascitur in limosis, subrecta semper nec umquam sine comite, quem pinoteren vocant, alii pinophylacem; is est squilla parva, aliubi cancer dapis adsectator. pandit se pina, luminibus orbum corpus intus minutis piscibus praebens. adsultant illi protinus et, ubi licentia audacia crevit, implent eam. hoc tempus speculatus index morsu levi significat. illa conpressu quicquid inclusit exanimat partemque socio tribuit.

quo magis miror quosdam existimasse aquatilibus nullum inesse sensum. novit torpedo vim suam ipsa non torpens, mersaque in limo se occultat, piscium qui securi supernatantes obtorpuere corripiens. - huius iecori teneritas nulla praefertur. - nec minor sollertia ranae, quae in mari piscatrix vocatur. eminentia sub oculis cornicula turbato limo exerit, adsultantibus pisciculis praetrahens, donec tam prope accedant, ut adsiliat. simili modo squatina et rhombus abditi pinnas exertas movent specie vermiculorum, item quae vocantur raiae. nam pastinaca latrocinatur ex occulto transeuntes radio, quod telum est ei, figens. argumenta sollertiae huius, quod tardissimi piscium hi mugilem velocissimum omnium habentes in ventre reperiuntur.

scolopendrae, terrestribus similes, quas centipedes vocant, hamo devorato omnia interanea evomunt, donec hamum egerant, dein resorbent. at vulpes marinae simili in periculo gluttiunt amplius usque ad infirma lineae, qua facile praerodant. cautius qui glanis vocatur aversos mordet hamos nec devorat, sed esca spoliat.

grassatur aries ut latro et nunc grandiorum navium in salo stantium occultatus umbra, si quem nandi voluptas invitet, expectat, nunc elato extra aquam capite piscantium cumbas speculatur occultusque adnatans mergit.

equidem et iis inesse sensum arbitror, quae neque animalium neque fruticum, sed tertiam quandam ex utroque naturam habent, urticis dico et spongeis.

vrticae noctu vagantur locumque mutant. carnosae frondis iis natura, et carne vescuntur. vis pruritu mordax est eademque, quae terrestris urticae. contrahit ergo se quam maxime rigens ac

praenatante pisciculo frondem suam spargit conplectensque devorat. alias marcenti similis et iactari se passa fluctu algae vice, contactos piscium attrituque petrae scalpentes pruritum invadit. eadem noctu pectines et echinos per ... quaerit. cum admoveri sibi manum sentit, colorem mutat et contrahitur. tacta uredinem mittit, paulumque si fuit intervalli, absconditur. ora ei in radice esse traduntur, excrementa per summa tenui fistula reddi.

spongearum tria genera accepimus: spissum ac praedurum et asperum tragos id vocatur, spissum et mollius manos, tenue densumque, ex quo penicilli, achillium. nascuntur omnes in petris, aluntur conchis, pisce, limo. intellectum inesse iis apparet, quia, ubi avulsorem sensere, contractae multo difficilius abstrahuntur; hoc idem fluctu pulsante faciunt. vivere esca manifesto conchae minutae in iis repertae ostendunt. circa toronen vesci illis avulsas etiam aiunt et ex relictis radicibus recrescere in petris; cruoris quoque inhaeret colos, africis praecipue, quae generantur in syrtibus. maximae fiunt manoe, sed mollissimae circa lyciam, in profundo autem nec ventoso molliores; in hellesponto asperae, et densae circa maleam. putrescunt in apricis locis, ideo optimae in gurgitibus. viventibus idem qui madentibus nigricans colos. adhaerent nec parte nec totae; intersunt enim fistulae quaedam inanes quaternae fere aut quinae, per quas pasci existimantur. sunt et aliae, sed superne concretae. et subesse membrana quaedam radicibus earum intellegitur. vivere constat longo tempore. pessimum omnium genus est earum quae aplysiae vocantur, quia elui non possunt; in quibus magnae sunt fistulae et reliqua densitas spissa.

canicularum maxime multitudo circa eas urinantes gravi periculo infestat. ipsi ferunt et nubem quandam crassescere super capita, animali planorum piscium similem, prementem eos arcentemque a reciprocando, et ob id stilos praeacutos lineis adnexos habere sese, quia nisi perfossae ita non recedant, caliginis et pavoris, ut arbitror, opere. nubem enim et nebulam, cuius nomine id malum appellant, inter animalia haut ulla conperit quisquam. cum caniculis atrox dimicatio. inguina et calces omnemque candorem corporum appetunt. salus una in adversas eundi ultroque terrendi, pavet enim hominem aeque ac terret, et ita sors aequa in gurgite. ut ad summa aquae ventum est, ibi periculum anceps adempta ratione contra

eundi, dum conetur emergere, et salus omnis in sociis. funem illi religatum ab umeris eius trahunt; hunc dimicans, ut sit periculi signum, laeva quatit, dextera adprehenso stilo in pugna est. modicus alias tractus; ut prope carinam ventum est, nisi praeceleri vi repente rapuit, absumi spectant. ac saepe iam subducti e manibus auferuntur, si non trahentium opem conglobato corpore in pilae modum ipsi adiuvere. protendunt quidem tridentes alii, set monstro sollertia est navigium subeundi atque ita e tuto proeliandi. omnis ergo cura ad speculandum hoc malum insumitur. certissima est securitas vidisse planos pisces, quia numquam sunt ubi maleficae bestiae, qua de causa urinantes sacros appellant eos.

silicea testa inclusis fatendum est nullum esse sensum, ut ostreis. multis eadem natura quae frutici, ut holothuriis, pulmonibus, stellis. adeoque nihil non gignitur in mari, ut cauponarum etiam aestiva animalia, pernici molesta saltu aut quae capillus maxime celat, existant et circumglobata escae saepe extrahantur, quae causa somnum piscium in mari noctibus infestare existimatur. quibusdam vero ipsis innascuntur, quo in numero chalcis accipitur.

nec venena cessant dira, ut in lepore, qui in indico mari etiam tactu pestilens vomitum dissolutionemque stomachi protinus creat, in nostro offa informis, colore tantum lepori similis, in indis et magnitudine et pilo, duriore tantum. nec vivus ibi capitur. aeque pestiferum animal araneus, spinae in dorso aculeo noxius. sed nullum usquam execrabilius quam radius super caudam eminens trygonis, quam nostri pastinacam appellant, quincunciali magnitudine: arbores infixus radici necat, arma ut telum perforat vi ferri et veneni malo.

morbos universa genera piscium, ut cetera animalia etiam fera, non accipimus sentire. verum aegrotare singulos manifestum facit aliquorum macies, cum in eodem genere praepingues alii capiantur.

quonam modo generent, desiderium et admiratio hominum differri non patitur. pisces attritu ventrium coeunt tanta celeritate, ut visum fallant, delphini et reliqua cete simili modo et paulo diutius. femina piscis coitus tempore marem sequitur, ventrem eius rostro pulsans; sub partu mares feminas similiter, ova vescentes earum. nec satis est generationi per se coitus, nisi editis ovis interversando mares vitale adsperserint virus. non omnibus id contingit ovis in tanta multitudine; alioqui replerentur maria et stagna, cum singuli uteri

innumerabilia concipiant.

piscium ova in mari crescunt, quaedam summa celeritate, ut murenarum, quaedam paulo tardius. plani piscium, quibus cauda non est ... aculeatique, et testudines in coitu superveniunt, polypi crine uno feminae naribus adnexo, saepiae et lolligines linguis, conponentes inter se bracchia et in contrarium nantes; ore et pariunt. sed polypi in terram verso capite coeunt, reliqua mollium tergis ut canes, item locustae et squillae, cancri ore. ranae superveniunt, prioribus pedibus alas feminae mare adprehendente, posterioribus clunes. pariunt minimas carnes nigras, quas gyrinos vocant, oculis tantum et cauda insignes, mox pedes figurantur cauda findente se in posteriores. mirumque, semestri vita resolvuntur in limum nullo cernente, et rursus vernis aquis renascuntur quae fuere natae, perinde occulta ratione, cum omnibus annis id eveniat. et mituli, pectines sponte naturae in harenosis proveniunt; quae durioris testae sunt, ut murices, purpurae, salivario lentore, sicut acescente umore culices; apua spuma maris incalescente, cum admissus est imber; quae vero siliceo tegmine operiuntur, ut ostrea, putrescente limo aut spuma circa navigia diutius stantia defixosque palos et lignum maxime. nuper conpertum in ostreariis umorem iis fetificum lactis modo effluere. anguillae atterunt se scopulis; ea strigmenta vivescunt, nec alia est earum procreatio. piscium diversa genera non coeunt praeter squatinam et raiam, ex quibus nascitur priore parte raiae similis, et nomen ex utroque conpositum apud graecos trahit. quaedam tempore anni gignuntur et in umore ut in terra, vere pectines, limaces, hirudines; eadem tempore evanescunt. piscium lupus et trichias bis anno parit, et saxatiles omnes; mulli ter et chalcis, cyprini sexiens, scorpaenae bis ac sargi, vere et autumno, ex planis squatina bis sola, autumno, occasu vergiliarum, plurimi piscium tribus mensibus aprili, maio, iunio, salpae autumno, sargi, torpedo, squali circa aequinoctium, molles vere, saepia omnibus mensibus. ova eius glutino atramenti ad speciem uvae cohaerentia masculus prosequitur adflatu; alias sterilescunt. polypi hieme coeunt, pariunt vere ova tortili vibrata pampino, tanta fecunditate, ut multitudinem ovorum occisi non recipiant cavo capitis quo praegnantes tulere; excludunt l die, e quibus multa propter numerum intercidunt. locustae et reliqua tenuioris crustae ponunt ova supter ipsa atque ita incubant. polypus

femina modo in ovis sedet, modo cavernam cancellato bracchiorum inplexu claudit. saepia in terreno parit inter harundines aut sicubi enata alga, excludit quinto decimo die. lolligines in alto conserta ova edunt ut saepiae. purpurae, murices eiusdemque generis vere pariunt. echini ova pleniluniis habent hieme; et cocleae hiberno tempore nascuntur.

torpedo octogenos fetus habens invenitur eaque intra se parit, ova praemollia in alium locum uteri transferens atque ibi excludens. simili modo omnia quae cartilaginea appellavimus. ita fit ut sola piscium et animal pariant et ova concipiant. silurus mas solus omnium edita custodit ova, saepe et quinquagenis diebus, ne absumantur ab aliis. ceterae feminae in triduo excludunt, si mas attigit.

acus sive belone unus piscium dehiscente propter multitudinem utero parit. a partu coalescit vulnus, quod et in caecis serpentibus tradunt. mus marinus in terra scrobe effosso parit ova et rursus obruit terra, tricensimo die refossa aperit fetumque in aquam ducit.

erythini et channae volvas habere traduntur; qui trochos appellatur a graecis, ipse se inire. fetus omnium aquatilium inter initia visu carent.

aevi piscium memorandum nuper exemplum accepimus. pausilypum villa est campaniae haut procul neapoli; in ea in caesaris piscinis a pollione vedio coniectum piscem sexagensimum post annum expirasse scribit annaeus seneca, duobus aliis aequalibus eius ex eodem genere etiam tunc viventibus. quae mentio piscinarum admonet, ut paulo plura dicamus hac de re prius quam digrediamur ab aquatilibus.

ostrearum vivaria primus omnium sergius orata invenit in baiano aetate L. Crassi oratoris ante marsicum bellum, nec gulae causa, sed avaritiae, magna vectigalia tali ex ingenio suo percipiens, ut qui primus pensiles invenerit balineas, ita mangonicatas villas subinde vendendo. is primus optimum saporem ostreis lucrinis adiudicavit, quando eadem aquatilium genera aliubi atque aliubi meliora, sicut lupi pisces in tiberi amne inter duos pontes, rhombus ravennae, murena in sicilia, elops rhodi, et alia genera similiter, ne culinarum censura peragatur. nondum britannica serviebant litora, cum orata lucrina nobilitabat. postea visum tanti in extremam italiam petere

brundisium ostreas, ac, ne lis esset inter duos sapores, nuper excogitatum famem longae advectionis a brundisio conpascere in lucrino.

eadem aetate prior licinius murena reliquorum piscium vivaria invenit, cuius deinde exemplum nobilitas secuta est philippi, hortensi. lucullus exciso etiam monte iuxta neapolim maiore inpendio quam villam exaedificaverat euripum et maria admisit, qua de causa magnus pompeius xerxen togatum eum appellabat. [30xl]30 hs e piscina ea defuncto illo veniere pisces.

murenarum vivarium privatim excogitavit ante alios c. hirrius, qui cenis triumphalibus caesaris dictatoris sex milia numero murenarum mutua appendit. nam permutare quidem pretio noluit aliave merce. huius villam infra quam modicam [30xl]30 piscinae vendiderunt. invasit dein singulorum piscium amor. apud baulos in parte baiana piscinam habuit hortensius orator, in qua murenam adeo dilexit, ut exanimatam flesse credatur. in eadem villa antonia drusi murenae, quam diligebat, inaures addidit, cuius propter famam nonnulli baulos videre concupiverunt.

coclearum vivaria instituit fulvius lippinus in tarquiniensi paulo ante civile bellum quod cum pompeio magno gestum est, distinctis quidem generibus earum, separatim ut essent albae, quae in reatino agro nascuntur, separatim illyricae, quibus magnitudo praecipua, africanae, quibus fecunditas, solitanae, quibus nobilitas. quin et saginam earum commentus est sapa et farre aliisque generibus, ut cocleae quoque altiles ganeam implerent: cuius artis gloria in eam magnitudinem perductas, ut lxxx quadrantes caperent singularum calices, auctor est M. Varro.

piscium genera etiamnum a theophrasto mira produntur. circa babylonis rigua decedentibus fluviis in cavernis aquas habentibus remanere quosdam, inde exire ad pabula pinnulis gradientes crebro caudae motu, contraque venantes refugere in suas cavernas et in his obversos stare; capita eorum esse ranae marinae similia, reliquas partes gobionum, branchias ut ceteris piscibus. circa heracleam et cromnam et multifariam in ponto unum genus esse quod extremas fluminum aquas sectetur cavernasque sibi faciat in terra atque in his vivat, etiam reciprocis amnibus siccato litore; effodi ergo, motu demum corporum vivere eos adprobante. circa eandem heracleam

eodemque lyco amne decedente ovis relictis in limo generari pisces, qui ad pabula petenda palpitent exiguis branchiis, quo fieri non indigos umoris, propter quod et anguillas diutius vivere exemptas aquis, ova autem in sicco maturari ut testudinum. eadem in ponti regione adprehendi glacie piscium maxime gobiones non nisi patinarum calore vitalem motum fatentes. et in his quidem, tametsi mirabilis, est tamen aliqua ratio. idem tradit in paphlagonia effodi pisces gratissimos cibis terrenos altis scrobibus in iis locis, in quibus nullae restagnent aquae, miraturque et ipse gigni sine coitu: umoris quidem vim aliquam inesse quam puteis arbitratur, ceu vero in ullis reperiantur pisces. quicquid est hoc, certe minus admirabilem talparum facit vitam, subterranei animalis, nisi forte vermium terrenorum et his piscibus natura inest.

verum omnibus his fidem nili inundatio adfert omnia excedente miraculo. quippe detegente eo musculi reperiuntur inchoato opere genitalis aquae terraeque, iam parte corporis viventes, novissima effigie etiamnum terrena.

nec de anthia pisce sileri convenit quae plerosque adverto credidisse. chelidonias insulas diximus asiae scopulosi maris ante promunturium tauri sitas; ibi frequens hic piscis et celeriter capitur uno genere. parvo navigio et concolori veste eademque hora per aliquot dies continuos piscator enavigat certo spatio escamque proicit. quicquid vero mutetur, suspecta fraus praedae est, cavetque quod timuit. cum id saepe factum est, unus aliquande consuetudine invitatus anthias escam adpetit. notatur hic intentione diligenti ut auctor spei conciliatorque capturae; neque est difficile, cum per aliquot dies solus accedere audeat. tandem et aliquos invenit paulatimque comitatior postremo greges adducit innumeros, iam vetustissimis quibusque adsuetis piscatorem agnoscere et e manu cibum rapere. tum ille paulum ultra digitos in esca iaculatus hamum singulos involat verius quam capit, ab umbra navis brevi conatu rapiens ita ne ceteri sentiant, alio intus excipiente centonibus raptum, ne palpitatio ulla aut sonus ceteros abigat. conciliatorem nosse ad hoc prodest, ne capiatur, fugituro in reliquum grege. ferunt discordem socium duci insidiatum pulchre noto cepisse malefica voluntate; agnitum in macello socio, cuius iniuria erat, et damni formulam editam condemnatumque addit mucianus aestimata lite.

iidem anthiae, cum unum hamo teneri viderint, spinis, quas in dorso serratas habent, lineam secare traduntur, eo qui teneatur extendente, ut praecidi possit. at inter sargos ipse qui tenetur ad scopulos lineam terit.

praeter haec claros sapientia auctores video mirari stellam in mari. ea figura est, parva admodum caro intus, extra duriore callo. huic tam igneum fervorem esse tradunt, ut omnia in mari contacta adurat, omnem cibum statim peragat. quibus sit hoc cognitum experimentis haut facile dixerim, multoque memorabilius duxerim id cuius experiendi cotidie occasio est.

concharum e genere sunt dactyli, ab humanorum unguium similitudine appellati. his natura in tenebris remoto lumine alio fulgere claro et, quanto magis umorem habeant, lucere in ore mandentium, lucere in manibus atque etiam in solo ac veste decidentibus guttis, ut procul dubio pateat, suci illam naturam esse, quam miraremur etiam in corpore.

sunt et inimicitiarum atque concordiae miracula. mugil et lupus mutuo odio flagrant, conger et murena caudam inter se praerodentes. polypum in tantum locusta pavet, ut, si iuxta vidit omnino, moriatur, locustam conger; rursus polypum congri lacerant. nigidius auctor est praerodere caudam mugili lupum eosdemque statis mensibus concordes esse; omnes autem vivere, quibus caudae sic amputentur. at e contrario amicitiae exempla sunt, praeter illa quorum diximus societatem, ballaena et musculus, quando praegravi superciliorum pondere obrutis eius oculis infestantia magnitudinem vada praenatans demonstrat oculorumque vice fungitur.

hinc volucrum naturae dicentur.

sequitur natura avium, quarum grandissimi et paene bestiarum generis struthocameli africi vel aethiopici altitudinem equitis insidentis equo excedunt, celeritatem vincunt, ad hoc demum datis pinnis, ut currentem adiuvent. cetero non sunt volucres nec a terra attolluntur. ungulae iis cervinis similes, quibus dimicant, bisulcae et conprehendendis lapidibus utiles, quos in fuga contra sequentes ingerunt pedibus. concoquendi sine dilectu devorata mira natura, sed non minus stoliditas in tanta reliqui corporis altitudine, cum colla frutice occultaverint, latere sese existimantium. praemia ex iis ova, propter amplitudinem pro quibusdam habita vasis, conosque bellicos et galeas adornantes pinnae.

aethiopes atque indi discolores maxime et inenarrabiles ferunt aves et ante omnes nobilem arabiae phoenicem, haud scio an fabulose, unum in toto orbe nec visum magno opere. aquilae narratur magnitudine, auri fulgore circa colla, cetero purpureus, caeruleam roseis caudam pinnis distinguentibus, cristis fauces caputque plumeo apice honestante. primus atque diligentissime togatorum de eo prodidit manilius, senator ille maximis nobilis doctrinis doctore nullo: neminem extitisse qui viderit vescentem, sacrum in arabia soli esse, vivere annis dxl, senescentem casiae turisque surculis construere nidum, replere odoribus et superemori. ex ossibus deinde et medullis eius nasci primo ceu vermiculum, inde fieri pullum, principioque iusta funera priori reddere et totum deferre nidum prope panchaiam in solis urbem et in ara ibi deponere. cum huius alitis vita magni conversionem anni fieri prodit idem manilius iterumque significationes tempestatum et siderum easdem reverti, hoc autem circa meridiem incipere quo die signum arietis sol intraverit, et fuisse eius conversionis annum prodente se p. licinio cn. cornelio cos. ccxv. cornelius valerianus phoenicem devolavisse in aegyptum tradit q. plautio sex. papinio cos. allatus est et in urbem claudii principis censura anno urbis dccc et in comitio propositus, quod actis testatum est, sed quem falsum esse nemo dubitaret.

ex his quas novimus aquilae maximus honos, maxima et vis. sex earum genera. melanae+tos a graecis dicta, eadem leporaria, minima

magnitudine, viribus praecipua, colore nigricans, sola aquilarum fetus suos alit - ceterae, ut dicemus, fugant - , sola sine clangore, sine murmuratione. conversatur autem in montibus, secundi generis pygargus in oppidis et in campis, albicante cauda. tertii morphnos, quam homerus et percnum vocat, aliqui et plangum et anatariam, secunda magnitudine et vi; huic vita circa lacus. phemonoe, apollinis dicta filia, dentes esse ei prodidit, mutae alias carentique lingua, eandem aquilarum nigerrimam, prominentiore cauda; consensit et boeus. huius ingenium est et testudines raptas frangere e sublimi iaciendo, quae fors interemit poetam aeschylum, praedictam fatis, ut ferunt, eius diei ruinam secura caeli fide caventem. quarti generis est percnopterus, eadem oripelargus, vulturina specie, alis minimis, reliqua magnitudine antecellens, sed inbellis et degener, ut quam verberet corvus; eadem ieiunae semper aviditatis et querulae murmurationis. sola aquilarum exanima fert corpora; ceterae, cum occidere, considunt. haec facit, ut quintum genus γνήσιον vocetur velut verum solumque incorruptae originis, media magnitudine, colore subrutilo, rarum conspectu. superest haliae+tos, clarissima oculorum acie, librans ex alto sese visoque in mari pisce praeceps in eum ruens et discussis pectore aquis rapiens. illa, quam tertiam fecimus, aquaticas aves circa stagna adpetit mergentes se subinde, donec sopitas lassatasque rapiat. spectanda dimicatio, ave ad perfugia litorum tendente, maxime si condensa harundo sit, aquila inde ictu abigente alae et, cum adpetiit in lacu, scandente umbramque suam nanti sub aquam a litore ostendente, rursus ave in diverso et ubi minime se credat expectari emergente. haec causa gregatim avibus natandi, quia plures simul non infestantur respersu pinnarum occaecantes. saepe et aquilae ipsae, non tolerantes pondus adprehensum, una merguntur. haliae+tus tantum inplumes etiamnum pullos suos percutiens subinde cogit adversos intueri solis radios et, si coniventem umectantemque animadvertit, praecipitat e nido velut adulterinum atque degenerem. illum, cuius acies firma contra stetit, educat. haliae+ti suum genus non habent, sed ex diverso aquilarum coitu nascuntur. id quidem, quod ex his natum est, in ossifragis genus habet, e quibus vultures minores progenerantur et ex his magni, qui omnino non generant. quidam adiciunt genus aquilae quam barbatam vocant, tusci vero ossifragam.

tribus primis et quinto aquilarum generi inaedificatur nido lapis ae +tites, quem aliqui dixere gagiten, ad multa remedia utilis, nihil igne deperdens. - est autem lapis iste praegnans intus alio, cum quatias, velut in utero sonante. - sed vis illa medica non nisi nido dereptis. nidificant in petris et arboribus, pariunt et ova terna, excludunt pullos binos; visi sunt et tres aliquando. alterum expellunt taedio nutriendi. quippe eo tempore ipsis cibum negavit natura, prospiciens ne omnium ferarum fetus raperentur. ungues quoque earum invertuntur diebus his, albescunt inedia pinnae, ut merito partus suos oderint. sed eiectos ab iis cognatum genus ossifragi excipiunt et educant cum suis. verum adultos quoque persequitur parens et longe fugat, aemulos scilicet rapinae. et alioqui unum par aquilarum magno ad populandum tractu, ut satietur, indiget. determinant ergo spatia nec in proximo praedantur. rapta non protinus ferunt, sed primo deponunt expertaeque pondus tunc demum abeunt. - oppetunt non senio nec aegritudine, sed fame, in tantum superiore adcrescente rostro, ut aduncitas aperiri non queat. - a meridiano autem tempore operantur et volant; prioribus horis diei, donec impleantur hominum conventu fora, ignavae sedent. aquilarum pinnae mixtas reliquarum alitum pinnas devorant. negant umquam solam hanc alitem fulmine exanimatam; ideo armigeram iovis consuetudo iudicavit.

romanis eam legionibus gaius marius in secundo consulatu suo proprie dicavit. erat et antea prima cum quattuor aliis: lupi, minotauri, equi aprique singulos ordines anteibant. paucis ante annis sola in aciem portari coepta erat, reliqua in castris relinquebantur; marius in totum ea abdicavit. ex eo notatum, non fere legionis umquam hiberna esse castra ubi aquilarum non sit iugum.

primo et secundo generi non minorum tantum quadripedum rapina, sed etiam cum cervis proelia. multum pulverem volutatu collectum insidens cornibus excutit in oculos, pinnis verberans, donec praecipitet in rupes. nec unus hostis illi satis: est acrior cum dracone pugna multoque magis anceps, etiamsi in ae+re. ova hic consectatur aquilae aviditate melefica. aquila ob hoc rapit ubicumque visum, ille multiplici nexu alas ligat, ita se inplicans, ut simul decidat ipse.

celebris apud seston urbem aquilae gloria est: educatam a virgine retulisse gratiam aves primo, mox deinde venatus adgerentem,

defuncta postremo in rogum accensum eius iniecisse sese et simul conflagrasse. quam ob causam incolae quod vocant heroum in eo loco fecere, appellatum iovis et virginis, quoniam illi deo ales adscribitur.

vulturum praevalent nigri. nidos nemo attigit; ideo et fuere qui putarent illos ex adverso orbe advolare. falso: nidificant in excelsissimis rupibus; fetus quidem saepe cernuntur, fere bini. vmbricius, haruspicum in nostro aevo peritissimus, parere tradit ova xiii, uno ex his reliqua ova nidumque lustrare, mox abicere. triduo autem ante advolare eos, ubi cadavera futura sunt.

sanqualem avem atque inmusulum augures romani magnae quaestioni habent. inmusulum aliqui vulturis pullum arbitrantur esse et sanqualem ossifragum. masurius sanqualem ossifragam esse dicit, inmusulum autem pullum aquilae prius quam albicet cauda. quidam post mucium augurem visos non esse romae confirmavere; ego, quod veri similius, in desidia rerum omnium arbitror non agnitos.

accipitrum genera sedecim invenimus, ex his aegithum, claudum altero pede, prosperrimi augurii nuptialibus negotiis et pecuariae rei; triorchem a numero testium, cui principatum in auguriis phemonoe dedit. buteonem hunc appellant romani, familia etiam cognominata, cum prospero auspicio in ducis navi sedisset. epileum graeci vocant qui solus omni tempore apparet; ceteri hieme abeunt. distinctio generum ex aviditate: alii non nisi e terra rapiunt avem, alii non nisi circa arbores volitantem, alii sedentem in sublimi, aliqui volantem in aperto. itaque et columbae novere ex his pericula visoque considunt vel subvolant, contra naturam eius auxiliantes sibi. in insula africae cerne in oceano accipitres totius masaesyliae humi fetificant nec alibi nascuntur, illis adsueti gentibus.

in thraciae parte super amphipolim homines et accipitres societate quadam aucupantur. hi ex silvis et harundinetis excitant aves, illi supervolantes deprimunt rursus; captas aucupes dividunt cum iis. traditum est missas in sublime sibi excipere eos et, cum sit tempus capturae, clangore ac volatus genere invitare ad occasionem. simile quiddam lupi ad maeotim paludem faciunt. nam nisi partem a piscantibus suam accepere, expansa eorum retia lacerant.

accipitres avium non edunt corda. nocturnus accipiter cybindis vocatur, rarus etiam in silvis, interdiu minus cernens. bellum

internecivum gerit cum aquila, cohaerentesque saepe prenduntur.

coccyx videtur ex accipitre fieri, tempore anni figuram mutans, quoniam tunc non apparent reliqui nisi perquam paucis diebus. ipse quoque, modico tempore aestatis visus, non cernitur postea. est autem neque aduncis unguibus, solus accipitrum, nec capite similis illis neque alio quam colore, ac visu columbi potius; quin et absumitur ab accipitre, si quando una apparuere, sola omnium avis a suo genere interempta. mutat autem et vocem. procedit vere, occultatur caniculae ortu, inter quae parit in alienis nidis, maxime palumbium, maiore ex parte singula ova, quod nulla alia avis, raro bina. causa pullos subiciendi putatur quod sciat se invisam cunctis avibus; nam minutae quoque infestant. ita non fore tutam generi suo stirpem opinatur, ni fefellerit; quare nullum facit nidum, alioqui trepidum animal. educat ergo subditum adulterato feta nido. ille, avidus ex natura, praeripit cibos reliquis pullis, itaque pinguescit et nitidus in se nutricem convertit. illa gaudet eius specie miraturque sese ipsam, quod talem pepererit; suos comparatione eius damnat ut alienos absumique etiam se inspectante patitur, donec corripiat ipsam quoque, iam volandi potens. nulla tunc avium suavitate carnis comparatur illi.

milui ex eodem accipitrum genere magnitudine differunt. notatum in his, rapacissimam et famelicam semper alitem nihil esculenti rapere umquam e funerum ferculis nec olympiae ex ara ac ne ferentium quidem manibus nisi lugubri municipiorum inmolantium ostento. iidem videntur artem gubernandi docuisse caudae flexibus, in caelo monstrante natura quod opus esset in profundo. milui et ipsi hibernis mensibus latent, non tamen ante hirundinem abeuntes. traduntur autem et a solstitiis adfici podagra.

volucrum prima distinctio pedibus maxime constat: aut enim aduncos ungues habent aut digitos, aut palmipedum in genere sunt, uti anseres et aquaticae fere aves. aduncos ungues habentia carne tantum vescuntur ex parte magna; cornices et alio pabulo, ut quae duritiam nucis rostro repugnantem volantes in altum in saxa tegulasve iaciant iterum ac saepius, donec quassatam perfringere queant. ipsa ales est inauspicatae garrulitatis, a quibusdam tamen laudata. ab arcturi sidere ad hirundinum adventum notatur eam in minervae lucis templisque raro, alicubi omnino non aspici, sicut

athenis; inauspicatissima fetus tempore, hoc est post solstitium. praeterea sola haec etiam volantes pullos aliquamdiu pascit. ceterae omnes ex eodem genere pellunt nidis pullos ac volare cogunt, sicut et corvi, qui et ipsi non carne tantum aluntur. sed robustos quoque fetus suos fugant longius; itaque parvis in vicis non plus bina coniugia sunt, circa crannonem quidem thessaliae singula perpetuo. genitores suboli loco cedunt.

diversa in hac et supradicta alite quaedam. corvi ante solstitium generant; iidem aegrescunt sexagenis diebus, siti maxime, ante quam fici coquantur autumno. cornix ab eo tempore corripitur morbo.

corvi pariunt, cum plurimum, quinos. ore eos parere aut coire vulgus arbitratur ideoque gravidas, si ederint corvinum ovum, per os partum reddere atque in totum difficulter parere, si tecto inferantur. aristoteles negat: non hercule magis quam in aegypto ibim, sed illam exosculationem, quae saepe cernitur, qualem in columbis esse. corvi in auspiciis soli videntur intellectum habere significationum suarum. nam cum medi hospites occisi sunt, omnes e peloponneso et attica regione volaverunt. pessima eorum significatio, cum gluttiunt vocem velut strangulati.

vncos ungues et nocturnae aves habent, ut noctuae, bubo, ululae. omnium horum hebetes interdiu oculi. bubo, funebris et maxime abominatus publicis praecipue auspiciis, deserta incolit nec tantum desolata, sed dira etiam et inaccessa, noctis monstrum, nec cantu aliquo vocalis, sed gemitu. itaque in urbibus aut omnino in luce visus dirum ostentum est. privatorum domibus insidentem plurium scio non fuisse feralem. volat numquam quo libuit, sed traversus aufertur. capitolii cellam ipsam intravit sexto palpellio histro l. pedanio cos., propter quod nonis martiis urbs lustrata est eo anno.

inauspicata est et incendiaria avis, quam propter saepenumero lustratam urbem in annalibus invenimus, sicut l. cassio c. mario cos., quo anno et bubone viso lustratam esse. quae sit avis ea, non reperitur nec traditur. quidam ita interpretantur, incendiariam esse quaecumque apparuerit carbonem ferens ex aris vel altaribus; alii spinturnicem eam vocant, sed haec ipsa quae esset inter aves, qui se scire diceret non inveni. cliviam quoque avem ab antiquis nominatam animadverto ignorari - quidam clamatoriam dicunt, labeo prohibitoriam - , et apud nigidium super appellatur avis, quae

aquilarum ova frangat. sunt praeterea conplura genera depicta in etrusca disciplina saeculis non visa, quae nunc defecisse mirum est, cum abundent etiam quae gula humana populatur.

externorum de auguriis peritissime scripsisse hylas nomine putatur. is tradit noctuam, bubonem, picum arbores cavantem, trygonem, cornicem a cauda de ovo exire, quoniam pondere capitum perversa ova posteriorem partem corporum fovendam matri adplicent.

noctuarum contra aves sollers dimicatio. maiore circumdatae multitudine resupinae pedibus repugnant collectaeque in artum rostro et unguibus totae teguntur. auxiliatur accipiter collegio quodam naturae bellumque partitur. noctuas sexagenis diebus hiemis cubare et novem voces habere tradit nigidius.

sunt et parvae aves uncorum unguium, ut pici martio cognomine insignes et in auspiciis magni. quo in genere arborum cavatores scandentes in subrectum felium modo, illi vero et supini, percussi corticis sono pabulum subesse intellegunt. pullos in cavis educant avium soli. adactos cavernis eorum a pastore cuneos admota quadam ab iis herba elabi creditur vulgo. trebius auctor est clavum cuneumve adactum quanta libeat vi arbori, in qua nidum habeat, statim exilire cum crepitu arboris, cum insederit clavo aut cuneo. ipsi principales latio sunt in auguriis a rege qui nomen huic avi dedit. unum eorum praescitum transire non queo. in capite praetoris urbani aelii tuberonis in foro iura pro tribunali reddentis sedit ita placide, ut manu prehenderetur. respondere vates exitium imperio portendi, si dimitteretur, at si exanimaretur, praetori. et ille avem protinus concerpsit nec multo post implevit prodigium.

vescuntur et glande in hoc genere pomisque multae, sed quae carne tantum, non bibunt, excepto miluo, quod ipsum in auguriis dirum est. uncos ungues habentes omnino non congregantur et sibi quaeque praedantur. sunt autem omnes fere altivolae praeter nocturnas, et magis maiores. omnibus alae grandes, corpus exiguum. ambulant difficulter; in petris raro consistunt curvatura unguium prohibente.

nunc de secundo genere dicamus, quod in duas dividitur species, oscines et alites. illarum generi cantus oris, his magnitudo differentiam dedit; itaque praecedent et ordine, omnesque reliquas in

iis pavonum genus cum forma tum intellectu eius et gloria. gemmantes laudatus expandit colores, adverso maxime sole, quia sic fulgentius radiant. simul umbrae quosdam repercussus ceteris, qui et in opaco clarius micant, conchata quaerit cauda omnesque in acervum contrahit pinnarum quos spectari gaudet oculos. idem cauda annuis vicibus amissa cum foliis arborum, donec renascatur alia cum flore, pudibundus ac maerens quaerit latebram. vivit annis xxv. colores fundere incipit in trimatu. ab auctoribus non gloriosum tantum animal hoc traditur, sed et malivolum, sicut anserem verecundum, quoniam has quoque quidam addiderunt notas in iis, haut probatas mihi.

pavonem cibi gratia romae primus occidit orator hortensius aditiali cena sacerdotii. saginare primus instituit circa novissimum piraticum bellum m. aufidius lurco exque eo quaestu reditus hs sexagena milia habuit.

proxime gloriam sentiunt et hi nostri vigiles nocturni, quos excitandis in opera mortalibus rumpendoque somno natura genuit. norunt sidera et ternas distinguunt horas interdiu cantu. cum sole eunt cubitum quartaque castrensi vigilia ad curas laboremque revocant nec solis ortum incautis patiuntur obrepere diemque venientem nuntiant cantu, ipsum vero cantum plausu laterum. imperitant suo generi et regnum in quacumque sunt domo exercent. dimicatione paritur hoc inter ipsos velut ideo tela agnata cruribus suis intellegentium, nec finis saepe commorientibus. quod si palma contigit, statim in victoria canunt seque ipsi principes testantur; victus occultatur silens aegreque servitium patitur. et plebs tamen aeque superba graditur ardua cervice, cristis celsa, caelumque sola volucrum aspicit crebra, in sublime caudam quoque falcatam erigens. itaque terrori sunt etiam leonibus ferarum generosissimis. iam ex his quidam ad bella tantum et proelia adsidua nascuntur - quibus etiam patrias nobilitarunt, rhodum aut tanagram; secundus est honos habitus melicis et chalcidicis - , ut plane dignae aliti tantum honoris perhibeat romana purpura. horum sunt tripudia solistima, hi magistratus nostros cotidie regunt domusque ipsis suas claudunt aut reserant. hi fasces romanos inpellunt aut retinent, iubent acies aut prohibent, victoriarum omnium toto orbe partarum auspices. hi maxime terrarum imperio imperant, extis etiam fibrisque haut aliter

quam opimae victimae diis grati. habent ostenta et praeposteri eorum vespertinique cantus: namque totis noctibus canendo boeotiis nobilem illam adversus lacedaemonios praesagivere victoriam, ita coniecta interpretatione, quoniam victa ales illa non caneret.

desinunt canere castrati, quod duobus fit modis, lumbis adustis candente ferro aut imis cruribus, mox ulcere oblito figlina creta; facilius ita pinguescunt. pergami omnibus annis spectaculum gallorum publice editur ceu gladiatorum. invenitur in annalibus in agro ariminensi m. lepido q. catulo cos. in villa galerii locutum gallinaceum, semel, quod equidem sciam.

et anseri vigil cura capitolio testata defenso, per id tempus canum silentio proditis rebus, quam ob causam cibaria anserum censores in primis locant. quin et fama amoris aegii dilecta forma pueri nomine ... olenii et glauces ptolemaeo regi cithara canentis, quam eodem tempore et aries amasse proditur. potest et sapientiae videri intellectus iis esse: ita comes perpetuo adhaesisse lacydi philosopho dicitur, nusquam ab eo, non in publico, non in balineis, non noctu, non interdiu, digressus.

nostri sapientiores, qui eos iecoris bonitate novere. fartilibus in magnam amplitudinem crescit, exemptum quoque lacte mulso augetur. nec sine causa in quaestione est, quis tantum bonum invenerit, scipio metellus vir consularis an marcus seius eadem aetate eques romanus. sed, quod constat, messalinus cotta, messalae oratoris filius, palmas pedum ex iis torrere atque patinis cum gallinaceorum cristis condire repperit; tribuetur enim a me culinis cuiusque palma cum fide. mirum in hac alite a morinis usque romam pedibus venire. fessi proferuntur ad primos; ita ceteri stipatione naturali propellunt eos.

candidorum alterum vectigal in pluma. velluntur quibusdam locis bis anno, rursus plumigeri vestiuntur. mollior quae corpori proxima, et e germania laudatissima. candidi ibi, verum minores; gantae vocantur. pretium plumae eorum in libras denarii quini. et inde crimina plerumque auxiliorum praefectis, a vigili statione ad haec aucupia dimissis cohortibus totis; eoque deliciae processere, ut sine hoc instrumento durare iam ne virorum quidem cervices possint.

aliud repperit syriae pars quae commagene vocatur, adipem eorum in vase aereo cum cinnamo nive multa obrutum ac rigore gelido

maceratum ad usum praeclari medicaminis, quod ab gente dicitur commagenum.

anserini generis sunt chenalopeces et, quibus lautiores epulas non novit britannia, chenerotes, fere ansere minores. decet tetraonas suus nitor absolutaque nigritia, in superciliis cocci rubor. alterum eorum genus vulturum magnitudinem excedit, quorum et colorem reddit, nec ulla ales, excepto struthocamelo, maius corpore inplens pondus, in tantum aucta, ut in terra quoque inmobilis prehendatur. gignunt eos alpes et septentrionalis regio. in vivariis saporem perdunt. moriuntur contumacia spiritu revocato. proximae iis sunt quas hispania aves tardas appellat, graecia ὠτίδας, damnatas in cibis; emissa enim ossibus medulla odoris taedium extemplo sequitur.

indutias habet gens pygmaea abscessu gruum, ut diximus, cum iis dimicantium. inmensus est tractus, quo veniunt, si quis reputet, a mari eoo. quando proficiscantur consentiunt; volant ad prospiciendum alte, ducem quem sequantur eligunt, in extremo agmine per vices qui adclament dispositos habent et qui gregem voce contineant. excubias habent nocturnis temporibus lapillum pede sustinentes, qui laxatus somno et decidens indiligentiam coarguat; ceterae dormiunt, capite subter alam condito alternis pedibus insistentes. dux erecto providet collo ac praedicit. eaedem mansuefactae lasciviunt gyrosque quosdam indecoro cursu vel singulae peragunt. certum est, pontum transvolaturas primum omnium angustias petere inter duo promunturia criu metopon et carambim, mox saburra stabiliri; cum medium transierint, abici lapillos e pedibus, cum attigerint continentem, et e gutture harenam. cornelius nepos, qui Divi Augusti principatu obiit, cum scriberet turdos paulo ante coeptos saginari, addidit ciconias magis placere quam grues, cum haec nunc ales inter primas expetatur, illam nemo velit attigisse.

ciconiae quonam e loco veniant aut quo se referant, inconpertum adhuc est. e longinquo venire non dubium eodem quo grues modo, illas hiemis, has aestatis advenas. abiturae congregantur in loca certa comitataeque sic, ut nulla generis sui relinquatur nisi captiva et serva, ceu lege praedicta die recedunt. nemo vidit agmen discedentium, cum discessurum appareat, nec venire, sed venisse cernimus. utrumque nocturnis fit temporibus, et quamvis ultra citrave pervolent,

numquam tamen advenisse usquam nisi noctu existimantur. pythonos comen vocant in asia patentibus campis, ubi congregatae inter se commurmurant eamque, quae novissima advenit, lacerant atque ita abeunt. notatum post idus augustas non temere visas ibi. sunt qui ciconiis non inesse linguam confirment. honos iis serpentium exitio tantus, ut in thessalia capital fuerit occidisse eademque legibus poena, quae in homicidam.

simili anseres quoque et olores ratione commeant, sed horum volatus cernitur. liburnicarum more rostrato impetu feruntur, facilius ita findentes ae+ra quam si recta fronte inpellerent; a tergo sensim dilatante se cuneo porrigitur agmen largeque inpellenti praebetur aurae. colla inponunt praecedentibus, fessos duces ad terga recipiunt. - (ciconiae nidos eosdem repetunt, genetricum senectam invicem educant) - olorum morte narratur flebilis cantus, falso, ut arbitror, aliquot experimentis. iidem mutua carne vescuntur inter se.

verum haec commeantium per maria terrasque peregrinatio non patitur differri minores quoque, quibus est natura similis. utcumque enim supra dictas magnitudo et vires corporum invitare videri possint, coturnices ante etiam semper adveniunt quam grues, parva avis et, cum ad nos venit, terrestris potius quam sublimis. advolant et hae simili modo, non sine periculo navigantium, cum adpropinquavere terris. quippe velis saepe incidunt, et hoc semper noctu, merguntque navigia. iter est iis per hospitia certa. austro non volant, umido scilicet et graviore vento; aura tamen vehi volunt propter pondus corporum viresque parvas - hinc volantium illa conquestio labore expressa - , aquilone ergo maxime volant, ortygometra duce. primam earum terrae adpropinquantem accipiter rapit. semper hic remeantes comitatum sollicitant, abeuntque una persuasae glottis et otus et cychramus. glottis praelongam exerit linguam, unde ei nomen. hanc initio blandita peregrinatione avide profectam paenitentia in volatu cum labore scilicet subit: reverti incomitatam piget et sequi nec umquam plus uno die pergit, in proximo hospitio deserit. verum invenitur alia antecedente anno relicta simili modo in singulos dies. cychramus perseverantior festinat etiam pervenire ad expetitas sibi terras. itaque noctu is eas excitat admonetque itineris. otus bubone minor est, noctuis maior, auribus plumeis eminentibus, unde et nomen illi - quidam latine

axionem vocant - , imitatrix alias avis ac parasita et quodam genere saltatrix. capitur haut difficulter ut noctuae, intentam in aliquem circumeunte alio. quod si ventus agmen adverso flatu coepit inhibere, pondusculis lapidum adprehensis aut gutture harena repleto stabilitae volant. coturnicibus veneni semen gratissimus cibus, quam ob causam eas damnavere mensae, simulque comitialem propter morbum despui suetum, quem solae animalium sentiunt praeter hominem.

abeunt et hirundines hibernis mensibus, sola carne vescens avis ex iis quae aduncos ungues non habent. sed in vicina abeunt apricos secutae montium recessus, inventaeque iam sunt ibi nudae atque deplumes. thebarum tecta subire negantur, quoniam urbs illa saepius capta sit, nec bizyes in threcia propter scelera terei. caecina volaterranus equestris ordinis, quadrigarum dominus, conprehensas in urbem secum auferens victoriae nuntias amicis mittebat in eundem nidum remeantes inlito victoriae colore. tradit et fabius pictor in annalibus suis, cum obsideretur praesidium romanum a ligustinis, hirundinem a pullis ad se adlatam, ut lino ad pedem eius adligato nodis significaret, quoto die adveniente auxilio eruptio fieri deberet.

abeunt et merulae turdique et sturni simili modo in vicina. sed hi plumam non amittunt nec occultantur, visi saepe ibi quo hibernum pabulum petunt; itaque in germania hieme maxime turdi cernuntur. verius turtur occultatur pinnasque amittit. abeunt et palumbes; quonam et in his incertum. sturnorum generi proprium catervatim volare et quodam pilae orbe circumagi, omnibus in medium agmen tendentibus. volucrum soli hirundini flexuosi volatus velox celeritas, quibus ex causis neque rapinae ceterarum alitum obnoxia est. eadem sola avium non nisi in volatu pascitur.

temporum magna differentia avibus: perennes, ut columbae, semenstres, ut hirundines, trimenstres, ut turdi, turtures, et quae, cum fetum eduxere, abeunt, ut galguli, upupae.

auctores sunt omnibus annis advolare ilium ex aethiopia aves et confligere ad memnonis tumulum, quas ob id memnonidas vocant. hoc idem quinto quoque anno facere eas in aethiopia circa regiam memnonis, exploratum sibi cremutius tradit. simili modo pugnant meleagrides in boeotia. africae hoc est gallinarum genus, gibberum, variis sparsum plumis. quae novissimae sunt peregrinarum avium in

mensas receptae propter ingratum virus; verum meleagri tumulus nobiles eas fecit.

seleucides aves vocantur quarum adventum ab iove precibus inpetrant cadmi montis incolae, fruges eorum locustis vastantibus. nec unde veniant quove abeant compertum, numquam conspectis nisi cum praesidio earum indigetur. invocant et aegyptii ibis suas contra serpentium adventum, et elei myiacoren deum muscarum multitudine pestilentiam adferente, quae protinus intereunt quam litatum est ei deo.

sed in secessu avium et noctuae paucis diebus latere traduntur, quarum genus in creta insula non esse, etiam, si qua invecta sit, emori. nam haec quoque mira naturae differentia: alia aliis locis negat, tamquam genera frugum fruticumve, sic et animalium; non nasci tralaticium, invecta emori mirum. quod illud est unius generis saluti adversum, quaeve ista naturae invidia aut qui terrarum dicti avibus termini rhodos aquilam non habet. transpadana italia iuxta alpes larium lacum appellat amoenum arbusto agro, ad quem ciconiae non permeant, sicuti nec octavum citra lapidem ab eo inmensa alioqui finitimo insubrum tractu examina graculorum monedularum, cui soli avi furacitas argenti aurique praecipue mira est. picus martius in tarentino agro negatur esse. nuper et adhuc tamen rara ab appennino ad urbem versus cerni coepere picarum genera, quae longa insignes cauda variae appellantur; proprium iis calvescere omnibus annis, cum serantur rapa. perdices non transvolant boeotiae fines in attica, nec ulla avis in ponto insula, qua sepultus est achilles, sacratam ei aedem. in fidenate agro iuxta urbem ciconiae nec pullos nec nidum faciunt. at in agrum volaterranum palumbium vis e mari quotannis advolat. romae in aedem herculis in foro boario nec muscae nec canes intrant. multa praeterea similia, quae prudens subinde omitto in singulis generibus, fastidio parcens, quippe cum theophrastus tradat invecticias esse in asia etiam columbas et pavones et cervos et in cyrenaica vocales ranas.

alia admiratio circa oscines. fere mutant colorem vocemque tempore anni ac repente fiunt aliae, quod in grandiore alitum genere grues tantum; hae enim senectute nigrescunt. merula ex nigra rufescit, canit aestate, hieme balbutit, circa solstitium muta. rostrum quoque anniculis in ebur transfiguratur, dumtaxat maribus. turdis

colos aestate circa cervicem varius, hieme concoloribus.

lusciniis diebus ac noctibus continuis xv garrulus sine intermissu cantus densante se frondium germine, non in novissimis digna miratu ave. primum tanta vox tam parvo in corpusculo, tam pertinax spiritus; deinde in una perfecta musica scientia: modulatus editur sonus et nunc continuo spiritu trahitur in longum, nunc variatur inflexo, nunc distinguitur conciso, copulatur intorto, promittitur revocato, infuscatur ex inopinato, interdum et secum ipse murmurat, plenus, gravis, acutus, creber, extentus, ubi visum est, vibrans, summus, medius, imus. breviterque omnia tam parvulis in faucibus, quae tot exquisitis tibiarum tormentis ars hominum excogitavit, non ut sit dubium hanc suavitatem praemonstratam efficaci auspicio, cum in ore stesichori cecinit infantis. ac ne quis dubitet artis esse, plures singulis sunt cantus, nec iidem omnibus, sed sui cuique. certant inter se, palamque animosa contentio est. victa morte finit saepe vitam spiritu prius deficiente quam cantu. meditantur aliae iuveniores versusque quos imitentur accipiunt. audit discipula intentione magna et reddit, vicibusque reticent: intellegitur emendatae correptio et in docente quaedam reprehensio. ergo servorum illis pretia sunt, et quidem ampliora quam quibus olim armigeri parabantur. scio hs [vi] candidam alioqui, quod est prope invisitatum, venisse, quae agrippinae claudi principis coniugi dono daretur. visum iam saepe iussas canere coepisse et cum symphonia alternasse, sicut homines repertos qui sonum earum addita in transversas harundines aqua foramen inspirantes linguaeve parva aliqua opposita mora indiscreta redderent similitudine. sed hae tantae tamque artifices argutiae a xv diebus paulatim desinunt, nec ut fatigatas possis dicere aut satiatas. mox aestu aucto in totum alia vox fit, nec modulata aut varia; mutatur et color. postremo hieme ipsa non cernitur. linguis earum tenuitas illa prima non est quae ceteris avibus. pariunt vere primo, cum plurimum, sena ova.

alia ratio ficedulis, nam formam simul coloremque mutant. hoc nomen autumno habent, postea melancoryphi vocantur. sic et erithacus hieme, idem phoenicurus aestate. mutat et upupa, ut tradit aeschylus poeta, obscena alias pastu avis, crista visenda plicatili, contrahens eam subrigensque per longitudinem capitis.

oenanthe quidem etiam statos latebrae dies habet. exoriente sirio

occultata ab occasu eiusdem prodit, quod miremur, ipsis diebus utrumque. chlorion quoque, qui totus est luteus, hieme non visus, circa solstitia procedit. merulae circa cyllenen arcadiae, nec usquam aliubi, candidae nascuntur. ibis circa pelusium tantum nigra est, ceteris omnibus locis candida.

oscines praeter exceptas non temere fetus faciunt ante aequinoctium vernum aut post autumnale, ante solstitium autem dubios, post solstitium vitales.

eo maxime sunt insignes halcyones. dies earum partus maria quique navigant novere. ipsa avis paulo amplior passere, colore cyanea et parte inferiore tantum purpurea, candidis admixta pinnis collo, gracili ac procero rostro. alterum genus earum magnitudine distinguitur et cantu: minores in harundinetis canunt. halcyonem videre rarissimum est nec nisi vergiliarum occasu et circa solstitia brumamve, nave aliquando circumvolata statim in latebras abeuntem. fetificant bruma, qui dies halcyonides vocantur, placido mari per eos et navigabili, siculo maxime. faciunt autem vii ante brumam diebus nidos et totidem sequentibus pariunt. nidi earum admirationem habent pilae figura paulum eminenti, ore perquam angusto, grandium spongearum similitudine. ferro intercidi non queunt, franguntur ictu valido, ut spuma arida maris. nec unde confingantur invenitur; putant ex spinis aculeatis, piscibus enim vivunt. subeunt et in amnes. pariunt ova quina.

gaviae in petris nidificant, mergi et in arboribus. pariunt plurimum terna, sed gaviae aestate, mergi incipiente vere.

halcyonum nidi figura reliquarum quoque sollertiae admonet, neque alia parte ingenia avium magis admiranda sunt. hirundines luto construunt, stramento roborant. si quando inopia est luti, madefactis multa aqua pinnis pulverem spargunt; ipsum vero nidum mollibus plumis floccisque consternunt tepefaciendis ovis, simul ne durus sit infantibus pullis. in fetu summa aequitate alternant cibum. notabili munditia egerunt excrementa pullorum adultioresque circumagi docent et foris saturitatem emittere. alterum est hirundinum genus rusticarum et agrestium, quae raro in domibus diversos figura, sed eadem materia confingunt nidos, totos supinos, faucibus porrectis in angustum, utero capaci, mirum qua peritia et occultandis habiles pullis et substernendis molles. in aegypti heracleotico ostio molem

continuatione nidorum evaganti nilo inexpugnabilem opponunt stadii fere unius spatio, quod humano opere perfici non posset. in eadem aegypto iuxta oppidum copton insula est sacra isidi, quam ne laceret amnis idem, muniunt opere, incipientibus vernis diebus palea et stramento rostrum eius firmantes, continuatis per triduum noctibus tanto labore, ut multas in opere emori constet; eaque militia illis cum anno redit semper. tertium est earum genus: excavant ripas atque ita internidificant. - (harum pulli ad cinerem ambusti mortifero faucium malo multisque aliis morbis humani corporis medentur) - non faciunt hae nidos migrantque multis diebus ante, si futurum est, ut auctus amnis attingat.

in genere vitiparrarum est cui nidus ex musco arido ita absoluta perficitur pila, ut inveniri non possit aditus. acanthyllis appellatur eadem figura ex lino intexens. picorum aliquis suspenditur surculo primis in ramis cyathi modo, ut nulla quadripes possit accedere. galgulos quidem ipsos dependentes pedibus somnum capere confirmant, quia tutiores ita se sperent. iam publicum quidem omnium est tabulata ramorum sustinendo nido provide eligere, camarare ab imbri aut fronde protegere densa. in arabia cinnamolgus avis appellatur cinnami surculis nidificans; plumbatis eos sagittis decutiunt indigenae mercis gratia. in scythis avis magnitudine otidis binos parit in leporina pelle semper in cacuminibus ramorum suspensa. picae cum diligentius visum ab homine nidum sensere, ova transgerunt alio. hoc in iis avibus, quarum digiti non sint accommodati conplectendis transferendisque ovis, miro traditur modo. namque surculo super bina ova inposito ac feruminato alvi glutino, subdita cervice medio, aequa utrimque libra deportant alio.

nec vero iis minor sollertia, quae cunabula in terra faciunt corporis gravitate prohibitae sublime petere. merops vocatur genitores suos reconditos pascens, pallido intus colore pinnarum, superne cyaneo, priore parte subrutilo. nidificat in specu sex pedum defossa altitudine.

perdices spina et frutice sic muniunt receptaculum, ut contra feram abunde vallentur. ovis stragulum molle pulvere contumulant nec in quo loco peperere incubant: ne cui frequentior conversatio suspecta sit, transferunt alio. illae quidem et maritos suos fallunt, quoniam intemperantia libidinis frangunt earum ova, ne incubando

detineantur. tunc inter se dimicant mares desiderio feminarum; victum aiunt venerem pati. id quidem et coturnices trogus et gallinaceos aliquando, perdices vero a domitis feros et novos aut victos iniri promiscue. capiuntur quoque pugnacitate eiusdem libidinis, contra aucupis inlicem exeunte in proelium duce totius gregis. capto eo procedit alter ac subinde singuli. rursus circa conceptum feminae capiuntur contra aucupum feminam exeuntes, ut rixando abigant eam. nec in alio animali par opus libidinis. si contra mares steterint, feminae aura ab iis flante praegnantes fiunt, hiantes autem exerta lingua per id tempus aestuant. concipiunt et supervolantium adflatu, saepe voce tantum audita masculi, adeoque vincit libido etiam fetus caritatem, ut illa furtim et in occulto incubans, cum sensit feminam aucupis accedentem ad marem, recanat revocetque et ultro praebeat se libidini. rabie quidem tanta feruntur, ut in capite aucupantium saepe caecae motu sedeant. si ad nidum is coepit accedere, procurrit ad pedes eius feta, praegravem aut delumbem sese simulans, subitoque in procursu aut brevi aliquo volatu cadit, ut fracta ala aut pedibus, at procurrit iterum iamiam prehensurum effugiens spemque frustrans, donec in diversum abducat a nidis. eadem in pavore, libera ac materna vacans cura, in sulco resupina glaeba se terrae pedibus adprehensa operit. perdicum vita et ad sedecim annos durare existimatur.

ab iis columbarum maxime spectantur simili ratione mores. inest pudicitia illis plurima et neutri nota adulteria. coniugi fidem non violant communemque servant domum. nisi caelebs aut vidua nidum non relinquit. et imperiosos mares, subinde etiam iniquos ferunt, quippe suspicio est adulterii, quamvis natura non sit: tunc plenum querela guttur saevique rostro ictus, mox in satisfactione exosculatio et circa veneris preces crebris pedum orbibus adulatio. amor utrique subolis aequalis; saepe et ex hac causa castigatio pigrius intrante femina ad pullos. parturienti solatia et ministeria ex mare. pullis primo salsiorem terram collectam gutture in ora inspuunt praeparantes tempestivitatem cibo. proprium generis eius et turturum, cum bibant, colla non resupinare largeque bibere iumentorum modo.

vivere palumbes ad tricensimum annum, aliquas et ad quadragensimum, habemus auctores, uno tantum incommodo

unguium - eodem et argumento senectae - , qui citra perniciem reciduntur. cantus omnibus similis atque idem trino conficitur versu praeterque in clausula gemitu, hieme mutis, a vere vocalibus. nigidius putat, cum ova incubet sub tecto, nominatam palumbem relinquere nidos. pariunt autem post solstitium. columbae et turtures octonis annis vivunt. contra passeri minimum vitae, cui salacitas par. mares negantur anno diutius durare argumento, quia nulla veris initio appareat nigritudo in rostro, quae ab aestate incipit. feminis longiusculum spatium. verum columbis inest quidam et gloriae intellectus: nosse credas suos colores varietatemque dispositam; quin etiam ex volatu quaeritur: plaudere in caelo varieque sulcare. qua in ostentatione ut vinctae praebentur accipitri, inplicatis strepitu pinnis, qui non nisi ipsis alarum umeris eliditur, alioquin soluto volatu multum velociores. speculatur occultus fronde latro et gaudentem in ipsa gloria rapit. ob id cum iis habenda est avis quae tinnungulus vocatur; defendit enim illas terretque accipitres naturali potentia in tantum, ut visum vocemque eius fugiant. hac de causa praecipuus columbis amor eorum, feruntque, si in quattuor angulis defodiantur in ollis novis oblitis, non mutare sedem columbas - quod et auro insectis alarum articulis quaesivere aliqui, non aliter innoxiis vulneribus - , multivaga alioqui ave. est enim ars illis inter se blandiri et corrumpere alias furtoque comitatiores reverti. quin et internuntiae in magnis rebus fuere, epistulas adnexas earum pedibus obsidione mutinensi in castra consulum Decumo Bruto mittente. quid vallum et vigil obsidio atque etiam retia in amne praetenta profuere antonio, per caelum eunte nuntio et harum amore insaniunt multi. super tecta exaedificant turres iis nobilitatemque singularum et origines narrant, vetere iam exemplo. l. axius eques romanus ante bellum civile pompeianum denariis cccc singula paria venditavit, ut M. Varro tradit. quin et patriam nobilitavere in campania grandissimae provenire existimatae.

harum volatus in reputationem ceterarum quoque volucrum inpellit. omnibus animalibus reliquis certus et unius modi et in suo cuique genere incessus est; aves solae vario meatu feruntur et in terra et in ae+re. ambulant aliquae, ut cornices; saliunt aliae, ut passeres, merulae; currunt, ut perdices, rusticulae; ante se pedes iaciunt, ut ciconiae, grues. expandunt alas pendentesque raro intervallo

quatiunt, aliae crebrius, sed et primas dumtaxat pinnas, aliae tota latera plaudunt; quaedam vero maiore ex parte conpressis volant percussoque semel, aliquae et gemino ictu, ae+re feruntur: velut inclusum eum prementes eiaculantur sese in sublime, in rectum, in pronum. impingi putes aliquas aut rursus ab alto cadere has, illas salire. anates solae quaeque sunt eiusdem generis in sublime protinus sese tollunt atque e vestigio caelum petunt, et hoc etiam ex aqua. itaque in foveas, quibus feras venamur, delapsae solae evadunt. vultur et fere graviores nisi ex procursu aut altiore cumulo inmissae non evolant; cauda reguntur. aliae circumspectant, aliae flectunt colla, nec ullae vescuntur ea quae rapuere pedibus. sine voce non volant multae, aut e contrario semper in volatu silent. subrectae, pronae, obliquae in latera, in ora, quaedam et resupinae feruntur, ut, si pariter cernantur plura genera, non in eadem natura meare videantur.

plurimum volant quae apodes, quia careant usu pedum, ab aliis cypseli appellantur, hirundinum specie. nidificant in scopulis. hae sunt quae toto mari cernuntur, nec umquam tam longo naves tamque continuo cursu recedunt a terra, ut non circumvolitent eas apodes. cetera genera residunt et insistunt; his quies nisi in nido nulla: aut pendent aut iacent.

et ingenia aeque varia, ad pastum maxime. caprimulgi appellantur, grandioris merulae aspectu, fures nocturni; interdiu enim visu carent. intrant pastorum stabula caprarumque uberibus advolant suctum propter lactis, qua iniuria uber emoritur caprisque caecitas, quas ita mulsere, oboritur. platea nominatur advolans ad eas, quae se in mari mergunt, et capita illarum morsu corripiens, donec capturam extorqueat. eadem cum devoratis se inplevit conchis, calore ventris coctas evomit atque ita ex iis esculenta eligit testas excernens.

villaribus gallinis et religio inest. inhorrescunt edito ovo excutiuntque sese et circumactae purificant aut festuca aliqua sese et ova lustrant. minimae avium cardueles imperata faciunt, nec voce tantum, sed pedibus et ore pro manibus. est quae boum mugitus imitetur, in arelatensi agro taurus appellata, alioquin parva est. equorum quoque hinnitus anthus nomine herbae pabulo adventu eorum pulsa imitatur, ad hunc modum se ulciscens. super omnia humanas voces reddunt, psittaci quidem etiam sermocinantes. india

hanc avem mittit, siptacen vocat, viridem toto corpore, torque tantum miniato in cervice distinctam. imperatores salutat et quae accipit verba pronuntiat, in vino praecipue lasciva. capiti eius duritia eadem quae rostro. hoc, cum loqui discit, ferreo verberatur radio; non sentit aliter ictus. cum devolat, rostro se excipit, illi innititur levioremque ita se pedum infirmitati facit.

minor nobilitas, quia non ex longinquo venit, sed expressior loquacitas certo generi picarum est. adamant verba quae loquantur nec discunt, sed diligunt meditantesque intra semet curam atque cogitationem, intentionem non occultant. constat emori victas difficultate verbi ac, nisi subinde eadem audiant, memoria falli quaerentesque mirum in modum hilarari, si interim audierint id verbum. nec vulgaris his forma, quamvis non spectanda: satis illis decoris in specie sermonis humani est. verum addiscere alias negant posse quam ex genere earum quae glande vescantur, et inter eas facilius quibus quini sint digiti in pedibus, ac ne eas quidem ipsas nisi primis duobus vitae annis. latiores linguae omnibus in suo cuique genere, quae sermonem imitantur humanum. quamquam id paene in omnibus contigit: agrippina claudii caesaris turdum habuit, quod numquam ante, imitantem sermones hominum. cum haec proderem, habebant et caesares iuvenes sturnum, item luscinias graeco ac latino sermone dociles, praeterea meditantes assidue et in diem nova loquentes, longiore etiam contextu. docentur secreto et ubi nulla alia vox misceatur, adsidente qui crebro dicat ea, quae condita velit, ac cibis blandiente.

reddatur et corvis sua gratia, indignatione quoque populi romani testata, non solum conscientia. tiberio principe ex fetu supra castorum aedem genito pullus in adpositam sutrinam devolavit, etiam religione commendatus officinae domino. is mature sermoni adsuefactus, omnibus matutinis evolans in rostra in forum versus, tiberium, dein germanicum et drusum caesares nominatim, mox transeuntem populum romanum salutabat, postea ad tabernam remeans, plurium annorum adsiduo officio mirus. hunc sive aemulatione vicinitatis manceps proximae sutrinae sive iracundia subita, ut voluit videri, excrementis eius posita calceis macula, exanimavit, tanta plebei consternatione, ut primo pulsus ex ea regione, mox interemptus sit funusque aliti innumeris celebratum

exequiis, constratum lectum super aethiopum duorum umeros, praecedente tibicine et coronis omnium generum ad rogum usque, qui constructus dextra viae appiae ad secundum lapidem in campo rediculi appellato fuit. adeo satis iusta causa populo romano visa est exequiarum ingenium avis aut supplicii de cive romano in ea urbe, in qua multorum principum nemo deduxerat funus, scipionis vero aemiliani post carthaginem numantiamque deletas ab eo nemo vindicaverat mortem. hoc gestum m. servilio c. cestio cos. a. d. v kal. apriles. nunc quoque erat in urbe roma, haec prodente me, equitis romani cornix e baetica primum colore mira admodum nigro, dein plura contexta verba exprimens et alia atque alia crebro addiscens. nec non et recens fama crateri monocerotis cognomine in erizena regione asiae corvorum opera venantis eo quod devehebat in silvas eos insidentes corniculo umerisque; illi vestigabant agebantque eo perducta consuetudine, ut exeuntem sic comitarentur et feri. tradendum putavere memoriae quidam, visum per sitim lapides congerentem in situlam monimenti, in qua pluvia aqua durabat, sed quae attingi non posset; ita descendere paventem expressisse tali congerie quantum poturo sufficeret.

nec diomedias praeteribo aves. iuba cataractas vocat, et eis esse dentes oculosque igneo colore cetero candidis tradens. duos semper his duces: alterum ducere agmen, alterum cogere. scrobes excavare rostro, inde crate consternere et operire terra quae ante fuerit egesta; in his fetificare. fores binas omnium scrobibus: orientem spectare quibus exeant in pascua, occasum quibus redeant. alvum exoneraturas subvolare semper et contrario flatu. uno hae in loco totius orbis visuntur, in insula, quam diximus nobilem diomedis tumulo atque delubro contra apuliae oram, fulicarum similes. advenas barbaros clangore infestant, graecis tantum adulantur miro discrimine, velut generi diomedis hoc tribuentes, aedemque eam cotidie pleno gutture madentibus pinnis perluunt atque purificant, unde origo fabulae diomedis socios in earum effigies mutatos.

non omittendum est, cum de ingeniis disserimus, e volucribus hirundines indociles esse, e terrestribus mures, cum elephanti iussa faciant, leones iugum subeant, in mari vituli totque piscium genera mitescant.

bibunt aves suctu, ex iis, quibus longa colla, intermittentes et

capite resupinato velut infundentes sibi; porphyrio solus morsu bibit. idem est proprio genere, omnem cibum aqua subinde tinguens, deinde pede ad rostrum veluti manu adferens. laudatissimi in commagene. rostra iis et praelonga crura rubent.

haec quidem et himantopodi multo minori, quamquam eadem crurum altitudine. nascitur in aegypto. insistit ternis digitis. praecipue ei pabulum muscae. vita in italia paucis diebus.

graviores omnes fruge vescuntur, altivolae carne tantum, inter aquaticas mergi, soliti avide vorare et quae ceterae reddunt.

olorum similitudinem onocrotali habent nec distare existimarentur omnino, nisi faucibus ipsis inesset alterius uteri genus. huc omnia inexplebile animal congerit, mira ut sit capacitas. mox perfecta rapina sensim inde in os reddita in veram alvum ruminantis modo refert. gallia hos septentrionalis proxima oceano mittit.

in hercynio germaniae saltu invisitata genera alitum accepimus, quarum plumae ignium modo conluceant noctibus. in ceteris nihil praeter nobilitatem longinquitate factam memorandum occurrit: phalerides in seleucia parthorum et in asia, aquaticarum laudatissimae, rursus phasianae in colchis - geminas ex pluma aures submittunt subriguntque - , numidicae in parte africae numidia; omnesque iam in italia.

phoenicopteri linguam praecipui saporis esse apicius docuit, nepotum omnium altissimus gurges. attagen maxime ionius celeber et vocalis alias, captus vero obmutescens, quondam existimatus inter raras aves, iam et in gallia hispaniaque. capitur circa alpes etiam, ubi et phalacrocoraces, avis baliarium insularum peculiaris, sicut alpium pyrrhocorax, luteo rostro niger, et praecipua sapore lagopus. pedes leporino villo nomen hoc dedere cetero candidae, columbarum magnitudine. non extra terram eam vesci facile, quando nec vita mansuescit et corpus ocissime marcescit. est et alia nomine eodem, a coturnicibus magnitudine tantum differens, croceo unctu cibis gratissima. visam in alpibus ab se peculiarem aegypti et ibim egnatius calvinus praefectus earum prodidit.

venerunt in italiam bedriacensibus bellis civilibus trans padum et novae aves - ita enim adhuc vocantur - , turdorum specie, paulum infra columbas magnitudine, sapore gratae. baliares insulae nobiliorem etiam supra dicto porphyrionem mittunt. ibi et buteo

accipitrum generis in honore mensarum est, item vibiones; sic vocant minorem gruem.

pegasos equino capite volucres et grypas aurita aduncitate rostri fabulosos reor, illos in scythia, hos in aethiopia. equidem et tragopana, de qua plures adfirmant, maiorem aquila, cornua in temporibus curvata habentem, ferruginei coloris, tantum capite phoeniceo. nec sirenes impetraverint fidem, adfirmet licet dinon, clitarchi celebrati auctoris pater, in india esse mulcerique earum cantu quos gravatos somno lacerent. qui credat ista, et melampodi profecto aures lambendo dedisse intellectum avium sermonis dracones non abnuat vel quae democritus tradit nominando aves quarum confuso sanguine serpens gignatur, quem quisquis ederit intellecturus sit alitum colloquia, quaeque de una ave galerita privatim commemorat, etiam sine his inmensa vitae ambage circa auguria. nominantur ab homero scopes avium genus: neque harum saturicos motus, cum insidientur, plerisque memoratos facile conceperim mente, neque ipsae iam aves noscuntur, quam ob rem de confessis disseruisse praestiterit.

gallinas saginare deliaci coepere, unde pestis exorta opimas aves et suopte corpore unctas devorandi. hoc primum antiquis cenarum interdictis exceptum invenio iam lege gai fanni consulis undecim annis ante tertium punicum bellum, ne quid volucre poneretur praeter unam gallinam quae non esset altilis, quod deinde caput translatum per omnes leges ambulavit. inventumque deverticulum est in fraudem earum gallinaceos quoque pascendi lacte madidis cibis: multo ita gratiores adprobantur. feminae quidem ad saginam non omnes eliguntur nec nisi in cervice pingui cute. postea culinarum artes, ut clunes spectentur, ut dividantur in tergora, ut a pede uno dilatatae repositoria occupent. dedere et parthi cocis suos mores. nec tamen in hoc mangonio quicquam totum placet, clune, alibi pectore tantum laudatis.

aviaria primus instituit inclusis omnium generum avibus m. laenius strabo brundisi equestris ordinis. ex eo coepimus carcere animalia coercere, quibus rerum natura caelum adsignaverat. maxime tamen insignis est in hac memoria clodii aesopi, tragici histrionis, patina hs [c] taxata, in qua posuit aves cantu aliquo aut humano sermone vocales, hs [vi] singulas coemptas, nulla alia inductus

suavitate nisi ut in iis imitationem hominis manderet, ne quaestus quidem suos reveritus illos opimos et voce meritos, dignus prorsus filio, a quo devoratas diximus margaritas, non sic tamen, ut verum facere velim inter duos iudicium turpitudinis, nisi quod minus est summas rerum naturae opes quam hominum linguas cenasse.

generatio avium simplex videtur esse, cum et ipsa habeat sua miracula, quoniam et quadripedes ova gignunt, chamaeleontes, lacertae et quae diximus ... , item serpentes. pinnatorum autem infecunda sunt quae aduncos habent ungues. cenchris sola ex his supra quaterna edit ova. tribuit hoc avium generi natura, ut fecundiores essent fugaces earum quam fortes. plurima pariunt struthocameli, gallinae, perdices soli. coitus avibus duobus modis, femina considente humi, ut in gallinis, aut stante, ut in gruibus.

ovorum alia sunt candida, ut columbis, perdicibus, alia pallida, ut aquaticis, alia punctis distincta, ut meleagridum, alia rubri coloris, ut phasianis, cenchridi. intus autem omne ovum volucrum bicolor, aquaticis lutei plus quam albi, id ipsum magis luridum quam ceteris; piscium unicolor, in quo nihil candidi. avium ova ex calore fragilia, serpentium ex frigore lenta, piscium ex liquore mollia. aquatilium rotunda, reliqua fere fastigio cacuminata. exeunt a rotundissima sui parte, dum pariuntur, molli putamine, sed protinus durescente quibuscumque emergunt portionibus. quae oblonga sint ova, gratioris saporis putat horatius flaccus. feminam edunt quae rotundiora gignuntur, reliqua marem. umbilicus ovis a cacumine inest, ceu gutta eminens in putamine.

quaedam omni tempore coeunt, ut gallinae, et pariunt, praeterquam duobus mensibus hiemis brumalibus. ex iis iuvencae plura quam veteres, sed minora, et in eodem fetu prima ac novissima. est autem tanta fecunditas, ut aliquae et sexagena pariant, aliquae cotidie, aliquae bis die, aliquae in tantum, ut effetae moriantur. hadrianis laus maxima. columbae deciens anno pariunt, quaedam et undeciens, in aegypto vero etiam brumali mense. hirundines et merulae et palumbi et turtures bis anno pariunt, ceterae aves fere semel. turdi, in cacuminibus arborum luto nidificantes paene contextim, in secessu generant. a coitu x diebus ova maturescunt in utero, vexatis autem gallinae et columbae pinna evulsa aliave simili iniuria diutius.

omnibus ovis medio vitelli parva inest velut sanguinea gutta, quod esse cor avium existimant, primum in omni corpore id gigni opinantes: in ovo certe gutta ea salit palpitatque. ipsum animal ex albo liquore ovi corporatur. cibus eius in luteo est. omnibus intus caput maius toto corpore, oculi conpressi capite maiores. increscente pullo candor in medium vertitur, luteum circumfunditur. vicensimo die si moveatur ovum, iam viventis intra putamen vox auditur. ab eodem tempore plumescit, ita positus, ut caput supra dextrum pedem habeat, dextram vero alam supra caput. vitellus paulatim deficit. aves omnes in pedes nascuntur, contra quam reliqua animalia. quaedam gallinae omnia gemina ova pariunt et geminos interdum excludunt, ut cornelius celsus auctor est, alterum maiorem; aliqui negant omnino geminos excludi. plus vicena quina incubanda subici vetant. parere a bruma incipiunt. optima fetura ante vernum aequinoctium. post solstitium nata non implent magnitudinem iustam tantoque minus, quanto serius provenere.

ova incubari intra decem dies edita utilissimum; vetera aut recentiora infecunda. subici inpari numero debent. quarto die post quam coepere incubari, si contra lumen cacumine ovorum adprehenso ima manu purus et unius modi perluceat color, sterilia existimantur esse proque iis alia substituenda. et in aqua est experimentum: inane fluitat, itaque sidentia, hoc est plena, subici volunt. concuti vero experimento vetant, quoniam non gignant confusis vitalibus venis. incubationi datur initium post novam lunam, quia prius inchoata non proveniant. celerius excluduntur calidis diebus; ideo aestate undevicensimo educent fetum, hieme xxv. si incubitu tonuit, ova pereunt; et accipitris audita voce vitiantur. remedium contra tonitrus clavus ferreus sub stramine ovorum positus aut terra ex aratro. quaedam autem et citra incubitum sponte naturae gignunt, ut in aegypti fimetis. scitum de quodam potore reperitur syracusis tam diu potare solitum, donec cooperta terra fetum ederent ova.

quin et ab homine perficiuntur. iulia augusta prima sua iuventa tib. caesare ex nerone gravida, cum parere virilem sexum admodum cuperet, hoc usa est puellari augurio, ovum in sinu fovendo atque, cum deponendum haberet, nutrici per sinum tradendo, ne intermitteretur tepor; nec falso augurata proditur. nuper inde fortassis

inventum, ut ova calido in loco inposita paleis igne modico foverentur homine versante, pariterque et stato die illinc erumperet fetus. traditur quaedam ars gallinarii cuiusdam dicentis, quod ex quaque esset. narrantur et mortua gallina mariti earum visi succedentes in vicem et reliqua fetae more facientes abstinentesque se cantu. super omnia est anatum ovis subditis atque exclusis admiratio prima non plane agnoscentis fetum, mox incerti singultus sollicite convocantis, postremo lamenta circa piscinae stagna mergentibus se pullis natura duce.

gallinarum generositas spectatur crista erecta, interim et gemina, pinnis nigris, ore rubicundo, digitis inparibus, aliquando et super iiii digitos traverso uno. ad rem divinam luteo rostro pedibusque purae non videntur, ad opertanea sacra nigrae. est et pumilionum genus non sterile in iis, quod non in alio genere alitum, sed quibus centra, fecunditas rara et incubatio ovis noxia.

inimicissima autem omni generi pituita maximeque inter messis ac vindemiae tempus. medicina in fame et cubitus in fumo, utique si e lauru aut herba sabina fiat, pinna per traversas inserta nares et per omnes dies mota; cibus alium cum farre aut aqua perfusus, in qua maduerit noctua, aut cum semine vitis albae coctus ac quaedam alia.

columbae proprio ritu osculantur ante coitum. pariunt fere bina ova, ita natura moderante, ut aliis crebrior sit fetus, aliis numerosior. palumbis et turtur plurimum terna nec plus quam bis vere pariunt, atque ita, si prior fetus corruptus est et ut, quamvis iii pepererint, numquam plus ii educant. tertium inritum est; urinum vocant. palumbis incubat femina post meridiana in matutinum, cetero mas. columbae marem semper et feminam pariunt, priorem marem, postridie feminam. incubant in eo genere ambo, interdiu mas, noctu femina. excludunt xx die, pariunt a coitu v. aestate quidem interdum binis mensibus terna educunt paria, namque xviii die excludunt statimque concipiunt; quare inter pullos saepe ova inveniuntur, et alii provolant, alii erumpunt. ipsi deinde pulli quinquemenstres fetificant. et ipsae autem inter se, si mas non sit, feminae aeque saliunt pariuntque ova inrita, ex quibus nihil gignitur, quae hypenemia graeci vocant.

pavo a trimatu parit; primo anno unum aut alterum ovum, sequenti quaterna quinave, ceteris duodena, non amplius, intermittens binos

dies ternosve parit, et ter anno, si gallinis subiciantur incubanda. mares ea frangunt desiderio incubantium; quapropter noctu et in latebris pariunt aut in excelso cubantes, set nisi molli strato excepta franguntur. mares singuli quinis sufficiunt coniugibus. cum singulae aut binae fuere, corrumpitur salacitate fecunditas. partus excluditur diebus ter novenis aut tardius tricensimo.

anseres in aqua coeunt, pariunt vere aut, si bruma coiere, post solstitium, xl prope, bis anno, si priorem fetum gallinae excludant, alias plurima ova xvi, paucissima vii. si quis subripiat, pariunt donec rumpantur. aliena non excludunt. incubanda subici utilissimum viiii aut xi. incubant feminae tantum tricenis diebus, si vero tepidiores sint, xxv. pullis eorum urtica contactu mortifera, nec minus aviditas nunc satietate nimia, nunc suamet vi, quando adprehensa radice morsu saepe conantes avellere ante colla sua abrumpunt. contra urticam remedium est stramento ab incubitu subdita radix earum.

ardiolarum tria genera: leucon, asterias, pelion. hi in coitu anguntur; mares quidem cum vociferatu sanguinem etiam ex oculis profundunt. nec minus aegre pariunt gravidae. aquila tricenis diebus incubat et fere maiores alites, minores vicenis, ut miluus et accipiter. miluus fere parit numquam plus ternos, is qui aegolios vocatur et quaternos, corvus aliquando et quinos. incubant totidem diebus. cornicem incubantem mas pascit. pica novenos, melancoryphus supra xx parit, semper numero inpari, nec alia iis plures: tanto fecunditas maior parvis. hirundini caeci primo pulli sunt et fere omnibus quibus numerosior fetus.

inrita ova, quae hypenemia diximus, aut mutua feminae inter se libidinis imaginatione concipiunt aut pulvere, nec columbae tantum, sed et gallinae, perdices, pavones, anseres, chenalopeces. sunt autem sterilia et minora ac minus iucundi saporis et magis umida. quidam et vento putant ea generari, qua de causa etiam zephyria appellant. urina autem vere tantum fiunt incubatione derelicta, quae alii cynosura dixere. ova aceto macerata in tantum emolliuntur, ut per anulos transeant. servari ea in lomento aut hieme in paleis, aestate in furfuribus utilissimum. sale exinaniri creduntur.

volucrum animal parit vespertilio tantum, cui et membranaceae pinnae uni. eadem sola volucrum lacte nutrit ubera admovens. parit geminos; volitat amplexa infantes secumque portat. eidem coxendix

una traditur esse. in cibatu culices gratissimi.

rursus in terrestribus ova pariunt serpentes, de quibus nondum dictum est. coeunt conplexu, adeo circumvolutae sibi ipsae, ut una existimari biceps possit. viperae mas caput inserit in os, quod illa abrodit voluptatis dulcedine. terrestrium eadem sola intra se parit ova, unius coloris et mollia, ut pisces. tertio die intra uterum catulos excludit, dein singulis diebus singulos parit, xx fere numero. itaque ceteri tarditatis inpatientes perrumpunt latera occisa parente. ceterae serpentes contexta ova in terra incubant et fetum sequenti excludunt anno. crocodili vicibus incubant, mas et femina. sed reliquorum quoque terrestrium reddatur generatio.

bipedum solus homo animal gignit. homini tantum primi coitus paenitentia, augurium scilicet vitae a paenitenda origine. ceteris animalibus stati per tempora anni concubitus, homini, ut dictum est, omnibus horis dierum noctiumque; ceteris satias in coitu, homini prope nulla. messalina claudi caesaris coniunx, regalem hanc existimans palmam, elegit in id certamen nobilissimam e prostitutis ancillam mercenariae stipis eamque nocte ac die superavit quinto atque vicensimo concubitu. in hominum genere maribus deverticula veneris, excogitata omnia scelere naturae, feminis vero abortus. quantum in hac parte multo nocentiores quam ferae sumus! viros avidiores veneris hieme, feminas aestate hesiodus prodidit.

coitus aversis elephantis, camelis, tigribus, lyncibus, rhinoceroti, leoni, dasypodi, cuniculis, quibus aversa genitalia. cameli etiam solitudines aut secreta certe petunt, neque intervenire datur sine pernicie; coitus toto die, et his tantum ex omnibus. quibus solida ungula in quadripedum genere, mares olfactus accendit. avertuntur et canes, phocae, lupi, in medioque coitu invitique etiam cohaerent. supra dictorum dasypodum plerumque feminae priores superveniunt, in reliquis mares. ursi autem, ut dictum est, humanitus strati, irenacei stantes ambo inter se conplexi, feles mare stante, femina subiacente, vulpes in latera proiectae maremque femina amplexa. taurorum cervorumque feminae vim non tolerant; ea de causa ingrediuntur in conceptu. cervi vicissim ad alias transeunt et ad priores redeunt. lacertae ut ea, quae sine pedibus sunt, circumflexu venerem novere.

omnia animalia quo maiora corpore, hoc minus fecunda. singulos gignunt elephanti, cameli, equi; acanthis duodenos, avis minima.

ocissime pariunt quae plurimos gignunt. quo maius est animal, tanto diutius formatur in utero. diutius gestantur quibus longiora sunt vitae spatia, neque crescentium tempestiva ad generandum aetas. quae solidas habent ungulas, singulos; quae bisulcas, et geminos pariunt; quorum in digitos pedum fissura divisa est, et numerosiora in fetu. sed superiora omnia perfectos edunt partus, haec inchoatos, in quo sunt genere leaenae, ursae; et vulpes informe etiam magis quam supra dicta parit, rarumque est videre parientem. postea lambendo calefaciunt fetus omnia ea et figurant. pariunt plurimum quaternos. caecos autem gignunt canes, lupi, pantherae, thoes.

canum plura genera. laconicae octavo mense utrimque generant; ferunt lx diebus et plurimum iii. ceterae canes et semenstres coitum patiuntur. inplentur omnes uno coitu. quae ante iustum tempus concepere, diutius caecos habent catulos, et omnes totidem diebus. existimantur in urina attollere crus fere semenstres; id est signum consummati virium roboris. feminae hoc idem sidentes. partus duodeni quibus numerosissimi, cetero quini, seni, aliquando singuli, quod prodigiosum putant, sicut omnes mares aut omnes feminas gigni. primos quosque mares pariunt, in ceteris alternant. ineuntur a partu sexto mense. octonos laconicae pariunt. propria in eo genere maribus labore salacitas. vivunt laconici annis denis, feminae duodenis, cetera genera xv annis, aliquando et xx, nec tota sua aetate generant, fere a duodecimo desinentes.

felium et ichneumonum reliqua ut canum. vivunt annis senis. dasypodes omni mense pariunt et superfetant, sicut lepores. a partu statim inplentur; concipiunt quamvis ubera siccante fetu. pariunt vero caecos. elephanti, ut diximus, pariunt singulos magnitudine vituli trimenstris. cameli xii mensibus ferunt; a trimatu pariunt vere iterumque post annum inplentur a partu. equas autem post tertium demum aut post unum ab enixu utiliter admitti putant coguntque invitas. asinas et septimo die concipere facillime creditur. equarum iubas tondere praecipiunt, ut asinorum coitum patiantur humilitate; comantes enim gloria superbire. a coitu solae animalium currunt exadversus aquilonem austrumve, prout marem aut feminam concepere. colorem ilico mutant, rubriore pilo vel quicumque sit pleniore: hoc argumento desinunt admittere, etiam volentes. nec inpedit partus quasdam ab opere falluntque gravidae. vicisse olympia

praegnantem echecratidis thessali invenimus. equos et canes et sues initum matutinum adpetere, feminas autem post meridiem blandiri diligentiores tradunt. equas domitas lx diebus equire ante quam gregales, sues tantum coitu spumam ore fundere, verrem subantis audita voce, ni admittatur, cibum non capere usque in maciem, feminas autem in tantum efferari, ut hominem lancinent, candida maxime veste indutum. rabies ea aceto mitigatur naturae adsperso. aviditas coitus putatur et cibis fieri, sicut viro eruca, pecori caepa. quae ex feris mitigentur, non concipere, ut anseres, apros vero tarde et cervos nec nisi ab infantia educatos mirum est. quadripedum praegnantes venerem arcent praeter equam et suem; sed superfetant dasypus et lepus tantum.

quaecumque animal pariunt, in capita gignunt circumacto fetu sub enixum, alias in utero porrecto. quadripedes gestantur extentis ad longitudinem cruribus et ad alvum suam adplicatis; homo in semet conglobatus inter duo genua naribus sitis. molas, de quibus ante diximus, gigni putant, ubi mulier non ex mare, verum ex semet ipsa tantum conceperit. ideo nec animari, quia non sit ex duobus, altricemque habere per se vitam illam quae satis arboribusque contingat. ex omnibus, quae perfectos fetus, sues tantum et numerosos edunt, nam plures contra naturam solidipedum aut bisulcorum.

super cuncta est murium fetus, haut sine cunctatione dicendus, quamquam sub auctore aristotele et alexandri magni militibus. generatio eorum lambendo constare, non coitu, dicitur. ex una genitos cxx tradiderunt, apud persas vero praegnantes in ventre parentis repertas. et salis gustatu fieri praegnantes opinantur. itaque desinit mirum esse unde vis tanta messes populetur murium agrestium, in quibus illud quoque adhuc latet, quonam modo illa multitudo repente occidat. nam nec exanimes reperiuntur neque extat qui murem hieme in agro effoderit. plurimi ita ad troada proveniunt et iam inde fugaverunt incolas. proventus eorum siccitatibus. tradunt etiam obituris vermiculum in capite gigni. aegypti muribus durus pilus sicut irenaceis. iidem bipedes ambulant ceu alpini quoque. - cum diversi generis coiere animalia, ita demum generant, si tempus nascendi par habent. - quadripedum ova gignentium lacertas ore parere, ut creditur vulgo, aristoteles negat. neque incubant eaedem,

oblitae quo sint in loco enixae, quoniam huic animali nulla memoria; itaque per se catuli erumpunt.

anguem ex medulla hominis spinae gigni accepimus a multis. pleraque enim occulta et caeca origine proveniunt, etiam in quadripedum genere, sicut salamandrae, animal lacertae figura, stellatum, numquam nisi magnis imbribus proveniens et serenitate desinens. huic tantus rigor, ut ignem tactu restinguat non alio modo quam glacies. eiusdem sanie, quae lactea ore vomitur, quacumque parte corporis humani contacta toti defluunt pili, idque, quod contactum est, colorem in vitiliginem mutat.

quaedam ergo gignuntur ex non genitis et sine ulla simili origine, ut supra dicta et quaecumque ver statumque tempus anni generant. ex his quaedam nihil gignunt ut salamandrae, neque est in iis masculum femininumve, sicut neque in anguillis omnibusque quae nec animal nec ovum ex sese generant. neutrum est et ostreis genus et ceteris adhaerentibus vado vel saxo. quae autem per se generantur, si in mares et feminas discripta sunt, generant quidem aliquid coitu, sed inperfectum ac dissimile et ex quo nihil amplius gignatur, ut vermiculos muscae. id magis declarabit natura eorum quae insecta dicuntur, arduae explanationis omnia et privatim dicato opere narranda. quapropter ingenium praedictorum et reliqua subtexetur edissertatio.

ex sensibus ante cetera homini tactus, dein gustatus; reliquis superatur a multis. aquilae clarius cernunt, vultures sagacius odorantur, liquidius audiunt talpae: obrutae terra, tam denso atque surdo naturae elemento, praeterea voce omni in sublime tendente, sermonem exaudiunt et, si de iis loquare, intellegere etiam dicuntur et profugere. auditus cui hominum primo negatus est, huic et sermonis usus ablatus, nec sunt naturaliter surdi, ut non iidem sint et muti. in marinis ostreis auditum esse non est verisimile, sed ad sonum mergere se dicuntur solenes; ideo et silentium in more piscantibus. pisces quidem auditus nec membra habent nec foramina, audire tamen eos palam est, utpote cum plausu congregari feros ad cibum adsuetudine in quibusdam vivariis spectetur et in piscinis caesaris genera piscium ad nomen venire quosdamve singulos. itaque produntur etiam clarissime audire mugil, lupus, salpa, chromis et ideo in vado vivere.

olfactum iis esse manifeste patet, quippe non omnes eadem esca capiuntur et prius quam adpetant odorantur. quosdam et speluncis latentes salsamento inlitis faucibus scopuli piscator expellit velut sui cadaveris agnitionem fugientes, conveniuntque ex alto etiam ad quosdam odores, ut saepiam ustam et polypum, quae ideo coiciuntur in nassas. sentinae quidem navium odorem procul fugiunt, maxime tamen piscium sanguinem. non potest petris avelli polypus; idem cunila admota ab odore protinus resilit. purpurae quoque faetidis capiuntur. nam de reliquo animalium genere quis dubitet cornus cervini odore serpentes fugantur, sed maxime styracis; origani aut calcis aut sulpuris formicae necantur. culices acida petunt, ad dulcia non advolant.

tactus sensus omnibus est, etiam quibus nullus alius; nam et ostreis et terestrium vermibus quoque.

existimaverim omnibus sensum et gustatus esse. cur enim alios alia sapores adpetant in quo vel praecipua naturae varietas et lusus: alia dentibus praedantur, alia unguibus, alia rostri aduncitate carpunt, alia latitudine eruunt, alia acumine excavant, alia sugunt, alia lambunt, sorbent, mandunt, vorant. nec minor varietas in pedum ministerio, ut rapiant, distrahant, teneant, premant, pendeant, tellurem scabere non cessent.

venenis capreae et coturnices, ut diximus, pinguescunt, placidissima animalia, at serpentes ovis, spectanda quidem draconum arte: aut enim solida hauriunt, si iam fauces capiunt, quae deinde in semet convoluti frangunt intus atque ita putamina extussiunt, aut si tenerior est catulis adhuc aetas, orbe adprehensa spirae ita sensim vehementerque praestringunt, ut amputata parte ceu ferro e reliqua, quae amplexu tenetur, sorbeant. simili modo avibus devoratis solidis contentione plumam excitam revomunt.

scorpiones terra vivunt. serpentes, cum occasio est, vinum praecipue adpetunt, cum alioqui exiguo indigeant potu; eaedem minimo et paene nullo cibo, cum adservantur inclusae, sicuti aranei quoque, alioqui suctu viventes. ideo nullum interit fame aut siti venenatum. nam neque calor iis nec sanguis nec sudor, quae aviditatem naturali sale augent. in quo genere omnia magis exitialia, si suum genus edere ante quam noceant. condit in thesauros maxillarum cibum sphingiorum et satyrorum genus, mox inde sensim

ad mandendum manibus expromit, et quod formicis in annum, sollemne est his in dies vel horas. unum animal digitos habentium herba alitur, lepus; ea et fruge solidipedes, et e bisulcis sues omni cibatu et radicibus. solidipedum volutatio propria. serratorum dentium carnivora sunt omnia; ursi et fruge, fronde, vindemia, pomis vivunt et apibus, cancris etiam ac formicis; lupi, ut diximus, et terra in fame. pecus potu pinguescit, ideo sal illis aptissimus; item veterina, quamquam et fruge et herba, scilicet ut bibere, sic edunt. ruminant praeter iam dicta silvestrium cervi, cum a nobis aluntur, omnia autem iacentia potius quam stantia, et hieme magis quam aestate, septenis fere mensibus. pontici quoque mures simili modo remandunt.

in potu autem, quibus serrati dentes, lambunt et mures hi vulgares, quamvis ex alio genere sint. quibus continui dentes, sorbent, ut equi, boves. neutrum ursi, sed aquam quoque morsu vorant. in africa maior pars ferarum aestate non bibunt inopia imbrium, quam ob causam capti mures libyci, si bibere, moriuntur. orygem perpetuo sitientia africae generant ex natura loci potu carentem et mirabili modo ad remedia sitientium: namque gaetuli latrones eo durant auxilio, repertis aperto corpore eorum saluberrimi liquoris vesicis.

insidunt in eadem africa pardi condensam arborem occultatique ex ramis in praetereuntia desiliunt atque e volucrum sede grassantur. feles quidem quo silentio, quam levibus vestigiis obrepunt avibus! quam occulte speculatae in musculos exiliunt! excrementa sua effossa obruunt terra, intellegentes odorem illum indicem sui esse. ergo et alios quosdam sensus esse quam supra dictos haut difficulter apparet.

sunt enim quaedam iis bella amicitiaeque, unde et adfectus, praeter illa quae de quibusque eorum suis diximus locis. dissident olores et aquilae, corvus et chloreus noctu invicem ova exquirentes, simili modo corvus et miluus, illo praeripiente huic cibos, cornices atque noctua, aquilae et trochilus, si credimus, quoniam rex appellatur avium, noctuae et ceterae minores aves, rursus cum trochilo mustela et cornix, turtur et pyrallis, ichneumones vespae et phalangia aranei, aquaticae brenthos et gavia et harpe, harpe et triorchis accipiter, sorices et ardiolae invicem fetibus insidiantes, -(aegithus avis minima cum asino; spinetis enim se scabendi causa

atterens nidos eius dissipat, quod adeo pavet, ut voce omnino rudentis audita ova eiciat, pulli ipsi metu cadant; igitur advolans ulcera eius rostro excavat) - volpes et milui, angues et mustelae et sues. aesalon vocatur parva avis ova corvi frangens, cuius pulli infestantur a volpibus. invicem haec catulos eius ipsamque vellit; quod ubi viderunt corvi, contra auxiliantur velut adversus communem hostem. et acanthis in spinis vivit; idcirco asinos et ipsa odit flores spinae devorantes, aegithum vero in tantum, ut sanguinem eorum credant non coire multisque ideo veneficiis infament. dissident thoes et leones, et minima aeque ac maxima. formicosam arborem urucae cavent. librat araneus se filo in caput serpentis porrectae sub umbra arboris suae tantaque vi morsu cerebrum adprehendit, ut stridens subinde et vertigine rotata ne filum quidem pendentis rumpere, adeo non fugere queat. nec finis ante mortem est.

rursus amici pavones et columbae, turtures et psittaci, merulae et turtures, cornix et ardiolae contra volpium genus communibus inimicitiis, harpe et miluus contra triorchin. quid, non et adfectus indicia sunt etiam in serpentibus, inmitissimo animalium genere dicta sunt quae arcadia narrat de domino a dracone servato et agnito voce draconis. de aspide miraculum phylarcho reddatur. is enim auctor est, cum ad mensam cuiusdam veniens in aegypto aleretur adsidue enixa catulos, quorum ab uno filium hospitis interemptum, illam reversam ad consuetudinem cibi intellexisse culpam et necem intulisse catulo nec postea in tectum id reversam.

somni quaestio non obscuram coniectationem habet. in terrestribus omnia quae coniveant dormire manifestum est. aquatilia quoque exiguum quidem, etiam qui de ceteris dubitant, dormire tamen existimant, non oculorum argumento, quia non habent genas, verum ipsa quiete cernuntur placida ceu soporata neque aliud quam caudas moventia et ad tumultum aliquem expavescentia. de thynnis confidentius adfirmatur; iuxta ripas enim aut petras dormiunt, plani autem piscium in vado, ut manu saepe tollantur. nam delphini ballaenaeque stertentes etiam audiuntur. insecta quoque dormire silentio apparet, quae ne luminibus quidem admotis excitentur.

homo genitus premitur somno per aliquot menses, dein longior in dies vigilia. somniat statim infans; nam et pavore expergiscitur et suctum imitatur. quidam vero numquam, quibus mortiferum fuisse

signum contra consuetudinem somnium invenimus exempla. magnus hic in vita locus et diversis refertus documentis, utrumne sint aliqua praescita animi quiescentis, quae fiant ratione, an fortuita res sit ut pleraque. si exemplis agatur, profecto paria fiant. a vino et a cibis proxima atque in redormitione vana esse visa prope convenit. est autem somnus nihil aliud quam animi in medium sese recessus. praeter hominem somniare equos, canes, boves, pecora, capras palam est: ob hoc creditur et in omnibus quae animal pariant. de iis quae ova gignunt incertum est, sed dormire ea certum.

verum et ad insecta transeamus; haec namque restant inmensae subtilitatis animalia.

LIBER XI

restant inmensae subtilitatis animalia, quando aliqui ea neque spirare et sanguine etiam carere prodiderunt. multa haec et multigenera, terrestrium volucrumque vita (alia ... pinnata, ut apes, alia utroque modo, ut formicae, aliqua et pinnis et pedibus carentia), et iure omnia insecta appellata ab incisuris, quae nunc cervicium loco, nunc pectorum atque alvi, praecincta separant membra, tenui modo fistula cohaerentia, aliquis vero non tota incisurae ambiente ruga, sed in alvo aut superne tantum imbricatis flexili vertebris, nusquam alibi spectatiore naturae rerum artificio. in magnis siquidem corporibus aut certe maioribus facilis officina sequaci materia fuit: in his tam parvis atque tam nullis quae ratio, quanta vis, quam inextricabilis perfectio! ubi tot sensus collocavit in culice et sunt alia dictu minora: sed ubi visum in eo praetendit ubi gustatum adplicavit ubi odoratum inseruit ubi vero truculentam illam et portione maximam vocem ingeneravit qua subtilitate pinnas adnexuit, praelongavit pedum crura, disposuit ieiunam caveam uti alvum, avidam sanguinis et potissimum humani sitim accendit! telum vero perfodiendo tergori quo spiculavit ingenio atque, ut in capaci, cum cerni non possit exilitas, reciproca generavit arte, ut fodiendo acuminatum pariter sorbendoque fistulosum esset! quos teredini ad perforanda robora terebrarum sono teste dentes adfixit potissimumque e ligno cibatum fecit! sed turrigeros elephantorum miramur umeros taurorumque colla et truces in sublime iactus, tigrium rapinas, leonum iubas, cum rerum natura nusquam magis quam in minimis tota sit. quapropter quaeso ne legentes, quoniam ex his spernunt multa, etiam relata fastidio damnent, cum in contemplatione naturae nihil possit videri supervacuum.

insecta multi negarunt spirare, idque ratione persuadentes, quoniam viscera interiora nexus spirabilis non inessent. itaque vivere ut fruges arboresque, sed plurimum interesse, spiret aliquid an vivat. eadem de causa nec sanguinem iis esse, qui sit nullis carentibus corde atque iecore. sic nec spirare ea quibus pulmo desit. unde numerosa quaestionum series exoritur. iidem enim et vocem esse iis negant in tanto murmure apium, cicadarum sono, et alia quae suis

aestimabuntur locis. nam mihi contuenti semper suasit rerum natura nihil incredibile existimare de ea. nec video cur magis possint non trahere animam talia et vivere quam spirare sine visceribus, quod etiam in marinis docuimus quamvis arcente spiritum densitate et altitudine umoris. volare quidem aliqua et animatu carere in ipso spiritu viventia, habere sensum victus, generationis, operis atque etiam de futuro curam, et quamvis non sint membra quae velut carina sensus invehant, esse tamen iis auditum, olfactum, gustatum, eximia praeterea naturae dona, sollertiam, animum, artem, quis facile crediderit sanguinem non esse iis fateor sic ut terrestribus quidem, cunctis inter se similem: verum ut saepiae in mari sanguinis vires atramentum optineat, purpurarum generi infector ille sucus, sic et insectis quisquis est vitalis umor, hic erit sanguis. denique existimatio sua cuique sit: nobis propositum est naturas rerum manifestas indicare, non causas indagare dubias.

insecta, ut intellegi possit, non videntur habere nervos nec ossa nec spinas nec cartilaginem nec pinguia nec carnes, ne crustam quidem fragilem ut quaedam marina, nec quae iure dicatur cutis, sed mediae cuiusdam inter omnia haec naturae corpus, arenti simile, nervo mollius, in reliquis partibus tutius vere quam durius. et hoc solum iis est, nec praeterea aliud. nihil intus nisi admodum paucis intestinum inplicatum. itaque divolsis praecipua vivacitas et partium singularum palpitatio, quia quaecumque est ratio vitalis illa non certis inest membris, sed toto in corpore, minime tamen capite, solumque non movetur nisi cum pectore avolsum. in nullo genere plures sunt pedes, et quibus ex his plurimi, diutius vivunt divulsa, ut in scolopendris videmus. habent autem oculos praeterque e sensibus et tactum atque gustatum, aliqua et odoratum, pauca et auditum.

sed inter omnia ea principatus apibus et iure praecipua admiratio, solis ex eo genere hominum causa genitis. mella contrahunt sucumque dulcissimum atque subtilissimum ac saluberrimum, favos confingunt et ceras mille ad usus vitae, laborem tolerant, opera conficiunt, rem publicam habent, consilia privatim quoque, at duces gregatim et, quod maxime mirum sit, mores habent praeter cetera, cum sint neque mansueti generis neque feri. tanta est natura rerum, ut prope ex umbra minima animalis incomparabile effecerit quiddam. quos efficaciae industriaeque tantae comparemus nervos, quas vires

quos ratione medius fidius iis viros, hoc certe praestantioribus, quod nihil novere nisi commune non sit de anima quaestio, constet et de sanguine, quantulum tamen esse in tantulis potest aestimemus post ea ingenium.

hieme conduntur - unde enim firmae pruinas nivesque et aquilonum flatus perferre vires - sane et insecta omnia, sed minus diu quae parietibus nostris occultata mature tepefiunt. circa apes aut temporum locorumve ratio mutata est, aut erraverunt priores. conduntur a vergiliarum occasu et latent ultra exortum - adeo non ad veris initium, ut dixere, nec quisquam in italia de alvis existimat ante fabas florentes - , exeunt ad opera et labores, nullusque, cum per caelum licuit, otio perit dies. primum favos construunt, ceram fingunt, hoc est domos cellasque faciunt, dein subolem, postea mella, ceram ex floribus, melliginem e lacrimis arborum quae glutinum pariunt, salicis, ulmi, harundinis suco, cummi, resina. his primum alvum ipsam intus in totum ut quodam tectorio inlinunt et aliis amarioribus sucis contra aliarum bestiolarum aviditates, id se facturas consciae quod concupisci possit; isdem fores quoque latiores circumstruunt.

prima fundamenta commosin vocant periti, secunda pissoceron, tertia propolin, inter coria cerasque, magni ad medicamina usus. commosis crusta est prima, saporis amari. pissoceros super eam venit, picantium modo, ceu dilutior cera. e vitium populorumque mitiore cummi propolis, crassioris iam materiae additis floribus, nondum tamen cera, sed favorum stabilimentum, qua omnes frigoris aut iniuriae aditus obstruuntur, odore et ipsa etiamnum gravi, ut qua plerique pro galbano utantur.

praeter haec convehitur erithace, quam aliqui sandaracam, alii cerinthum vocant. hic erit apium dum operantur cibus, qui saepe invenitur in favorum inanitatibus sepositus, et ipse amari saporis. gignitur autem rore verno et arborum suco cummium modo, capitur in ficis minor, austri flatu nigrior, aquilonibus melior et rubens, plurimus in graecis nucibus. Menecrates florem esse dicit, sed nemo praeter eum.

ceras ex omnium arborum satorumque floribus confingunt excepta rumice et echinopode; herbarum haec genera. falso excipitur et spartum, quippe cum in hispania multa in spartariis mella herbam

eam sapiant. falso et oleas excipi arbitror, quippe olivae proventu plurima examina gigni certum est. fructibus nullis nocetur. mortuis ne floribus quidem, non modo corporibus, insidunt. operantur intra lx p. et subinde consumptis in proximo floribus speculatores ad pabula ulteriora mittunt. noctu deprehensae in expeditione excubant supinae, ut alas a rore protegant, ne quis miretur amore earum captos aristomachum solensem duodesexaginta annis nihil aliud egisse, philiscum vero thasium in desertis apes colentem agrium cognominatum, qui ambo scripsere de iis.

ratio operis mire divisi: statio ad portas more castrorum, quies in matutinum, donec una excitet gemino aut triplici bombo ut bucino aliquo. tunc universae provolant, si dies mitis futurus est. praedivinant enim ventos imbresque, cum se continent tectis; itaque temperie caeli otium hoc inter praescita habent. cum agmen ad opera processit, aliae flores adgerunt pedibus, aliae aquam ore guttasque lanugine totius corporis. quibus est earum adulescentia, ad opera exeunt et supra dicta convehunt, seniores intus operantur. quae flores comportant, prioribus pedibus femina onerant propter id natura scabra, pedes priores rostro, totaeque onustae remeant sarcina pandatae. excipiunt eas ternae quaternae, quae exonerant. sunt enim intus quoque officia divisa: aliae struunt, aliae poliunt, aliae suggerunt, aliae cibum comparant ex eo quod adlatum est; neque enim separatim vescuntur, ne inaequalitas operis et cibi fiat et temporis. struunt orsae a concamaratione alvi textumque velut a summa tela deducunt, limitibus binis circa singulos actus, ut aliis intrent, aliis exeant. favi, superiore parte adfixi et paulum etiam lateribus, simul haerent et pendent; ima alvum non contingunt, oblongi aut rotundi, qualiter poposcit alvus, aliquando et duorum generum, cum duo examina concordibus populis dissimiles habuere ritus. ruentes ceras fulciunt, pilarum intergerivis a solo fornicatis, ne desit aditus ad sarciendum. primi fere tres versus inanes struuntur, ne promptum sit quod invitet furantem; novissimi maxime inplentur melle. ideo aversa alvo favi eximuntur. gerulae secundos flatus captant. si cooriatur procella, adprehensi ponducculo lapilli se librant; quidam in umeros eum inponi tradunt. iuxta vero terram volant in adverso flatu vepribus evitatis. mira observatio operis: cessantium inertiam notant, castigant, mox et puniunt morte. mira

munditia amoliuntur omnia e medio, nullaeque inter opera spurcitiae iacent; quin et excrementa operantium intus, ne longius recedant, unum congesta in locum turbidis diebus et operis otio egerunt. cum advesperascit, in alvo strepunt minus ac minus, donec una circumvolet eodem quo excitavit bombo ceu quietem capere imperans, et hoc castrorum more. tunc repente omnes conticescunt.

domos primum plebei exaedificant, deinde regibus. si speratur largior proventus, adiciuntur contubernia et fucis. hae cellarum minimae, sed ipsi maiores apibus. sunt autem fuci sine aculeo, velut inperfectae apes novissimaeque a fessis aut iam emeritis inchoatae, serotinus fetus et quasi servitia verarum apium, quam ob rem imperant iis primosque expellunt in opera, tardantes sine clementia puniunt. neque in opere tantum, sed in fetu quoque adiuvant eas, multum ad calorem conferente turba. certe quo maior eorum fuit multitudo, hoc maior fit et examinum proventus. cum mella coeperunt maturescere, abigunt eos multaeque singulos adgressae trucidant. nec id genus nisi vere conspicitur. fucus ademptis alis in alvum reiectus ipse ceteris adimit. regias imperatoribus futuris in ima parte alvi exstruunt amplas, magnificas, separatas, tuberculo eminentes, quod si exprimatur, non gignuntur. sexangulae omnes cellae a singulorum pedum opere. nihil horum stato tempore, sed rapiunt diebus serenis munia. melle uno alterove summum die cellas replent.

venit hoc ex ae+re et maxime siderum exortu, praecipueque ipso sirio explendescente, nec omnino prius vergiliarum exortu, sublucanis temporibus. itaque tum prima aurora folia arborum melle roscida inveniuntur ac, si qui matutino sub diu fuere, unctas liquore vestes capillumque concretum sentiunt, sive ille est caeli sudor sive quaedam siderum saliva sive purgantis se ae+ris sucus; utinamque esset purus ac liquidus et suae naturae, qualis defluit primo! nunc vero e tanta cadens altitudine multumque, dum venit, sordescens et obvio terrae halitu infectus, praeterea e fronde ac pabulis potus et in utriculos congestus apium - ore enim eum vomunt - , ad hoc suco florum corruptus et alvi vitiis maceratus totiensque mutatus, magnam tamen caelestis naturae voluptatem adfert. ibi optimus semper, ubi optimorum doliolis florum conditur. fit atticae regionis hoc et siculae hymetto et hybla locis, mox calydna insula. est autem initio mel ut

aqua dilutum et primis diebus fervet ut musta seque purgat, vicensimo die crassescit, mox obducitur tenui membrana, quae fervoris ipsius spuma concrescit. sorbetur optimum et minime fronde infectum e quercus, tiliae, harundinum foliis.

summa quidem bonitatis natione constat, ut supra diximus, pluribus modis. aliubi enim favi cera spectabiles gignuntur, ut in sicilia, paelignis, aliubi copia mellis, ut in creta, cypro, africa, aliubi magnitudine, ut in septentrionalibus, viso iam in germania octo pedum longitudinis favo in cava parte nigro. in quocumque tamen tractu terna sunt genera mellis. vernum ex floribus constructo favo, quod ideo vocatur anthinum. hoc quidam attingi vetant, ut largo alimento valida exeat suboles. alii ex nullo minus apibus relinquunt, quoniam magna sequatur ubertas magnorum siderum exortu, praeterea solstitio, cum thymum et uva florere incipiunt, praecipua cellarum materia. est autem in eximendis favis necessaria dispensatio, quoniam inopia cibi desperant moriunturque aut diffugiunt, contra copia ignaviam adfert, ac iam melle, non erithace, pascuntur. ergo diligentiores ex hac vindemia xv partem apibus relinquunt. dies status inchoandae, ut quadam lege naturae, si scire aut observare homines vellent, tricensimus ab educto examine, fereque maio mense includitur haec vindemia.

alterum genus est mellis aestivi, quod ideo vocatur horaeon a tempestivitate praecipua, ipso sirio exsplendescente post solstitium diebus xxx fere. inmensa circa hoc subtilitas naturae mortalibus patefacta est, nisi fraus hominum cuncta pernicie corrumperet. namque ab exortu sideris cuiuscumque, sed nobilium maxime, aut caelestis arcus, si non sequantur imbres, sed ros tepescat solis radiis, medicamenta, non mella, gignuntur, oculis, ulceribus internisque visceribus dona caelestia. quod si servetur hoc sirio exoriente casuque congruat in eundem diem, ut saepe, veneris aut iovis mercurive exortus, non alia suavitas visque mortalium malis a morte revocandis quam divini nectaris fiat.

mel plenilunio uberius capitur, sereno die pinguius. in omni melle quod per se fluxit ut mustum oleumque, appellatur acetum. maxime laudabile est aestivum omne rutilum, ut siccioribus confectum diebus. album mel non fit ubi thymum est, sed oculis et ulceribus aptissimum existimatur. e thymo coloris aurei, saporis gratissimi,

quo fit palam; ... doliolis pingue, e marino rore spissum. quod concrescit autem, minime laudatur. thymosum non coit et tactu praetenuia fila mittit, quod primum bonitatis argumentum est; abrumpi statim et resilire guttas vilitatis indicium habetur. sequens probatio ut sit odoratum et ex dulci acre, glutinosum, perlucidum. aestiva mellatione x partem cassio dionysio apibus relinqui placet, si plenae fuerint alvi; si minus, pro rata portione aut, si inanes, omnino non attingi. huic vindemiae attici signum dedere initium caprifici, alii diem volcano sacrum.

tertium genus mellis minime probatum silvestre, quod ericaeum vocant. convehitur post primos autumni imbres, cum erice sola floret in silvis, ob id harenoso simile. gignit id maxime arcturi exortus ex a. d. pr. id. septembres. quidam aestivam mellationem ad arcturi exortum proferunt, quoniam ad aequinoctium autumni ab eo supersint dies xiiii, et ab aequinoctio ad vergiliarum occasum diebus xxxxviii plurima sit erice. athenienses eam tetralicen appellant, euboea sisyrum, putantque apibus esse gratissimam, fortassis quia tunc nulla alia sit copia. haec ergo mellatio fine vindemiae et vergiliarum occasu idibus novembribus fere includitur. relinqui ex ea duas partes apibus ratio persuadet, et semper eas partes favorum, quae habeant erithacen. a bruma ad arcturi exortum diebus lx somno aluntur sine ullo cibo. ab arcturi exortu ad aequinoctium vernum tepidiore tractu iam vigilant, sed etiamnum alvo se continent servatosque in id tempus cibos repetunt. in italia vero hoc idem a vergiliarum exortu faciunt et in eum dormiunt. alvos quidam in eximendo melle expendunt, ita diribentes quantum relinquant. aequitas quidem etiam in iis obstringitur, feruntque societate fraudata alvos mori. in primis ergo praecipitur, lauti ut purique eximant mella. faetorem mulierumque menses odere. cum eximantur mella, apes abigi fumo utilissimum, ne irascantur aut ipsae avide vorent. fumo crebriore et ignavia earum excitatur ad opera, nam nisi incubavere, favos lividos faciunt. rursus fumo nimio inficiuntur, quando iniuriam celerrime sentiunt mella, vel minimo contactu roris acescentia. et ob id inter genera servatur quod acapnum vocant.

fetus quonam modo progenerarent, magna inter eruditos et subtilis fuit quaestio. apium enim coitus visus est numquam. plures existimavere ore confingi floribus compositas apte atque utiliter;

aliqui coitu unius, qui rex in quoque appelletur examine: hunc esse solum marem, praecipua magnitudine, ne fatiscat; ideo fetum sine eo non edi, apesque reliquas tamquam marem feminas comitari, non tamquam ducem. quam probabilem alias sententiam fucorum proventus coarguit. quae enim ratio, ut idem coitus inperfectos generet alios propior vero prior existimatio fieret, ni rursus alia difficultas occurreret. quippe nascuntur aliquando in extremis favis apes grandiores, quae ceteras fugant. oestrus vocatur hoc malum, quonam modo nascens, si ipsae fingunt quod certum est, gallinarum modo incubant. id, quod exclusum est, primo vermiculus videtur candidus, iacens transversus adhaerensque ita ut pars cerae videatur. rex statim mellei coloris, ut electo flore ex omni copia factus, neque vermiculus, sed statim pinniger. cetera turba cum formam capere coepit, nymphae vocantur, ut fuci serenes aut cephenes. si quis alterutris capita demat prius quam pinnas habeant, pro gratissimo sunt pabulo matribus. tempore procedente instillant cibos atque incubant, tum maxime murmurantes, caloris, ut putant, faciendi gratia necessarii excludendis pullis, donec ruptis membranis, quae singulos cingunt, ovorum modo universum agmen emergat. spectatum hoc romae consularis cuiusdam surburbano, alvis cornu lanternae tralucido factis. fetus intra xlv diem peragitur. fit in favis quibusdam qui vocatur clavus, amarae duritia cerae, cum fetum inde non eduxere morbo aut ignavia aut infecunditate naturali; hic est abortus apium. protinus autem educti operantur quadam disciplina cum matribus, regemque iuvenem aequalis turba comitatur. reges plures inchoantur, ne desint. postea ex his suboles cum adulta esse coepit, concordi suffragio deterrimos necant, ne distrahant agmina. duo autem genera eorum: melior rufus, deterior niger variusque. omnibus forma semper egregia et duplo quam ceteris maior, pinnae breviores, crura recta, ingressus celsior, in fronte macula quodam diademate candicans. multum etiam nitore a volgo differunt.

quaerat nunc aliquis, unusne hercules fuerit et quot liberi patres, et reliqua vetustatis situ obruta! ecce in re parva villisque nostris adnexa, cuius adsidue copia est, non constat inter auctores, rex nullumne solus habeat aculeum, maiestate tantum armatus, an dederit quidem eum natura, sed usum eius illi tantum negaverit. illud constat, imperatorem aculeo non uti. mira plebei circa eum

obedientia. cum procedit, una est totum examen circaque eum globatur, cingit, protegit, cerni non patitur. reliquo tempore, cum populus in labore est, ipse opera intus circumit, similis exhortanti, solus inmunis. circa eum satellites quidam lictoresque, adsidui custodes auctoritatis. procedit foris non nisi migraturo examine. id multo intellegitur ante, aliquot diebus murmure intus strepente, apparatus indice diem tempestivum eligentium. si quis alam ei detruncet, non fugiat examen. cum processere, se quaeque proximam illi cupit esse, in officio conspici gaudet. fessum umeris sublevant, validius fatigatum ex toto portant. si qua lassata defecit aut forte aberravit, odore persequitur. ubicumque ille consedit, ibi cunctarum castra sunt.

tunc ostenta faciunt privata ac publica, uva dependente in domibus templisque, saepe expiata magnis eventibus. sedere in ore infantis tum etiam platonis, suavitatem illam praedulcis eloquii portendentes. sedere in castris drusi imperatoris, cum prosperrime pugnatum apud arbalonem est, hautquaquam perpetua haruspicum coniectura, qui dirum id ostentum existimant semper. duce prenso totum tenetur agmen, amisso dilabitur migratque ad alios. esse utique sine rege non possunt. invitae autem interemunt eos, cum plures fuere, potiusque nascentium domos diruunt, si proventus desperatur. tunc et fucos abigunt. quamquam et de his video dubitari propriumque iis genus esse aliquos existimare, sicut furibus, grandissimis inter illos, sed nigris lataque alvo, ita appellatis, quia furtim devorent mella. certum est ab apibus fucos interfici. utique regem non habent. et quo modo sine aculeo nascantur in quaestione est.

vmido vere melior fetus, sicco mel copiosius; quod si defecit aliquas alvos cibus, impetum in proximas faciunt rapinae proposito. at illae contra derigunt aciem et, si custos adsit, alterutra pars, quae sibi favere sensit, non adpetit eum. ex aliis quoque saepe dimicant causis duasque acies contrarias duosque imperatores instruunt, maxime rixa in convehendis floribus exserta et suos quibusque evocantibus, quae dimicatio iniectu pulveris aut fumo tota discutitur, reconciliatur vero lacte vel aqua mulsa.

apes sunt et rusticae silvestresque, horridae aspectu, multo iracundiores, sed opere ac labore praestantes. urbanarum duo genera:

optimae breves variaeque et in rotunditatem compactiles, deteriores longae et quibus similitudo vesparum, etiamnum deterrimae ex iis pilosae. in ponto sunt quaedam albae, quae bis in mense mella faciunt, circa thermodontem autem fluvium duo genera, aliarum quae in arboribus mellificant, aliarum quae sub terra, triplici cerarum ordine, uberrimi proventus. aculeum apibus dedit natura, ventri consertum ad unum ictum. hoc infixo quidam eas statim emori putant, aliqui non nisi in tantum adacto, ut intestini quippiam sequatur, sed fucos postea esse nec mella facere velut castratis viribus pariterque et nocere et prodesse desinere. est in exemplis equus ab iis occisus. odere foedos odores proculque fugiunt, sed et fictos; itaque unguenta redolentes infestant. ipsae plurimorum animalium iniuriis obnoxiae. inpugnant eas naturae eiusdem degeneres vespae atque crabrones, etiam e culicum genere qui vocantur muliones. populantur hirundines et quaedam aliae aves. insidiantur aquantibus ranae, quae maxima earum est operatio tum cum subolem faciunt; nec hae tantum quae stagna rivosque obsident, verum et rubetae veniunt ultro adrepentesque foribus portas sufflant: ad hoc statio provolat confestimque abripitur. nec sentire ictus apium ranae traduntur. inimicae et oves difficile se e lanis earum explicantibus. cancrorum etiam odore, si quis iuxta coquat, exanimantur.

quin et morbos suapte natura sentiunt. index eorum tristitia torpens et cum ante fores in teporem solis promotis aliae cibos ministrant, cum defunctas progerunt funerantiumque more comitantur exequias. rege ea peste consumpto maeret plebes ignavo dolore, non cibos convehens, non procedens; tristi tantum murmure glomeratur circa corpus eius. subtrahitur itaque deductae multitudini. alias spectantes exanimem luctum non minuunt; tunc quoque ni subveniatur, fame moriuntur. hilaritate igitur et nitore sanitas aestimatur. sunt et operis morbi: cum favos non explent, claron vocant; item blapsigonian, si fetum non peragant.

inimica et echo est resultanti sono, qui pavidas alterno pulset ictu; inimica et nebula. aranei quoque vel maxime hostiles: cum praevaluere, ut intexant, enecant alvos. papilio etiam hic ignavus et inhonoratus, luminibus accensis advolitans, pestifer, nec uno modo: nam et ipse ceras depascitur et relinquit excrementa, e quibus

teredines gignuntur; fila etiam araneosa, quacumque incessit, alarum maxime e lanugine obtexit. nascuntur et in ipso ligno teredines, quae ceras praecipue adpetunt. infestat et aviditas pastus, nimia florum satietate verno maxime tempore alvo cita. oleo quidem non apes tantum, sed omnia insecta exanimantur, praecipue si capite uncto in sole ponantur. aliquando et ipsae contrahunt mortis sibi causas, cum sensere eximi mella, avide vorantes, cetero praeparcae et quae alioqui prodigas atque edaces non secus ac pigras et ignavas proturbent. nocent et sua mella ipsis inlitaeque ab aversa parte moriuntur. tot hostibus, tot casibus - et quotam portionem eorum commemoro - tam munificum animal expositum est. remedia dicemus suis locis; nunc enim sermo de natura est.

gaudent plausu atque tinnitu aeris eoque convocantur. quo manifestum est auditus quoque inesse sensum. effecto opere, educto fetu functae munere omni exercitationem tamen sollemnem habent, spatiataeque in aperto et in altum elatae, gyris volatu editis, tum demum ad cibum redeunt. vita iis longissima, ut prospere inimica ac fortuita cedant, septenis annis. universas alvos numquam ultra decem annos durasse proditur. sunt qui mortuas, si intra tectum hieme serventur, dein sole verno torreantur ac ficulneo cinere tepido foveantur, putent revivescere; in totum vero amissas reparari ventribus bubulis recentibus cum fimo obrutis, vergilius iuvencorum corpore exanimato, sicut equorum vespas atque crabrones, sicut asinorum scarabaeos, mutante natura ex aliis quaedam in alia. sed horum omnium coitus cernuntur, et tamen in fetu eadem prope natura quae apibus.

vespae in sublimi e luto nidos faciunt, in iis ceras, crabrones cavernis aut sub terra. et horum omnium sexangulae cellae, cerae autem e cortice, araneosae. fetus ipse inaequalis ut barbaris: alius evolat, alius in nympha est, alius in vermiculo, et autumno, non vere, omnia ea. plenilunio maxime crescunt. vespae quae ichneumones vocantur - sunt autem minores quam aliae - unum genus ex araneis peremunt, phalangium appellatum, et in nidos suos ferunt, deinde inlinunt et ex iis incubando suum genus procreant. praeterea omnes carne vescuntur contra quam apes, quae nullum corpus attingunt. sed vespae muscas grandiores venantur amputatoque iis capite reliquum corpus auferunt. crabronum silvestres in arborum cavernis degunt;

hieme ut cetera insecta conduntur; vita bimatum non transit. ictus eorum haut temere sine febri est. auctores sunt ter novenis punctis interfici hominem. aliorum, qui mitiores videntur, duo genera: opifices, minores corpore, qui moriuntur hieme, matres, quae biennio durant; hi et clementes. nidos vere faciunt fere quadrifores, in quibus opifices generentur. his eductis alios deinde maiores nidos fingunt, in quibus matres futuras producant iam: tum opifices funguntur munere et pascunt eas. latior matrum species, dubiumque an habeant aculeos, quia non egrediuntur. et iis sui fuci. quidam opinantur omnibus his ad hiemem decidere aculeos. nec crabronum autem nec vesparum generi reges aut examina, sed subinde renovatur multitudo subole.

quartum inter haec genus est bombycum, in assyria proveniens, maius quam supra dicta. nidos luto fingunt salis specie, adplicatos lapidi, tanta duritia, ut spiculis perforari vix possint. in iis ceras largius quam apes faciunt, dein maiorem vermiculum.

et alia horum origo. ex grandiore vermiculo gemina protendens sui generis cornuum urica fit, dein quod vocatur bombylis, ex ea necydallus, ex hoc in sex mensibus bombyx. telas araneorum modo texunt ad vestem luxumque feminarum, quae bombycina appellatur. prima eas redordiri rursusque texere invenit in coo mulier pamphile, plateae filia, non fraudanda gloria excogitatae rationis, ut denudet feminas vestis.

bombycas et in coo insula nasci tradunt, cupressi, terebinthi, fraxini, quercus florem imbribus decussum terrae halitu animante. fieri autem primo papiliones parvos nudosque, mox frigorum inpatientia villis inhorrescere et adversus hiemem tunicas sibi instaurare densas, pedum asperitate radentes foliorum lanuginem. in vellera hanc ab iis cogi subigique unguium carminatione, mox trahi in tramas, tenuari ceu pectine, postea adprehensam corpori involvi nido volubili; tum ab homine tolli fictilibusque vasis tepore et furfurum esca nutriri, atque ita subnasci sui generis plumas, quibus vestitos ad alia pensa dimitti. quae vero capta sint lanifica, umore lentescere, mox in fila tenuari iunceo fuso. nec puduit has vestes usurpare etiam viros levitatem propter aestivam: in tantum a lorica gerenda discessere mores, ut oneri sit etiam vestis. assyria tamen bombyce adhuc feminis cedimus.

araneorum his non absurde iungatur natura, digna vel praecipua

admiratione. plura autem sunt genera nec dictu necessaria in tanta notitia. phalangia ex iis appellantur quorum noxii morsus, corpus exiguum, varium, acuminatum, adsultim ingredientium. altera eorum species nigri, prioribus cruribus longissimis. omnibus internodia terna in cruribus. luporum minimi non texunt, maiores in terra, et cavernis exigua vestibula praepandunt. tertium eorundem genus erudita operatione conspicuum. orditur telas tantique operis materiae uterus ipsius sufficit, sive ita corrupta alvi natura stato tempore, ut democrito placet, sive est quaedam intus lanigera fertilitas: tam moderato ungue, tam tereti filo et tam aequali deducit stamina, ipso se pondere usus. texere a medio incipit, circinato orbe subtemina adnectens, maculasque paribus semper intervallis, sed subinde crescentibus ex angusto dilatans indissolubili nodo inplicat. quanta arte celat pedicas a scutulato rete grassantes! quam non ad hoc videtur pertinere crebratae pexitas telae et quadam politurae arte ipsa per se tenax ratio tramae! quam laxus ad flatus ac non respuenda quae veniant sinus! derelicta lasso praetendi summa parte arbitrere licia: at illa difficile cernuntur atque, ut in plagis, lineae offensae praecipitant in sinum. specus ipse qua concamaratur architectura! et contra frigora quanto villosior! quam remotus a medio aliudque agenti similis, inclusus vero sic, ut sit necne intus aliquis cerni non possit! age firmitas, quando rumpentibus ventis, qua pulverum mole degravante! latitudo telae saepe inter duas arbores, cum exercet artem et discit texere, longitudo fili a cacumine ac rursus a terra per illud ipsum velox reciprocatio, subitque pariter ac fila deducit. cum vero captura incidit, quam vigilans et paratus accursus! licet extrema haereat plaga, semper in medium currit, quia sic maxime totum concutiendo inplicat. scissa protinus reficit ad polituram sarciens. namque et lacertarum catulos venantur, os primum tela involventes et tunc demum labra utraque morsu adprehendentes, amphitheatrali spectaculo, cum contigit. sunt ex eo et auguria. quippe incremento amnium futuro telas suas altius tollunt. iidem sereno texunt, nubilo retexunt, ideoque multa aranea imbrium signa sunt. feminam putant esse quae texat, marem qui venetur; ita paria fieri merita coniugio.

aranei conveniunt clunibus, pariunt vermiculos ovis similes: nam nec horum differri potest genitura, quoniam insectorum vix ulla alia ratio est. pariunt autem omnia in tela, set sparsa, quia saliunt atque

ita emittunt. phalangia tantum in ipso specu incubant magnum numerum, qui, ut emersit, matrem consumit, saepe et patrem; adiuvat enim incubare. pariunt autem et trecenos - ceterae pauciores - et incubant triduo. consummantur aranei quater septenis diebus.

similiter his et scorpiones terrestres vermiculos ovorum specie pariunt similiterque pereunt, pestis inportuna, veneni serpentium, nisi quod graviore supplicio lenta per triduum morte conficiunt, virginibus letali semper ictu et feminis fere in totum, viris autem matutino, exeuntes cavernis prius quam aliquo fortuito ictu ieiunum egerant venenum. semper cauda in ictu est nulloque momento meditari cessat, ne quando desit occasioni; ferit et obliquo ictu et inflexo. venenum ab iis candidum fundi apollodorus auctor est, in novem genera discriptis per colores maxime supervacuos, quoniam non est scire quos minime exitiales praedixerit. geminos quibusdam aculeos esse, maresque saevissimos - nam coitum iis tribuit - , intellegi autem gracilitate et longitudine. venenum omnibus medio die, cum incanduere solis ardoribus, itemque, cum sitiunt, inexplebiles potus. constat et septena caudae internodia saeviora esse; pluribus enim sena sunt. hoc malum africae volucre etiam austri faciunt pandentibus bracchia ut remigia sublevantes; apollodorus idem plane quibusdam inesse pinnas tradit. saepe psylli, qui reliquarum venena terrarum invehentes quaestus sui causa peregrinis malis implevere italiam, hos quoque importare conati sunt, sed vivere intra siculi caeli regionem non potuere. visuntur tamen aliquando in italia, sed innocui, multisque aliis in locis, ut circa pharum in aegypto. in scythia interemunt etiam sues, alioqui vivaciores contra venena talia, nigras quidem celerius, si in aquam se inmerserint. homini icto putatur esse remedio ipsorum cinis potus in vino. magnam adversitatem oleo mersis et stellionibus putant esse, innocuis dumtaxat iis qui et ipsi carent sanguine, lacertarum figura; aeque scorpiones in totum nullis nocere quibus non sit sanguis. quidam et ab ipsis fetum devorari arbitrantur; unum modo relinqui sollertissimum et qui se ipsius matris clunibus inponendo tutus et a cauda et a morsu loco fiat; hunc esse reliquorum ultorem, qui postremo genitores superne conficiat. pariuntur autem undeni.

chamaeleonum stelliones hi quodam modo naturam habent, rore tantum viventes praeterque araneis.

similis cicadis vita, quarum duo genera: minores quae primae proveniunt et novissimae pereunt; sunt autem mutae. sequens est volatura earum quae canunt; vocantur achetae et, quae minores ex his sunt, tettigonia. sed illae magis canorae. mares canunt in utroque genere, feminae silent. gentes vescuntur iis ad orientem, etiam parthi opibus abundantibus. ante coitum mares praeferunt, a coitu feminas, ovis earum corrupti, quae sunt candida. coitus supinis. asperitas praeacuta in dorso, qua excavant feturae locum in terra. fit primo vermiculus, deinde ex eo quae vocatur tettigometra, cuius cortice rupto circa solstitia evolant, noctu semper, primo nigrae atque durae. unum hoc ex iis, quae vivunt, et sine ore est; pro eo quiddam aculeatorum linguis simile, et hoc in pectore, quo rorem lambunt. pectus ipsum fistulosum. hoc canunt achetae, ut dicemus. de cetero in ventre nihil est. excitatae cum subvolant, umorem reddunt, quod solum argumentum est rore eas ali. isdem solis nullum ad excrementa corporis foramen. oculis tam hebetes, ut, si quis digitum contrahens ac remittens adpropinquet iis, transeant velut folio ludente. quidam duo alia genera faciunt earum: surculariam, quae sit grandior; frumentariam, quam alii avenariam vocant, apparet enim simul cum frumentis arescentibus. cicadae non nascuntur in raritate arborum - idcirco non sunt cyrenis nisi circa oppidum - nec in campis nec in frigidis aut umbrosis nemoribus. est quaedam et his locorum differentia. in milesia regione paucis sunt locis, sed in cephallania amnis quidam paenuriam earum et copiam dirimit. at in regino agro silent omnes, ultra flumen in locrensi canunt. pinnarum illis natura quae apibus, sed pro corpore amplior.

insectorum autem quaedam binas gerunt pinnas, ut muscae, quaedam quaternas, ut apes. membranis et cicadae volant. quaternas habent quae aculeis in alvo armantur. nullum, cui telum in ore, pluribus quam binis advolat pinnis. illis enim ultionis causa datum est, his aviditatis. nullis eorum pinnae revivescunt avulsae. nullum, cui aculeus in alvo, bipinne est.

quibusdam pinnarum tutelae crusta supervenit, ut scarabaeis, quorum tenuior fragiliorque pinna. his negatus aculeus, sed in quodam genere eorum grandi cornua praelonga, bisulca dentatis forcipibus in cacumine, cum libuit, ad morsum coeuntibus, infantium etiam remediis ex cervice suspenduntur; lucavos vocat hos nigidius.

aliud rursus eorum genus, qui e fimo ingentes pilas aversi pedibus volutant parvosque in iis contra rigorem hiemis vermiculos fetus sui nidulantur. volitant alii magno cum murmure aut mugitu, alii focos et prata crebris foraminibus excavant, nocturno stridore vocales. lucent ignium modo noctu laterum et clunium colore lampyrides, nunc pinnarum hiatu refulgentes, nunc vero conpressu obumbratae, non ante matura pabula aut post desecta conspicuae. e contrario tenebrarum alumna blattis vita, lucemque fugiunt in balinearum maxime umido vapore prognatae. fodiunt ex eodem genere rutili atque praegrandes scarabaei tellurem aridam favosque parvae et fistulosae modo spongiae medicato melle fingunt. in threcia iuxta olynthum locus est parvus, in quo unum hoc animal exanimatur, ob hoc cantharolethrus appellatus. pinnae insectis omnibus sine scissura. nulli cauda nisi scorspioni. hic eorum solus et bracchia habet et in cauda spiculum; reliquorum quibusdam aculeus in ore, ut asilo, sive tabanum dici placet, item culici et quibusdam muscis, omnibus autem his in ore et pro lingua. sunt hi aculei quibusdam hebetes neque ad punctum, sed ad suctum, ut muscarum generi, in quo lingua evidens fistula est. nec sunt talibus dentes. aliis cornicula ante oculos praetenduntur ignava, ut papilionibus. quaedam insecta carent pinnis, ut scolopendra.

insectorum pedes quibus sunt, in obliquum moventur. quorundam extremi longiores foris curvantur, ut locustis.

hae pariunt, in terram demisso spinae caule, ova condensa autumni tempore. ea durant hieme; e terra subsequenti anno exitu veris emittunt parvas, nigrantes et sine cruribus pinnisque reptantes. itaque vernis aquis intereunt ova, sicco vere maior proventus. alii duplicem earum fetum geminumque exitium tradunt: vergiliarum exortu parere, deinde ad canis ortum obire et alias renasci; quidam arcturi occasu renasci. mori matres, cum pepererint, certum est, vermiculo statim circa fauces innascente qui eas strangulat. eodem tempore mares obeunt. et tam frivola ratione morientes serpentem, cum libuit, necant singulae, faucibus eius adprehensis mordicus. non nascuntur nisi rimosis locis. in india ternum pedum longitudinis esse traduntur, cruribus et feminibus serrarum usum praebere, cum inaruerint. est et alius earum obitus: gregatim sublatae vento in maria aut stagna decidunt. forte hoc casuque evenit, non, ut prisci

existimavere, madefactis nocturno umore alis. iidem quippe nec volare eas noctibus propter frigora tradiderunt, ignari etiam longinqua maria ab iis transiri, continuata plurium dierum - quod maxime miremur - fame quoque, quam propter externa pabula petere sciunt. deorum irae pestis ea intellegitur. namque et grandiores cernuntur et tanto volant pinnarum stridore, ut aliae alites credantur, solemque obumbrant sollicitis suspectantibus populis, ne suas operiant terras. sufficiunt quippe vires et, tamquam parum sit maria transisse, inmensos tractus permeant diraque messibus nube contegunt, multa contactu adurentes, omnia vero morsu erodentes et fores quoque tectorum.

italiam ex africa maxime coortae infestant, saepe populo romano ad sibyllina coacto remedia confugere inopiae metu. in cyrenaica regione lex etiam est ter anno debellandi eas, primo ova obterendo, dein fetum, postremo adultas, desertoris poena in eum qui cessaverit. et in lemno insula certa mensura praefinita est, quam singuli enecatarum ad magistratus referant. graculos quoque ob id colunt adverso volatu occurrentes earum exitio. necare et in syria militari imperio coguntur. tot orbis partibus vagatur id malum. parthis et hae in cibo gratae.

vox earum proficisci ab occipitio videtur. eo loco in commissura scapularum habere quasi dentes existimantur eosque inter se terendo stridorem edere, circa duo maxime aequinoctia, sicut cicadae circa solstitium. coitus locustarum qui et insectorum omnium quae coeunt, marem portante femina, in eum feminarum ultimo caudae reflexo tardoque digressu. minores autem in omni hoc genere feminis mares.

plurima insectorum vermiculum gignunt, nam et formicae similem ovis vere, ... et hae communicantes laborem ut apes, sed illae faciunt cibos, hae condunt. ac si quis conparet onera corporibus earum, fateatur nullis portione vires esse maiores. gerunt ea morsu; maiora aversae postremis pedibus moliuntur umeris obnixae. et his rei publicae ratio, memoria, cura. semina adrosa condunt, ne rursus in frugem exeant e terra, maiora ad introitum dividunt, madefacta imbre proferunt atque siccant. operantur et noctu plena luna, eaedem interlunio cessant. iam in opere qui labor, quae sedulitas! et quoniam ex diverso convehunt altera alterius ignara, certi dies ad recognitionem mutuam nundinis dantur. quae tunc earum

concursatio, quam diligens cum obviis quaedam conlocutio atque percunctatio! silices itinere earum adtritos videmus et opere semitam factam, ne quis dubitet, qualibet in re quid possit quantulacumque adsiduitas. sepeliunt inter se viventium solae praeter hominem. non sunt in sicilia pinnatae.

indicae formicae cornua erythris in aede herculis fixa miraculo fuere. aurum hae cavernis egerunt terra in regione septentrionalium indorum qui dardae vocantur. ipsis color felium, magnitudo aegypti luporum. erutum hoc ab iis tempore hiberno indi furantur aestivo fervore, conditis propter vaporem in cuniculos formicis, quae tamen odore sollicitatae provolant crebroque lacerant quamvis praevelocibus camelis fugientes. tanta pernicitas feritasque est cum amore auri.

multa autem insecta et aliter nascuntur, atque in primis e rore. insidet hic raphani folio primo vere et spissatus sole in magnitudinem milii cogitur. inde porrigitur vermiculus parvus et triduo mox uruca, quae adiectis diebus accrescit, inmobilis, duro cortice. ad tactum tantum movetur, araneo accreta, quam chrysallidem appellant. rupto deinde cortice volat papilio.

sic quaedam ex imbri generantur in terra, quaedam et in ligno. nec enim cossi tantum in eo, sed etiam tabani ex eo nascuntur et alias, ubicumque umor est nimius, sicut intra hominem taeniae tricenum pedum, aliquando et plurium longitudine. iam in carne exanima et viventium quoque hominum et capillo, qua foeditate et sulla dictator et alcman ex clarissimis graeciae poetis obiere. hoc quidem et aves infestat, phasianas vero interemit nisi pulverantes sese; pilos habentium asinum tantum inmunem hoc malo credunt et oves. gignuntur autem et vestis genere, praecipue lanicio interemptarum a lupis ovium. aquas quoque quasdam, quibus lavemur, fertiliores eius generis invenio apud auctores, quippe cum etiam cerae id gignant quod animalium minimum existimatur. alia rursus generantur sordibus aridi soli, posteriorum lascivia crurum petauristae, alia pulvere umido in cavernis volucria.

est animal eiusdem temporis, infixo semper sanguini capite vivens atque ita intumescens. unum animalium, cui cibi non sit exitus, dehiscit in nimia satietate, alimento ipso moriens. numquam hoc in iumentis gignitur, in bubus frequens, in canibus aliquando, in quibus

omnia; in ovibus et in capris hoc solum. aeque mira sanguinis et hirudinum in palustri aqua sitis; namque et hae toto capite conduntur. est volucre canibus peculiare suum malum, aures maxime lancinans, quae defendi morsu non queunt.

idem pulvis in lanis et veste tineas creat, praecipue si araneus una includatur. sitiens enim et omnem umorem absorbens ariditatem ampliat. hoc et in chartis nascitur. est earum genus tunicas suas trahentium quo cocleae modo; sed harum pedes cernuntur. spoliatae exspirant. si adcrevere, faciunt chrysallidem. ficarios culices caprificus generat, cantharidas vermiculi ficorum et piri et peuces et cynacanthae et rosae. venenum hoc remedia secum habet: alae medentur, quibus demptis letale est. rursus alia genera culicum acescens natura gignit, quippe cum et in nive inveniantur vetustiore vermiculi rutili - nam et ipsa nix vetustate rufescit - hirti pilis, in media quidem candidi, grandiores torpentesque.

gignit aliqua et contrarium naturae elementum. siquidem in cypri aerariis fornacibus et medio igni maioris muscae magnitudinis volat pinnatum quadrupes; appellatur pyrallis, a quibusdam pyrotocon. quamdiu est in igni, vivit; cum evasit longiore paulo volatu, emoritur.

hypanis fluvius in ponto circa solstitium defert acinorum effigie tenues membranas, quibus erumpit volucre quadrupes supra dicti modo, nec ultra unum diem vivit, unde hemerobion vocatur. reliquis talium ab initio ad finem septenarii sunt numeri, culici et vermiculis ter septeni, corpus parientibus quater septeni; mutationes et in alias figuras transitus trinis aut quadrinis diebus. cetera ex his pinnata autumno fere moriuntur tabe alarum, tabani quidem etiam caecitate. muscis umore exanimatis, si cinere condantur, redit vita.

nunc per singulas corporum partes praeter iam dicta membratim tractetur historia.

caput habent cuncta quae sanguinem. in capite paucis animalium nec nisi volucribus apices, diversi quidem generis, phoenici plumarum serie e medio eo exeunte alia, pavonibus crinitis arbusculis, stymphalidi cirro, phasianae corniculis, praeterea parvae avi, quae, ab illo galerita appellata quondam, postea gallico vocabulo etiam legioni nomen dederat alaudae. diximus et cui plicatilem cristam dedisset natura. per medium caput a rostro residentem et

fulicarum generi dedit, cirros pico quoque martio et grui balearicae, sed spectatissimum insigne gallinaceis, corporeum, serratum; nec carnem ita esse nec cartilaginem nec callum iure dixerimus, verum peculiare datum. draconum enim cristas qui viderit, non reperitur.

cornua multis quidem et aquatilium et marinorum et serpentium variis data sunt modis, sed quae iure cornua intellegantur, quadripedum tantum generi; actaeonem enim et cipum etiam in latia historia fabulosos reor. nec alibi maior naturae lascivia. lusit animalium armis, sparsit haec in ramos, ut cervorum, aliis simplicia tribuit, ut in eodem genere subulonibus ex argumento dictis, aliorum fudit in palmas digitosque emisit ex iis, unde platycerotas vocant. dedit ramosa capreis, sed parva nec fecit decidua, convoluta in anfractum arietum generi, ceu caestus daret, infesta tauris - in hoc quidem genere et feminis tribuit, in multis tantum maribus - , rupicapris in dorsum adunca, dammis in adversum; erecta autem rugarumque ambitu contorta et in leve fastigium exacuta, ut lyras decerent, strepsiceroti, quem addacem africa appellat; mobilia eadem, ut aures, phrygiae armentis, trogodytarum in terram derecta, qua de causa obliqua cervice pascuntur, aliis singula, et haec medio capite aut naribus, ut diximus. iam quidem aliis ad incursum robusta, aliis ad ictum, aliis adunca, aliis redunca, aliis ad iactum pluribus modis, supina, convexa, conversa, omnia in mucronem nigrantia. in quodam genere pro manibus ad scabendum corpus, cocleis ad praetemptandum iter, corporea haec, sicut cerastis; his aliquando singula, cocleis semper bina et ut protendantur ac resiliant.

vrorum cornibus barbari septentrionales potant urnisque bina capitis unius cornua inplent; alii praefixa hastilia cuspidant. apud nos in lamnas secta tralucent atque etiam lumen inclusum latius fundunt multasque alias ad delicias conferuntur, nunc tincta, nunc sublita, nunc quae cestrota a picturae genere dicuntur. - (omnibus autem cava et in mucrone demum concreta sunt, cervis tantum tota solida et omnibus annis decidua) - boum attritis ungulis cornua unguendo arvina medentur agricolae, adeoque sequax natura est, ut in ipsis viventium corporibus ferventi cera flectantur atque nascentium in diversas partes torqueantur, ut singulis capitibus quaterna fiant.

tenuiora feminis plerumque sunt, ut in pecore multis, ovium nulla nec cervorum; nec quibus multifidi pedes, nec solidipedum ulli

excepto asino indico, qui uno armatus est cornu. bisulcis bina natura tribuit, nulli superne primores habenti dentes. qui putant eos in cornua absumi, facile corguuntur cervarum natura, quae nec dentes habent (ut neque mares) nec tamen cornua. ceterorum ossibus adhaerent, cervorum tantum cutibus enascuntur.

capita piscibus portione corporum maxima, fortassis ut mergantur. ostrearum generi nulla nec spongeis nec aliis fere, quibus solus ex sensibus tactus est. quibusdam indiscretum caput, ut cancris.

in capite animalium cunctorum homini plurimus pilus, iam quidem promiscue maribus ac feminis, apud intonsas utique gentes. atque etiam nomina ex eo capillatis alpium incolis, galliae comatae, ut tamen sit aliqua in hoc terrarum differentia. quippe myconii carentes eo gignuntur, sicut in cauno lienosi. et quaedam animalium naturaliter calvent, sicut struthocameli et corvi aquatici, quibus apud graecos nomen inde. defluvium eorum in muliere rarum, in spadonibus non visum, nec in ullo ante veneris usum nec infra cerebrum aut infra verticem aut circa tempora atque aures. calvitium uni tantum animalium homini praeterquam innatum. canities homini tantum et equo, sed homini semper a priore parte capitis, tum deinde ab aversa. vertices bini hominum tantum aliquis.

capitis ossa plana, tenuia, sine medullis, serratis pectinatim structa conpagibus. perfracta non queunt solidari, sed exempta modice non sunt letalia, in vicem eorum succedente corporea cicatrice. infirmissima esse ursis, durissima psittacis suo diximus loco.

cerebrum omnia habent animalia quae sanguinem, etiam in mari quae mollia appellavimus, quamvis careant sanguine, ut polypus. sed homo portione maximum et umidissimum omniumque viscerum frigidissimum, duabus supra subterque membranis velatum, quarum alterutram rumpi mortiferum est. cetero viri quam feminae maius. omnibus hoc sine sanguine, sine venis, et sebosis sine pingui. aliud esse quam medullam eruditi docent, quoniam coquendo durescat. omnium cerebro medio insunt ossicula parva. uni homini in infantia palpitat nec corroboratur ante primum sermonis exordium. hoc est viscerum excelsissimum ... que caelo capitis, sine carne, sine cruore, sine sordibus. hanc habent sensus arcem, huc venarum omnis a corde vis tendit, hic desinit, hoc columen altissimum, hic mentis est regimen. omnium autem animalium in priora pronum, quia et sensus

ante nos tendunt. ab eo proficiscitur somnus, hinc capitis nutatio. quae cerebrum non habent, non dormiunt. - cervis in capite inesse vermiculi sub linguae inanitate et circa articulum, qua caput iungitur, numero xx produntur. -

aures homini tantum inmobiles. ab his flaccorum cognomina. nec in alia parte feminis maius inpendium margaritis dependentibus; in oriente quidem et viris aurum eo loci gestare decus existimatur. animalium aliis maiores, aliis minores; cervis tantum scissae ac velut divisae, sorici pilosae, sed aliquae omnibus animal dumtaxat generantibus, excepto vitulo marino atque delphino et quae cartilaginea appellavimus et viperis: haec cavernas tantum habent aurium loco praeter cartilaginea et delphinum, quem tamen audire manifestum est. nam et cantu mulcentur et capiuntur attoniti sono. quanam audiant mirum. iidem nec olfactus vestigia habent, cum olfaciant sagacissime. pinnatorum animalium buboni tantum et oto plumae velut aures, ceteris cavernae ad auditum; simili modo squamigeris atque serpentibus. in equis et omni iumentorum genere indicia animi praeferunt, marcidae fessis, micantes pavidis, subrectae furentibus, resolutae aegris.

facies homini tantum, ceteris os aut rostra. frons et aliis, sed homini tantum tristitiae, hilaritatis, clementiae, severitatis index. in assensu eius supercilia homini et pariter et alterna mobilia. et in his pars animi: negamus iis, annuimus. haec maxime indicant fastum, superbiam. aliubi conceptaculum, sed hic sedem habet; in corde nascitur, huc subit, hic pendet. nihil altius simul abruptiusque invenit in corpore, ubi solitaria esset.

subiacent oculi, pars corporis pretiosissima et quae lucis usu vitam distinguat a morte. non omnibus animalium hi; ostreis nulli, quibusdam concharum dubii. pectines enim, si quis digitos adversum hiantes eos moveat, contrahuntur ut videntes, et solenes fugiunt admota ferramenta. quadripedum talpis visus non est; oculorum effigies inest, si quis praetentam detrahat membranam. et inter aves ardiolarum in genere quos leucos vocant, altero oculo carere tradunt, optimi augurii, cum ad austrum volent septentrionemve: solvi enim pericula et metus narrant. nigidius nec locustis, cicadis esse dicit. cocleis oculorum vicem cornicula bina praetemptatu inplent. nec lumbricis ulli sunt vermiumve generi.

oculi homini tantum diverso colore, ceteris in suo cuique genere similes. et equorum quibusdam glauci, sed in homine numerosissimae varietatis atque differentiae: grandiores, modici, parvi; prominentes quos hebetiores putant, conditi quos clarissime cernere, sicuti colore caprinos.

praeterea alii contuentur longinqua, alii nisi prope admota non cernunt. multorum visus fulgore solis constat, nubilo die non cernentium nec post occasus. alii interdiu hebetiores, noctu praeter ceteros cernunt. de geminis pupillis aut quibus noxii visus essent satis diximus. caesii in tenebris clariores. ferunt ti. caesari, nec alii genitorum mortalium, fuisse naturam ut expergefactus noctu paulisper haut alio modo quam luce clara contueretur omnia, paulatim tenebris sese obducentibus. Divo Augusto equorum modo glauci fuere superque hominem albicantis magnitudinis, quam ob causam diligentius spectari eos iracunde ferebat; claudio caesari ab angulis candore carnoso sanguineis venis subinde suffusi, gaio principi rigentes, neroni ... at, nisi cum coniveret ad prope admota, hebetes. [xx] gladiatorum in gai principis ludo fuere, in iis duo omnino qui contra comminationem aliquam non coniverent, et ob id invicti. tantae hoc difficultatis est homini. plerisque vero naturale ut nictari non cessent, quos pavidiores accepimus. oculus unicolor nulli; communi candore omnibus medius colos differens. neque ulla ex parte maiora animi indicia cunctis animalibus, sed homini maxime, id est moderationis, clementiae, misericordiae, odii, amoris, tristitiae, laetitiae. contuitu quoque multiformes, truces, torvi, flagrantes, graves transversi, limi, summissi, blandi. profecto in oculis animus habitat. ardent, intenduntur, umectant, conivent. hinc illa misericordiae lacrima, hos cum exosculamur, animum ipsum videmur attingere, hinc fletus et rigantes ora rivi. quis ille est umor in dolore tam fecundus et paratus aut ubi reliquo tempore animo autem videmus, animo cernimus: oculi ceu vasa quaedam visibilem eius partem accipiunt atque tramittunt. sic magna cogitatio obcaecat abducto intus visu. sic in morbo comitiali animo caligante aperti nihil cernunt. quin et patentibus dormiunt lepores multique hominum, quos κορυβαντιᾶν graeci dicunt. tenuibus multisque membranis eos natura composuit, callosis contra frigora caloresque in extumo tunicis, quas subinde purificat lacrimationum salivis, lubricos propter

incursantia et mobiles.

media eorum cornua fenestravit pupilla, cuius angustiae non sinunt vagari incertam aciem ac velut canali dirigunt obiterque incidentia facile declinant, aliis nigri, aliis ravi, aliis glauci coloris orbibus circumdatis, ut habili mixtura et accipiatur circumiecto candore lux et temperato repercussu non obstrepat. adeoque his absoluta vis speculi, ut tam parva illa pupilla totam imaginem reddat hominis. ea causa est, ut pleraeque alitum e manibus hominum oculos potissimum adpetant, quod effigiem suam in iis cernentes velut ad cognata desideria sua tendunt. veterina tantum quaedam ad incrementa lunae morbos sentiunt. sed homo solus emisso umore caecitate liberatur. post vicensimum annum multis restitutus est visus, quibusdam statim nascentibus negatus nullo oculorum vitio, multis repente ablatus simili modo nulla praecedente iniuria. venas ab iis pertinere ad cerebrum peritissimi auctores tradunt; ego et ad stomachum crediderim: certe nulli sine redundatione eius eruitur oculus. morientibus illos operire rursusque in rogo patefacere quiritium magno ritu sacrum est, ita more condito, ut neque ab homine supremum eos spectari fas sit et caelo non ostendi nefas. uni animalium homini depravantur, unde cognomina strabonum et paetorum. ab isdem qui altero lumine orbi nascerentur coclites vocabantur; qui parvis utrisque, ocellae; luscini iniuriae cognomen habuerunt. nocturnorum animalium veluti felium in tenebris fulgent radiantque oculi, ut contueri non sit; et caprae lupoque splendent lucemque iaculantur. vituli marini et hyaenae in mille colores transeunt subinde. quin et in tenebris multorum piscium refulgent, aridi sicut robusti caudices putresque vetustate. non conivere diximus quae non obliquis oculis, sed circumacto capite cernerent. chamaeleonis oculos ipsos circumagi totos tradunt. cancri in oblicum aspiciunt crusta fragili inclusos gerentes. locustis, squillis magna ex parte sub eodem munimento praeduri eminent. quorum duri sunt, minus cernunt quam quorum umidi. serpentium catulis et hirundinum pullis, si quis eruat, renasci tradunt. insectorum omnium et testacei operimenti oculi moventur sicut quadripedum aures. quibus fragilia operimenta, his oculi duri. omnia talia et pisces et insecta non habent genas nec integunt oculos. omnibus membrana vitri modo tralucida obtenditur.

palpebrae in genis homini utrimque, mulieribus fuco etiam infectae cotidiano: tanta est decoris adfectatio, ut tinguantur oculi quoque. alia de causa hoc natura dederat ceu vallum quoddam visus et prominens munimentum contra occursantia animalia aut alia fortuito incidentia. defluere eas haut inmerito venere abundantibus tradunt. ex ceteris nulli sunt nisi quibus et in reliquo corpore pili, sed quadripedibus in superiore tantum gena, volucribus in inferiore et quibus molle tergus, ut serpentibus, et quadripedum quae ova pariunt, ut lacertae. struthocamelus alitum sola ut homo utrimque palpebras habet.

ne genae quidem omnibus. ideo neque nictatio nisi iis quae animal generant, graviores alitum inferiore gena conivent, eaedem nictantur ab angulis membrana obeunte. columbae et similia utraque conivent; at quadripedes quae ova pariunt, ut testudines, crocodili, inferiore tantum sine ulla nictatione propter praeduros oculos. extremum ambitum genae superioris antiqui cilium vocavere, unde et supercilia. hoc vulnere aliquo diductum non coalescit, ut in paucis humani corporis membris.

infra oculos malae homini tantum, quas prisci genas vocabant, xii tabularum interdicto radi a feminis vetantes. pudoris haec sedes: ibi maxime ostenditur rubor.

infra eas hilaritatem risumque indicantes buccae et altior homini tantum, quem novi mores subdolae inrisioni dicavere, nasus. non alii animalium nares eminent: avibus, serpentibus, piscibus foramina tantum ad olfactus sine naribus, et hinc cognomina simorum, silonum. septimo mense genitis saepenumero foramina aurium et narium defuere.

labra, a quibus brocchi, labeones dicti, et os probum duriusve animal generantibus. pro his cornea et acuta volucribus rostra, eadem rapto viventibus adunca, collecto recta, herbas eruentibus limumque lata, ut et suum generi; iumentis vice manus ad colligenda pabula. ora apertiora laniatu viventibus.

mentum nulli praeter hominem, nec malae. maxillas crocodilus tantum superiores movet, terrestres quadrupedes eodem quo cetera more praeterque in oblicum.

dentium tria genera, serrati aut continui aut exerti: serrati pectinatim coeuntes, ne contrario occursu atterantur, ut serpentibus,

piscibus, canibus; continui, ut homini, equo; exerti, ut apro, hippopotamio, elephanto. continuorum qui digerunt cibum lati et acuti, qui conficiunt duplices; qui discriminant eos canini appellantur: hi sunt serratis longissimi. continui aut utraque parte oris sunt, ut equo, aut superiore primores non sunt, ut bubus, ovibus omnibusque quae ruminant. caprae superiores non sunt praeter primores geminos. nulli exerti quibus serrati, raro feminae, et tamen sine usu. itaque cum apri percutiant, feminae sues mordent. nulli, cui cornua, exerti, sed omnibus concavi; ceteris dentes solidi. piscium omnibus serrati praeter scarum; huic uni aquatilium plani. cetero multis eorum in lingua et toto ore, ut turba vulnerum molliant quae attritu subigere non queunt, multis et in palato atque etiam in cauda, praeterea in os vergentes, ne excidant cibi nullum habentibus retinendi adminiculum.

similes aspidi et serpentibus, sed duo in supera parte dextra laevaque longissimi, tenui fistula perforati, ut scorpioni aculei, venenum infundentes. non aliud hoc esse quam fel serpentium et inde venas sub spina ad os pervenire diligentissimi auctores scribunt; quidam unum esse eum et, quia sit aduncus, resupinari, cum momorderit; aliqui tum decidere eum rursusque recrescere facilem decussu, et sine eo esse quas tractari cernamus. scorpionis caudae inesse eum et plerisque ternos. viperis dentes gingivis conduntur. haec, eodem praegnans veneno, inpressum dentium repulsu virus fundit in morsus. volucrum nulli dentes praeter vespertilionem. camelus una ex iis, quae non sunt cornigera, in superiore maxilla primores non habet. cornua habentium nulli serrati. et cocleae dentes habent. indicio est et a minimis earum derosa vicia. at in marinis crustata et cartilaginea primores habere, item echinis quinos esse unde intellegi potuerit miror. dentium vice aculeus insectis. simiae dentes ut homini. elephanto intus ad mandendum iiii, praeterque eos prominent masculis reflexi, feminis recti atque proni. musculus marinus, qui ballaenam antecedit, nullos habet, sed pro iis saetis intus os hirtum et linguam etiam ac palatum. terrestrium minutis quadripedibus primores bini utrimque longissimi.

ceteris cum ipsis nascuntur, homini post quam natus est septimo mense. reliquis perpetui manent, mutantur homini, leoni, iumento, cani et ruminantibus, sed leoni et cani non nisi canini appellati. lupi

dexter caninus in magnis habetur operibus. maxillares, qui sunt a caninis, nullum animal mutat. homini novissimi, qui genuini vocantur, circiter vicensimum annum gignuntur, multis et octogensimo, feminis quoque, sed quibus in iuventa non fuere nati. decidere in senecta et mox renasci certum est. zoclen samothracem, cui renati essent post ciiii annos, mucianus visum a se prodidit. cetero maribus plures quam feminis in homine, pecude, capra, sue. timarchus nicoclis filius paphi duos ordines habuit maxillarium; frater eius non mutavit primores ideoque praetrivit. est exemplum dentis homini et in palato geniti. a caninis amissi casu aliquo numquam renascuntur. ceteris senecta rufescunt, equo tantum candidiores fiunt.

aetas veterinorum dentibus iudicatur. equo sunt numero xl. amittit tricensimo mense primores utrimque binos, sequenti anno totidem proximos, cum subeunt dicti columellares; quinto anno incipiente amittit binos, qui sexto anno renascuntur; septimo omnes habet et renatos et inmutabiles. equo castrato prius non decidunt dentes. asinorum genus tricensimo mense similiter amittit, dein senis mensibus. quod si non prius peperere quam decidant postremi, sterilitas certa. boves bimi mutant. subus non decidunt umquam. absumpta hac observatione senectus in equis et ceteris veterinis intellegitur dentium brocchitate, superciliorum canitia et circa ea lacunis, cum fere xvi annorum existimantur. hominum dentibus quoddam inest virus; namque et speculi nitorem ex adverso nudati hebetant et et columbarum fetus inplumes necant. reliqua de iis in generatione hominum dicta sunt. erumpentibus morbi corpora infantium accipiunt. reliqua animalia quae serratos habent saevissime dentiunt.

linguae non omnibus eodem modo. tenuissima serpentibus et trisulca, vibrans, atri coloris et, si extrahas, praelonga; lacertis bifida et pilosa, vitulis quoque marinis duplex, sed supra dictis capillamenti tenuitate. ceteris ad circumlambenda ora, piscibus paulo minus quam tota adhaerens, crocodilis tota; sed in gustatu linguae vice carnosum aquatilibus palatum. leonibus, pardis omnibusque generis eius, etiam felibus, imbricatae asperitatis ac limae similis attenuansque lambendo cutem hominis, quae causa etiam mansuefacta, ubi ad vicinum sanguinem pervenit saliva, invitat ad rabiem. de purpurarum

linguis diximus. ranis prima cohaeret, intima absoluta a gutture, qua vocem emittunt mares, cum vocantur ololygones. stato id tempore evenit, cientibus ad coitum feminas. tum siquidem inferiore labro demisso ad libramentum aquae modice receptae in fauces palpitante ibi lingua ululatus eliditur. tunc et extenti buccarum sinus perlucent, oculi flagrant labore perpulsi. quibus in posteriore parte aculei, his et dentes et lingua, apibus etiam praelonga, eminens et cicadis. quibus aculeus in ore fistulosus, his nec lingua nec dentes. quibusdam insectis intus lingua, ut formicis; ceterum latet et elephanto praecipue. reliquis in suo genere semper absoluta, homini tantum ita saepe constricta venis, ut intercidi eas necesse sit. metellum pontificem adeo inexplanatae fuisse accipimus, ut multis mensibus tortus credatur, dum meditatur in dedicanda aede opi opiferae dicere. ceteris septimo ferme anno sermonem exprimit. multis vero talis ars eius contingit, ut avium et animalium vocis indiscreta edatur imitatio. intellectus saporum ceteris in prima lingua, homini et in palato.

tonsillae in homine, in sue glandulae. quod inter eas uvae nomine ultimo dependet palato, homini tantum est. sub ea minor lingua nulli ova generantium. opera eius gemina duabus interpositae fistulis. interior earum appellatur arteria, ad pulmonem atque cor pertinens; hanc operit in epulando, spiritu et voce in illa meante, ne, si potus cibusve in alienum deerraverit tramitem, torqueat. altera exterior appelletur sane gula, qua cibus atque potus devolant. tendit haec ad stomachum, is ad ventrem. hanc per vices operit, cum spiritus tantum aut vox commeat, ne restagnatio intempestiva alvi obstrepat. ex cartilagine et carne arteria, gula e nervo et carne constat.

cervix nulli nisi quibus utraque haec; ceteris collum, quibus tantum gula. sed quibus cervix, e multis vertebratisque orbiculatim ossibus flexilis ad circumspectum articulorum nodis iungitur, leoni tantum et lupo et hyaenae singulis rectisque ossibus rigens. cetero spinae adnectitur, spina lumbis, ossea, sed tereti structura, per mediae foramina a cerebro medulla descendente. eandem esse ei naturam quam cerebro colligunt, quoniam praetenui eius membrana modo incisa statim expiretur. quibus longa crura, his longa et colla, item aquaticis quamvis brevia crura habentibus, simili modo uncos ungues.

guttur homini tantum et subus intumescit, aquarum quae potantur

plerumque vitio. summum gulae fauces vocantur, extremum stomachus. hoc nomine est sub arteria iam carnosa inanitas adnexa spinae, ad latitudinem ac longitudinem lagonae modo fusa. quibus fauces non sunt, ne stomachus quidem est nec colla nec guttur, ut piscibus, et ora ventribus iunguntur. testudini marinae lingua nulla nec dentes: rostri acie comminuit omnia. postea arteria et stomachus denticulatus callo in modum rubi ad conficiendos cibos, decrescentibus crenis quicquid adpropinquent ventri; novissima asperitas ut scobinae fabrilis.

cor animalibus ceteris medio pectore est, homini tantum infra laevam papillam turbinato mucrone in priora eminens. piscibus solis ad os spectat. hoc primum nascentibus formari in utero tradunt, deinde cerebrum, sicut tardissime oculos, sed hos primum emori, cor novissime. huic praecipuus calor. palpitat certe et quasi alterum movetur intra animal praemolli firmoque opertum membranae involucro, munitum costarum et pectoris muro, ut pariat praecipuam vitae causam et originem. prima domicilia intra se animo et sanguini praebet sinuoso specu et in magnis animalibus triplici, in nullo non gemino. ibi mens habitat. ex hoc fonte duae grandes venae in priora et terga discurrunt sparsaque ramorum serie per alias minores omnibus membris vitalem sanguinem rigant. solum hoc viscerum vitiis non maceratur nec supplicia vitae trahit laesumque mortem ilico adfert. ceteris corruptis vitalitas in corde durat.

bruta existimantur animalium quibus durum riget, audacia quibus parvum est, pavida quibus praegrande. maximum autem est portione muribus, lepori, asino, cervo, pantherae, mustelis, hyaenis et omnibus timidis aut propter metum maleficis. in paphlagonia bina perdicibus corda. in equorum corde et boum ossa reperiuntur interdum. augeri id per singulos annos in homine et binas drachmas ponderi ad quinquagensimum annum accedere, ab eo detrahi tantundem, et ideo non vivere hominem ultra centensimum annum defectu cordis aegyptii existimant, quibus mos est cadavera adservare medicata. hirto corde gigni quosdam homines proditur neque alios fortioris esse industriae, sicut aristomenen messenium, qui trecentos occidit lacedaemonios. ipse convolneratus captus semel per cavernam lautumiarum evasit angustias, volpium aditus secutus. iterum captus sopitis custodibus somno ad ignem advolutus lora cum

corpore exussit. tertium capto lacedaemonii pectus dissecuere viventi, hirsutumque cor repertum est.

in corde summo pinguitudo quaedam est laetis extis. non semper autem in parte extorum habitum est. l. postumio l. f. albino rege sacrorum post cxxvi olympiadem, cum rex pyrrhus ex italia decessisset, cor in extis haruspices inspicere coeperunt. caesari dictatori, quo die primum veste purpurea processit atque in sella aurea sedit, sacrificanti in extis defuit. unde quaestio magna de divinatione argumentantibus, potueritne sine illo viscere hostia vivere an ad tempus amiserit. negatur cremari posse in iis qui cardiaco morbo obierint, negatur et veneno interemptis. certe exstat oratio vitelli, qua gnaeum pisonem eius sceleris coarguit, hoc usus argumento palamque testatus non potuisse ob venenum cor germanici caesaris cremari. contra genere morbi defensus est piso.

sub eo pulmo est spirandique officina attrahens ac reddens animam, idcirco spongeosus ac fistulis inanibus cavus. pauca eum, ut dictum est, habent aquatilia, cetera ova parientia exiguum spumosumque nec sanguineum. ideo non sitiunt. eadem est causa, quare sub aqua diu ranae et phocae urinentur. testudo quoque, quamvis praegrandem et sub toto tegumento habeat, sine sanguine tamen habet. quanto minor hic corporibus, tanto velocitas maior. chamaeleonti portione maximus et nihil aliud intus.

iecur in dextera parte est, in eo quod caput extorum vocant magnae varietatis. m. marcello circa mortem, cum periit ab Hannibale, defuit in extis; sequenti deinde die geminum repertum est. defuit et c. mario, cum immolaret vticae, item gaio principi kal. ian., cum iniret consulatum quo anno interfectus est, claudio successori eius quo mense interemptus est veneno. Divo Augusto spoleti sacrificanti primo potestatis suae die sex victimarum iocinera replicata intrinsecus ab ima fibra reperta sunt responsumque duplicaturum intra annum imperium. caput extorum tristis ostenti caesum quoque est, praeterquam in sollicitudine ac metu; tunc enim peremit curas. bina iocinera leporibus circa briletum et tharnen et in cherroneso ad propontidem, mirumque, tralatis alio interit alterum.

in eodem est fel, non omnibus datum animalibus. in euboeae chalcide nullum pecori, in naxo praegrande geminumque, ut sit prodigii loco utrumque advenae. equi, muli, asini, cervi, capreae,

apri, cameli, delphini non habent. murium aliqui habent. hominum paucis non est, quorum valitudo firma et vita longior. sunt qui equo non quidem in iecore esse, sed in alvo putent et cervo in cauda aut intestinis; ideo tantam amaritudinem, ut a canibus non attingantur. est autem nihil aliud quam purgamentum, pessimumque sanguinis ideo et in materia eius. certe iecur nulli est nisi sanguinem habentibus. accipit hoc a corde, cui iungitur, funditque in venas.

sed in felle nigro insaniae causa homini morsque toto reddito. hinc et in mores crimen bilis nomine: adeo magnum est in hac parte virus, cum se fundit in animum. quin et toto vagum corpore colorem oculis quoque aufert, illud quidem redditum etiam ae+nis, nigrescuntque contacta eo, ne quis miretur id venenum esse serpentium. - (carent eo quae apsinthio vescuntur in ponto) - sed avibus et parte tamen altera intestino iungitur in corvis, coturnicibus, phasianis, quibusdam intestimo tantum, ut in columbis, accipitre, murenis; paucis avium in iecore. serpentibus portione maxime copiosum. et piscibus autem est toto plerisque intestino, sicut accipitri, miluo; praeterea et in iecore est, ut cetis omnibus. - vitulis quidem marinis ad multa quoque nobile. taurosum felle aureus ducitur color. haruspices id neptuno et umoris potentiae dicavere, geminumque fuit Divo Augusto quo die apud actium vicit.

murium iocusculis fibrae ad numerum lunae in mense congruere dicuntur totidemque inveniri, quotum lumen eius sit, praeterea bruma increscere. cuniculorum exta in baetica gemina saepe reperiuntur. ranarum rubetarum altera fibra a formicis non attingitur propter venenum, ut arbitrantur. iecur maxime vetustatis patiens centenis durare annis obsidionum exempla prodidere.

exta serpentibus et lacertis longa. caecinae volaterrano dracones emicuisse de extis laeto prodigio traditur, et profecto nihil incredibile sit aestimantibus pyrrho regi quo die periit praecisa hostiarum capita repsisse sanguinem suum lambentia. exta homini ab inferiore viscerum parte separantur membrana, quam praecordia appellant, quia a corde praetenditur quod graeci appellaverunt φρένας. omnia quidem principalia viscera membranis propriis ac velut vaginis inclusit providens natura; in hac fuit et peculiaris causa vicinitas alvi, ne cibo supprimeretur animus. huic certe refertur accepta subtilitas mentis; ideo nulla est ei caro, sed nervosa exilitas. in eadem

praecipua hilaritatis sedes, quod titillatu maxime intellegitur alarum, ad quas subit, non aliubi tenuiore humana cute ideoque scabendi dulcedine ibi proxima. ob hoc in proeliis gladiatorumque spectaculis mortem cum risu traiecta praecordia attulerunt.

subest venter stomachum habentibus, ceteris simplex, ruminantibus geminus, sanguine carentibus nullus. intestinum enim ab ore incipiens quibusdam eodem reflectitur, ut saepiae et polypo. in homine adnexus infimo stomacho similis canino. his solis animalium inferiore parte angustior; itaque et sola vomunt, quia repleto propter angustias supprimitur cibus, quod accidere non potest iis quorum spatiosa laxitas eum in inferiora transmittit.

ab hoc ventriculo lactes in ove et homine, per quas labitur cibus, in ceteris hillae, a quibus capaciora intestina ad alvum, hominique flexuosissimis orbibus. idcirco magis avidi ciborum quibus ab alvo longius spatium. item minus sollertes quibus obesissimus venter. aves quoque geminos sinus habent quaedam: unum quo mergunt recentia ut guttur, alterum in quem ex eo dimittunt concoctione maturata, ut gallinae, palumbes, columbae, perdices. ceterae fere carent eo, sed gula patentiore utuntur, ut graculi, corvi, cornices. quaedam neutro modo, sed ventrem proximum habent, quibus praelonga colla et angusta, ut porphyrioni. venter solidipedum asper et durus; terrestrium aliis denticulatae asperitatis, aliis cancellatim mordacis, quibus neque dentes utrimque nec ruminatio. hic conficiuntur cibi, hinc in alvum delabuntur. media haec umbilico adnexa omnibus, in homine suillae infima parte similis, a graecis appellatur colon, ubi dolorum magna causa. angustissima canibus, qua de causa vehementi nisu nec sine cruciatu levant eam. insatiabilia animalium quibus a ventre protinus recto intestino transeunt cibi, ut lupis cervariis et inter aves mergis. ventres elephanto quattuor, cetera subus similia, pulmo quadruplo maior bubulo. avibus venter carnosus callosusque. in ventre hirundinum pullis lapilli candido aut rubenti colore, qui chelidonii vocantur, magicis narrati artibus, reperiuntur; et in iuvencarum secundo ventre pilae rotunditate nigricans tophus, nullo pondere, singulare, ut putant, remedium aegre parientibus, si tellurem non attigerit.

ventriculus atque intestina pingui ac tenui omento integuntur praeterquam ova gignentibus. huic adnectitur lien in sinistra parte

adversus iecori, cum quo locum aliquando permutat, sed prodigiose. quidam eum putant inesse ova parientibus, item serpentibus admodum exiguum. ita certe apparet in testudine et crocodilo et lacertis et ranis. aegocephalo avi non inesse constat neque iis quae careant sanguine. peculiare cursus inpedimentum aliquando in eo, quam ob rem minuitur cursorum laborantibus. et per vulnus etiam exempto vivere animalia tradunt. sunt qui putent adimi simul risum homini intemperantiamque eius constare lienis magnitudine. asiae regio scepsis appellatur, in qua minimos esse pecori tradunt, et inde ad lienem invecta remedia.

at in brileto et tharne quaterni renes cervis, contra pinnatis squamosisque nulli. de cetero summis adhaerent lumbis. dexter omnibus elatior et minus pinguis sicciorque. utrique autem pinguitudo e medio exit praeterquam in vitulo marino. animalia in renibus pinguissima, oves quidem letaliter circum eos concreto pingui. aliquando in iis inveniuntur lapilli. - renes habent omnia quadripedum quae animal generant, ova parientium testudo sola, quae et alia omnia viscera, sed ut homo bubulis similes velut e multis renibus compositos.

pectus, hoc est ossa, praecordiis et vitalibus natura circumdedit, at ventri, quem necesse erat increscere, ademit: nulli animalium circa ventrem ossa. pectus homini tantum latum, reliquis carinatum, volucribus magis et inter eas aquaticis maxime. costae homini octonae, subus denae, cornigeris xiii, serpentibus xxx.

infra alvum est a priore parte vesica, quae nulli ova gignentium praeter testudinem, nulli nisi sanguineum pulmonem habenti, nulli pedibus carentium. inter eam et alvum arteriae ad pubem tendentes, quae ilia appellantur. in vesica lupi lapillus, qui syrites vocatur, sed in hominum quibusdam diro cruciatu subinde nascentes calculi et saetarum capillamenta. vesica membrana constat, quae volnerata cicatrice non solidescit nec qua cerebrum aut cor involvitur; plura enim membranarum genera.

feminis eadem omnia praeterque vesicae iunctus utriculus, unde dictus uterus. quod alio nomine locos appellant, hoc in reliquis animalibus volvam. haec viperae et intra se parientibus duplex, ova generantium adnexa praecordiis, et in muliere geminos sinus ab utraque parte laterum habet, funebris quotiens versa spiritum inclusit.

boves gravidas negant praeterquam dextero volvae sinu ferre, etiam cum geminos ferant. volva eiecto partu melior quam edito: eiecticia vocatur illa, haec porcaria. primiparae suis optima, contra effetis. a partu, praeterquam eodem die suis occisae, livida ac macra. nec novellarum suum praeter primiparas probatur potiusque veterum, dum ne effetarum, nec biduo ante partum aut post partum aut quo eiecerint die. proxima ab eiecticia est occisae uno die post partum. huius et sumen optimum, si modo fetus non hauserit; eiecticiae deterrimum. antiqui abdomen vocabant prius quam calleret, incientes occidere non adsueti.

cornigera una parte dentata et quae in pedibus talos habent sebo pinguescunt, bisulca scissisve in digitos pedibus et non cornigera adipe. concretus hic et, cum refrixit, fragilis semperque in fine carnis; contra pingue inter carnem cutemque suco liquidum. quaedam non pinguescunt, ut lepus, perdix. steriliora cuncta pinguia et in maribus et in feminis; senescunt quoque celerius praepinguia. omnibus animalibus est quoddam in oculis pingue. adips cunctis sine sensu, quia nec arterias habet nec venas. plerisque animalium et pinguitudo sine sensu; quam ob causam sues spirantes a muribus tradunt adrosos, quin et l. aproni consularis viri filio detractos adipes levatumque corpus inmobili onere.

medulla ex eodem videtur esse, iuventae rubens, in senecta albescens. non nisi cavis haec ossibus nec cruribus iumentorum aut canum; quare fracta non feruminantur, quod defluente evenit medulla. est autem pinguis iis quibus adips, sebosa cornigeris, nervosa et in spina tantum dorsi ossa non habentibus, ut piscium generi, ursis nulla, leoni in feminum et bracchiorum ossibus paucis exigua admodum; cetera sunt tanta duritia, ut ignis elidatur velut e silice. et iis dura quae non pinguescunt, asinorum ad tibias canora. delphinis ossa, non spinae, animal enim pariunt; serpentibus spinae. aquatilium mollibus nulla, sed corpus circulis carnis vinctum, ut saepiae atque lolligini. et insectis negatur aeque esse ulla. cartilaginea aquatilium habent medullam in spina, vituli marini cartilaginem, non ossa. item omnium auriculae ac nares, quae modo eminent, flexili mollitia, naturae providentia ne frangerentur. cartilago rupta non solidescit nec praecisa ossa recrescunt praeterquam veterinis ab ungula ad suffraginem ... homo in

longitudinem usque ad ter septenos annos, tum deinde ad plenitudinem. maxime autem pubescens nodum quendam solvere, et praecipue aegritudine, sentitur.

nervi, orsi a corde bubuloque etiam circumvoluti, similem naturam et causam habent, in omnibus lubricis applicati ossibus nodosque corporum, qui vocantur articuli, aliubi interventu, aliubi ambitu, aliubi transitu ligantes, hic teretes, illic lati, ut quaeque poscit figuratio. nec hi solidantur incisi, mirumque, vulneratis summus dolor, praesectis nullus. sine nervis sunt quaedam animalia, ut pisces, arteriis enim constant; sed neque his molles piscium generis. ubi sunt nervi, interiores conducunt membra, superiores revocant.

inter hos latent arteriae, id est spiritus semitae; his innatant venae, id est sanguinis rivi. arteriarum pulsus in cacumine maxime membrorum evidens, index fere morborum, in modulos certos legesque metricas per aetates - stabilis aut citatus aut tardus - discriptus ab herophilo medicinae vate miranda arte; nimiam propter suptilitatem desertus, observatione tamen crebri aut languidi ictus gubernacula vitae temperat. arteriae carent sensu, nam et sanguine. nec omnes vitalem continent spiritum, praecisisque torpescit tantum pars ea corporis. aves nec venas nec arterias habent, item serpentes, testudines, lacertae, minimumque sanguinis.

venae in praetenues postremo fimbrias supter totam cutem dispersae adeo in angustam suptilitatem tenuantur, ut penetrare sanguis non possit aliudve quam excitus umor ab illo, qui cacuminibus innumeris sudor appellatur. venarum in umbilico nodus ac coitus.

sanguis quibus multus et pinguis, iracundi. maribus quam feminis nigrior et iuventae quam senio, et inferiore parte pinguior. magna et in eo vitalitatis portio. emissus spiritum secum trahit, tactum tamen non sentit. animalium fortiora quibus crassior sanguis, sapientiora quibus tenuior, timidiora quibus minimus aut nullus. taurorum celerrime coit atque durescit - ideo pestifer potu - , proxime aprorum, at cervorum caprearumque et bubalorum omnino non spissatur. pinguissimus asinis, homini tenuissimus. iis, quibus plus quaterni pedes, nullus. obesis minus copiosus, quoniam absumitur pingui. profluvium eius uni fit in maribus homini, aliis nare alterutra vel utraque, quibusdam per inferna, multis per ora stato tempore, ut

nuper macrino visco praetorio viro et omnibus annis volusio saturnino urbis praefecto, qui nonagensimum etiam excessit annum. solum hoc in corpore temporarium sentit incrementum, si quidem hostiae abundantiorem fundunt, si prius bibere.

quae animalium latere certis temporibus diximus, non habent tunc sanguinem praeter exiguas admodum circa corda guttas, miro opere naturae, sicut in homine vim eius ad minima momenta mutari, non somno tantum minore materia suffusi, verum ad singulos animi habitus, pudore, ira, metu, palloris pluribus modis, item ruboris: alius enim irae et alius verecundiae. nam in metu refugere et nusquam esse certum est multisque non profluere transfossis, quod homini tantum evenit. nam quae mutare diximus colorem, alienum accipiunt quodam repercussu; homo solus in se mutat. morbi omnes morsque sanguinem absumunt.

sunt qui suptilitatem animi constare non tenuitate sanguinis putent, sed cute operimentisque corporum magis aut minus bruta esse, ut ostreas et testudines; boum terga, saetas suum obstare tenuitati immeantis spiritus, nec purum liquidumque tramitti; sic et in homine, cum crassior callosiorve excludat cutis: ceu vero non crocodilis et duritia tergoris tribuatur et sollertia. hippopotami corio crassitudo talis, ut inde tornentur hastae, et tamen quaedam ingenio medica diligentia. elephantorum quoque tergora inpenetrabiles caetras habent, cum tamen omnium quadripedum suptilitas animi praecipua perhibetur illis. ergo cutis ipsa sensu caret, maxime in capite. ubicumque per se ac sine carne est, volnerata non coit, ut in bucca cilioque.

quae animal pariunt, pilos habent; quae ova, pinnas aut squamas aut corticem, ut testudines, aut cutem puram, ut serpentes. pinnarum caules omnium cavi. praecisae non crescunt, evulsae renascuntur. membranis volant fragilibus insecta, umentibus hirundines in mari, siccis inter tecta. vespertilionum alae quoque articulos habent.

pili e cute exeunt crassa hirti, feminis tenuiores; equis in iuba largi, in armis leoni, dasypodi et in buccis intus et sub pedibus, quae utraque trogus et in lepore tradidit, hoc exemplo libidinosiores hominum quoque hirtos colligens. villosissimum animalium lepus. pubescit homo solus, quod nisi contigit, sterilis in gignendo est, seu mas seu femina. pili in homine partim simul, partim postea

gignuntur. hi castratis non nascuntur, congeniti autem non desinunt, sicut nec feminis magno opere; inventae tamen quaedam defluvio capitis invalidae, ut et lanugine oris, cum menstrui cursus stetere. quibusdam post genituri sponte non gignuntur. quadripedibus pilum cadere atque subnasci annuum est. viris crescunt maxime in capillo, mox in barba. recisi non, ut herbae ac cetera, ab incisura augentur, sed ab radice exeunt. crescunt et in quibusdam morbis, maxime phthisi, et in senecta, defunctis quoque corporibus. libidinosis congeniti maturius defluunt, agnati celerius crescunt. quadripedibus senectute crassescunt lanaeque rarescunt. quadripedum dorsa pilosa, ventres glabri. - boum coriis glutinum excoquitur, taurorumque praecipuum. -

mammas homo solus e maribus habet, cetera animalia mammarum notas tantum. sed ne feminae quidem in pectore nisi quae possunt partus suos attollere. ova gignentium nulli; nec lact nisi animal parienti. volucrum vespertilioni tantum: fabulosum enim arbitror de strigibus, ubera eas infantium labris inmulgere. esse in maledictis iam antiquis strigem convenit, sed quae sit avium, constare non arbitror. asinis a fetu dolent, ideo sexto mense arcent partus, cum equae anno prope toto praebeant. quibus solida ungula nec supra geminos fetus, haec omnia binas habent mammas, nec aliubi quam in feminibus. eodem loci bisulca et cornigera, boves quaternas, oves et caprae binas. quae numeroso fecunda partu et quibus digiti in pedibus, haec plures habent et toto ventre duplici ordine, ut sues, generosae duodenas, volgares binis minus; similiter canes. alia ventre medio quaternas, ut pantherae, alia binas, ut leaenae. elephans tantum sub armis duas nec in pectore, sed citra in alis occultas. nulli in feminibus digitos habentium. primis genitis in quoque partu sues primas praebent - eae sunt faucibus proximae - , et suam quisque novit in fetu quo genitus est ordine, eaque alitur nec alia. detracto illa alumno suo sterilescit ilico ac resilit, uno vero ex omni turba relicto sola munifex, quae genito fuerat attributa, dependet. ursae mammas quaternas gerunt, delphini binas in ima alvo papillas tantum nec evidentes et paulum in oblicum porrectas. neque aliud animal in cursu lambitur. et ballaenae autem vitulique marini mammis nutriunt fetus.

mulieri ante septimum mensem profusum lact inutile, ab eo

mense, quo vitales partus, salubre. plerisque autem totis mammis atque etiam alarum sinu fluit. cameli lact habent, donec iterum gravescant. suavissimum id existimatur ad unam mensuram tribus aquae additis. bos ante partum non habet, et primo semper a partu colostrae fiunt, ni admisceatur aqua, in pumicis modum coeunte duritia. asinae praegnates continuo lactescunt. pullos earum, ubi pingue pabulum, biduo a partu maternum lact gustasse letale est. genus mali vocatur colostratio. caseus non fit ex utrimque dentatis, quoniam eorum lact non coit. tenuissimum camelis, mox equis, crassissimum asinae, ut quo coaguli vice utantur. conferre aliquid et candori in mulierum cute existimatur. poppaea certe, domiti neronis coniunx, quingentas per omnia secum fetas trahens, balnearum etiam solio totum corpus illo lacte macerabat, extendi quoque cutem credens. omne autem igne spissatur, umore fervescit. bubulum caseo fertilius quam caprinum, ex eadem mensura paene altero tanto. quae plures quaternis mammas habent, caseo inutilia, et meliora quae binas.

coagulum hinnulei, leporis, haedi laudatum, praecipuum tamen dasypodis, quod et profluvio alvi medetur, unius utrimque dentatorum. mirum barbaras gentes, quae lacte vivant, ignorare aut spernere tot saeculis casei dotem, densantes id alioqui in acorem iucundum et pingue butyrum. spuma id est, lacte concretior lentiorque quam quod serum vocatur. non omittendum in eo olei vim esse et barbaros omnes infantesque nostros ita ungui.

laus caseo romae, ubi omnium gentium bona comminus iudicantur, e provinciis nemausensi praecipua, lesurae gabalicoque pagis, sed brevis ac musteo tantum commendatio. duobus alpes generibus pabula sua adprobant: delmaticae docleatem mittunt, ceutronicae vatusicum. numerosior appennino: cebanum hic e liguria mittit ovium maxime lacte, sassinatem ex vmbria mixtoque etruriae atque liguriae confinio luniensem magnitudine conspicuum, quippe et ad singula milia pondo premitur, proximum autem urbi vestinum eumque e caedicio campo laudatissimum. et caprarum gregibus sua laus est, in recenti maxime augente gratiam fumo, qualis in ipsa urbe conficitur cunctis praeferendus; nam galliarum sapor medicamenti vim optinet. trans maria vero bithynus fere in gloria est. inesse pabulis salem, etiam ubi non detur, ita maxime intellegitur, omni in

salem caseo senescente, quales redire in musteum saporem aceto et thymo maceratos certum est. tradunt zoroastren in desertis caseo vixisse annis xx ita temperato, ut vetustatem non sentiret.

terrestrium solus homo bipes. uni iuguli, umeri, ceteris armi; uni ulnae. quibus animalium manus sunt, intus tantum carnosae, extra nervis et cute constant.

digiti quibusdam in manibus seni. m. corani ex patricia gente filias duas ob id sedigitas accipimus appellatas et volcacium sedigitum, inlustrem in poetica. hominis digiti ternos articulos habent, pollex binos; et digitis adversus universis flectitur, per se vero in oblicum porrigitur, crassior ceteris. huic minimus mensura par, ac duo reliqui sibi, inter quos medius longissime protenditur. quibus ex rapina victus quadripedum, quini digiti in prioribus pedibus, in reliquis quaterni. leones, lupi, canes, panthera in posterioribus quoque quinos ungues habent uno iuxta cruris articulum dependente; reliqua, quae sunt minora, et digitos quinos.

bracchia non omnibus paria secum. studioso threci in c. caesaris ludo notum est dexteram fuisse proceriorem.

animalium quaedam ut manibus utuntur priorum ministerio pedum sedentque ad os illis admoventia cibos, ut sciuri. nam simiarum genera perfectam hominis imitationem continent facie, naribus, auribus, palpebris, quas solae quadripedum et in inferiore habent gena, iam mammas in pectore et bracchia et crura in contrarium similiter flexa, in manibus ungues, digitos longioremque medium. pedibus paulum differunt; sunt enim ut manus praelongae, sed vestigium palmae simile faciunt. pollex quoque iis et articuli ut homini, ac praeter genitale - et hoc in maribus tantum - viscera etiam interiora omnia ad exemplar.

vngues clausulae nervorum summae existimantur. omnibus hi quibus et digiti. sed simiae imbricati, hominibus lati - et defuncto crescunt - , rapacibus unci, ceteris recti, ut canibus, praeter eum qui a crure plerisque dependet. omnia digitos habent quae pedes, excepto elephanto; huic enim informes, numero quidem v, sed indivisi ac leviter discreti ungulisque, non unguibus, similes, et pedes maiores priores, in posterioribus articuli breves. idem poplites intus flectit hominis modo, cetera animalia in diversum posterioribus pedibus quam prioribus. nam quae animal generant, genua ante se flectunt et

suffraginum artus in aversum.

homini genua et cubita contraria, item ursis et simiarum generi, ob id minime pernicibus. ova parientibus quadripedum, crocodilo, lacertis, priora genua post curvantur, posteriora in priorem partem. sunt autem crura his obliqua, humani pollicis modo. sic et multipedibus praeterquam novissima salientibus. aves, ut quadripedes, alas in priora curvant, suffraginem in posteriora.

hominis genibus quaedam et religio inest observatione gentium. haec supplices attingunt, ad haec manus tendunt, haec ut aras adorant, fortassis quia inest iis vitalitas. namque in ipsa genus utriusque commissura, dextra laevaque, a priore parte gemina quaedam buccarum inanitas inest, qua perfossa ceu iugulo spiritus fluit. inest et aliis partibus quaedam religio, sicut in dextera: osculis aversa adpetitur, in fide porrigitur. antiquis graeciae in supplicando mentum attingere mos erat. est in aure ima memoriae locus, quem tangentes antestamur; est post aurem aeque dexteram nemeseos, quae dea latinum nomen ne in capitolio quidem invenit, quo referimus tactum ore proximum a minimo digitum, veniam sermonis a diis ibi recondentes.

varices in cruribus viro tantum, mulieri raro. c. marium, qui vii consul fuit, stanti sibi extrahi passum unum hominum oppius auctor est.

omnia animalia a dextris partibus incedunt, sinistris incubant. reliqua ut libitum est gradiuntur, leo tantum et camelus pedatim, hoc est, ut sinister pes non transeat dextrum, sed subsequatur. pedes homini maximi, feminis tenuiores in omni genere. surae homini tantum et crura carnosa. reperitur apud auctores quendam in aegypto non habuisse suras. vola homini tantum exceptis quibusdam. namque et hinc cognomina inventa planci, plauti, pansae, Scauri, sicut a cruribus vari, vatiae, vatini, quae vitia et in quadripedibus. solidas habent ungulas quae non sunt cornigera; igitur pro iis telum ungulae ictus est illis. nec talos habent eadem, at quae bisulca sunt, habent. iidem digitos habentibus non sunt, neque in prioribus omnino pedibus ulli. camelo tali similes bubulis, sed minores paulo; est enim bisulcum discrimine exiguo; pes in vestigio carnosus ut ursi, qua de causa in longiore itinere sine calceatu fatiscunt.

vngulae veterino tantum generi renascuntur. sues in illyrico

quibusdam locis solidas habent ungulas. cornigera fere bisulca; solida ungula et bicorne nullum, unicorne asinus tantum indicus; unicorne et bisulcum oryx. talos asinus indicus unus solidipedum habet, nam sues ex utroque genere existimantur, ideo foedi earum. hominem qui existimarunt habere, facile convicti. lynx tantum digitos habentium simile quiddam talo habet; leo etiamnum tortuosius. talus autem rectus est in articulo pedis, ventre eminens concavo, in vertebra ligatus.

avium aliae digitatae, aliae palmipedes, aliae inter utrumque, divisis digitis adiecta latitudine. sed omnibus quaterni digiti, tres in priore parte, unus a calce. hic deest quibusdam longa crura habentibus. iynx sola utrimque binos habet; eadem linguam serpentium similem in magnam longitudinem porrigit; collum circumagit in aversam se; ungues ei grandes ceu graculis. avium quibusdam gravioribus in cruribus additi radii, nulli uncos habentium ungues. longipedes porrectis ad caudam cruribus volant; quibus breves, contractis ad medium. qui negant volucrem ullam sine pedibus esse, confirmant et apodas habere, docent et drepanin, quae ex his rarissime apparet. - visae iam et serpentes anserinis pedibus. -

insectorum pedes primi longiores duros habentibus oculos, ut subinde pedibus eos tergeant, ceu notamus in muscis. quae ex iis novissimos habent longos, saliunt, ut locustae. omnibus autem his seni pedes. araneis quibusdam praelongi accedunt bini. internodia singulis terna. octonos et marinis esse diximus, polypis, saepiis, lolligini, cancris, qui bracchia in contrarium movent, pedes in orbem aut in oblicum; iidem solis animalium rotundi. cetera binos pedes duces habent, cancri tantum quaternos. quae hunc numerum pedum excessere terrestria, ut plerique vermes, non infra duodenos habent, aliqua vero et centenos. numerus pedum inpar nulli est.

solidipedum crura statim iusta nascuntur mensura, postea exporrigentia se verius quam crescentia. itaque in infantia scabunt aures posterioribus pedibus, quod addita aetate non queunt, quia longitudo superficiem corporum solam ampliat. hac de causa inter initia pasci nisi summissis genibus non possunt nec usque dum cervix ad iusta incrementa perveniat. pumilionum genus in omnibus animalibus est, atque etiam inter volucres.

genitalia maribus quibus essent retrorsa diximus. ossea sunt lupis,

vulpibus, mustelis, viverris, unde etiam calculo humano remedia praecipua. urso quoque, simul atque expiraverit, cornescere aiunt. camelino arcus intendere orientis populis fidissimum. nec non aliqua gentium quoque in hoc discrimina et sacrorum etiam, citra perniciem amputantibus matris deum gallis. contra mulierum paucis prodigiosa adsimulatio, sicut hermaphroditis utriusque sexus, quod etiam quadripedum generi accidisse neronis principatu primum arbitror. ostentabat certe hermaphroditas subiunctas carpento suo equas, in treverico galliae agro repertas: ceu plane visenda res esset principem terrarum insidere portentis.

testes pecori armentoque ad crura decidui, subus adnexi. delphino praelongi ultima conduntur alvo; et elephanto occulti. ova parientium lumbis intus adhaerent, qualia ocissima in venere. piscibus serpentibusque nulli, sed eorum vice binae ad genitalia a renibus venae. buteonibus terni. homini tantum iniuria aut sponte naturae franguntur, idque tertium ab hermaphroditis et spadonibus semiviri genus habent. - mares in omni genere fortiores sunt praeterquam pantheris et ursis.

caudae praeter hominem ac simias omnibus fere et animal et ova gignentibus, pro desiderio corporum nudae hirtis, ut apris, parvae villosis, ut ursis, praelongae saetosis, ut equis. amputatae lacertis et serpentibus renascuntur. piscium meatus gubernaculi modo regunt atque etiam in dexteram ac laevam motae ut remigio quodam inpellunt. lacertis inveniuntur et geminae. boum caudis longissimus caulis atque in ima parte hirtus; idem asinis longior quam equis, sed saetosus veterinis. leoni in prima parte ut bubus et sorici, pantheris non item; vulpibus et lupis villosus ut ovibus, quibus procerior. sues intorquent, canum degeneres sub alvum reflectunt.

vocem non habere nisi quae pulmonem et arterias habeant, hoc est nisi quae spirent, aristoteles putat. idcirco et insectis sonum esse, non vocem, intus inmeante spiritu et incluso sonante; alia murmur edere, ut apes, alia contractum stridorem, ut cicadas, receptum enim duobus sub pectore cavis spiritum, mobili occursante membrana intus, attritu eius sonare. muscas, apes, cetera similia cum volatu et incipere audiri et desinere, sonum enim attritu et interiore aura, non anima, reddi; locustas pinnarum et feminum attritu sonare. credatur sane item aquatilium pectines stridere, cum volant, mollia et crusta intecta nec

vocem nec sonum ullum habere: sed ceteri pisces, quamvis pulmone et arteria careant, non in totum sine ullo sunt sono - stridorem eum dentibus fieri cavillantur - , et is, qui caper vocatur in acheloo amne, grunnitum habet et alii, de quibus diximus. ova parientibus sibilus, serpentibus longus, testudini abruptus. ranis sui generis, ut dictum est, nisi si et in his ferenda dubitatio est, quia vox in ore concipitur, non in pectore. multum tamen in his refert et locorum natura: mutae in macedonia traduntur, muti et apri. avium loquaciores quae minores, et circa coitus maxime: aliis in pugna vox, ut coturnicibus, aliis ante pugnam, ut perdicibus, aliis cum vicere, ut gallinaceis. isdem sua maribus, aliis eadem et feminis, ut lusciniarum generi. quaedam toto anno canunt, quaedam certis temporibus, ut in singulis dictum est. elephans citra nares ore ipso sternumento similem elidit sonum, per nares autem turbarum raucitati. bubus tantum feminis vox gravior, in alio omni genere exilior quam maribus, in homine etiam castratis. infantis in nascendo nulla auditur ante quam totus emergat utero. primus sermo anniculo; set semenstris locutus est croesi filius et in crepundiis prodigio, quo totum id concidit regnum. qui celerius fari coepere, tardius ingredi incipiunt. vox roboratur a xiiii annis; eadem in senecta exilior, neque in alio animalium saepius mutatur.

mira praeterea sunt de voce digna dictu: theatrorum in orchestris scobe aut harena superiacta devoratur, item rudi parietum circumiectu, doliis etiam inanibus. currit eadem recto vel conchato parietum spatio, quamvis levi sono dicta verba ad alterum caput perferens, si nulla inaequalitas impediat. vox in homine magnam voltus habet partem. adgnoscimus ea prius quam cernamus non aliter quam oculis, totidemque sunt hae, quot in rerum natura mortales, et sua cuique sicut facies. hinc illa gentium totque linguarum toto orbe diversitas, hinc tot cantus et moduli flexionesque, sed ante omnia explanatio animi, quae nos distinxit a feris et inter ipsos quoque homines discrimen alterum, aeque quam a beluis, fecit.

membra animalibus adgnata inutilia sunt, sicut sextus homini semper digitus. placuit in aegypto nutrire portentum, binis et in aversa capitis parte oculis hominem, sed iis non cernentem.

miror equidem aristotelem non modo credidisse praescita vitae esse aliqua in corporibus ipsis, verum etiam prodidisse. quae

quamquam vana existimo nec sine cunctatione proferenda, ne in se quisque ea auguria anxie quaerat, attingam tamen, quia tantus vir in doctrinis non sprevit. igitur vitae brevis signa ponit raros dentes, praelongos digitos, plumbeum colorem pluresque in manu incisuras nec perpetuas. contra longae esse vitae incurvos umeris et in manu unam aut duas incisuras longas habentes et plures quam xxxii dentes, auribus amplis. nec universa haec, ut arbitror, sed singula observat, frivola, ut reor, et volgo tamen narrata. addidit morum quoque spectus simili modo apud nos trogus, et ipse auctor e severissimis, quos verbis eius subiciam: “frons quibus est magna, segnem animum subesse significat; quibus parva, mobilem; quibus rotunda, iracundum, velut hoc vestigio tumoris apparente. supercilia quibus porriguntur in rectum, molles significant; quibus iuxta nasum flexa sunt, austeros; quibus iuxta tempora inflexa, derisores; quibus in totum demissa, malivolos et invidos. oculi quibus utrimque sunt longi, malificos moribus esse indicant; qui carnosos a naribus angulos habent, malitiae notam praebent; candida pars extenta notam inpudentiae habet; qui identidem operiri solent, inconstantiae. oricularum magnitudo loquacitatis et stultitiae nota est.” hactenus trogus.

animae leonis virus grave, ursi pestilens. contacta halitu eius nulla fera attingit, ociusque putrescunt adflata. e reliquis homini tantum infici natura voluit pluribus modis, et ciborum ac dentium vitiis, sed maxime senio. dolorem sentire non poterat, tactu sensuque omni carebat sine qua nihil sentitur; eadem commeabat recens assidue, exitura supremo et sola ex homine superfutura, denique haec trahebatur e caelo: huius quoque tamen reperta poena est, ut neque id ipsum, quo vivitur, in vita iuvaret. parthorum populis haec praecipue et a iuventa propter indiscretos cibos, namque et vino faetent ora nimio; sed sibi proceres medentur grano assyrii mali, cuius et suavitas praecipua, in esculenta addito.

elephantorum anima serpentes extrahit, cervorum urit. diximus hominum genera qui venena serpentium suctu corporibus eximerent. quin et subus serpentes in pabulo sunt, et aliis venenum est. quae insecta appellavimus, omnia olei aspersu necantur, vultures unguenti - qui fugat alios appetunt odorem - , scarabaei rosa. quasdam serpentes scorpio occidit. scythae sagittas tingunt viperina sanie et

humano sanguine; inremediabile id scelus: mortem ilico adfert levi tactu.

quae animalium pascerentur veneno diximus. quaedam, innocua alioqui, venenatis pasta noxia fiunt et ipsa. apros in pamphylia et ciliciae montuosis salamandra ab iis devorata qui edere, moriuntur: neque enim est intellectus ullus in odore vel sapore; et aqua vinumque interemit salamandra ibi inmortua vel si omnino biberit unde potetur, item rana quam rubetam vocant. tantum insidiarum est vitae! vespae serpente avide vescuntur, quo alimento mortiferos ictus faciunt. adeoque magna differentia est victus, ut in tractu pisce viventium theophrastus prodat boves quoque pisce vesci, sed non nisi vivente.

homini cibus utilissimus simplex, acervatio saporum pestifera et condimento perniciosior. difficulter autem perficiuntur omnia in cibis acria, aspera, inconsueta, varia, nimia et avide hausta, et aestate quam hieme difficilius et in senecta quam in iuventa. vomitiones homini ad haec in remedium excogitatae frigidiora corpora faciunt, inimicae oculis maxime ac dentibus.

somno concoquere corpulentiae quam firmitati utilius; ideo athletas ambulatione malunt cibos perficere. pervigilio quidem praecipue vincuntur cibi. augescunt corpora dulcibus atque pinguibus et potu, minuuntur siccis et aridis fridigisque ac siti. quaedam animalia et pecudes quoque in africa quarto die bibunt. homini non utique septimo letalis inedia; durasse et ultra undecimum plerosque certum est. morbus esuriendi semper inexplebili aviditate uni animalium homini.

quaedam rursus exiguo gustu famem ac sitim sedant conservantque vires, ut butyrum, hippace, glycyrrhiza. perniciosissimum autem et in omni quidem vita quod nimium, praecipue tamen corpori, minuique quod gravet quolibet modo utilius.

verum ad reliqua naturae transeamus.

LIBER XII

animalium omnium quae nosci potuere naturae generatim membratimque ita se habent. restat ut neque ipsa anima carentia - quandoquidem nihil sine ea vivit - , terra edita et inde eruta, dicantur ac nullum sileatur rerum naturae opus. diu fuere occulta eius beneficia, summumque munus homini datum arbores silvaeque intellegebantur. hinc primum alimenta, harum fronde mollior specus, libro vestis. etiam nunc gentes sic degunt. quo magis ac magis admirari subit his a principiis caedi montes in marmora, vestes ad seras peti, unionem in rubri maris profunda, zmaragdum in ima tellure quaeri. ad hoc excogitata sunt aurium vulnera, nimirum quoniam parum erat collo, crinibus, manibus gestari, nisi infoderentur etiam corpori. quam ob rem sequi par est ordinem vitae et arbores ante alia dicere ac moribus primordia ingerere nostris.

haec fuere numinum templa, priscoque ritu simplicia rura etiam nunc deo praecellentem arborem dicant. nec magis auro fulgentia atque ebore simulacra quam lucos et in iis silentia ipsa adoramus. arborum genera numinibus suis dicata perpetuo servantur, ut iovi aesculus, apollini laurus, minervae olea, veneri myrtus, herculi populus. quin et silvanos faunosque et dearum genera silvis ac sua numina tamquam e caelo attributa credimus. arbores postea blandioribus fruge sucis hominem mitigavere. ex his recreans membra olei liquor viresque potus vini, tot denique sapores anni sponte venientes et mensae, depugnetur licet earum causa cum feris et pasti naufragorum corporibus pisces expetantur, etiam nunc tamen secundae. mille praeterea sunt usus earum, sine quis vita degi non possit. arbore sulcamus maria terrasque admovemus, arbore exaedificamus tecta. arborea et simulacra numinum fuere nondum pretio excogitato beluarum cadaveri atque ut, a diis nato iure luxuriae, eodem ebore numinum ora spectarentur et mensarum pedes. produnt alpibus coercitas ut tum inexsuperabili munimento gallias hanc primum habuisse causam superfundendi se italiae, quod helico ex helvetiis civis earum fabrilem ob artem romae commoratus ficum siccam et uvam oleique ac vini promissa remeans secum tulisset. quapropter haec vel bello quaesisse venia sit.

sed quis non iure miretur arborem umbrae gratia tantum ex alieno petitam orbe platanus haec est, in mare ionium diomedis insula tenus eiusdem tumuli gratia primum invecta, inde in siciliam transgressa atque inter primas donata italiae et iam ad morinos usque pervecta ac tributarium etiam detinens solum, ut gentes vectigal et pro umbra pendant. dionysius prior siciliae tyrannus regium in urbem transtulit eas domus suae miraculum, ubi postea factum gymnasium; nec potuisse in amplitudinem augescere aut alias fuisse in italia ac nominatim hispania apud auctores invenitur.

hoc actum circa captae urbis aetatem, tantumque postea honoris increvit, ut mero infuso enutriantur. conpertum id maxime prodesse radicibus, docuimusque etiam arbores vina potare.

celebratae sunt primum in ambulatione academiae athenis cubitorum xxxiii radice ramos antecedente. nunc est clara in lycia fontis gelidi socia amoenitate, itineri adposita, domicilii modo cava octoginta atque unius pedum specu, nemorosa vertice et se vastis protegens ramis arborum instar, agros longis obtinens umbris ac, ne quid desit speluncae imagini, saxea intus crepidinis corona muscosos conplexa pumices, tam digna miraculo, ut licinius mucianus ter consul et nuper provinciae eius legatus prodendum etiam posteris putaverit, epulatum intra eam se cum duodevicensimo comite, large ipsa toros praebente frondis, ab omni adflatu securum, optantem imbrium per folia crepitus, laetiorem quam marmorum nitore, picturae varietate, laquearium auro cubuisse in eadem. aliud exemplum gai principis in veliterno rure mirati unius tabulata laxeque ramorum trabibus scamna patula et in ea epulati, cum ipse pars esset umbrae, quindecim convivarum ac ministerii capaci triclinio, quam cenam appellavit ille nidum. est gortynae in insula creta iuxta fontem platanus una insignis utriusque linguae monimentis, numquam folia dimittens, statimque ei graeciae fabulositas superfuit iovem sub ea cum europa concubuisse, ceu vero non alia eiusdem generis esset in cypro. sed ex ea primum in ipsa creta, ut est natura hominum novitatis avida, platani satae regeneravere vitium, quandoquidem commendatio arboris eius non alia maior est quam soles aestate arcere, hieme admittere. inde in italiam quoque ad surburbana sua claudio principe marcelli aesernini libertus, sed qui se potentiae causa caesaris libertis adoptasset, spado

thessalicus praedives, ut merito dici possit is quoque dionysius, transtulit id genus. durantque et in italia portenta terrarum praeter illa scilicet quae ipsa excogitavit italia.

namque et chamaeplatani vocantur coactae brevitatis, quoniam arborum etiam abortus invenimus. hoc quoque ergo in genere pumilionum infelicitas dicta erit. fit autem et serendi genere et recidendi. primus c. matius ex equestri ordine, Divi Augusti amicus, invenit nemora tonsilia intra hos lxxx annos.

peregrinae et cerasi persicaeque et omnes quarum graeca nomina aut aliena, sed quae ex iis incolarum numero esse coepere, dicentur inter frugiferas. in praesentia externas persequemur a salutari maxime orsi.

malus assyria, quam alii medicam vocant, venenis medetur. folium eius est unedonis intercurrentibus spinis. pomum ipsum alias non manditur, odore praecellit foliorum quoque, qui transit in vestes una conditus arcetque animalium noxia. arbor ipsa omnibus horis pomifera est, aliis cadentibus, aliis maturescentibus, aliis vero subnascentibus. temptavere gentes transferre ad sese propter remedii praestantiam fictilibus in vasis, dato per cavernas radicibus spiramento, qualiter omnia transitura longius seri aptissime transferrique meminisse conveniet, ut semel quaeque dicantur. sed nisi apud medos et in perside nasci noluit. haec est cuius grana parthorum proceres incoquere diximus esculentis commendandi halitus gratia. nec alia arbor laudatur in medis.

lanigeras serum in mentione gentis eius narravimus, item indiae arborum magnitudinem. unam e peculiaribus indiae vergilius celebravit hebenum, nusquam alibi nasci professus. herodotus eam aethiopiae intellegi maluit in tributi vicem regibus persidis e materia eius centenas phalangas tertio quoque anno pensitasse aethiopas cum auro et ebore prodendo. non omittendum id quoque, vicenos dentes elephantorum grandes, quoniam ita significavit, aethiopas ea de causa pendere solitos. tanta ebori auctoritas erat urbis nostrae cccx anno; tunc enim auctor ille historiarum condidit thuriis in italia, quo magis mirum est quod eidem credimus, qui padum amnem vidisset neminem ad id tempus asiae graeciaeque visum. cognita aethiopiae forma - ut diximus, nuper allata neroni principi - raram arborem meroen usque a syene fine imperii per [dcccclxxxxvi] p. nullamque

nisi palmarum generis esse docuit. ideo fortassis in tributi auctoritate tertia res fuerit hebenus.

romae eam magnus pompeius triumpho mithridatico ostendit. accendi fabianus negat, uritur tamen odore iucundo. duo genera eius: rarum id quod melius, arboreum, purae et enodis materiae nigri splendoris ac vel sine arte protinus iucundi, alterum fruticosum cytisi modo et tota india dispersum.

est ibi et spina similis, sed deprehensa vel lucernis igni protinus transiliente.

nunc eas exponemus, quas mirata est alexandri magni victoria orbe eo patefacto.

ficus ibi eximia pomo, se ipsa semper serens. vastis diffunditur ramis, quorum imi in terram adeo curvantur, ut annuo spatio infigantur novamque sibi progeniem faciant circa parentem in orbem quodam opere topiario. intra saepem eam aestivant pastores, opacam pariter et munitam vallo arboris, decora specie subter intuenti proculve fornicato ambitu. superiores eiusdem rami in excelsum emicant silvosa multitudine, vasto matris corpore, ut lx passus pleraeque orbe colligant, umbra vero bina stadia operiant. foliorum latitudo peltae effigiem amazonicae habet; ea causa fructum integens crescere prohibet. rarus ... que nec fabae magnitudinem excedens, sed per folia solibus coctus praedulcis sapore et dignus miraculo arboris. gignitur circa acesinen maxime amnem.

maior alia pomo et suavitate praecellentior, quo sapientes indorum vivunt. folium alas avium imitatur, longitudine trium cubitorum, latitudine duum. fructum cortice emittit admirabilem suci dulcedine, ut uno quaternos satiet. arbori nomen palae, pomo arierae. plurima est in sydracis, expeditionum alexandri termino. est et alia similis huic, dulcior pomo, sed interaneorum valetudini infesta. edixerat alexander ne quis agminis sui id pomum attingeret.

genera arborum macedones narravere maiore ex parte sine nominibus. est et terebintho similis cetera, pomo amygdalis, minore tantum magnitudine, praecipuae suavitatis, in bactris utique. hanc aliqui terebinthon esse proprii generis potius quam similem ei putaverunt. sed unde vestes lineas faciunt, foliis moro similis, calyce pomi cynorrhodo. serunt eam in campis, neque est gratior vinearum prospectus.

oliva indiae sterilis praeterquam oleastri fructus. passim vero quae piper gignunt iunipiris nostris similes, quamquam in fronte caucasi solibus opposita gigni tantum eas aliqui tradidere. semina a iunipiro distant parvulis siliquis, quales in phasiolis videmus. hae prius quam dehiscant decerptae tostaeque sole faciunt quod vocatur piper longum, paulatim vero dehiscentes maturitate ostendunt candidum piper, quod deinde tostum solibus colore rugisque mutatur. verum et his sua iniuria est, atque caeli intemperie carbunculant fiuntque semina cassa et inania, quod vocant bregma, sic indorum lingua significante mortuum. hoc ex omni genere asperrimum est levissimumque et pallidum, gratius nigrum, lenius utroque candidum. non est huius arboris radix, ut aliqui existimavere, quod vocant zingiberi, alii vero zimpiberi, quamquam sapore simili. id enim in arabia atque trogodytica in villis nascitur, parva herba, radice candida. celeriter ea cariem sentit, quamvis in tanta amaritudine. pretium eius in libras #1108 vi. piper longum facillime adulteratur alexandrino sinapi. emitur in libras #1108 xv, album #1108 vii, nigrum #1108 iiii. usum eius adeo placuisse mirum est; in aliis quippe suavitas cepit, in aliis species invitavit: huic nec pomi nec bacae commendatio est aliqua. sola placere amaritudine, et hanc in indos peti! quis ille primus experiri cibis voluit aut cui in appetenda aviditate esurire non fuit satis utrumque silvestre gentibus suis est et tamen pondere emitur ut aurum vel argentum.

piperis arborem iam et italia habet, maiorem myrto nec absimilem. amaritudo grano eadem quae piperi musteo credatur esse: deest tosta illa maturitas ideoque et rugarum colorisque similitudo. adulteratur iunipiri bacis mire vim trahentibus; in pondere quidem multis modis.

est etiamnum in india piperis granis simile quod vocatur caryophyllon, grandius fragiliusque. tradunt in indica loto id gigni. advehitur odoris gratia. fert et spina piperis similitudinem praecipua amaritudine, foliis parvis densisque cypri modo, ramis trium cubitorum, cortice pallido, radice lata lignosaque, buxei coloris. hac in aqua cum semine excocta in aereo vase medicamentum fit, quod vocatur lycion. ea spina et in pelio monte nascitur adulteratque medicamentum, item asphodeli radix aut fel bubulum aut apsinthium vel rhus vel amurca. aptissimum medicinae quod est spumosum. indi

in utribus camelorum aut rhinocerotum id mittunt. spinam ipsam in graecia quidam pyxacanthum chironium vocant.

et macir ex india advehitur, cortex rubens radicis magnae, nomine arboris suae. qualis sit ea incompertum habeo. corticis melle decocti usus in medicina ad dysintericos praecipuus habetur.

saccaron et arabia fert, sed laudatius india. est autem mel in harundinibus collectum, cummium modo candidum, dentibus fragile, amplissimum nucis abellanae magnitudine, ad medicinae tantum usum.

contermina indis gens ariana appellatur, cui spina lacrima pretiosa murrae simili, difficili accessu propter aculeos adnexos. ibi et frutex pestilens, ... raphani, folio lauri, odore equos invitans, qui paene equitatu orbavit alexandrum primo introitu. quod et in gedrosis accidit item laureo folio. et ibi spina tradita est, cuius liquor adspersus oculis caecitatem inferret omnibus animalibus, nec non et herba praecipui odoris, referta minutis serpentibus, quarum ictu protinus moriendum esset. onesicritus tradit in hyrcaniae convallibus fico similes esse arbores quae vocentur occhi, ex quibus defluat mel horis matutinis duabus.

vicina est bactriana, in qua bdellium laudatissimum. arbor nigra, magnitudine oleae, folio roboris, fructu caprifici. ipsi natura quae cummi. alii brochon appellant, alii malacham, alii maldacon, nigrum vero et in offas convolutum hadrobolon. esse autem debet tralucidae simile cerae, odoratum et, cum frietur, pingue, gustu amarum citra acorem. in sacris vino perfusum odoratius. nascitur et in arabia indiaque et media ac babylone. aliqui peraticum vocant ex media advectum. fragilius hoc et crustosius amariusque, at indicum umidius et cumminosum. adulteratur amygdala nuce, cetera eius genera cortice et scordasti - ita vocatur arbor aemulo cummi - , sed deprehenduntur, semel quod dixisse et in ceteros odores satis sit, odore, colore, pondere, gustu, igne. bactrio nitor siccus multique candidi ungues, praeterea suum pondus, quo gravius esse aut levius non debeat. pretium sincero in libras #1108 iii.

gentes supra dictas persis attingit. rubro mari, quod ibi persicum vocavimus, longe in terram aestus agente, mira arborum natura. namque erosae sale, invectis derelictisque similes, sicco litore radicibus nudis polyporum modo amplexae steriles harenas

spectantur. eaedem mari adveniente fluctibus pulsatae resistunt inmobiles; quin et pleno aestu operiuntur totae, adparetque rerum argumentis asperitate aquarum illas ali. magnitudo miranda est, species similis unedoni, pomum amygdalis extra, intus contortis nucleis.

tylos insula in eodem sinu est, repleta silvis qua spectat orientem quaque et ipsa aestu maris perfunditur. magnitudo singulis arboribus fici, flos suavitate inenarrabili, pomum lupino simile, propter asperitatem intactum omnibus animalibus. eiusdem insulae excelsiore suggestu lanigerae arbores, alio modo quam serum: his folia infecunda, quae ni minora essent, vitium poterant videri. ferunt mali cotonei amplitudine cucurbitas, quae maturitate ruptae ostendunt lanuginis pilas, ex quibus vestes pretioso linteo faciunt. arborem vocant gossypinum, fertiliore etiam tylo minore, quae distat [x] p. iuba circa fruticem lanugines esse tradit linteaque ea indicis praestantiora, arabiae autem arborem, ex qua vestes faciant, cynas vocari, folio palmae simili. sic indos suae arbores vestiunt. in tylis autem et alia arbor floret albae violae specie, sed magnitudine quadriplici, sine odore, quod miremur in eo tractu. est et alia similis, foliosior tamen roseique floris, quem noctu conprimens aperire incipit solis exortu, meridie expandit; incolae dormire eum dicunt. fert eadem insula et palmas oleasque ac vites et cum reliquo pomorum genere ficos. nulli arborum folia ibi decidunt, rigaturque gelidis fontibus et imbres accipit.

vicina iis arabia flagitat quandam generum distinctionem, quoniam fructus constant radice, frutice, cortice, suco, lacrima, ligno, surculo, flore, folio, pomo. radix et folium indis in maximo pretio.

radix costi gustu fervens, odore eximia, frutice alias inutili. primo statim introitu amnis indi in patale insula duo eius genera: nigrum et, quod melius, candicans. pretium in libras #1108 v s.

de folio nardi plura dici par est ut principali in unguentis. frutex est gravi et crassa radice, sed brevi ac nigra fragilique, quamvis pingui, situm redolente, ut cypiros, aspero sapore, folio parvo densoque. cacumina in aristas se spargunt; ideo gemina dote nardi spicas ac folia celebrant. alterum eius genus apud gangen nascens damnatur in totum ozaenitidos nomine, virus redolens. adulteratur et pseudonardo herba, quae ubique nascitur crassiore atque latiore folio

et colore languido in candidum vergente, item sua radice permixta ponderis causa et cummi spumaque argenti aut stibi ac cypiro cypirive cortice. sincerum quidem levitate deprehenditur et colore rufo odorisque suavitate et gustu maxime siccante os, sapore iucundo. pretium spicae in libras #1108 c. folii divisere annonam amplitudine. hadrosphaerum vocatur maioribus pilulis #1108 xxxx. quod minore folio est, mesosphaerum appellatur; emitur #1108 lx. laudatissimum microsphaerum e minimis foliis; pretium eius #1108 lxxv. odoris gratia omnibus, maior recentibus. nardo colos, si inveteravit, nigriori melior. in nostro orbe proxime laudatur syriacum, mox gallicum, tertio loco creticum, quod aliqui agrion vocant, alii phun, folio olusatri, caule cubitali, geniculato, in purpuram albicante, radice obliqua villosaque et imitante avium pedes. baccaris vocatur nardum rusticum, de quo dicemus inter flores. sunt autem omnia ea herbae praeter indicum. ex iis gallicum et cum radice vellitur abluiturque vino. siccatur in umbra, alligatur fasciculis in charta, non multum ab indico differens, syriaco tamen levius. pretium #1108 iii. in his probatio una, ne sint fragilia et arida potius quam sicca folia. cum gallico nardo semper nascitur herba quae hirculus vocatur a gravitate odoris et similitudine, qua maxime adulteratur. distat quod sine cauliculo est et quod minoribus foliis quodque radicis neque amarae neque odoratae.

nardi vim habet et asarum, quod et ipsum aliqui silvestre nardum appellant. est autem hederae foliis, rotundioribus tantum mollioribusque, flore purpureo, radice gallici nardi, semine acinosum, saporis calidi ac vinosi, in montibus umbrosis bis anno florens. optimum in ponto, proximum in phrygia, tertium in illyrico. foditur, cum folia amittere incipit, et in sole siccatur, celeriter situm trahens ac senescens. inventa nuper et in threcia herba est cuius folia nihil ab indico nardo distant.

amomi uva in usu est ex indica vite labrusca, ut alii existimavere, frutice tortuoso, palmi altitudine, carpiturque cum radice, manipulatim leniter componitur, protinus fragile. laudatur quam maxime punici mali foliis simile nec rugosis, colore rufo. secunda bonitas pallido; herbaceum peius, pessimumque candidum, quod et vetustate evenit. pretium uvae in libras #1108 lx, friato vero amomo #1108 xliix. nascitur et in armeniae parte quae vocatur otene et in

media et in ponto. adulteratur foliis punici et cummi liquido, ut cohaereat convolvatque se in uvae modum. est et quae vocatur amomis, minus venosa atque durior ac minus odorata, quo apparet aut aliud esse aut colligi inmaturum.

simile his et nomine et frutice cardamomum, semine oblongo. metitur eodem modo in arabia. quattuor eius genera: viridissimum ac pingue, acutis angulis contumax frianti - hoc maxime laudatur - , proximum e rufo candicans, tertium brevius atque nigrius, peius tamen varium et facile tritu odorisque parvi, qui vero costo vicinus esse debet. hoc et apud medos nascitur. pretium optimi in libras #1108 iii.

cinnamomo proxima gentilitas erat, ni prius arabiae divitias indicari conveniret causasque quae cognomen illi felicis ac beatae dedere.

principalia ergo in illa tus atque murra, haec et cum trogodytis communis, tura praeter arabiam nullis ac ne arabiae quidem universae. in medio eius fere sunt atramitae, pagus sabaeorum capite regni sabota in monte excelso, a quo octo mansionibus distat regio eorum turifera sariba appellata; hoc significare graeci mysterium dicunt. spectat ortus solis aestivi, undique rupibus invia et a dextera mari scopulis inaccesso. id solum e rubro lacteum traditur. silvarum longitudo est schoeni xx, latitudo dimidium eius. schoenus patet eratosthenis ratione stadia xl, hoc est p. [v], aliqui xxxii stadia singulis schoenis dedere. attolluntur colles alti, decurruntque et in plana arbores sponte natae. terram argillosam esse convenit, raris fontibus ac nitrosis. attingunt et minaei, pagus alius, per quos evehitur uno tramite angusto. hi primi commercium turis fecere maximeque exercent, a quibus et minaeum dictum est. nec praeterea arabum alii turis arborem vident, ac ne horum quidem omnes, feruntque [iii] non amplius esse familiarum quae ius per successiones id sibi vindicent; sacros vocari ob id nec ullo congressu feminarum funerumque, cum incidant eas arbores aut metant, pollui atque ita religionem mercis augeri. quidam promiscuum tus iis populis esse tradunt in silvis, alii per vices annorum dividi.

nec arboris ipsius quae sit facies constat. res in arabia gessimus et romana arma in magnam partem eius penetravere, gaius etiam caesar Augusti filius inde gloriam petiit, nec tamen ab ullo, quod equidem

sciam, latino arborum earum tradita est facies. graecorum exempla variant: alii folio piri, minore dumtaxat et herbidi coloris, prodidere, alii lentisco similem subrutilo folio, quidam terebinthum esse, et hoc visum antigono regi allato frutice. iuba rex iis voluminibus, quae scripsit ad c. caesarem Augusti filium ardentem fama arabiae, tradit contorti esse caudicis, ramis aceris maxime pontici, sucum amygdalae modo emittere, talesque in carmania apparere et in aegypto satas studio ptolemaeorum regnantium. cortice lauri esse constat; quidam et folium simile dixere: talis certe fuit arbor sardibus, nam et asiae reges serendi curam habuerunt. qui mea aetate legati ex arabia venerant, omnia incertiora fecerunt, quod iure miremur, virgis etiam turis ad nos commeantibus, quibus credi potest matrem quoque teretem enodi fruticare trunco.

meti semel anno solebat minore occasione vendendi; iam quaestus alteram vindemiam adfert. prior atque naturalis vindemia circa canis ortum flagrantissimo aestu, incidentibus qua maxime videatur esse praegnas tenuissimusque tendi cortex. laxatur hic plaga, non adimitur; inde prosilit spuma pinguis. haec concreta densatur, ubi loci natura poscat, tegete palmea excipiente, aliubi area circumpavita. purius illo modo, sed hoc ponderosius. quod in arbore haesit, ferro depectitur, ideo corticosum. silva divisa certis portionibus mutua innocentia tuta est: nemo saucias arbores custodit, nemo furatur alteri. at hercules alexandriae, ubi tura interpolantur, nulla satis custodit diligentia officinas. subligaria signantur opifici; persona additur capiti densusve reticulus; nudi emittuntur: tanto minus fidei apud nos poena quam apud illos silvae habent! autumno legitur ex aestivo partu; hoc purissimum, candidum. secunda vindemia est vere, ad eam hieme corticibus incisis. rufum hoc exit nec conparandum priori. illud carfiathum, hoc dathiathum vocant. creditur et novellae arboris candidius esse, sed veteris odoratius. quidam et in insulis melius putant gigni, iuba in insulis negat nasci. quod ex eo rotunditate guttae pependit, masculum vocamus, cum alias non fere mas vocetur ubi non sit femina; religioni tributum, ne sexus alter usurparetur. masculum aliqui putant a specie testium dictum. praecipua autem gratia mammoso, cum haerente lacrima priore consecuta alia miscuit se. singula haec manum inplere solita invenio, cum minore deripiendi aviditate lentius nasci liceret. graeci stagonian

et atomum tali modo appellant, minorem autem orobian. micas concussu elisas mannam vocamus. etiamnum tamen inveniuntur guttae quae tertiam partem mnae, hoc est xxviii denariorum pondus, aequent. alexandro magno in pueritia sine parsimonia tura ingerenti aris paedagogus leonides dixerat, ut illo modo, cum devicisset turiferas gentes, supplicaret. at ille arabiae potitus ture onustam navem misit et exhortatus est, ut large deos adoraret. tus collectum sabotam camelis convehitur, porta ad id una patente. degredi via capital reges fecere. ibi decumas deo quem vocant sabin mensura, non pondere, sacerdotes capiunt, nec ante mercari licet: inde inpensae publicae tolerantur; nam et benigne certo dierum numero deus hospites pascit. evehi non potest nisi per gebbanitas, itaque et horum regi penditur vectigal. caput eorum thomna abest a gaza, nostri litoris in iudaea oppido, [30xxiiii]30 [xxxvii] d p., quod dividitur in mansiones camelorum lxv. sunt et quae sacerdotibus dantur portiones scribisque regum certae. sed praeter hos et custodes satellitesque et ostiarii et ministri populantur. iam quacumque iter est aliubi pro aqua, aliubi pro pabulo aut pro mansionibus variisque portoriis pendunt, ut sumptus in singulas camelos #1108 dclxxxviii ad nostrum litus colligat, iterumque imperii nostri publicanis penditur. itaque optimi turis libra #1108 vi pretium habet, secundi #1108 v, tertii #1108 iii. adulteratur apud nos resinae candidae gemma perquam simili, sed deprehenditur quibus dictum est modis. probatur candore, amplitudine, fragilitate, carbone, ut statim ardeat, item ne dentem recipiat potiusque in micas frietur.

murram in isdem silvis permixta arbore nasci tradidere aliqui, plures separatim, quippe multis locis arabiae gignitur, ut apparebit in generibus. convehitur et ex insulis laudata, petuntque eam etiam ad trogodytas sabaei transitu maris. sativa quoque provenit, multum silvestri praelata. gaudet rastris atque ablaqueationibus, melior radice refrigerata.

arbori altitudo ad quinque cubita, nec sine spina, caudice duro et intorto, crassiore quam turis, et ab radice etiam quam reliqua sui parte. corticem levem similemque unedoni scabrum alii spinosumque dixere, folium olivae, verum crispius et aculeatum, iuba olusatri. aliqui similem iunipero, scabriorem tantum spinisque horridam, folio rotundiore, sed sapore iuniperi. nec non fuere qui e turis arbore

utrumque nasci mentirentur.

inciduntur bis et ipsae isdemque temporibus, sed a radice usque ad ramos qui valent. sudant autem sponte prius quam incidantur stacte dicta, cui nulla praefertur. ab hac sativa et in silvestri quoque melior aestiva. non dant ex murra portiones deo, quoniam et apud alios nascitur; regi tamen gebbanitarum quartas partes eius pendunt. cetero passim a vulgo coemptam in folles conferciunt, nostrique unguentarii digerunt haud difficulter odoris atque pinguedinis argumentis.

genera complura: trogodytica silvestrium prima, sequens minaea, in qua et atramitica est et gebbanitica et ausaritis gebbanitarum regno, tertia dianitis, quarta collaticia, quinta sambracena a civitate regni sabaeorum mari proxima, sexta quam dusaritim vocant. est et candida uno tantum loco, quae in mesalum oppidum confertur. probatur trogodytica pinguedine et quod aspectu aridior est sordidaque ac barbara, sed acrior ceteris. sambracena praedicta ante alias hilaris, sed viribus tenuis. in plenum autem probatio est minutis glaebis nec rotundis, in concretu albicantis suci et tabescentis utque fracta candidos ungues habeat, gustu leniter amara. secunda bonitas intus variae; pessima quae intus nigra, peior, si etiam foris. pretia ex occasione ementium varia: stactae a #1108 iii ad #1108 l, sativae summum #1108 xi, erythraeae xvi - hanc volunt arabicam intellegi - , trogodyticae nucleo xvi s, ei vero quam odorariam vocant xii. adulteratur lentisci glaebis et cummi, item cucumeris suco amaritudinis causa, sicut ponderis spuma argenti. reliqua vitia deprehenduntur sapore. cummis dente lentescens. fallacissime autem adulteratur indica murra, quae ibi de quadam spina colligitur. hoc solum peius india adfert, facili distinctione: tanto deterior est.

ergo transit in mastichen, quae et ex alia spina fit in india itemque in arabia; lainam vocant. sed mastiche quoque gemina est, quoniam et in asia graeciaque reperitur herba a radice folia emittens et carduum similem malo, seminis plenum ac lacrimae, quae erumpit incisa parte summa, vix ut dinosci possit a mastiche vera. nec non et tertia in ponto est, bitumini similior, laudatissima autem chia candida, cuius pretium in libras #1108 x, nigrae vero #1108 ii. chia e lentisco traditur gigni cummium modo. adulteratur ut tura resina.

arabia etiamnum et ladano gloriatur. forte casuque hoc et iniuria odorum fieri plures tradidere, caprasque, maleficum alias frondibus

animal, odoratorum vero fruticum adpetentius, tamquam intellegant pretia, carpere germinum caules praedulci liquore turgentes destillantemque ab iis casus mixtura sucum inprobo barbarum villo abstergere. hunc glomerari pulvere, incoqui sole, et ideo in ladano caprarum pilos esse. sed hoc non alibi fieri quam in nabataeis, qui sunt ex arabia contermini syriae. recentiores ex auctoribus storbon hoc vocant traduntque silvas arabum pastu caprarum infringi atque ita sucum villis inhaerescere, verum autem ladanum cypri insulae esse, ut obiter quaeque genera odorum dicantur, quamvis non terrarum ordine. similiter hoc et ibi fieri tradunt et esse oesypum hircorum barbis genibusque villosis inhaerens, sed hederae flore deroso, pastibus matutinis, cum est rorulenta cypros. dein nebula sole discussa pulverem madentibus villis adhaerescere atque ita ladanum depecti. sunt qui herbam in cypro, ex qua id fiat, ledam appellent; etenim illi ledanum vocant. huius pinguia insidere; itaque et tractis funiculis herbam eam convolvi atque ita offas fieri. ergo in utraque gente bina genera, terrenum et facticium. id quod terrenum est friabile, facticium lentum. nec non fruticem esse dicunt in carmania et super aegyptum per ptolemaeos tralatis plantis aut, ut alii, degenerante in id turis arbore, colligique ut cummim inciso cortice et caprinis pellibus excipi. pretia sunt laudatissimo in libras asses xxxx. adulteratur myrti bacis et aliis animalium sordibus. sinceri odor esse debet ferus et quodam modo solitudinem redolens, ipsum visu aridum tactu statim mollescere, accensum fulgere odore iucundo; gravi myrtatum deprehenditur crepitatque igni. praeterea sincero calculi potius e rupibus inhaerent quam pulvis.

in arabia et olea dotatur lacrima, qua medicamentum conficitur graecis enhaemon dictum, singulari effectu contrahendis vulnerum cicatricibus. in maritimis hae fluctibus aestuque operiuntur, nec bacae nocetur, cum constet in foliis salem relinqui.

haec sunt peculiaria arabiae, et pauca praeterea communia alibi dicenda, quoniam in iis vincitur. peregrinos ipsa mire odores et ad exteros petit: tanta mortalibus suarum rerum satias est alienarumque aviditas. petunt igitur in elymaeos arborem bratum, cupresso fusae similem, exalbidis ramis, iucundi odoris accensam et cum miraculo historiis claudi caesaris praedicatam. folia eius inspergere potionibus parthos tradit; odorem esse proximum cedro fumumque eius contra

ligna alia remedio. nascitur ultra pasitigrim finibus oppidi sostratae in monte scanchro. petunt et in carmanos arborem stobrum ad suffitus, perfusam vino palmeo accendentes. huius odor redit a camaris ad solum, iucundus, sed adgravans capita, citra dolorem tamen; hoc somnum aegris quaerunt. his commerciis carra oppidum aperuere, quod est ibi nundinarium. inde gabbam omnes petere solebant dierum viginti itinere et palaestinen syriam. postea characem peti coeptum ac regna parthorum ex ea causa, auctor est iuba. mihi ad persas etiam prius ista portasse quam in syriam aut aegyptum videntur herodoto teste, qui tradit singula milia talentum annua turis pensitasse arabas regibus persarum. ex syria revehunt styracem, acri odore eius in focis abigentes suorum fastidium. cetero non alia sunt ligni genera in usu quam odorata, cibosque sabaei coquunt turis ligno, alii murrae, oppidorum vicorumque non alio quam ex aris fumo atque nidore. ad hunc ergo sanandum styracem in follibus petunt hircinis suffiuntque tecta: adeo nulla est voluptas quae non adsiduitate fastidium pariat. eundem et ad serpentes fugandas urunt in odoriferis silvis frequentissimas.

non sunt eorum cinnamomum aut casia, et tamen felix appellatur arabia, falsi et ingrati cognominis, quae hoc acceptum superis ferat, cum plus ex eo inferis debeat. beatam illam fecit hominum etiam in morte luxuria quae dis intellexerant genita inurentium defunctis. periti rerum adseverant non ferre tantum annuo fetu, quantum nero princeps novissimo poppaeae suae die concremaverit. aestimentur post ea toto orbe singulis annis tot funera acervatimque congesta honori cadaverum quae dis per singulas micas dantur. nec minus propitii erant mola salsa supplicantibus, immo vero, ut palam est, placatiores. verum arabiae etiamnum felicius mare est; ex illo namque margaritas mittit. minimaque computatione miliens centena milia sestertium annis omnibus india et seres et paeninsula illa imperio nostro adimunt: tanti nobis deliciae et feminae constant. quota enim portio ex illis ad deos, quaeso, iam vel ad inferos pertinet

cinnamomum et casias fabulose narravit antiquitas princepsque herodotus avium nidis et privatim phoenicis, in quo situ liber pater educatus esset, ex inviis rupibus arboribusque decuti carnis quam ipsae inferrent pondere aut plumbatis sagittis, item casiam circa paludes, propugnante unguibus diro vespertilionum genere

aligerisque serpentibus, his commentis augentes rerum pretia. comitata vero fabula est ad meridiani solis repercussus inenarrabilem quendam universitatis halitum e tota paeninsula existere tot generum aurae spirante concentu, magnique alexandri classibus arabiam primum odoribus nuntiatam in altum. omnia falsa, si quidem cinnamomum idemque cinnamum nascitur in aethiopia trogodytis conubio permixta. hi mercantes id a conterminis vehunt per maria vasta ratibus, quas neque gubernacula regant neque remi trahant vel inpellant vela, non ratio ulla adiuvet: omnium instar ibi sunt homo tantum et audacia. praeterea hibernum mare exigunt circa brumam, euris tum maxime flantibus. hi recto cursu per sinus inpellunt, atque a promunturii ambitu argestae deferunt in portum gebbanitarum qui vocatur ocilia. quam ob rem illi maxime id petunt, produntque vix quinto anno reverti negotiatores et multos interire. contra revehunt vitrea et ae+na, vestes, fibulas cum armillis ac monilibus. ergo negotiatio illa feminarum maxime fide constat.

ipse frutex duum cubitorum altitudine amplissimus palmique minimus, quattuor digitorum crassitudinis, statim a terra vi digitis surculosus, arido similis, cum viret, non odoratus, folio origani, siccitate gaudens, sterilior imbre, caeduae naturae. gignitur in planis quidem, sed densissimis in vepribus rubisque, difficilis collectu. metitur non nisi permiserit deus. iovem hunc intellegunt aliqui, assabinum illi vocant. xliiii boum caprarumque et arietum extis impetratur venia caedendi, non tamen ut ante ortum solis aut post occasum liceat. sarmenta hasta dividit sacerdos deoque partem ponit, reliquum mercator in massas condit. est et alia fama cum sole dividi ternasque partes fieri, dein sorte gemina discerni quodque soli cesserit relinqui ac sponte conflagrare. praecipua bonitas virgultorum tenuissimis partibus ad longitudinem palmi, secunda proximis breviore mensura, atque ita ordine. vilissimum quod radicibus proximum, quoniam ibi minimum corticis, in quo summa gratia, eaque de causa praeferuntur cacumina, ubi plurimus torpet. ipsum vero lignum in fastidio propter origani acrimoniam, xylocinnamomum vocatur. pretium ei in libras #1108 x. quidam cinnami duo genera tradidere, candidius nigriusque, et quondam praeferebatur candidum, nunc contra nigrum laudatur atque etiam varium praeferunt candido. certissima tamen aestimatio, ne sit

scabrum atque ut inter sese tritum tarde frietur; damnatur in primis molle aut cui labet cortex. ius eius a gebbanitarum rege solo proficiscitur; is edicto mercatu vendit. pretia quondam fuere in libras denarium milia. auctum id parte dimidia est incensis, ut ferunt, silvis ira barbarorum. id acciderit ob iniquitatem praepotentium an forte, non satis constat. austros ibi tam ardentes flare, ut aestatibus silvas accendant, invenimus apud auctores. coronas ex cinnamo interrasili auro inclusas primus omnium in templis capitolii atque pacis dicavit imperator Vespasianus Augustus. radicem eius magni ponderis vidimus in palatii templo, quod fecerat Divo Augusto coniunx augusta, aureae paterae inpositam, ex qua guttae editae annis omnibus in grana durabantur, donec id delubrum incendio consumptum est.

frutex et casia est iuxtaque cinnami campos nascitur, sed in montibus crassiore sarmento, tenui cute verius quam cortice, quem contra atque in cinnamo diximus labare et exinaniri pretium est. amplitudo frutici trium cubitorum, colos triplex: cum primum emicat, candidus pedali mensura, dein rufescit addito semipede, ultra nigricans. haec pars maxime laudatur ac deinde proxima, damnatur vero candida. consecant surculos longitudine binum digitorum, mox praesuunt recentibus coriis quadripedum ob id interemptarum, ut putrescentibus vermiculi lignum erodant et excavent corticem, tutum amaritudine. probatur recens maxime et quae sit odoris longissimi gustuque quam minime fervens potiusque lento tepore leniter mordens, colore purpurae, quaeque plurima minimum ponderis faciat, brevi tunicarum fistula atque non fragili. ladam vocant talem barbaro nomine. alia est balsamodes, ab odore simili appellata, sed amara ideoque utilior medicis, sicut nigra unguentis. pretia nulli diversiora, optimae in libras #1108 l, ceteris #1108 v.

his adiecere mangones quam daphnidis vocant, cognominatam isocinnamon, pretiumque ei faciunt #1108 ccc. adulteratur styrace et propter similitudinem corticum laurus tenuissimis surculis. quin et in nostro orbe seritur, extremoque in margine imperii, qua rhenus adluit, vidi in alvariis apium satam. color abest ille torridus sole et ob id simul idem odor.

ex confinio casiae cinnamique et cancamum ac tarum invehitur, sed per nabataeos trogodytas, qui consedere ex nabataeis.

eo comportatur et serichatum et gabalium, quae intra se consumunt arabes, nostro orbi tantum nominibus cognita, sed cum cinnamo casiaque nascentia. pervenit tamen aliquando serichatum et in unguenta additur ab aliquis. permutatur in libras #1108 vi.

myrobalanum trogodytis et thebaidi et arabiae, quae iudaeam ab aegypto disterminat, commune est, nascens id unguento, ut ipso nomine apparet, quo item indicatur et glandem esse. arbor est heliotropio, quam dicemus inter herbas, simili folio, fructus magnitudine abellanae nucis. ex his in arabia nascens syriaca appellatur et est candida, contra in thebaide nigra. praefertur illa bonitate olei quod exprimitur, sed copia thebaica. inter haec trogodytica vilissima est. sunt qui aethiopicam his praeferant, glandem nigram nec pinguem, nucleoque gracili, sed liquore qui exprimitur odoratiore, nascentem in campestribus. aegyptiam pinguiorem esse et crassiore cortice rubentem et, quamvis in palustribus nascatur, breviorem siccioremque; e diverso arabicam viridem ac tenuiorem et, quoniam sit montuosa, spissiorem; longe autem optimam petraeam ex quo diximus oppido, nigro cortice, nucleo candido. unguentarii autem tantum cortices premunt, medici et nucleos, tundentes adfusa paulatim calida aqua.

myrobalano in unguentis similem proximumque usum habet palma in aegypto quae vocatur adipsos, viridis, odore mali cotonei, nullo intus ligno. colligitur autumno paulo ante quam incipiat maturescere. quod si relinquatur, phoenicobalanus vocatur et nigrescit vescentesque inebriat. myrobalano pretium in libras #1108 ii. institores et faecem unguenti hoc nomine appellant.

calamus quoque odoratus in arabia nascens communis indis atque syriae est, in qua vincit omnes. a nostro mari cl stadiis inter libanum montem aliumque ignobilem (non, ut quidam existimavere, antilibanum) in convalle modica iuxta lacum, cuius palustria aestate siccantur, tricenis ab eo stadiis calamus et iuncus odorati gignuntur. sane enim dicamus et de iunco, quamvis alio herbis dicato volumine, quoniam tamen hic unguentorum materia tractatur. nihil ergo a ceteris sui generis differunt aspectu, sed calamus praestanti odore statim e longinquo invitat, mollior tactu, meliorque qui minus fragilis et qui assulose potius quam qui raphani modo frangitur. inest fistulae araneum, quod vocant florem, praestantiore cui numerosius. reliqua

probatio ut niger sit - damnantur albi - , melior, quo brevior crassiorque, et lentus in frangendo. calamo pretium in libras singulas #1108 i, iunco #1108 v. traduntque iuncum odoratum et in campania inveniri.

discessimus a terris oceanum spectantibus ad convexas in nostra maria. ergo aethiopiae subiecta africa hammoniaci lacrima stillat in harenis suis; inde nomen etiam hammonis oraculo, iuxta quod gignitur arbore quam metopon appellant, resinae modo aut cummium. genera eius duo: thrauston masculi turis similitudine, quod maxime probatur, alterum pingue et resinosum, quod phyrama appellant. adulteratur harenis velut nascendo adprehensis; igitur quam minimis glaebis probatur et quam purissimis. pretium optimo in libras asses xxxx.

sphagnos infra eos situs in cyrenaica provincia maxime probatur; alii bryon vocant. secundum locum optinet cyprius, tertium phoenicius. fertur et in aegypto nasci, quin et in gallia; nec dubitaverim: sunt enim hoc nomine cani arborum villi, quales in quercu maxime videmus, sed odore praestantes. laus prima candidissimis atque latissimis, secunda rutilis, nulla nigris. et in insulis petrisque nati improbantur omnesque quibus palmarum atque non suus odor sit.

cypros in aegypto est arbor, ziziphi foliis, semine coriandri, candido, odorato. coquitur hoc in oleo premiturque postea, quod cypros vocatur. pretium ei in libras #1108 v. optimum e canopica in ripis nili nata, secundum ascalone iudaeae, tertium in cypro insula. odoris suavitas quaedam. hanc esse dicunt arborem quae in italia ligustrum vocetur. in eodem tractu aspalathos nascitur, spina candida magnitudine arboris modicae, flore rosae. radix unguentis expetitur. tradunt in quocumque frutice curvetur arcus caelestis, eandem quae sit aspalathi suavitatem odoris exsistere; sed si in aspalatho, inenarrabilem quandam. quam quidam erysisceptrum vocant, alii sceptrum. probatio eius in colore rufo vel igneo tactuque spisso et odore castorei. permutatur in libras #1108 v. in aegypto nascitur et maron, peius quam lydium, maioribus foliis ac variis; illa brevia ac minuta et odorata.

sed omnibus odoribus praefertur balsamum, uni terrarum iudaeae concessum, quondam in duobus tantum hortis, utroque regio, altero

iugerum viginti non amplius, altero pauciorum. ostendere arborum hanc urbi imperatores vespasiani, clarumque dictu, a pompeio magno in triumpho arbores quoque duximus. servit nunc haec ac tributa pendit cum sua gente, in totum alia natura quam nostri externique prodiderant. quippe viti similior est quam myrto. malleolis seri didicit nuper, vincta ut vitis, et inplet colles vinearum modo. quae sine adminiculis se ipsa sustinet, tondetur similiter fruticans ac rastris nitescit properatque nasci, intra tertium annum fructifera. folium proximum tuburi, perpetua coma. saeviere in eam iudaei sicut in vitam quoque suam; contra defendere romani, et dimicatum pro frutice est; seritque nunc eum fiscus, nec umquam fuit numerosior. proceritas intra bina cubita subsistit. arbori tria genera: tenue et capillacea coma quod vocatur eutheriston; alterum scabro aspectu, incurvum, fruticosum, odoratius; hoc trachy appellant, tertium eumeces, quia est reliquis procerius, levi cortice. huic secunda bonitas, novissima eutheristo. semen eius vino proximum gustu, colore rufum, nec sine pingui. peius in grano quod levius atque viridius. ramus crassior quam myrto. inciditur vitro, lapide osseisve cultellis; ferro laedi vitalia odit, emoritur protinus, eodem amputari supervacua patiens. incidentis manus libratur artifici temperamento, ne quid ultra corticem violet. sucus e plaga manat quem opobalsamum vocant, suavitatis eximiae. sed tenui gutta ploratu: lanis parva colligitur in cornua, ex iis novo fictili conditur, crassiori similis oleo et in musto candida; rufescit deinde simulque durescit e tralucido. alexandro magno res ibi gerente toto die aestivo unam concham impleri iustum erat, omni vero fecunditate e maiore horto congios senos, e minore singulos, cum et duplo rependebatur argento, nunc etiam singularum arborum largior vena. ter omnibus percutitur aestatibus, postea deputatur. et sarmenta quoque in merce sunt. [dccc] hs amputatio ipsa surculusque veniere intra quintum devictae iudaeae annum; xylobalsamum vocatur et coquitur in unguentis. pro suco ipso substituere officinae. corticis etiam ad medicamenta pretium est. praecipua autem gratia lacrimae, secunda semini, tertia cortici, minima ligno. ex hoc buxosum optimum, quod et odoratissimum, e semine autem maximum et ponderosissimum, mordens gustu fervensque in ore. adulteratur petraeo hyperico, quod coarguitur magnitudine, inanitate, longitudine, odoris ignavia, sapore

piperis. lacrimae probatio ut sit e pingui tenuis ac modice rufa et in fricando odorata. secundus candidi coloris, peior viridis crassusque, pessimus niger, quippe ut oleum senescit. ex omni incisura maxime probatur quod ante semen fluxit. et alias adulteratur seminis suco, vixque maleficium deprehenditur gustu amariore; esse enim debet lenis, non subacidus, odore tantum austerus. vitiatur et oleo rosae, cypri, lentisci, balani, terebinthi, myrti, resina, galbano, cera cypria, prout quaeque res fuit, nequissime autem cummi: quoniam arescit, in manu inversa et in aqua sidit, quae probatio eius gemina est. debet et sincerum arescere, sed hoc cummi addita fragili crusta evenit. et gustu deprehenditur, carbone vero quod cera resinaque adulteratum est, nigriore flamma. nam melle mutatum statim in manu contrahit muscas. praeterea sinceri densatur in tepida aqua gutta sidens ad ima vasa, adulterata olei modo innatat et, si metopio vitiata est, circulo candido cingitur. summa est probatio ut lac coagulet, in veste maculas non faciat. nec manifestior alibi fraus, quippe milibus denarium sextarii, empti vendente fisco trecenis denariis, veneunt: in tantum expedit augere liquorem. xylobalsamo pretium in libras #1108 vi.

proxima iudaeae syria supra phoenicen styracem gignit circa gabala et marathunta et casium seleuciae montem. arbor est eodem nomine, cotoneo malo similis, lacrimae ex austero iucundi odoris; intus similitudo harundinis, suco praegnans. in hanc circa canis ortus advolant pinnati vermiculi erodentes, ob id scobe sordescit. styrax laudatur post supra dicta ex pisidia side, cypro, cilicia, creta, minime ex amano syriae medicis, sed unguentariis magis. colos in quacumque natione praefertur rufus et pinguiter lentus, deterior furfurosus et cano situ obductus. adulteratur cedri resina vel cummi, alias melle aut amygdalis amaris. omnia ea deprehenduntur gustu. pretium optimo #1108 xvii. exit et in pamphylia, sed aridior minusque sucosus. dat et galbanum syria in eodem amano monte e ferula, quae eiusdem nominis, resinae modo; stagonitim appellant. quod maxime laudant, cartilaginosum, purum ad similitudinem hammoniaci minimeque lignosum. sic quoque adulteratur faba aut sacopenio. sincerum, si uratur, fugat nidore serpentes. permutatur in libras #1108 v. medicinae hoc tantum, panacen et unguentis eadem gignit, nascentem et in psophide arcadiae circaque erymanthi fontem

et in africa et in macedonia, ferula sui generis quinque cubitorum, foliis primo quaternis, mox senis in terra iacentibus, ampla magnitudine rotundis, in cacumine vero oleagineis, semine muscariis dependente ut ferulae. excipitur sucus inciso caule messibus, radice autumno. laudatur candor eius coacti; sequens pallido statera, niger colos inprobatur. pretium optimo in libras #1108 ii. ab hac ferula differt quae vocatur spondylion foliis tantum, quia sunt minora et platani divisura. non nisi in opacis gignitur. semen eodem nomine silis speciem habet, medicinae tantum utile. dat et malobathrum syria, arborem folio convoluto, colore aridi folii, ex quo premitur oleum ad unguenta, fertiliore eiusdem aegypto. laudatius tamen ex india venit. in paludibus ibi gigni tradunt lentis modo, odoratius croco, nigricans scabrumque, quodam salis gustu. minus probatur candidum. celerrime situm in vetustate sentit. sapor eius nardo similis esse debet sub lingua. odor vero in vino subfervefacti antecedit alios. in pretio quidem prodigio simile est, a denaris singulis ad #1108 ccc pervenire libras, folium autem ipsum in libras #1108 lx.

oleum et omphacium est. fit duobus generibus et totidem modis, ex olea et vite, olea adhuc alba expressa, deterius ex druppa. ita vocatur prius quam cibo matura sit, iam tamen colorem mutans; differentia quod hoc viride est, illud candidum. e vite psithia fit aut aminnea. cum sunt acini ciceris magnitudine, ante canis ortum, in prima lanugine demetitur uva eiusque melligo. reliquum corpus sole coquitur - nocturni rores caventur in fictili conditae - ; melligo colligitur subinde et cyprio aere servatur. optima quae rufa acriorque et aridior. pretium omphacio in libras #1108 vi. fit et alio modo, cum in mortariis uva inmatura teritur siccataque in sole postea digeritur in pastillos.

eodem et bryon pertinet, uva populi albae. optima circa cnidum aut cariam in sitientibus aut siccis asperisque, secunda in lyciae cedro. eodem et oenanthe pertinet; est autem vitis labruscae uva; colligitur, cum floret, id est cum optime olet, siccatur in umbra substrato linteo atque ita in cados conditur. praecipua ex parapotamia, secunda ab antiochia atque laudicea syriae, tertia ex montibus medicis; haec utilior medicinae. quidam omnibus his praeferunt eam quae in cypro insula nascitur. nam quae in africa fit,

ad medicos tantum pertinet vocaturque massaris. omnis autem ex alba labrusca praestantior quam e nigra.

est praeterea arbor ad eadem unguenta pertinens, quam alii elaten vocant - quod nos abietem - alii palmam, alii spatham. laudatur hammoniaca maxime, mox aegyptia, dein syriaca, dumtaxat in locis sitientibus odorata, pingui lacrima, quae in unguenta additur ad domandum oleum.

in syria gignitur et cinnamum quod comacum appellant. id est sucus nuci expressus, multum a suco illo veri cinnami differens, vicina tamen gratia. pretium in libras asses xxxx.

LIBER XIII

hactenus in odoribus habent pretia silvae, erantque per se mira singula, iuvitque luxuria omnia ea miscere et e cunctis unum odorem facere: ita reperta sunt unguenta. quis primus invenerit non traditur. iliacis temporibus non erant, nec ture supplicabatur: cedri tantum et citri, suorum fruticum, et in sacris fumo convolutum nidorem verius quam odorem noverant, iam rosae suco reperto; nominatur enim hic quoque in olei laude. unguentum persarum gentis esse debet. illi madent eo et accersita commendatione inluvie natum virus extingunt. primum, quod equidem inveniam, castris darii regis expugnatis in reliquo eius apparatu alexander cepit scrinium unguentorum. postea voluptas eius a nostris quoque inter lautissima atque etiam honestissima vitae bona admissa est, honosque et ad defunctos pertinere coepit. quapropter plura de eo dicemus. quae ex his non erunt fruticum, ad praesens nominibus tantum indicabuntur, natura vero eorum suis reddetur locis.

vnguentis cognomina dedere aliis patriae, aliis suci, aliis arbores, aliis causae, primumque id scire convenit, mutatam auctoritatem et saepius transisse gloriam. laudatissimum fuit antiquitus in delo insula, postea mendesium. nec mixtura et compositione tantum hoc accidit, sed iidem suci varie alibi atque alibi praevaluere aut degeneravere. irinum corinthi diu maxime placuit, postea cyzici, simili modo rhodinum phaseli, quam gloriam abstulere neapolis, capua, praeneste. crocinum in solis ciliciae diu maxime laudatum est, mox rhodi, oenanthinum in cypro, post adramytteo, amaracinum in coo, postea eodem loco praelatum est melinum, cyprinum in cypro, deinde in aegypto, ubi mendesium et metopium subito gratius factum est. mox haec abstulit phoenice et cyprini laudem aegypto reliquit. panathenaicum suum athenae perseveranter optinuere. fuerat et pardalium in tarso, cuius etiam conpositio et mixtura oblitterata est. narcissinum quoque ex flore narcisso desiit conponi. ratio faciendi duplex, sucus et corpus: ille olei generibus fere constat, hoc odorum; haec stymmata vocant, illa hedysmata. tertius inter haec est colos multis neglectus; huius causa adduntur cinnabaris et anchusa. sal adspersus olei naturam coercet. quibus anchusa adiecta est, sal non

additur. resina aut cummis adiciuntur ad continendum odorem in corpore; celerrime is evanescit atque defluit, si non sunt haec addita. unguentorum expeditissimum fuit primumque, ut verisimile est, e bryo et balanino oleo, de quibus supra diximus et increvit deinde mendesium balanino, resina, murra, magisque etiamnum metopium. oleum hoc est amygdalis amaris expressum in aegypto, cui addidere omphacium, cardamomum, iuncum, calamum, mel, vinum, murram, semen balsami, galbanum, resinam terebinthinam. e vilissimis quidem hodieque est - ob id creditum et id e vetustissimis esse - quod constat oleo myrteo, calamo, cupresso, cypro, lentisco, mali granati cortice. sed divulgata maxime unguenta crediderim rosa, quae plurima ubique gignitur. itaque simplicissima rhodini mixtura diu fuit additis omphacio, flore rosae, crocino, cinnabari, calamo, melle, iunco, salis flore aut anchusa, vino. similis ratio et in crocino additis cinnabari, anchusa, vino. similis et in sampsuchino admixtis omphacio, calamo. optimum hoc in cypro, mytilenis, ubi plurima sampsuchus. miscentur et viliora genera olei e myrto, lauru, quibus additur sampsuchum, lilium, faenum graecum, murra, casia, nardum, iuncus, cinnamomum. e malis quoque cotoneis et strutheis fit oleum, ut dicemus, melinum, quod in unguenta transit admixtis omphacio, cyprino, sesamino, balsamo, iunco, casia, habrotono. susinum tenuissimum omnium est; constat ex liliis, balanino, calamo, melle, cinnamo, croco, murra; et dein cyprinum ex cypro et omphacio et cardamomo, calamo, aspalatho, habrotono; aliqui et cyperum addunt et murram et panacem. hoc optimum sidone, mox aegypto. si non addatur sesaminum oleum, durat et quadriennio; excitatur cinnamomo. telinum fit ex oleo recenti, cypiro, calamo, meliloto, faeno graeco, melle, maro, amaraco. hoc multo erat celeberrimum menandri poetae comici aetate; postea successit propter gloriam appellatum megalium, ex oleo balanino, calamo, iunco, xylobalsamo, casia, resina. huius proprietas ut ventiletur in coquendo, donec desinat olere; rursus refrigeratum odorem suum capit. singuli quoque suci nobilia unguenta faciunt: in primis malobathrum, postea iris illyrica et cyzicena amaracus, herbarum utraque. vel pauca his et alia alii miscent; qui plurima, alterutri mel, salis florem, omphacium, agni folia, panacem. externa omnia et prodigiosa cinnamomino pretia: adicitur cinnamo balaninum oleum, xylobalsamum, calamus, iunci,

balsami semina, murra, mel odoratum. unguentorum hoc crassissimum. pretia ei a #1108 xxxv ad #1108 ccc. nardinum sive foliatum constat omphacio aut balanino, iunco, costo, nardo, amomo, murra, balsamo. in hoc genere conveniet meminisse herbarum, quae nardum indicum imitarentur, species viiii a nobis esse dictas: tanta materia adulterandi est. omnia autem acutiora fiunt costo, amomo, quae maxime nares feriunt, crassiora murra suavioraque, medicinae autem utiliora croco, acerrima per se amomo; hoc et capitis dolores facit. quidam satis habent adspergere quae sunt pretiosissima ceteris decoctis, inpendio parcentes, sed non est eadem vis nisi una decoctis. murra et per se unguentum facit sine oleo, stacte dumtaxat, alioqui nimiam amaritudinem adfert. cyprino viride fit, susino unguinosum, mendesio nigrum, rhodino candidum, murra pallidum. haec sunt antiquae inventionis genera et postea officinarum furta.

nunc dicetur cumulus ipse deliciarum et summa auctoritas rei. ergo regale unguentum, appellatum quoniam parthorum regibus ita temperatur, constat myrobalano, costo, amomo, cinnamo comaco, cardamomo, nardi spica, maro, murra, casia, styrace, ladano, opobalsamo, calamo iuncoque syriis, oenanthe, malobathro, serichato, cypro, aspalatho, panace, croco, cypiro, amaraco, loto, melle, vino. nihilque eius rei causa in italia victrice omnium, in europa vero tota praeter irim illyricam et nardum gallicum gignitur. nam vinum et rosa et myrti folia oleumque communia fere omnium terrarum intellegantur.

siccis odoribus constant quae diapasmata vocantur. nam faecem unguenti magma appellant. inter omnes potentissimus odor quisquis novissime additur. unguenta optime servantur in alabastris, odores in oleo, quod diuturnitati eorum tanto utilius quanto pinguius, ut ex amygdalis. et ipsa unguenta vetustate meliora. sol inimicus iis, quam ob rem in umbra conduntur plumbeis vasis. experimentum eorum inversa manu capitur, ne carnosae partis calor vitiet.

haec est materia luxus e cunctis maxime supervacui. margaritae enim gemmaeque ad heredem tamen transeunt, vestes prorogant tempus: unguenta ilico expirant ac suis moriuntur horis. summa commendatio eorum ut transeuntem feminam odor invitet etiam aliud agentis. exceduntque quadringenos denarios librae: tanti emitur voluptas aliena; etenim odorem qui gerit, ipse non sentit. si tamen et

haec aliqua differentia signanda sunt, in m. ciceronis monumentis invenitur unguenta gratiora quae terram quam quae crocum sapiant, quando etiam corruptissimo in genere magis tamen iuvat quaedam ipsius vitii severitas. sed quosdam crassitudo maxime delectat, spissum appellantes, linique iam, non solum perfundi, gaudent. vidimus etiam vestigia pedum tingui, quod monstrasse m. othonem neroni principi ferebant, quaeso ut qualiter sentiretur iuvaretque ab ea parte corporis nec non aliquem e privatis audivimus iussisse spargi parietes balnearum unguento atque gaium principem solia temperari ac, ne principale videatur hoc bonum, et postea quendam e servis neronis. maxime tamen mirum est hanc gratiam penetrasse et in castra; aquilae certe ac signa, pulverulenta illa et cuspidibus horrida, unguuntur festis diebus, utinamque dicere possemus quis primus instituisset! ita est nimirum: hac mercede corruptae orbem terrarum devicere aquilae. ista patrocinia quaerimus vitiis, ut per hoc ius sub casside unguenta sumantur.

quando id primum ad romanos penetraverit, non facile dixerim. certum est antiocho rege asiaque devictis, urbis anno dlxv, P. Licinium Crassum l. iulium caesarem censores edixisse ne quis venderet unguenta exotica; sic enim appellavere. at hercules iam quidam etiam in potus addunt, tantique est amaritudo, ut odore prodigo fruantur ex utraque parte corporis. l. plotium, l. planci bis consulis censorisque fratrem, proscriptum a triumviris in salurnitana latebra unguenti odore proditum constat, quo dedecore tota absoluta proscriptio est; quis enim non merito iudicet perisse tales

cetero terrarum omnium aegyptus accommodatissima unguentis, ab ea campania est copia rosae. iudaea vero incluta est vel magis palmis, quarum natura nunc dicetur. sunt quidem et in europa vulgoque italia, sed steriles. ferunt in maritimis hispaniae fructum, verum inmitem; dulcem in africa, sed statim evanescentem. contra in oriente ex iis vina gentiumque aliquis panis, plurimis vero etiam quadrupedum cibus; quam ob rem iure dicentur externae. nulla est in italia sponte genita nec in alia parte terrarum nisi in calida, frugifera vero nusquam nisi in fervida. gignitur levi sabulosaque terra, maiore in parte et nitrosa. gaudet riguis totoque anno bibere, cum amet sitientia. fimo quidam etiam laedi putant, assyriorum pars aliqua, si non rivis misceat. genera earum plura, et prima frutice non

excedentia sterilem hunc - aliubi et ipsum fertilem - brevisque rami orbe foliosum. tectorii vicem hic parietibus plerisque in locis praestat contra aspergines. est et procerioribus silva arbore ex ipsa, foliorum aculeo fruticante circa totas pectinatim. quas silvestres intellegi necesse est, incerta tamen libidine etiam mitioribus se miscent. reliquae, teretes atque procerae, densis gradatisque corticum pollicibus aut orbibus faciles ad scandendum orientis se populis praebent, vitilem sibi arborique indutis circulum mira pernicitate cum homine subeuntem. coma omnis in cacumine et pomum est, non inter folia hoc, ut in ceteris, sed suis inter ramos palmitibus racemosum, utraque natura uvae atque pomi. folia, cultrato mucrone lateribus in sese bifida, tabellas primum demonstravere geminas, nunc ad funes vitiliumque nexus et capitum levia umbracula finduntur. arboribus, immo potius omnibus quae terra gignat herbisque etiam, utrumque esse sexum diligentissimi naturae tradunt, quod in plenum satis sit dixisse hoc in loco, nullis tamen arboribus manifestius. mas palmite floret, femina citra florem germinat tantum spicae modo. utrisque autem prima nascitur pomi caro, postea lignum intus, hoc est semen eius. argumentum quod parvae sine hoc reperiuntur in eodem palmite. est autem oblongum, non ut olivis orbiculatum, praeterea caesum a dorso pulvinata fissura et in alvo media plerisque umbilicatum. inde primum spargitur radix. seritur autem pronum et bina iuxta composita semina superque totidem; quoniam infirma e singulis planta est, quaternae coalescunt. multis candidisque lignum hoc a carnibus discernitur tunicis, aliis corpori adhaerentibus, laxeque distans tantum cacuminis filo adhaeret. caro maturescit anno. quibusdam tamen in locis, ut in cypro, quamquam ad maturitatem non perveniat, grato sapore dulcis est. folium ibi latius, fructus quam reliquis rotundior nec ut devoretur corpus, verum ut expuatur suco modo expresso. et in arabia languide dulces traduntur esse palmae, quamquam iuba apud scenitas arabas praefert omnibus saporibus quam vocant dablan. cetero sine maribus non gignere feminas sponte edito nemore confirmant circaque singulos plures nutare in eum pronas blandioribus comis. illum erectis hispidum adflatu visuque ipso et pulvere etiam reliquas maritare; huius arbore excisa viduvio sterilescere feminas. adeoque est veneris intellectus, ut coitus etiam excogitatus sit ab homine, e maribus flore

ac lanugine, interim vero tantum pulvere, insperso feminis.

seruntur autem palmae et trunco duum cubitorum longitudine, a cerebro ipso arboris fissuris diviso atque defosso. et ab radice avulsae vitalis est satus et ramorum tenerrimis. in assyria ipsa quoque arbor strata in solo umido tota radicatur, sed in frutices, non in arborem. ergo plantaria instituunt anniculasque transferunt et iterum bimas. gaudent enim mutatione sedis, verna alibi, in assyria autem circa canis ortus. nec ferro attingunt ibi novellas, sed religant comas, ut in altitudinem exeant. robustas deputant crassitudinis gratia, semipedales ramorum truncos relinquentes, qui decisi alibi necant matrem. diximus salsum ab iis solum diligi. ergo, ubi non est tale, salem aspergunt, non radicibus, sed longius paulo. quaedam in syria et aegypto in binos se dividunt truncos, in creta et in ternos, quaedamque et quinos. ferunt statim in trimatu, in cypro vero, syria, aegypto quadrimae, aliae quinquennes, altitudine hominis, nullo intus pomi ligno quamdiu sunt novellae, ob id spadonum accepto nomine.

genera earum multa. sterilibus ad materias operumque lautiora utitur assyria et tota persis. sunt et caeduae palmarum quoque silvae, rursus germinantes ab radice succisae. dulcis medulla earum in cacumine, quod cerebrum appellant, exemptaque vivunt, quod non aliae. vocantur autem chamaeropes, folio latiore ac molli ad vitilia utilissimae, copiosae in creta, sed magis in sicilia. e palmis prunae vivaces ignisque lentus. fructiferarum aliis brevius lignum in pomo, aliis longius, his mollius, illis durius, quibusdam osseum, limarum dente contra fascinantes religione politum. aliud pluribus vestitum paucioribusve tunicis, aliud crassioribus tenuioribusve. ita fiunt undequinquaginta genera, si quis omnium persequi velit nomina, etiam barbara, vinorumque ex iis differentias. clarissimae omnium, quas regias appellavere ob honorem, quoniam regibus tantum persidis servarentur, babylone natae uno in horto bagou; ita vocant spadones, qui apud eos etiam regnavere. hortus ille numquam nisi dominantis in aula fuit. at in meridiano orbe praecipuam optinent nobilitatem syagri proximamque margarides. hae breves, candidae, rotundae, acinis quam quam balanis similiores, quare et nomen a margaritis accepere. una earum arbor in chora esse traditur, una et syagrorum, mirumque de ea accepimus, cum phoenice ave, quae putatur ex huius palmae argumento nomen accepisse, intermori ac

renasci ex se ipsa, eratque, cum proderem, fertilis. pomum ipsum grande, durum, horridum et a ceteris generibus distans sapore quodam ferinae in apris evidentissimo, quae causa nominis. quarta auctoritas sandalidum a similitudine appellatarum. iam in aethiopiae fine quinque harum, qui plurimas, arbores tradunt, non raritate magis quam suavitate mirabiles. ab his caryotae maxime celebrantur, et cibo quidem, sed et suco uberrimae, ex quibus praecipua vina orienti, inimica capiti, unde pomo nomen. sed ut copia ibi atque fertilitas, ita nobilitas in iudaea, nec in tota, sed hiericunte maxime, quamquam laudata et archelaide et phaselide atque liviade, gentis eiusdem convallibus. dos iis praecipua suco pingui lactentibus quodamque vini sapore in melle praedulci. sicciores ex hoc genere nicolai, sed amplitudinis praecipuae: quaterni cubitorum longitudinem efficiunt. minus speciosae, sed sapore caryotarum sorores et ob hoc adelphides dictae proximam suavitatem habent, non tamen eandem. tertium ex his genus patetae: nimio liquore abundant, rumpitque se pomi ipsius, etiam in sua matre, ebrietas, calcatis similis. suum genus e sicciore turba dactylis, praelonga gracilitate curvatis interim; nam quos ex his honori deorum damus, chydaeos appellavit iudaea gens contumelia numinum insignis. in totum arentes thebaidi atque arabiae macroque corpore exiles, et adsiduo vapore torrente crustam verius quam cutem obducunt. in ipsa quidem aethiopia friatur haec - tanta est siccitas - et farinae modo spissatur in panem. gignitur autem in frutice ramis cubitalibus, folio latiore, pomo rotundo, sed maiore quam mali amplitudine; coecas vocant. triennio maturescunt, semperque frutici pomum est subnascente alio. thebaidis fructus extemplo in cados conditur cum sui ardoris anima. ni ita fiat, celeriter expirat marcescitque non retostus furnis. e reliquo genere plebeiae videntur syriae et quas tragemata appellant. nam in alia parte phoenices ciliciaeque populari etiam nomine a nobis appellantur balani. eorum quoque plura genera. differunt figura rotunditatis aut proceritatis, differunt et colore, nigriores ac rubentes. nec pauciores fico traduntur colores, maxime tamen placent candidi. distant et magnitudine, prout multi cubitum effecere, quidam sunt non ampliores faba. servantur ii demum qui nascuntur in salsis atque sabulosis, ut in iudaea atque cyrenaica africa, non item in aegypto, cypro, syria, seleucia assyria, quam ob rem sues et reliqua animalia ex iis saginantur. vitiati aut

vetusti eius pomi signum est decidisse candidam verrucam, qua racemo adhaeserint. alexandri milites palmis viridibus strangulati sunt; in gedrosis id factum est pomi genere, alibi copia evenit: est enim tanta suavitas musteis, ut finis mandendi non nisi periculo fiat.

syria praeter hanc peculiares habet arbores: in nucum genere pistacia nota - prodesse adversus serpentium morsus traduntur et potu et cibo - , in ficorum autem caricas et minores eiusdem generis, quas cottana vocant, item pruna in damasco monte nata et myxas, utramque iam familiarem italiae. e myxis in aegypto et vina fiunt.

iunipiris similem habet phoenice cedrum minorem. duo eius genera, lycia et phoenicia, differunt folio; nam quae durum, acutum, spinosum habet, oxycedros vocatur, ramosa et nodis infesta altera, odore praestans. fructum ferunt myrti magnitudine, dulcem sapore. et maioris cedri duo genera. quae floret, fructum non fert, fructifera non floret, et in ea antecedentem fructum occupat novus; semen eius cupresso simile. quidam cedrelaten vocant. ex hac resina laudatissima. materiae vero ipsi aeternitas, itaque et simulacra deorum ex ea factitaverunt. cedrinus est romae in delubro apollo sosianus seleucia advectus. cedro similis in arcadia est arbor, in phrygia frutex vocatur cedris.

syria et terebinthum habet. ex iis mascula est sine fructu; feminarum duo genera. alteri fructus rubet lentis magnitudine, alteri pallidus cum vite maturescit, non grandior faba, odore iucundus, tactu resinosus. circa iden troadis et in macedonia brevis arbor haec atque fruticosa, in damasco syriae magna. materies ei admodum lenta ac fidelis ad vetustatem, nigri splendoris; flos racemosus olivae modo, sed rubens, folia densa. fert et folliculos emittentes quaedam animalia ceu culices lentoremque resinosum, qui et ex cortice erumpit. et rhus syriae mascula sterili fert femina, folio ulmi paulo longiore et piloso, foliorum semper inter se contrariis pediculis, gracili brevique ramo. pelles candidae conficiuntur iis. semen lenti simile cum uva rubescit, quod vocatur rhus, medicamentis necessarium.

et aegypto multa genera quae non aliubi, ante omnia ficus ob id aegyptia cognominata. arbor moro similis folio, magnitudine, aspectu; pomum fert non ramis, sed caudice ipso, idque ficus est praedulcis sine granis interioribus, perquam fecundo proventu

scalpendo tantum ferreis unguibus; aliter non maturescit. sed cum hoc factum est, quarto die demetitur alio subnascente, septeno ita numerosa partu per singulas aestates, multo lacte abundante. subnascitur, etiamsi non scalpatur, fetus quater aestate prioremque expellit inmaturum. materies proprii generis inter utilissimas. caesa statim stagnis mergitur - hoc est eius siccari - et primo sidit, postea fluitare incipit, certoque eam sugit alienus umor, qui aliam omnem rigat. cum innatare coeperit, tempestivae habet signum.

huic similis quadamtenus quae vocatur cypria ficus in creta. nam et ipsa caudice ipso fert pomum et ramis, cum in crassitudinem adolevere, sed haec germen emittit sine ullis foliis radici simile. caudex arboris similis populo, folium ulmo. fructus quaternos fundit, totiens et germinat, sed grossus eius non maturescit nisi incisura emisso lacte. suavitas et interiora fici, magnitudo sorvi.

similis et quam iones cerauniam vocant, trunco et ipsa fertilis - pomum siliqua - ; ob id quidam aegyptiam ficum dixere, errore manifesto: non enim in aegypto nascitur, sed in syria ioniaque et circa cnidum atque in rhodo, semper comantibus foliis, flore candido cum vehementia odoris, plantigera imis partibus et ideo superficie flavescens, sucum auferente subole. pomo antecedentis anni circa canis ortus detracto statim alterum parit, postea floret per arcturum, hieme fetus eius nutriente.

aegyptus et perseam arborem sui generis habet, similem piro, folia retinentem. fertilitas adsidua eius, subnascente crastino fructu, maturitas etesiarum adflatu. pomum longius piro, inclusum amygdalae putamine et corio, colore herbido, sed ubi nux illi, huic prunum differens brevitate ac mollitia et, quamvis blandiatur praedulcis suavitas, innocuum. materies bonitate, firmitudine, nigritia quoque nihil differens a loto. simulacra et ex ea factitavere. non eadem gratia, quamquam fideli, materiae ex arbore quam balanum appellavimus, magna ex parte contortae; navalis itaque tantum est. at e diverso cuci in magno honore, palmae similis, quando et eius foliis utuntur ad textilia. differt quod in bracchia ramorum spargitur. pomo magnitudo quae manum inpleat, colos fulvus, commendabili suco ex austero dulci. lignum intus grande firmaeque duritiae, ex quo velares detornant anulos. in eo nucleus dulcis, dum recens est; siccatus durescit ad infinitum, ut mandi non possit, nisi sit pluribus diebus

maceratus. materies crispioris elegantiae et ob id persis gratissima. nec minus spina celebratur in eadem gente dumtaxat nigra, quoniam incorrupta etiam in aquis durat, ob id utilissima navium costis. candidae facile putrescunt. aculei spinarum et in foliis, semen in siliquis, quo coria perficiunt gallae vice. flos et coronis iucundus et medicamentis utilis. manat et cummis ex ea. sed praecipua utilitas quod caesa anno tertio resurgit. circa thebas haec, ubi et quercus et persea et oliva, ccc a nilo stadiis, silvestri tractu et suis fontibus riguo. ibi et prunus aegyptia, non dissimilis spinae proxime dictae, pomo mespili, maturescens bruma nec folia dimittens. lignum in pomo grande, sed corpus ipsum natura et copia messium instar incolis; purgatum enim tundunt servantque eius offas. silvestris fuit et circa memphin regio tam vastis arboribus, ut terni non quirent circumplecti, unius peculiari miraculo, nec pomum propter usumve aliquem, sed eventum. facies est spinae, folia habet ceu pinnas, quae tactis ab homine ramis cadunt protinus ac postea renascuntur.

cummim optimam esse ex aegyptia spina convenit, vermiculatam, colore glauco, puram, sine cortice, dentibus adhaerentem. pretium eius in libras #1108 iii. deterior ex amygdalis amaris et ceraso, pessima e prunis. fit et in vitibus infantium ulceribus aptissima, et aliquando in olea dentium dolori, ulmo etiam in coryco monte ciliciae ac iunipiro ad nihil utiles, ex ulmi vero cummi et culices ibi nascuntur. fit et e sarcocolla - ita vocatur arbor et cummis - utilissima pictoribus ac medicis, similis pollini turis et ideo candida quam rufa melior. pretium eius quod supra.

nondum palustria attingimus nec frutices amnium; prius tamen quam digrediamur ab aegypto, et papyri natura dicetur, cum chartae usu maxime humanitas vitae constet, certe memoria. et hanc alexandri magni victoria repertam auctor est M. Varro, condita in aegypto alexandria. antea non fuisse chartarum usum: in palmarum foliis primo scriptitatum, dein quarundam arborum libris. postea publica monumenta plumbeis voluminibus, mox et privata linteis confici coepta aut ceris; pugillarium enim usum fuisse etiam ante troiana tempora invenimus apud homerum, illo vero prodente ne terram quidem ipsam, quae nunc aegyptus, intellegitur, cum in sebennytico et saite eius nomo omnis charta nascatur, postea adaggeratam nilo, si quidem a pharo insula, quae nunc alexandriae

ponte iungitur, noctis dieique velifico navigi cursu terram afuisse prodidit. mox aemulatione circa bibliothecas regum ptolemaei et eumenis, supprimente chartas ptolemaeo, idem Varro membranas pergami tradit repertas. postea promiscue repatuit usus rei qua constat inmortalitas hominum.

papyrum ergo nascitur in palustribus aegypti aut quiescentibus nili aquis, ubi evagatae stagnant duo cubita non excedente altitudine gurgitum, bracchiali radicis obliquae crassitudine, triangulis lateribus, decem non amplius cubitorum longitudine in gracilitatem fastigatum, thyrsi modo cacumen includens, nullo semine aut usu eius alio quam floris ad deos coronandos. radicibus incolae pro ligno utuntur, nec ignis tantum gratia, sed ad alia quoque utensilia vasorum. ex ipso quidem papyro navigia texunt et e libro vela tegetesque, nec non et vestem, etiam stragula ac funes. mandunt quoque crudum decoctumque, sucum tantum devorantes. nascitur et in syria circa quem odoratus ille calamus lacum, neque aliis usus est quam inde funibus rex antigonus in navalibus rebus, nondum sparto communicato. nuper et in euphrate nascens circa babylonem papyrum intellectum est eundem usum habere chartae; et tamen adhuc malunt parthi vestibus litteras intexere.

praeparatur ex eo charta diviso acu in praetenues, sed quam latissimas philyras. principatus medio, atque inde scissurae ordine. hieratica appellabatur antiquitus religiosis tantum voluminibus dicata, quae adulatione Augusti nomen accepit, sicut secunda liviae a coniuge eius: ita descendit hieratica in tertium nomen. proximum amphitheatriticae datum fuerat a confecturae loco; excepit hanc romae fanni sagax officina tenuatamque curiosa interpolatione principalem fecit e plebeia et nomen ei dedit; quae non esset ita recurata, in suo mansit amphitheatritica. post hanc saitica ab oppido ubi maxima fertilitas, ex vilioribus ramentis, propiorque etiamnum cortici taeneotica a vicino loco, pondere iam haec, non bonitate, venalis. nam emporitica inutilis scribendo involucris chartarum segestriumque mercibus usum praebet, ideo a mercatoribus cognominata. post hanc papyrum est extremumque eius scirpo simile ac ne funibus quidem nisi in umore utile. texitur omnis madente tabula nili aqua. turbidum liquoris glutinum praebet. in rectum primo supina tabulae schida adlinitur longitudine papyri quae potuit esse,

resegminibus utrimque amputatis, traversa postea crates peragit. premitur ergo praelis, et siccantur sole plagulae atque inter se iunguntur, proximarum semper bonitatis deminutione ad deterrimas. numquam plures scapo quam vicenae.

magna in latitudine earum differentia: xiii digitorum optimis, duo detrahuntur hieraticae, fanniana denos habet, et uno minus amphitheatritica, pauciores saitica, nec malleo sufficit; nam emporiticae brevitas sex digitos non excedit. praeterea spectatur in chartis tenuitas, densitas, candor, levor. primatum mutavit claudius caesar: nimia quippe augustae tenuitas tolerandis non sufficiebat calamis; ad hoc tramittens litteras liturae metum adferebat ex aversis, et alias indecoro visu pertralucida. igitur e secundo corio statumina facta sunt, e primo subtemina. auxit et amplitudinem, pedali mensura. erat et cubitalis macrocollis, sed ratio deprehendit vitium, unius schidae revulsione plures infestante paginas. ob haec praelata omnibus claudia, augustae in epistulis auctoritas relicta; liviana suam tenuit, cui nihil e prima erat, sed omnia e secunda.

scabritia levigatur dente conchave, sed caducae litterae fiunt. minus sorbet politura charta, magis splendet. rebellat saepe umor incuriose datus primo, malleoque deprehenditur aut etiam odore, cum cura fuit indiligentior. deprehenditur et lentigo oculis, sed inserta mediis glutinamentis taenea fungo papyri bibula, vix nisi littera fundente se: tantum inest fraudis. alius igitur iterum texendis labor.

glutinum vulgare e pollinis flore temperatur fervente aqua, minimo aceti aspersu, nam fabrile cummisque fragilia sunt. diligentior cura mollia panis fermentati colat aqua fervente; minimum hoc modo intergerivi, atque etiam nili lenitas superatur. omne autem glutinum nec vetustius esse debet uno die nec recentius. - (postea malleo tenuatur et glutino percurritur, iterumque constricta erugatur atque extenditur malleo) - ita sint longinqua monimenta. tiberi gaique gracchorum manus apud pomponium secundum vatem civemque clarissimum vidi annos fere post ducentos; iam vero ciceronis ac Divi Augusti vergilique saepenumero videmus.

ingentia exempla contra M. Varronis sententiam de chartis reperiuntur. namque cassius hemina, vetustissimus auctor annalium, quarto eorum libro prodidit cn. terentium scribam agrum suum in ianiculo repastinantem effodisse arcam, in qua numa, qui romae

regnavit, situs fuisset. in eadem libros eius repertos p. cornelio l. filio cethego, m. baebio q. filio tamphilo cos., ad quos a regno numae colliguntur anni dxxxv. hos fuisse e charta, maiore etiamnum miraculo, quod infossi duraverint - quapropter in re tanta ipsius heminae verba ponam: “mirabantur alii, quomodo illi libri durare possent; ille ita rationem reddebat: lapidem fuisse quadratum circiter in media arca evinctum candelis quoquoversus. in eo lapide insuper libros iii sitos fuisse; propterea arbitrarier non computuisse. et libros citratos fuisse; propterea arbitrarier tineas non tetigisse. in iis libris scripta erant philosophiae pythagoricae” - eosque combustos a q. petilio praetore, quia philosophiae scripta essent. hoc idem tradit piso censorius primo commentariorum, sed libros septem iuris pontificii, totidem pythagoricos fuisse; tuditanus tertio decimo numae decretorum fuisse. ipse Varro humanarum antiquitatum vii, antias secundo libros fuisse xii pontificales latinos, totidem graecos praecepta philosophiae continentes; idem tertio et sc. ponit quo comburi eos placuerit. inter omnes vero convenit sibyllam ad tarquinium superbum tres libros adtulisse, ex quibus sint duo cremati ab ipsa, tertius cum capitolio sullanis temporibus. praeterea mucianus ter cos. prodidit nuper se legisse, cum praesideret lyciae, sarpedonis ab troia scriptam in quodam templo epistulae chartam, quod eo magis miror, si etiamnum homero condente aegyptus non erat. aut cur, si iam hic erat usus, in plumbeis linteisque voluminibus scriptitatum constet, curve homerus in illa ipsa lycia bellerophonti codicillos datos, non epistulas, tradiderit sterilitatem sentit hoc quoque, factumque iam tiberio principe inopia chartae ut e senatu darentur arbitri dispensandis; alias in tumultu vita erat.

aethiopia aegypto contermina insignes arbores non fere habet praeter liniferam, qualis indorum atque arabiae dicta est. propior tamen huic natura lanae maiorque folliculus granati modo mali, similesque et inter se arbores ipsae. praeter hanc palmae, quales retulimus. insularum arbores ambitu aethiopiae et nemora odorata in mentione earum dicta sunt.

atlans mons peculiari proditur silva, de qua diximus. confines ei mauri, quibus plurima arbor citri et mensarum insania, quas feminae viris contra margaritas regerunt. exstat hodie m. ciceroni in illa paupertate et (quod magis mirum est) illo aevo empta hs [d].

memoratur et galli asini hs [30x]30. venumdatae sunt et duae ab iuba rege pendentes, quarum alteri pretium fuit hs [30xii]30, alteri paulo minus. interiit nuper incendio a cethegis descendens, hs [30xiii]30 permutata, latifundii taxatione, si quis praedia tanti mercari malit. magnitudo amplissimis adhuc fuit uni commissae ex orbibus dimidiatis duobus a rege mauretaniae ptolemaeo quattuor pedes et semipedem per medium ambitum, crassitudine quadrantali - maiusque miraculum in ea est artis latente iunctura quam potuisset esse naturae - , solidae autem a nomio caesaris liberto cognomen trahenti tribus sicilicis infra quattuor pedes totidemque infra pedem crassitudinis. qua in re non omittendum videtur tiberio principi mensam quattuor pedes sextante et sicilico excedentem, tota vero crassitudine sescunciali, operimento lamnae vestitam fuisse, cum tam opima nomio liberto eius esset. tuber hoc est radicis, maximeque laudatum quod sub terra totum fuerit, et rarius quam quae superne gignuntur etiam in ramis, proprieque quod tanti emitur arborum vitium est, quarum amplitudo ac radices aestimari possunt ex orbibus. sunt autem cupresso feminae atque etiamnum silvestri similes folio, odore, caudice. ancorarius mons vocatur citerioris mauretaniae, qui laudatissimum dedit citrum, iam exhaustus.

mensis praecipua dos in venam crispis vel in vertices parvos. illud oblongo evenit discursu ideoque tigrinum appellatur, hoc intorto et ideo tales pantherinae vocantur. sunt et undatim crispae, maiore gratia, si pavonum caudae oculos imitentur. magna, verum post has, gratia extra praedictas crispis densa veluti grani congerie, quas ob id a similitudine apiatas vocant. summa vero omnium in colore: hic maxime mulsi placet, vinis suis refulgens. post haec amplitudo est: iam toti caudices iuvant, pluresque in una. mensae vitia lignum - ita vocatur materiae surda et indigesta simplicitas aut platani foliorum modo digesta - , item ilignae venae similitudo vel coloris et, quibus maxime obnoxias fecere aestus ventique, rimae aut capillamenta rimas imitata; postea murena nigro transcurrens limite variisque corticum punctis adprehensus papaverum modo et in totum atro propior colos maculaeve discolores. - virides terra condunt barbari et inlinunt cera, artifices vero frumenti acervis inponunt septenis diebus totidem intermissis, mirumque ponderi quantum ita detrahatur. naufragia docuere nuper hanc quoque materiem siccatam mari,

duritie incorrupta, cospissari non ullo modo vehementius. nutriuntur optime splendescuntque manus siccae fricatu a balineis maxime, nec vinis laeduntur ut iis genitae.

inter pauca nitidioris vitae instrumenta haec arbor est, quapropter insistendum ei quoque paululum videtur. nota etiam homero fuit. thyon graece vocatur, ab aliis thya. hanc itaque inter odores uri tradidit in deliciis circae, quam deam volebat intellegi, magno errore eorum qui odoramenta in eo vocabulo accipiunt, cum praesertim eodem versu cedrum laricemque una tradat uri, quo manifestum est de arboribus tantum locutum. theophrastus, qui proximus a magni alexandri aetate scripsit haec circa urbis romae annum ccccxxxx, magnum iam huic arbori honorem tribuit, memoratas ex ea referens templorum veterum contignationes quandamque inmortalitatem materiae in tectis contra vitia omnia incorruptae. radice nihil crispius, nec aliunde pretiosiora opera. praecipuam autem esse eam arborem circa hammonis delubrum, nasci et in interiore cyrenaicae parte. de mensis tamen tacuit, et alias nullius ante ciceronianam vetustior memoria est, quo noviciae apparent. - alia est arbor eodem nomine, malum ferens exsecratum aliquis odore et amaritudine, aliis expetitum, domus etiam decorans, nec dicenda verbosius.

eadem africa, qua vergit ad nos, insignem arborem loton gignit, quam vocat celthim, et ipsam italiae familiarem, sed terra mutatam. praecipua est circa syrtis atque nasamonas. magnitudo quae piro, quamquam nepos cornelius brevem tradit. incisurae folio crebriores; alioqui ilicis viderentur. differentiae plures, eaeque maxime fructibus fiunt. magnitudo huic fabae, color croci, sed ante maturitatem alius atque alius, sicut uvis. nascitur densus in ramis myrti modo, non ut in italia cerasis, tam dulcis ibi cibo, ut nomen etiam genti terraeque dederit nimis hospitali advenarum oblivione patriae. ferunt ventris non sentire morbos qui eum mandant. melior sine interiore nucleo, qui in altero genere osseus videtur. vinum quoque exprimitur illi simile mulso, quod ultra denos dies negat durare idem nepos bacasque concisas cum alica ad cibos doliis condi. quin et exercitus pastos eo accepimus ultro citroque commeantes per africam. ligno colos niger; ad tibiarum cantus expetitur. e radice cultellis capulos brevesque alios usus excogitant.

haec ibi natura arboris. est autem eodem nomine et herba et in

aegypto caulis in palustrium genere. recedentibus enim aquis nili riguis provenit, similis fabae caule foliisque densa congerie stipatis, brevioribus tantum gracilioribusque. fructus in capite papaveri similis incisuris omnique alio modo; intus grana ceu milium. incolae capita in acervis putrefaciunt, mox separant lavando et siccata tundunt eoque pane utuntur. mirum est quod praeter haec traditur, sole occidente papavera ea comprimi et integi foliis, ad ortum autem aperiri, donec maturescant flosque, qui est candidus, decidat. hoc amplius in euphrate tradunt, et caput ipsum et florem vespera mergi usque in medias noctes totumque abire in altum, ut ne demissa quidem manu possit inveniri, reverti deinde paulatimque subrigi et ad exortus solis emergere extra aquam ac florem patefacere atque etiamnum insurgere, ut plane ab aqua absit alte. radicem lotos habet mali cotonei magnitudine, opertam nigro cortice, qualis et castaneas tegit. interius candidum corpus, gratum cibis et crudum, gratius decoctum sive aqua sive pruna. neque aliunde magis quam purgamentis eius sues crassescunt.

cyrenaica regio loton suae postponit paliuro. fruticosior haec fructuque magis rubens, cuius nucleus non simul mandatur; iucundus per se ac suavior e vino, quin et vina suco suo commendans. interior africa ad garamantas usque et deserta palmarum magnitudine et suavitate constat, nobilibus maxime circa delubrum hammonis, sed circa carthaginem punicum malum cognomine sibi vindicat; aliqui granatum appellant. divisit et in genera apyrenum vocando cui lignosus nucleus abesset; candidior ei natura et blandiores acini minusque amaris distincti membranis. alias structura eorum quaedam ut in favis, communis nucleos habentium. horum quinque species: dulcia, acria, mixta, acida, vinosa. samia et aegyptia distinguntur erythrocomis et leucocomis. corticis maior usus ex acerbis ad perficienda coria. flos balaustium vocatur, et medicis idoneus et tinguendis vestibus, quarum color inde nomen accepit.

in asia et graecia nascuntur frutices epicactis, quem alii embolinen vocant, parvis foliis, quae pota contra venena prosunt sicut erices contra serpentes, et in quo nascitur granum cnidium, quod aliqui linum vocant, fruticem vero thymelaean, alii chamelaean, alii pyros achnen, aliqui cnestorem, alii cneorum. est similis oleastro, foliis angustioribus, cumminosis, si mordeantur, myrti magnitudine. semen

colore et specie farris, ad medicinae tantum usum.

tragion fruticem sola creta insula gignit, terebintho similem et semine, quod contra sagittarum ictus efficacissimum tradunt. eadem et tragacantham spinae albae radice, multum praelatam apud medos aut in achaia nascenti. pretium eius in libras #1108 iii.

tragon et asia fert sive scorpionem, veprem sine foliis, racemis rubentibus, ad medicinae usum. myricen et italia, quam tamaricen vocat, achaia autem bryan silvestrem. insigne in ea quod sativa tantum fert gallae similem fructum. in syria et aegypto copiosa haec est, cuius infelicia ligna appellamus, qua tamen infeliciora sunt graeciae. gignit enim arborem ostryn, quam et ostryam vocant, solitariam circa saxa aquosa, similem fraxino cortice et ramis, folio piris, paulo tamen longioribus crassioribusque ac rugosis incisuris, quae per tota discurrunt, semine hordeo simili et colore. materies est dura atque firma, qua in domum inlata difficiles partus fieri produnt mortesque miseras. nec auspicatior in lesbo insula arbor quae vocatur euonymos, non absimilis punicae arbori - inter eam et laurum folia magnitudine, figura vero et mollitia punicae - , floris candidi odore statim pestem denuntians. fert siliquas sesames, intus granum quadriangula figura, spissum, letale animalibus; nec non et folio eadem vis. succurrit aliquando praeceps alvi exinanitio.

alexander cornelius arborem leonem appellavit, ex qua facta esset argo, similem robori viscum ferenti, quae neque aqua neque igni posset corrumpi, sicuti nec viscum, nulli alii cognitam, quod equidem sciam.

andrachlen omnes fere graecis porcillacae nomine interpretantur, cum sit herba et andrachne vocetur unius litterae diversitate. cetero andrachle est silvestris arbor neque in planis nascens, similis unedoni, folio tantum minore et numquam decidente, cortice non scabro quidem, sed qui circumgelatus videri possit: tam tristis aspectus est. similis et coccygia folio, magnitudine minor. proprietatem habet fructum amittendi lanugine (pappum vocant), quod nulli alii arbori evenit. similis et apharce, bifera aeque quam andrachle. priorem fructum incipiente pubescere uva peragunt, alterum initio hiemis, quales eos non traditur.

et ferulam inter externas dixisse conveniat arborumque generi adscripsisse, quoniam quarundam naturae, sicuti distinguemus,

lignum omne corticis loco habent forinsecus, ligni autem loco fungosam intus medullam ut sabuci, quaedam vero inanitatem ut harundines. ferula calidis nascitur locis atque trans maria, geniculatis nodata scapis. duo eius genera: nartheca graeci vocant adsurgentem in altitudinem, nartheciam vero semper humilem. a genibus exeunt folia, maxima ut quaeque terrae proxima. cetera natura eadem quae anetho, et fructu simili. nulli fruticum levitas maior; ob id gestatu facilis baculorum usum senectuti praebet.

semen ferulae thapsian quidam vocavere, decepti quoniam ferula sine dubio est thapsia, sed sui generis, foliis feniculi, inani caule nec excedente baculi longitudinem. semen quale ferulae, radix candida. incisa lacte manat et contusa suco, nec corticem abdicant. omnia ea venena: quippe etiam fodientibus nocet, si minima aspiret aura; intumescunt corpora, faciemque invadunt ignes sacri; ob id cerato prius inlinunt. quibusdam tamen morbis auxiliari dicunt medici permixtam aliis, item alopeciis suggillatisque ac liventibus, ceu vero remedia desint, ut scelera non tractent. sed ista praetexunt noxio instrumento, tantumque inpudentiae est, ut venenum artis esse persuadeant. thapsia in africa vehementissima. quidam caulem incidunt per messes et in ipsa excavant radice, quo sucus confluat, arefactumque tollunt. alii folia, caulem, radicem tundunt in pila et sucum in sole coactum dividunt in pastillos. nero caesar claritatem ei dedit initio imperi, nocturnis grassationibus converberata facie inlinens id cum ture ceraque et secuto die contra famam cutem sinceram circumferens. ignem ferulis optime servari certum est easque in aegypto praecellere.

vbi et cappari, firmioris ligni frutex seminisque et cibis vulgati, caule quoque una plerumque decerpto. cavenda eius genera peregrina, si quidem arabium pestilens, africum gingivis inimicum, marmaricum vulvis et omnibus inflationibus. apulum vomitus facit, stomachum et alvum solvit. quidam id cynosbaton vocant, alii ophiostaphylen.

frutectosi est generis et saripha, circa nilum nascens, duorum ferme cubitorum altitudine, pollicari crassitudine, coma papyri, similique manditur modo, radice ferrariis officinis praecipua carbonis usu propter duritiam.

non omittendum est et quod babylone seritur in spinis, quoniam

non aliubi vivit, sicut et viscum in arboribus, sed illud in spina tantum quae regia vocatur. mirum quod eodem die germinat quo iniectum est - inicitur autem ipso canis ortu - et celerrime arborem occupat. condiunt eo vina et ideo serunt. spina illa nascitur et athenis in longis muris.

frutex est et cytisus, ab amphilocho atheniense miris laudibus praedicatus pabulo omnium, aridus vero etiam suum, spondetque iugero eius annua hs mm vel mediocri solo reditus. utilitas quae ervo, sed ocior satias, perquam modico pinguescente quadripede, ita ut iumenta hordeum spernant. non ex alio pabulo lactis maior copia aut melior, super omnia pecudum medicina validas a morbis omnibus praestante. quin et nutricibus in defectu lactis aridum atque in aqua decoctum potui cum vino dari iubet - firmiores excelsioresque infantes fore - , viridem etiam gallinis aut, si inaruerit, madefactum. apes quoque numquam defore cytisi pabulo contingente promittunt democritus atque aristomachus. nec aliud minoris impendi est. seritur, cum hordeum, aut vere semine ut porrum, vel caule autumno ante brumam; si semine, madidum, aut, si desint imbres, satum spargitur. plantae cubitales transferuntur scrobe pedali. seritur per aequinoctia tenero frutice, perficitur triennio, demetitur verno aequinoctio, cum florere desiit, vel pueri anusve vilissima opera. canus aspectu, breviterque si quis exprimere similitudinem velit, angustioris trifoli frutex. datur animalibus post biduum semper, hieme vero quod inaruit madidum. satiant equos denae librae et ad portionem minora animalia, obiterque inter ordines alium, cepas seri fertile est. inventus est hic frutex in cythno insula, inde tralatus in omnes cycladas, mox in urbes graecas, magno casei proventu. praeterea - quo maxime miror rarum esse in italia - non aestuum, non frigorum, non grandinum aut nivis iniuriam expavescit. adicit hyginus, ne cossium quidem propter nullam gratiam ligni.

nascuntur etiam in mari frutices arboresque - minores in nostro - , rubrum enim et totus orientis oceanus refertus est silvis. non habet lingua latia nomen quod graeci vocant phycos, quoniam alga herbarum maris vocabulum intellegitur, hic autem est frutex. folio lato, colore viridi gignit quod quidam prason vocant, alii zostera. alterum genus eiusdem capillaceo folio, simile feniculo, in saxis nascitur, superius in vadis haut procul litore, utrumque verno, et

interit autumno. circa cretam insulam nato in petris purpuras quoque inficiunt, laudatissimo a parte aquilonis ut spongeis. tertium est gramini simile, radice geniculata et caule qualiter calami. aliud genus fruticum bryon vocatur, folio lactucae, rugosiore tantum, iam hoc inferius nascens, in alto vero abies et quercus cubitali altitudine; ramis earum adhaerent conchae. quercu et tingui lanas tradunt, glandem etiam quasdam ferre in alto. naufragis haec deprehensa urinantibusque; ea et aliae traduntur praegrandes circa scionen. vitis enim passim nascitur, sed ficus sine foliis, rubro cortice. fit et palma fruticum generis. extra herculis columnas porri fronde nascitur frutex et alius lauri ac thymi, qui ambo eiecti in pumicem transfigurantur.

at in oriente mirum est statim a copto per solitudines nihil gigni praeter spinam quae sitiens vocatur, et hanc raram admodum, in mari vero rubro silvas virere, lauru maxime et oliva ferentibus bacas et, cum pluat, fungos, qui sole tacti mutantur in pumicem. fruticum ipsorum magnitudo ternum cubitorum est. caniculis referta maria, vix ut prospicere e nave tutum sit, remos plerumque ipsos invadentibus. qui navigavere ex indo alexandri milites frondem marinarum arborum tradidere in aqua viridem fuisse, exemptam sole protinus in salem arescentem, iuncos quoque lapideos perquam similes veris per litora, et in alto quasdam arbusculas colore bubuli cornus ramosas et cacuminibus rubentes, cum tractarentur, vitri modo fragiles, in igni autem ut ferrum inardescentes, restinctis colore suo redeunte. eodem tractu insularum silvas operit aestus, quamquam altiores platanis populisque altissimis. folia iis laurea, flos violae et odore et colore, bacae ut oleis, et ipsae odoris iucundi, autumno nascentes, vere decidentes, foliis numquam deciduis. harum minores totas integit mare; maximarum cacumina extant, ad quae naves religantur et, cum recessit aestus, ad radices. alias quoque arbores in alto ab isdem accepimus eodem in mari visas, semper folia retinentes, fructu earum lupino simili. iuba tradit circa trogodytarum insulas fruticem in alto vocari isidis crinem, curalio similem sine foliis, praecisum mutato colore in nigrum durescere, cum cadat, frangi. item alium, qui vocatur chariton blepharon, efficacem in amatoriis. spatalia ex eo facere et monilia feminas; sentire eum se capi durarique cornus modo et hebetare aciem ferri. quod si fefellerint insidiae, in lapidem transfigurari.

LIBER XIV

externae arbores indocilesque nasci alibi quam ubi coepere et quae in alienas non commeant terras hactenus fere sunt, licetque iam de communibus loqui, quarum omnium peculiaris parens videri potest italia. noscentes tantum meminerint naturas earum a nobis interim dici, non culturas, quamquam et colendi maxima in natura portio est. illud satis mirari non queo, interisse quarundam memoriam atque etiam nominum quae auctores prodidere notitiam. quis enim non communicato orbe terrarum maiestate romani imperii profecisse vitam putet commercio rerum ac societate festae pacis omniaque, etiam quae ante occulta fuerant, in promiscuo usu facta at hercules non reperiuntur qui norint multa ab antiquis prodita. tanto priscorum cura fertilior aut industria felicior fuit, ante milia annorum inter principia litterarum hesiodo praecepta agricolis pandere orso subsecutisque non paucis hanc curam eius, unde nobis crevit labor, quippe cum requirenda sint non solum postea inventa, verum etiam ea quae invenerant prisci, desidia rerum internecione memoriae indicta. cuius vitii causas quis alias quam publicas mundi invenerit nimirum alii subiere ritus circaque alia mentes hominum detinentur et avaritiae tantum artes coluntur. antea inclusis gentium imperiis intra ipsas adeoque et ingeniis, quadam sterilitate fortunae necesse erat animi bona exercere, regesque innumeri honore artium colebantur et in ostentatione has praeferebant opes, inmortalitatem sibi per illas prorogari arbitrantes, qua re abundabant et praemia et opera vitae. posteris laxitas mundi et rerum amplitudo damno fuit. postquam senator censu legi coeptus, iudex fieri censu, magistratum ducemque nihil magis exornare quam census, postquam coepere orbitas in auctoritate summa et potentia esse, captatio in quaestu fertilissimo ac sola gaudia in possidendo, pessum iere vitae pretia omnesque a maximo bono liberales dictae artes in contrarium cecidere ac servitute sola profici coeptum. hanc alius alio modo et in aliis adorare, eodem tamen habendique ad spes omnium tendente voto. passim vero etiam egregii aliena vitia quam bona sua colere malle. ergo hercules voluptas vivere coepit, vita ipsa desiit. sed nos oblitterata quoque scrutabimur, nec deterrebit quarundam rerum

humilitas, sicuti nec in animalibus fecit, quamquam videmus vergilium praecellentissimum vatem ea de causa hortorum dotes fugisse et in his quae rettulit flores modo rerum decerpsisse, beatum felicemque gratiae quindecim omnino generibus uvarum nominatis, tribus oleae, totidem pirorum, malo vero tantum assyrio, ceteris omnibus neglectis.

vnde autem potius incipiamus quam a vitibus quarum principatus in tantum peculiaris italiae est, ut vel hoc uno omnia gentium vicisse etiam odorifera possit videri bona, quamquam ubicumque pubescentium odori nulla suavitas praefertur.

vites iure apud priscos magnitudine quoque inter arbores numerabantur. iovis simulacrum in urbe populonio ex una conspicimus tot aevis incorruptum, item massiliae pateram. metaponti templum iunonis vitigineis columnis stetit. etiam nunc scalis tectum ephesiae dianae scanditur una vite cypria, ut ferunt quoniam ibi ad praecipuam amplitudinem exeunt. nec est ligno ulli aeternior natura. verum ista ex silvestribus facta crediderim; hae vites tonsura annua coercentur, et vis earum omnis evocatur in palmites aut deprimitur in propagines, sucique tantum gratia ex iis petitur pluribus modis ad caeli mores solique ingenia. in campano agro populis nubunt, maritasque conplexae atque per ramos earum procacibus bracchiis geniculato cursu scandentes cacumina aequant, in tantum sublimes, ut vindemitor auctoratus rogum ac tumulum excipiat, nulla fine crescendi, vidique iam porticus, villas et domos ambiri singularum palmitibus ac sequacibus loris. quodque memoria dignum inter prima valerianus quoque cornelius existimavit, una vitis romae in liviae porticibus subdiales inambulationes umbrosis pergulis opacat, eadem duodenis musti amphoris fecunda. ulmos quidem ubique exuperant, miratumque altitudinem earum ariciae ferunt legatum regis pyrrhi cineam facete lusisse in austeriorem gustum vini, merito matrem eius pendere in tam alta cruce. rumpotinus vocatur et alio nomine opulus arbor italiae padum transgressis, cuius tabulata in orbem patula replent puroque perductae dracone in palmam eius inde sub rectos ramorum digitos flagella dispergunt. eaedem modici hominis altitudine adminiculatae sudibus horrent, vineamque faciunt aliae inprobo reptatu pampinorumque per inania omnia discursu atria media conplentes.

tot differentias vel sola tantum italia recipit. stat provinciarum aliquarum per se vitis sine ullo pedamento, arcus suos in se colligens et brevitate crassitudinem pascens. vetant hoc aliubi venti, ut in africa et narbonensis provinciae partibus, ubi excrescere ultra suos pollices prohibitae semperque pastinatis similes herbarum modo vagantur per arva ac sucum terrae passim uvis bibunt, quae ob id magnitudinem infantium puerorum in interiore parte africae exsuperant. vina non alibi tristiora, sed uva non alibi gratior callo, unde possit invenisse nomen durus acinus. namque genera magnitudine, colore, saporibus acini innumera etiamnum multiplicantur vino. hic purpureo lucent colore, illic fulgent roseo nitentque viridi; candicans enim nigerque vulgares. tument vero mammarum modo bumasti, praelongis dactyli porriguntur acinis. est et illa naturae lascivia, ut praegrandibus adhaereant parvi comites, suavitate certantes; leptorragas has vocant. durant aliae per hiemes, pensili concamaratae nodo. aliae in sua tantum continentur anima, ollis fictilibus et insuper doliis inclusae, stipatae vinaceis circumsudantibus. aliis gratiam, qui et vinis, fumus adfert, fabrilisque in eo gloriam praecipuam fornacibus africae tiberi caesaris auctoritas fecit; ante eum raeticis prior mensa erat uvis ex veroniensium agro. quin et patientia nomen acinis dat passis. conduntur et musto uvae ipsaeque vino suo inebriantur. aliae decocto in musto dulcescunt, aliae vero subolem novam in ipsa matre expectant tralucidae vitro, additque acinis eandem quam in doliis amphorisve duratricem illam firmitatem austeritas picis infusa pediculo. iam inventa vitis per se in vino picem resipiens, viennensem agrum nobilitans taburno sotanoque et helvico generibus, non pridem haec inlustrata atque vergili vatis aetate incognita, a cuius obitu xc aguntur anni. quid, quod inserta castris summam rerum imperiumque continet centurionum in manu vitis et opimo praemio tardos ordines ad lentas perducit aquilas atque etiam in delictis poenam ipsam honorat nec non vineae oppugnationum dedere rationem. nam in medicaminibus adeo magnum obtinent locum, ut per sese vino ipso remedia sint.

genera vitium numero conprehendi posse unus existimavit democritus, cuncta sibi graeciae cognita professus; ceteri innumera atque infinita esse prodiderunt, quod verius apparebit ex vinis. nec omnia dicentur, sed maxime insignia, quippe totidem paene sunt quot

agri, quam ob rem celeberrimas vitium aut quibus est aliqua proprietate miraculum ostendisse satis erit.

principatus datur aminneis firmitatem propter senioque proficientem vini eius utique vitam. quinque earum genera. ex iis germana minor acino melius deflorescit, imbres tempestatesque tolerat, non item maior, sed in arbore quam in iugo minus obnoxia. gemellarum, quibus hoc nomen uvae semper geminae dedere, asperrimus sapor, sed vires praecipuae. ex iis minor austro laeditur, ceteris ventis alitur, ut in vesuvio monte surrentinisque collibus, in reliquis italiae partibus non nisi arbori accommodata. quintum genus lanatae. ne seras miremur aut indos adeo, lanugo eam vestit. prima ex aminneis maturescit ocissimeque putrescit.

proxima dignitas nomentanis, rubente materia, quapropter quidam rubellas appellavere vineas. hae minus fertiles, vinaceis et faece nimiae, contra pruinas fortissimae, siccitate magis quam imbre, aestu quam algore vexantur. quam ob rem in frigidis umidisque principatum obtinent. fertilior quae minor acino et folio scissa minus.

apianis apes dedere cognomen, praecipue earum avidae. ex iis duo genera lanugine et ipsa pubescunt. distant quod altera celerius maturescit, quamquam et altera properante. situs frigidi iis non respuuntur, et tamen nullae celerius imbre putrescunt. vina primo dulcia austeritatem annis accipiunt. etruria nulla magis vite gaudet. et hactenus potissima nobilitas datur peculiaribus atque vernaculis italiae; ceterae advenere. e chio thasove graecula non inferior aminneis bonitate, praetenera acino et uva tam parva, ut nisi pinguissimo solo colere non prosit. eugeniam tauromenitani colles cum generositatis cognomine misere albano tantum agro, quoniam translata statim mutatur. namque est aliquis tantus locorum amor, ut omnem in iis gloriam suam relinquant nec usquam transeant totae. quod et in raetica allobrogicaque, quam supra picatam appellavimus, evenit, domi nobilibus nec agnoscendis alibi. fecundae tamen bonitatis vice copiam praestant, eugenia ferventibus locis, raetica temperatis, allobrogica frigidis, gelu maturescens et colore nigra. ex iis quas adhuc diximus, sed etiam e nigris, vina vetustate in album colorem transeunt. reliquae ignobiles, aliquando tamen caeli aut soli opera non fallunt vetustatem, sicuti faecenia et cum ea florens biturigiaca, acino rarior, numquam floris obnoxii, quoniam

antecedunt ventisque et imbribus resistunt, meliores tamen algentibus locis quam calidis, umidis quam sitientibus. visulla grandi magis quam denso uvarum partu, inpatiens variantis caeli, sed contra tenorem unum algoris aestusve constans. quae minor est ex eo genere, melior. in eligendo solo morosa, pingui putrescit, gracili omnino non provenit; mediam temperiem delicate quaerit, ob hoc sabinis collibus familiaris. uva eius indecora visu, sapore iucunda. nisi matura protinus rapitur, etiam non putrescens cadit. contra grandines eam tuetur foliorum amplitudo atque duritia.

insignes iam colore inter purpureas nigrasque helvolae saepius variantes et ob id varianae a quibusdam appellatae. praefertur in iis nigrior; utraque alternis annis fertilis, sed melior vino, cum parcior. et praeciae duo genera magnitudine acini discernuntur, quibus materies plurima uvaque ollis utilissima; folium apio simile. baliscam dyrrachini celebrant, hispaniae coccolobin vocant. rarior uva, aestus austrosque tolerat, capiti inimica, copia larga. hispaniae duo genera eius faciunt, unum oblongo acino, alterum rotundo; novissimas vindemiant. quo dulcior est coccolobis, hoc melior. sed et austera transit in dulcem vetustatem, et quae dulcis fuit in austeritatem; tunc albano vino aemulantur. tradunt vesicae vitiis utilissimum ex iis potum. albuelis summis arboribus fertilior est, visulla imis; quam ob rem circa easdem satae diversitate naturae locupletant. inerticulam e nigris appellavere, iustius sobriam dicturi, inveterato praecipue commendabilem vino, sed viribus innoxiam, si quidem temulentiam sola non facit.

fertilitas commendat ceteras principemque helvennacam. duo eius genera: maior quam quidam longam, minor quam marcum appellant, non tam fecundam, sed gratiorem haustu. discernitur folio circinato, verum utraque gracilis. furcas subdere iis necessarium; alioqui ubertatem suam non tolerant. maritimo adflatu gaudent, roscida odere. nulla vitium minus italiam amat, rara, parva, putrescens in ea, vino quoque quod genuit aestatem non exuperans; nec alia macro solo familiarior. graecinus, qui alioqui cornelium celsum transcripsit, arbitratur non naturam eius repugnare italiae, sed culturam avide palmites evocantium. ob id fertilitate sua absumi, si non praepinguis soli ubertas lassescentem sustineat. carbunculare negatur, magna dote, si verum est aliqua in vite caelo non esse ius.

aestus fert spionia, quam quidam spineam vocant, autumnisque imbribus pinguescit; quin immo nebulis una alitur, ob id ravennati agro peculiaris. vennunculam inter optime deflorescentes et ollis aptissimam campani malunt surculam vocare, alii scapulam, tarracina numisianam, nullas vires proprias habentem, sed totam perinde ac solum valeat, surrentinis tamen efficacissimam testis vesuvio tenus. ibi enim murgentina e sicilia potentissima, quam pompeianam aliqui vocant, laeto demum feracem, sicut horconia in campania tantum. e diverso arceraca, vergilio argitis dicta, ultro solum laetius facit, ipsa contra imbres et senectam fortissima, vino quidem vix annua ac vilitatis cibariae, sed ubertate praecipua. tolerat et annos mettica, contra omne sidus firmissima, nigro acino, vinis in vetustate rufescentibus.

et hactenus publica sunt genera, cetera regionum locorumque aut ex iis inter se insitis mixta: si quidem tuscis peculiaris est tudernis, atque etiam nomen iis florentiae sopina, arretio talpona et etesiaca et conseminia. talpona nigra candidum facit mustum. etesiaca fallax: quo plus tulit, hoc laudabilius fundit, mirumque, fecunditate pariter et bonitate cessat. conseminia nigra, vino minime durante, uva maxime, post xv dies quam ulla alia metitur, fertilis, set cibaria. huius folia sicuti labruscae prius quam decidant sanguineo colore mutantur. evenit hoc et quibusdam aliis, pessimi generis argumento. itriola vmbriae mevanatique et piceno agro peculiaris est, amiternino pumula. isdem bananica fallax est, adamant tamen eam. municipii suam pompei nomine appellant, quamvis clusinis copiosiorem; municipii et tiburtes appellavere, quamvis oleagineam nuper invenerint a similitudine olivae. novissima haec uvarum ad hoc tempus reperta est. vinaciolam soli noverunt sabini, calventinam gaurani. scio e falerno agro tralatas vocari falernas, celerrime ubique degenerantes. nec non surrentinum genus fecere aliqui praedulci uva. capnios et et buconiates et tharrupia in thurinis collibus non ante demetuntur quam gelaverit. pariana gaudent pisae, mutina perusinia nigro acino, intra quadriennium albescente vino. mirum ibi cum sole circumagi uvam quae ob id streptis vocatur, et in italia gallicam placere, trans alpis vero picenam. dixit vergilius thasias et mareotidas et lageas compluresque externas, quae non reperiuntur in italia.

sed sunt etiamnum insignes uva, non vino, ambrosia e duracinis,

sine ullis vasis in vite servabilis - tanta est contra frigora, aestus tempestatesque firmitas, nec orthampelos indiget arbore aut palis, ipsa se sustinens, non item dactylides digitali gracilitate - , columbinae e racemosis, et magis purpureae, cognomine bimammiae, quando non racemos, sed uvas alias gerunt, item tripedanea, cui nomen a mensura est, item scripula passo acino et raetica in maritimis alpibus appellata, dissimilis laudatae illi. namque haec brevis, conferta acino, degener vino, sed cute omnium tenuissima, nucleo (quod chium vocant) uno ac minimo, acinum praegrandem unum alterumve habens. est et nigra aminnea, cui syriacae nomen inponunt, item hispana ignobilium probatissima.

in pergulis vero seruntur escariae appellatae e duracinis, albae, nigrae, et bumasti totidem coloribus, ac nondum dictae aegia et rhodia et uncialis, velut a pondere acini, item picina, omnium nigerrima, et coronario naturae lusu stephanitis, acinos foliis intercursantibus, et quae forenses vocantur, celeres proventu, vendibiles aspectu, portatu faciles. contra damnantur etiam visu cinerea et rabuscula et asinusca, minus tamen caudas vulpium imitata alopecis. alexandrina appellatur vitis circa phalacram brevis, ramis cubitalibus, acino nigro fabae magnitudine, nucleo molli et minimo, obliquis racemis praedulcibus, folio parvo et rotundo, sine divisuris. septem his annis in narbonensis provinciae alba helvia inventa est vitis uno die deflorescens, ob id tutissima; carbunicam vocant, quam nunc tota provincia conserit.

catonum ille primus, triumpho et censura super cetera insignis, magis tamen etiamnum claritate litterarum praeceptisque omnium rerum expetendarum datis generi romano, inter prima vero agrum colendi, ille aevi confessione optimus ac sine aemulo agricola, pauca attigit vitium genera, quarundam ex iis iam etiam nominibus abolitis. separatim toto tractatu sententia eius indicanda est, ut in omni genere noscamus quae fuerint celeberrima anno dc urbis, circa captas carthaginem ac corinthum, cum supremum is diem obiit, et quantum postea ccxxx annis vita profecerit. ergo de vitibus uvisque ita prodidit: “qui locus vino optimus dicetur esse et ostentus solibus, aminnium minusculum et geminum eugenium, helvium minusculum conserito. qui locus crassior aut nebulosior, aminnium maius aut murgentinum, apicium, lucanum serito. ceterae vites miscellae

maxime in quemvis agrum conveniunt. in olla vinaceis conduntur aminnium minusculum et maius et apicium, eadem in sapa et musto, in lora recte conduntur. quas suspendas duracinas, aminnias maiores, vel ad fabrum ferrarium pro passis hae recte servantur." nec sunt vetustiora de illa re latinae linguae praecepta. tam prope ab origine rerum sumus. aminneam proxime dictam Varro scantianam vocat.

in nostra aetate pauca exempla consummatae huius artis fuere, verum eo minus omittenda, ut noscantur etiam praemia, quae in omni re maxime spectantur. summam ergo adeptus est gloriam acilius sthenelus e plebe libertina lx iugerum non amplius vineis excultis in nomentano agro atque [cccc] nummum venumdatis. magna fama et vetuleno aegialo, perinde libertino, fuit in campania rure liternino, maiorque etiam favore hominum, quoniam ipsum africani colebat exilium; sed maxima, eiusdem stheneli opera, remmio palaemoni, alias grammatica arte celebri, in hisce viginti annis mercato rus [dc] nummum in eodem nomentano decimi lapidis ab urbe deverticulo. est autem usquequaque nota vilitas mercis per omnia suburbana, ibi tamen maxime, quoniam et neglecta indiligentia praedia paraverat ac ne in pessimis quidem elegantioris soli. haec adgressus excolere non virtute animi, sed vanitate primo, quae nota mire in illo fuit, pastinatis de integro vineis cura stheneli, dum agricolam imitatur, ad vix credibile miraculum perduxit, intra octavum annum [cccc] nummum emptori addicta pendente vindemia. cucurritque non nemo ad spectandas uvarum in iis vineis strues, litteris eius altioribus contra id pigra vicinitate sibi patrocinante, novissime annaeo seneca, principe tum eruditorum ac potentia, quae postremo nimia ruit super ipsum, minime utique miratore inanium, tanto praedii huius amore capto, ut non puderet inviso alias et ostentaturo tradere palmam eam, emptis quadriplicato vineis illis intra decimum fere curae annum. digna opera quae in caecubis setinisque agris proficeret, quando et postea saepenumero septenos culleos singula iugera, hoc est amphoras centenas quadragenas, musti dedere! ac ne quis victam in hoc antiquitatem arbitretur, idem cato denos culleos redire ex iugeribus scripsit, efficacibus exemplis non maria plus temerata conferre mercatori, non in rubrum litus indicumve merces petitas quam sedulum ruris larem.

vino antiquissimo claritas maroneo in thraciae maritima parte

genito, ut auctor est homerus. neque enim fabulosa aut de origine eius varie prodita consectamur, praeterquam aristaeum primum omnium in eadem gente mel miscuisse vino, suavitate praecipua utriusque naturae sponte provenientis. maroneum vicies tanto addito aquae miscendum homerus prodidit. durat etiam nunc vis in eadem terra generi rigorque indomitus, quippe cum mucianus ter consul ex iis qui nuperrime prodidere sextarios singulos octonis aquae misceri compererit praesens in eo tractu, esse autem colore nigrum, odoratum, vetustate pinguescere. et pramnio, quod idem homerus celebravit, etiam nunc honos durat. nascitur zmyrnae regione iuxta delubrum matris deum. in reliquis claritas generi non fuit alicui: anno fuit omnium generum bonitate l. opimio cos., cum c. gracchus tribunus plebem seditionibus agitans est interemptus. ea caeli temperies fulsit (cocturam vocant) solis opere natali urbis dcxxxiii, durantque adhuc vina ea ducentis fere annis, iam in speciem redacta mellis asperi - etenim haec natura vinis in vetustate est - , nec potari per se queant pervincive aqua, usque in amaritudinem carie indomita; sed ceteris vinis commendandis minima aliqua mixtura medicamenta sunt. quod ut eius temporis aestimatione in singulas amphoras centeni nummi statuantur, ex his tantum usura multiplicata semissibus, quae civilis ac modica est, in c. caesaris germanici fili principatu anno clx singulas uncias vini constitisse, nobili exemplo docuimus referentes vitam pomponii secundi vatis cenamque quam principi illi dedit. tantum pecuniarum detinent apothecae! nec alia res maius incrementum sentit ad vicensimum annum maiusve ab eo dispendium, non proficiente pretio; raro quippe adhuc fuere, nec nisi in nepotatu, singulis testis milia nummum. viennenses soli picata sua, quorum genera diximus, pluris permutare, sed inter sese amore patrio, creduntur; idque vinum frigidius reliquis existimatur in frigido potu.

vino natura est hausto accendendi calore viscera intus, foris infuso refrigerandi. nec alienum fuerit commemorare hoc in loco quod androcydes sapientia clarus ad alexandrum magnum scripsit, intemperantiam eius cohibens: “vinum poturus, rex, memento bibere te sanguinem terrae. cicuta hominis venenum est, cicutae vinum.” quibus praeceptis ille si obtemperavisset, profecto amicos in temulentia non interemisset, prorsus ut iure dici possit, neque viribus

corporis utilius aliud neque voluptatibus perniciosius, si modus absit.

genera autem vini alia aliis gratiora esse quis dubitet aut non ex eodem lacu aliud praestantius altero germanitatem praecedere sive testa sive fortuito eventu quam ob rem de principatu se quisque iudicem statuet. iulia augusta lxxxvi annos vitae pucino vino rettulit acceptos, non alio usa. gignitur in sinu hadriatici maris non procul timavo fonte saxoso colle, maritimo adflatu paucas coquente amphoras; nec aliud aptius medicamentis iudicatur. hoc esse crediderim quod graeci celebrantes miris laudibus praetetianum appellaverint ex hadriatico sinu. Divus Augustus setinum praetulit cunctis et fere secuti principes, confessa propter experimenta, non temere cruditatibus noxiis ab ea saliva. nascitur supra forum appi. antea caecubo erat generositas celeberrima in palustribus populetis sinu amynclano, quod iam intercidit incuria coloni locique angustia, magis tamen fossa neronis, quam a baiano lacu ostiam usque navigabilem incohaverat.

secunda nobilitas falerno agro erat et ex eo maxime faustiniano; cura culturaque id collegerat. exolescit haec quoque copiae potius quam bonitati studentium. falernus ager a ponte campano laeva petentibus vrbanam coloniam sullanam nuper capuae contributam incipit, faustinianus circiter iiii milia passuum a vico caedicio, qui vicus a sinuessa vi m passuum abest. nec ulli nunc vino maior auctoritas. solo vinorum flamma accenditur. tria eius genera: austerum, dulce, tenue. quidam ita distingunt, summis collibus caucinum gigni, mediis faustinianum, imis falernum. non omittendum autem nulli eorum quae celebrentur iucundum saporem uvae esse.

at tertiam palmam varie venere albana urbi vicina, praedulcia ac rara in austero, item surrentina in vineis tantum nascentia, convalescentibus maxime probata propter tenuitatem salubritatemque. tiberius caesar dicebat consensisse medicos ut nobilitatem surrentino darent; alioqui esse generosum acetum; c. caesar, qui successit illi, nobilem vappam. certant massica atque a monte gauro puteolos baiasque prospectantia. nam falerno contermina statana ad principatum venere non dubie palamque fecere sua quibusque terris tempora esse, suos rerum proventus occasusque. iuncta iis praeponi solebant calena et quae in vineis arbustisque

nascuntur fundana et alia ex vicinia urbis, veliterna, privernatia. nam quod signiae nascitur, austeritate nimia continendae utile alvo, inter medicamina numeratur.

quartum curriculum publicis epulis optinuere a divo iulio - is enim primus auctoritatem iis dedit, ut epistulis eius apparet - mamertina circa messanam in sicilia genita; ex iis potulana, ab auctore dicta illo cognomine, proxima italiae laudantur praecipue. est in eadem sicilia et tauromenitanis honos lagonis pro mamertino plerumque subditis.

ex reliquis autem a supero mari praetutia atque ancone nascentia, et quae a palma una forte enata palmensia appellavere, in mediterraneo vero caesenatia ac maecenatiana, in veroniensi item raetica, falernis tantum postlata a vergilio, mox ab intimo sinu maris hadriana, ab infero autem latiniensia, graviscana, statoniensia. etruriae luna palmam habet, liguriae genua, inter pyrenaeum alpesque massilia gemino sapore, quando et condiendis aliis pinguius gignit, quod vocat sucosum. baeterrarum intra gallias consistit auctoritas. de reliquis in narbonensi genitis adseverare non est, quoniam officinam eius rei fecere tinguentes fumo, utinamque non et herbis ac medicaminibus noxiis! quippe etiam aloe mercator saporem coloremque adulterat.

verum et longinquiora italiae ab ausonio mari non carent gloria, tarentina et servitia et consentiae genita et tempsae, calabriae lucanaque antecedentibus thurinis. omnium vero eorum maxime inlustrata messalae potiti salute lagarina, non procul grumento nascentia. campania nuper excitavit novis nominibus auctoritatem sive cura sive casu ad quartum a neapoli lapidem trebellicis, iuxta capuam caulinis et in suo agro trebulanis, alioqui semper inter plebeia et trifolinis gloriata. nam pompeianis summum decem annorum incrementum est, nihil senecta conferente. dolore etiam capitum in sextam horam diei sequentis infesta deprehenduntur. quibus exemplis, nisi fallor, manifestum est patriam terramque referre, non uvam, et supervacuam generum consectationem in numerum, cum eadem vitis aliud aliis in locis polleat. hispaniarum laeetana copia nobilitantur, elegantia vero tarraconensia atque lauronensia et baliarica ex insulis conferuntur italiae primis. nec ignoro multa praetermissa plerosque existimaturos, quando suum cuique placet et, quocumque eatur, fabula eadem reperitur, Divi

Augusti iudiciorum ac palati peritissimum e libertis censuram vini in epulas eius facientem dixisse hospiti de indigena vino, novum quidem sibi gustum esse eum atque non ex nobilibus, sed caesarem non aliud poturum. nec negaverim et alia digna esse fama, sed de quibus consensus aevi iudicaverit haec sunt.

nunc simili modo transmarina dicemus. in summa gloria post homerica illa, de quibus supra diximus, fuere thasium chiumque, ex chio quod ariusium vocant. his addidit lesbium erasistrati maximi medici auctoritas, circiter ccccl anno urbis romae. nunc gratia ante omnia est clazomenio, postquam parcius mari condiunt. lesbium sponte naturae suae mare sapit. nec tmoliti per se gratia ut vino, sed cuius dulci admixto reliquorum duritia suavitatem accipiat simul et aetatem, quoniam vetustiora protinus videntur. ab his dignatio est sicyonio, cyprio, telmesico, tripolitico, berytio, tyrio, sebennytico. in aegypto hoc nascitur tribus generibus uvarum ibi nobilissimis, thasia, aethalo, peuce. post haec auctoritas hippodamantio, mystico, cantharitae, protropo cnidio, catacecaumenitae, petritae, myconio. nam mesogiten capitis dolores facere compertum est, nec ephesium salubre esse, quoniam mari et defruto condiatur. apamenum mulso praecipue convenire dicitur, sicut praetutium in italia. est enim et haec proprietas generum; dulcia utique inter se non congruunt. exolevit et protagion, quod italicis proximum fecerant asclepiadis scholae. apollodorus medicus in volumine, quo suasit ptolemaeo regi quae vina biberet, italicis etiam tum ignotis laudavit in ponto nasperceniten, mox oreticum, oeneaten, leucadium, ambracioten et, quod cunctis praetulit, peparethium, sed minoris famae esse dixit, quoniam ante sex annos non placeret.

hactenus bonitas vini nationibus debetur. apud graecos cura clarissimum nomen accepit quod appellaverunt bion, ad plurimos valitudinum usus excogitatum, ut docebimus in parte medicinae. fit autem hoc modo: uvae paulum ante maturitatem decerptae siccantur acri sole, ter die versatae per triduum, quarto exprimuntur, dein in cadis sole inveterantur. coi marinam aquam largiorem miscent, a servi furto origine orta sic mensuram explentis, qua re translata in album mustum leucocoum appellatur. in aliis autem gentibus simili modo factum tethalassomenon vocant, thalassiten autem vasis musti deiectis in mare, quo genere praecox fit vetustas. nec non apud nos

quoque coum vinum ex italico faciendi rationem cato demonstravit, super cetera in sole quadriennio maturandum praecipiens. rhodium coo simile est, phorineum salsius coo. omnia transmarina septem annis ad vetustatem mediam pervenire existimantur.

vinum omne dulce minus odoratum; quo tenuius, eo odoratius. colores vinis quattuor: albus, fulvus, sanguineus, niger. psithium et melampsithium passi genera sunt suo sapore, non vini, scybelites vero mulsi, in galatia nascens, et haluntium in sicilia. nam siraeum, quod alii hepsema, nostri sapam appellant, ingeni, non naturae, opus est musto usque ad tertiam mensurae decocto. quod ubi factum ad dimidiam est, defrutum vocatur. omnia in adulterium mellis excogitata, sed priora uva terraque constant. passum a cretico cilicium probatur et africum. et in italia finitimisque provinciis fieri certum est ex uva quam graeci psithiam vocant, nos apianam, item scripulam, diutius uvis in vite sole adustis aut ferventi oleo. quidam ex quacumque dulci, dum praecocta, alba, faciunt siccantes sole, donec paulo amplius dimidium pondus supersit, tunsasque leniter exprimunt. dein quantum expressere adiciunt vinaceis aquae puteanae, ut et secundarium passum faciant. diligentiores eodem modo siccatis acinos eximunt ac sine sarmentis madefactos vino excellenti, donec intumescant, premunt - et hoc genus ante cetera laudant - ac simili modo aqua addita secundarium faciunt. medium inter dulcia vinumque est quod graeci aigleucos vocant, hoc est semper mustum. id evenit cura, quoniam fervere prohibetur - sic appellant musti in vina transitum - ; ergo mergunt e lacu protinus aqua cados, donec bruma transeat et consuetudo fiat algendi. est etiamnum aliud genus per se, quod vocat dulce narbonensis provincia et in ea maxime voconti. adservatur eius gratia uva diutius in vite pediculo intorto. ab aliis ipse palmes inciditur ad medullam, ab aliis uva torretur in tegulis, omnia ex helvennaca vite. his adiciunt aliqui quod vocant diachyton, uvis in sole siccatis loco cluso per dies septem in cratibus, totidem pedes a terra alte, noctibus ab umore defensis, octavo die calcatis: ita fieri optimi odoris saporisque. e dulci genere est et melitites; distat a mulso, quod fit e musto, cum quinque congiis austeri musti congio mellis et salis cyatho subfervefactis. austerum, sed inter haec genera poni debet et protropum; ita appellatur a quibusdam mustum sponte defluens ante

quam calcentur uvae. hoc protinus diffusum in lagonis suis defervere passi postea in sole xl diebus torrent aestatis secutae ipso canis ortu.

non possunt iure dici vina quae graeci deuteria appellant, cato et nos loram, maceratis aqua vinaceis, sed tamen inter vina operaria numerantur. tria eorum genera: decima parte aquae addita quam musti expressa sit et ita nocte ac die madefactis vinaceis rursusque prelo subiectis; alterum, quo modo graeci factitavere, tertia parte eius quod expressum sit addita aquae expressoque decocto ad tertias partes. tertium est faecibus vini expressum, quod faecatum cato appellat. nullum ex his plus quam annui usus.

verum inter haec subit mentem, cum sint genera nobilia, quae proprie vini intellegi possint, lxxx fere in toto orbe, duas partes ex hoc numero italiae esse, praeterea longe ante cunctas terras. et hinc deinde altius cura serpit, non a primordio hanc gratiam fuisse, auctoritatem post dc urbis annum coepisse. romulum lacte, non vino, libasse indicio sunt sacra ab eo instituta, quae hodie custodiunt morem. numae regis postumia lex est: “vino rogum ne respargito.” quod sanxisse illum propter inopiam rei nemo dubitet. eadem lege ex inputata vite libari vina diis nefas statuit, ratione excogitata ut putare cogerentur alias aratores et pigri circa pericula arbusti. M. Varro auctor est mezentium etruriae regem auxilium rutulis contra latinos tulisse vini mercede quod tum in latino agro fuisset. non licebat id feminis romae bibere. invenimus inter exempla egnati maetenni uxorem, quod vinum bibisset e dolio, interfectam fusti a marito, eumque caedis a romulo absolutum. fabius pictor in annalibus suis scripsit matronam, quod loculos in quibus erant claves cellae vinariae resignavisset, a suis inedia mori coactam, cato ideo propinquos feminis osculum dare, ut scirent an temetum olerent. hoc tum nomen vino erat, unde et temulentia appellata. cn. domitius iudex pronuntiavit mulierem videri plus vini bibisse quam valitudinis causa, viro insciente, et dote multavit. diuque eius rei magna parsimonia fuit. l. papirius imperator adversus samnites dimicaturus votum fecit, si vicisset, iovi pocillum vini. denique inter dona sextarios datos lactis invenimus, nusquam vini. idem cato cum in hispaniam navigasset, unde cum triumpho rediit: “non aliud vinum”, inquit, “bibi quam remiges,” in tantum dissimilis istis qui etiam convivis alia quam sibimet ipsis ministrant aut procedente mensa

subiciunt.

lautissima apud priscos vina erant murrae odore condita, ut apparet in plauti fabulis, quamquam in ea quae persa inscribitur et calamum addi iubet. ideo quidam aromatite delectatos maxime credunt. sed fabius dossennus his versibus decernit:

“mittebam vinum pulchrum, murrinam,” et in acharistione:

“panem et polentam, vinum murrinam.” scaevolam quoque et l. aelium et ateium capitonem in eadem sententia fuisse video, quoniam in pseudolo sit:

“quod si opus est, ut dulce promat indidem,

ecquid habet - rogas?

murrinam, passum, defrutum, mella,” quibus apparet non inter vina modo murrinam, sed inter dulcia quoque nominatum.

apothecas fuisse et diffundi solita vina anno dcxxxiii urbis apparet indubitato opimiani vini argumento. iam intellegentis suum bonum italiae nondum tamen ista genera in claritate erant; itaque omnia tunc genita unum habent consulis nomen. sic quoque postea diu transmarina in auctoritate fuerunt et ad avos usque nostros, quin et falerno iam reperto, sicut apparet ex illo comico versu:

“quinque thasi vini depromam, bina falerni.” P. Licinius Crassus l. iulius caesar censores anno urbis conditae dclxv edixerunt, “ne quis vinum graecum, aminniumque octonis aeris singula quadrantalia venderet.” haec enim verba sunt. tanta vero graeco vino gratia erat, ut singulae potiones in convictu darentur. quibus vinis auctoritas fuerit sua iuventa, M. Varro his verbis tradit: “l. lucullus puer apud patrem numquam lautum convivium vidit, in quo plus semel graecum vinum daretur: ipse cum rediit ex asia, milia cadum congiarium divisit amplius centum. c. sentius, quem praetorem vidimus, chium vinum suam domum inlatum dicebat tum primum, cum sibi cardiaco medicus dedisset: hortensius super [x] cadum heredi reliquit.” hactenus Varro. quid non et caesar dictator triumphi sui cena vini falerni amphoras, chii cados in convivia distribuit idem hispaniensi triumpho chium et falernum dedit, epulo vero in tertio consulatu suo falernum, chium, lesbium, mamertinum, quo tempore primum quattuor genera vini adposita constat. postea ergo reliqua omnia in nobilitatem venere et circiter dcc urbis annum.

itaque non miror innumerabilia paene genera ficticii reperta multis

ante saeculis, quae nunc dicemus, omnia ad medicinae usum pertinentia. omphacium quo modo fieret, propter unguenta diximus priore libro. fit e labrusca, hoc est vite silvestri, quod vocatur oenanthinum, floris eius libris duabus in musti cado maceratis. post dies xxx utuntur. praeter hoc radix labruscae, acini coria perficiunt. hi paulo post quam defloruere singulare remedium habent ad refrigerandos in morbis corporum ardores, gelidissima, ut ferunt, natura. pars eorum aestu moritur prius quam reliqua, quae solstitiales dicuntur. universi numquam maturescunt, et si prius quam tota inarescat uva incocta detur cibo gallinaceo generi, fastidium gignit uvas adpetendi.

ficticiorum primum fit ex ipso vino (quod vocant adynamon) hoc modo: albi musti sextarii xx, aquae dimidium fervent, donec excoquatur aquae mensura. alii marinae sextarios x, tantundem pluviae in sole xl diebus torrent. dant aegris quibus vini noxiam timent.

proximum fit e milii semine maturi cum ipsa stipula, libra quadrante in congios duos musti, macerato et post septimum mensem transfuso. ex loto arbore, frutice, herba dictum est ubi quaeque fierent.

fiunt et e pomis, quae dicemus interpretationibus non nisi necessariis additis, primumque e palmis, quo parthi, indi utuntur et oriens totus, mitiorum quas vocant chydaeas modio in aquae congiis tribus macerato expressoque. sic fit et sycites e fico, quem alii pharnuprium, alii trochin vocant, aut si dulce esse non libeat, pro aqua tantundem vinaceorum adicitur. e cypria fico et acetum fit praecellens atque alexandrino quoque melius. vinum fit et e siliqua syriaca et e piris malorumque omnibus generibus - sed e punicis rhoiten vocant - et e cornis, mespilis, sorvis, moris siccis, nucleis pineis. hi musto madidi exprimuntur, superiora per se mitia. myrtiten cato quem ad modum fieri docuerit mox paulo indicabimus, graeci et alio modo. ramis teneris cum suis foliis in salso musto coctis tunsis, libram in tribus musti congiis defervefaciunt, donec duo supersint. quod ita e silvestris myrti bacis factum est, myrtidanum vocatur. hoc manus tinguit.

ex his quae in hortis gignuntur fit vinum e radice asparagi, cunila, origano, api semine, habrotono, mentastro, ruta, nepeta, serpyllo,

marruvio. manipulos binos condunt in cadum musti et sapae sextarium et aquae marinae heminam. e napis fit duum denariorum pondere in sextarios binos musti addito, item e scillae radice; inter flores ex rosae foliis tusis in linteolo in mustum collatis cum ponducsulo, ut sidat, #1108 l pondere in sextarios musti vicenos - vetant ante tres menses vas aperiri - , item e nardo gallico et aliud e silvestri.

aromatiten quoque invenio factitatum tantum non unguentorum compositione, primo ex murra, ut diximus, mox et nardo celtico, calamo, bitumine, offis in mustum aut dulce vinum deiectis, alibi calamo, iunco, costo, nardo syriaco, amomo, casia, cinnamo, croco, palma, asaro, similiter in offa. apud alios nardi etiam et malobathri selibris in musti congios duos additis, qualia nunc quoque fiunt pipere et melle addito, quae alii condita, alii piperata appellant. invenitur et nectarites ex herba quam alii helenion, alii medicam, alii symphyton, alii idaeam, alii orestion, alii nectariam vocant, radice ponderis #1108 l in sextarios sex musti addita, similiter in linteo. ex ceteris herbis fit absinthites in xl sextariis musti absinthi pontici libra decocta ad tertias partes vel scopis absinthi in vinum additis. similiter hyssopites e cilicio hyssopo unciis tribus in duos congios musti coiectis aut tusis in vinum. fiunt utraque et alio modo, circa radices vitium sato. sic et elleboriten fieri ex veratro nigro cato docet. sic fit et scammonites, mira vitium natura saporem alienum in se trahendi, quare et salicem redolent patavinorum in palustribus vindemiae. sic et elleborum seritur in thaso aut cucumis silvester aut scammonia, quod vinum phthorium vocatur, quoniam abortus facit.

fit et ex herbis, quarum naturae suo loco dicentur: e stoechade et radice gentianae et tragorigano et dictamno, asaro, dauco, elelisphaco, panace, acoro, thymo, mandragora, iunco. vocarunt et scyzinum et itaeomelin et lectisphagiten, quorum iam oblitterata ratio est.

e fruticum vero genere cedri utriusque, cupressus, laurus, iunipiri, terebinthi, calami, lentisci bacae aut lignum recens in musto decocuntur, item chamelaeae et chamaepityis, chamaedryis lignum. eodem modo et ex flore, in congium musti decem #1108 pondere addito.

fit vinum et ex aqua ac melle tantum. quinquennio ad hoc servari

caelestem iubent. alii prudentiores statim ad tertias partes decocunt et tertiam veteris mellis adiciunt, dein xl diebus canis ortu in sole habent. alii diffusa ita decimo die obturant. hoc vocatur hydromeli et vetustate saporem vini adsequitur, nusquam laudatius quam in phrygia. quin et acetum melle temperabatur: adeo nihil intemptatum vitae fuit. oxymeli hoc vocarunt, mellis decem libris, aceti veteris heminis quinque, salis marini libra, aquae pluviae sextariis quinque suffervefactis deciens, mox elutriatis atque ita inveteratis. omnia ab themisone summo auctore damnata. et hercules coactus usus eorum videri potest, nisi si quis naturae opus esse credit aromatiten et ex unguentis vina conposita aut ut biberentur genuisse eam frutices. ita sunt cognitu iucunda sollertiae humanae nomine omnia exquirentis. nihil quidem ex iis anno durare, praeterquam quae vetustate ipsa fieri diximus, et plura ne tricenis quidem diebus, non erit dubium.

sunt et in vino prodigia. dicitur in arcadia fieri quod fecunditatem feminis inportet, viris rabiem, at in achaia maxime circa ceryniam abigi partum vino atque etiam si uvam edant gravidae, cum differentia in gustatu non sit. troezenium vinum qui bibant negantur generare. thasios duo genera vini diversa facere proditur, quo somnus concilietur, alterum vero quo fugetur. apud eosdem vitis theriaca vocatur, cuius et vinum et uva contra serpentium ictus medetur; libanodes turis odore, ex qua diis prolibant. e diverso aspendios damnata aris; ferunt eam nec ab alite ulla attingi. thasiam uvam aegyptus vocat apud se praedulcem, quae solvit alvum; est contra lycia, quae solutam firmat. aegyptus et ecbolada habet abortus facientem. vina in apothecis canis ortu mutantur quaedam posteaque restituuntur sibi. sic et mari navigato, cuius iactatus iis quae duraverint tantum vetustatis adicere sentitur, quantum habuerint.

et quoniam religione vita constat, prolibare diis nefastum habetur vina - praeter inputatae - vitis fulmine tactae quamque iuxta hominis mors laqueo pependerit aut vulneratis pedibus calcatae, et quod circumcisis vinaceis profluxerit, aut superne deciduo inmundiore lapsu aliquo polluta, item graeca, quoniam aquam habeant. - vitis ipsa quoque manditur decoctis caulibus summis, qui et condiuntur in aceto ac muria.

verum et de apparatu vini dixisse conveniat, cum graeci privatim ea praecepta condiderint artemque fecerint, sicut euphronius et

aristomachus et commiades et hicesius. africa gypso mitigat asperitatem nec non aliquibus partibus sui calce. graecia argilla aut marmore aut sale aut mari lenitatem excitat, italiae pars aliqua crapulana pice, ac resina condire musta volgare ei est provinciisque finitimis. nonnusquam prioris vini faece acetove condiunt. nec non et ex ipso musto fiunt medicamina. decoquitur ut dulcescat portione virium, nec durare ultra annuum spatium tale proditur. aliquibus in locis decocunt ad sapas musta infusisque iis ferociam frangunt. et in hoc tamen genere et in omni alio subministrant vasa ipsa condimentis picis, cuius faciendae ratio proximo dicetur volumine.

arborum suco manantium picem resinamque aliae ortae in oriente, aliae in europa ferunt. quae interest asia utrimque quasdam habet. in oriente optimam tenuissimamque terebinthi fundunt, dein lentisci, quam et mastichen vocant, postea cupressi, acerrimam sapore, liquidam omnes et tantum resinam, crassiorem vero et ad pices faciendas cedrus. arabica resina alba est, acri odore, difficilis coquenti, iudaea callosior et terebinthina quoque odoratior, syriaca attici mellis similitudinem habet. cypria antecedit omnes, item melleo colore, carnosa. colophonia, praeter ceteras fulva, si teratur, alba fit, gravior odore; ob id non utuntur ea unguentarii. in asia quae fit e picea, admodum candida, psagdas vocatur. resina omnis dissolvitur oleo - quidam et creta figulinarum hoc fieri arbitrantur - , pudetque confiteri maximum iam honorem eius esse in evellendis virorum corpori pilis.

ratio autem condiendi musta in primo fervore, qui novem diebus cum plurimum peragitur, adspersu picis, ut odor vino contingat et saporis quaedam acumina. vehementius id fieri arbitrantur crudo flore resinae excitarique lenitatem, e diverso crapula conpesci feritatem nimiam frangique virus aut, ubi pigra lenitas torpeat, virus addi, liguriae maxime circumpadanisque mustis. utilitas discernitur hoc modo: pugnacibus mustis crapulae plus inditur, lenibus parcius. sunt qui et utroque condiri velint, nec non aliqua est musti picea natura vitiumque musto quibusdam in locis iterum sponte fervere, qua calamitate deperit sapor: vappae accipit nomen, probrosum etiam hominum, cum degeneravit animus. aceti enim nequitiae inest virtus magnos ad usus et sine quis mitior vita degi non possit. cetero vinorum medicaminis tanta cura est, ut cinere apud quosdam, ceu

gypso alibi et quibus diximus modis, instaurentur; sed cinerem e vitis sarmentis aut quercu praeferunt. quin et marinam aquam eiusdem rei gratia ex alto peti iubent servarique ab aequinoctio verno, aut certe nocte solstitio et aquilone flante hauriri vel, si circa vindemiam hauriatur, decoqui.

pix in italia ad vasa vino condendo maxime probatur bruttia. fit e piceae resina, in hispania autem e pinastris minime laudata. est enim resina earum amara et arida et gravi odore. differentiam rationemque faciendi proximo volumine demonstrabimus inter arbores feras. vitia praeter supra dicta acor aut fumidum virus, picis autem adustio; experimentum vero, si fragmenta subluceant ac sub dente lentescant acore iucundo. asia picem idaeam maxime probat, graecia piericam, vergilius naryciam. diligentiores admiscent nigram mastichen, quae in ponto bitumini similis gignitur, et iris radicem oleumque. nam ceram accipientibus vasis conpertum vina acescere. sed transferre in ea vasa, in quibus acetum fuerit, utilius quam in ea, in quibus dulce aut mulsum. cato iubet vina concinnari - hoc enim utitur verbo - cineris lixivi cum defruto cocti parte quadragesima in culleum vel salis sesquilibra, interim et tuso marmore. facit et sulpuris mentionem, resinae vero in novissimis. super omnia addi maturescente iam vino iubet mustum, quod ille tortivum appellat, nos intellegimus novissime expressum. et addi scimus tinguendi gratia colores, ut pigmentum aliquod vini, atque ita pinguius fieri. tot veneficiis placere cogitur, et miramur noxium esse! in vitium inclinantis experimentum est lamnae plumbeae mutatus in eo colos.

proprium autem inter liquores vino mucescere aut in acetum verti, extantque medicinae volumina. faex vini siccata recipit ignes ac sine alimento per sese flagrat. cinis eius nitri naturam habet easdemque vires, hoc amplius quod pinguior sentitur.

magna et collecto iam vino differentia in caelo. circa alpes ligneis vasis condunt tectisque cingunt atque etiam hieme gelida ignibus rigorem arcent. rarum dictu, sed aliquando visum, ruptis vasis stetere glaciatae moles, prodigii modo, quoniam vini natura non gelascit; alias ad frigus stupet tantum. mitiores plagae doliis condunt infodiuntque terrae tota aut ad portionem situs. ita caelum prohibent, alibi vero inpositis tectis arcent, traduntque et haec praecepta: latus cellae vinariae aut certe fenestras obverti in aquilonem oportere vel

utique in exortum aequinoctialem. sterculinia et arborum radices procul abesse omniaque odoris evitandi, facillimo in vina transitu, ficos utique et caprificos; doliis etiam intervalla dari, ne inter sese vitia serpant contagione vini semper ocissima. quin et figuras referre; ventriosa ac patula minus utilia. picari oportere protinus a canis ortu, postea perfundi marina aqua aut salsa, dein cinere e sarmentis aspergi vel argilla, abstersa murra suffiri ipsasque saepius cellas. inbecilla vina demissis in terram doliis servanda, valida expositis. numquam inplenda, et quod supersit passo aut defruto perunguendum admixto croco pistave iri cum sapa. sic opercula doliorum medicanda addita mastiche aut pice bruttia. aperiri vetant nisi sereno die, vetant austro flante lunave plena. flos vini candidus probatur; rubens triste signum esse, si non is vini colos sit, item vasa incalescentia operculave sudantia. quod celeriter florere coeperit odoremque trahere, non fore diutinum. ipsa quoque defruta ac sapas, cum sit caelum sine luna, hoc est in sideris eius coitu, neque alio die coqui iubent, praeterea plumbeis vasis, non aereis, nucibusque iuglandibus additis; eas enim fumum excipere. campaniae nobilissima exposita sub diu in cadis verberari sole, luna, imbre, ventis aptissimum videtur.

ac si quis diligentius reputet, in nulla parte operosior vita est - ceu non saluberrimum ad potus aquae liquorem natura dederit, quo cetera omnia animalia utuntur; at nos vinum bibere et iumenta cogimus - tantoque opere, tanto labore et inpendio praestat quod hominis mentem mutet ac furorem gignat, milibus scelerum ob id editis, tanta dulcedine, ut magna pars non aliud vitae praemium intellegat. quin immo, ut plus capiamus, sacco frangimus vires, et alia inritamenta excogitantur ac bibendi causa etiam venena concipiuntur, aliis cicutam praesumentibus, ut bibere mors cogat, aliis pumicis farinam et quae referendo pudet docere. cautissimos ex iis in balineis coqui videmus exanimesque efferri, iam vero alios lectum expectare non posse, immo vero nec tunicam, nudosque ibi protinus et anhelos ingentia vasa corripere, velut ad ostentationem virium, ac plena infundere, ut statim vomant rursusque hauriant, idque iterum tertiumque, tamquam ad perdenda vina geniti et tamquam effundi illa non possint nisi per corpus humanum! huc pertinent peregrinae exercitationes et volutatio in caeno ac pectorosa cervicis repandae ostentatio. per omnia haec praedicatur sitis quaeri. iam vero quae in

bibendo certamina, quae vasa adulteriis caelata, tamquam per se parum doceat libidines temulentia! ita vina ex libidine hauriuntur, atque etiam praemio invitatur ebrietas et, si dis placet, emitur. alius, ut quantum biberit, tantum edit, pretium vinolentiae lege accipit, alius quantum alea quaesierit, tantum bibit. tunc avidi matronam oculi licentur, graves produnt maritum, tunc animi secreta proferuntur. alii testamenta sua nuncupant, alii mortifera elocuntur rediturasque per iugulum voces non continent - quam multis ita interemptis! - volgoque veritas iam attributa vino est. interea, ut optime cedat, solem orientem non vident ac minus diu vivunt. hinc pallor et genae pendulae, oculorum ulcera, tremulae manus effundentes plena vasa - quae sit poena praesens - , furiales somni et inquies nocturna praemiumque summum ebrietatis libido portentosa ac iucundum nefas. postero die ex ore halitus cadi ac rerum omnium oblivio morsque memoriae. rapere se ita vitam praedicant, cum priorem diem cotidie perdant; illi vero et venientem. tiberio claudio principe ante hos annos xl institutum, ut ieiuni biberent potiusque vinum antecederet cibos, externis et hoc artibus ac medicorum placitis novitate semper aliqua sese commendantium. gloriam hac virtute parthi quaerunt, famam apud graecos Alcibiades meruit, apud nos cognomen etiam novellius torquatus mediolanensis, ad proconsulatum usque praeturae honoribus gestis, tribus congiis - unde et cognomen illi fuit - epotis uno impetu, spectante miraculi gratia tiberio principe, in senecta iam severo atque etiam saevo alias. et ipsi iuventa ad merum pronior fuerat, eaque commendatione credidere l. pisonem urbis curae ab eo delectum, quod biduo duabusque noctibus perpotationem continuasset apud ipsum iam principem. nec alio magis drusus caesar regenerasse patrem tiberium ferebatur. torquato rara gloria, quando et haec ars suis legibus constat, non labasse sermone, non levatum vomitione nec alia corporis parte, dum biberet, matutinas obisse sine iniuria vigilias, plurimum hausisse uno potu, plurimum praeterea aliis minoribus addidisse, optima fide non respirasse in hauriendo neque expuisse nihilque ad elidendum in pavimentis sonum ex vino reliquisse, diligenti scito legum contra bibendi fallacias. tergilla ciceronem m. f. binos congios simul haurire solitum ipsi obicit marcoque agrippae a temulento scyphum inpactum. etenim haec sunt ebrietatis opera. sed

nimirum hanc gloriam auferre cicero voluit interfectori patris sui m. antonio. is enim ante eum avidissime adprehenderat hanc palmam edito etiam volumine de sua ebrietate, quo patrocinari sibi ausus adprobavit plane, ut equidem arbitror, quanta mala per temulentiam terrarum orbi intulisset. exiguo tempore ante proelium actiacum id volumen evomuit, quo facile intellegatur ebrius iam sanguine civium et tanto magis eum sitiens. namque et haec necessitas vitium comitatur, ut bibendi consuetudo augeat aviditatem, scitumque est scytharum legati, quanto plus biberint, tanto magis sitire parthos.

est et occidentis populis sua ebrietas fruge madida, pluribus modis per gallias hispaniasque, nominibus aliis, sed ratione eadem. hispaniae iam et vetustatem ferre ea genera docuerunt. aegyptus quoque e fruge sibi potus similes excogitavit, nullaque in parte mundi cessat ebrietas, meros quippe hauriunt tales sucos nec diluendo ut vina mitigant. at hercules illic tellus fruges parere videbatur. heu mira vitiorum sollertia! inventum est quem ad modum aquae quoque inebriarent.

duo sunt liquores humanis corporibus gratissimi, intus vini, foris olei, arborum e genere ambo praecipui, sed olei necessarius; nec segniter in eo vita elaboravit. quanto tamen in potu ingeniosior fuerit, apparebit ad bibendum generibus centum octoginta quinque, si species vero aestimentur, paene duplici numero excogitatis tantoque paucioribus olei, de quo sequenti volumine dicemus.

LIBER XV

oleam theophrastus e celeberrimis graecorum auctoribus urbis romae anno circiter ccccxl negavit nisi intra [xxxx] passuum ab mari nasci, fenestella vero omnino non fuisse in italia hispaniaque aut africa tarquinio prisco regnante, ab annis populi romani clxxiii, quae nunc pervenit trans alpis quoque et in gallias hispaniasque medias. urbis quidem anno dv appio claudio caeci nepote l. iunio cos. olei librae duodenae denis assibus veniere, et mox anno dclxxx m. seius l. f. aedilis curulis olei denas libras singulis assibus praestitit populo romano per totum annum. minus ea miretur qui sciat post annos xxii cn. pompeio iii cos. oleum provinciis italiam misisse. hesiodus quoque, in primis culturam agrorum docendam arbitratus vitam, negavit oleae satorem fructum ex ea percepisse quemquam: tam tarda tunc res erat. at nunc etiam in plantariis ferunt, translatarumque altero anno decerpuntur bacae. fabianus negat provenire in frigidissimis oleam neque in calidissimis.

genera earum tria dixit vergilius, orchites et radios et posias, nec desiderare rastros aut falces ullamve curam. sine dubio et in iis solum maxime caelumque refert. verum tamen et tondentur, cum et vites, atque etiam interradi gaudent. consequens earum vindemia est arsque vel maior olei musta temperandi. ex eadem quippe oliva differunt suci. primum omnium cruda dat atque nondum inchoatae maturitatis; hoc sapore praestantissimum. quin et ex eo prima unda preli lautissima ac deinde per deminutiones, sive in sportis prematur sive, ut nuper inventum est, exilibus regulis pede incluso. quanto maturior baca, tanto pinguior sucus minusque gratus. optima autem aetas ad decerpendum inter copiam bonitatemque incipiente baca nigrescere, cum vocant druppas, graeci vero drypetidas. cetero distat tum, maturitas illa in torcularibus fiat an ramis, rigua fuerit arbor an suo tantum baca suco nihilque aliud quam rores caeli biberit.

vetustas oleo taedium adfert, non item ut vino, plurimumque aetatis annuo est, provida, si libeat intellegere, natura, quippe temulentiae nascentibus vinis uti necesse non est, quin immo invitat ad servandum blanda inveterati caries: oleo noluit parci fecitque ea necessitate promiscuum et vulgo. principatum in hoc quoque bono

obtinuit italia e toto orbe, maxime agro venafrano eiusque parte quae licinianum fundit oleum, unde et liciniae gloria praecipua olivae. unguenta hanc palmam dedere accommodato ipsis odore, dedit et palatum delicatiore sententia; de cetero bacas liciniae nulla avis adpetit. relicum certamen inter histriae terram et baeticae par est. cetero fere vicina bonitas provinciis excepto africae frugifero solo: cereri id totum natura concessit, oleum ac vinum non invidit tantum satisque gloriae in messibus fecit. reliqua erroris plena, quem in nulla parte vitae numerosiorem esse docebimus.

oliva constat nucleo, oleo, carne, amurca. sanies haec est eius amara; fit ex aquis, ideo siccitatibus minima, riguis copiosa. suus quidem olivae sucus oleum est, idque praecipue ex inmaturis intellegitur, sicut in omphacio docuimus. augetur oleum ab arcturi exortu in a. d. xvi kal. oct., postea nuclei increscunt et caro. tum si etiam copiosi imbres accessere, vitiatur oleum in amurcam. huius color olivam cogit nigrescere, ideoque incipiente nigritia minimum amurcae, ante eam nihil est. error hominum falsus existimantium maturitatis initium quod est vitii proximum, deinde quod oleum crescere olivae carne arbitrantur, cum sucus omnis in corpus abeat lignumque intus grandescat. ergo tum maxime rigantur; quod ubi cura multisve imbribus accidit, oleum absumitur nisi consecuta serenitate quae corpus extenuet. omnino enim, ut theophrasto placet, et olei causa calor est, quare in torcularibus etiam ac cellis multo igni quaeritur. tertia est culpa in parsimonia, quoniam propter inpendium decerpendi expectatur ut decidant olivae. qui medium temperamentum in hoc servant, perticis decutiunt cum iniuria arborum sequentisque anni damno. quippe olivantibus lex antiquissima fuit: “oleam ne stringito neve verberato.” qui cautissime agunt, harundine levi ictu nec adversos percutiunt ramos. sic quoque alternare fructus cogitur decussis germinibus, nec minus si expectetur ut cadant; haerendo enim ultra suum tempus absumunt venientibus alimentum et detinent locum. argumentum est quod nisi ante favonium collectae novas vires resumunt et difficilius cadunt.

primae ergo ab autumno colliguntur vitio operae, non naturae, posia cui plurimum carnis, mox orchites cui olei, post radius. has enim ocissime occupatas, quia sunt tenerrimae, amurca cogit decidere. differuntur vero etiam in martium mensem callosae, contra

umorem pugnaces ob idque minimae, licinia, cominia, contia, sergia, quam sabini regiam vocant, non ante favonii adflatum nigrescentes, hoc est a. d. vi id. feb. tunc arbitrantur eas maturescere, et quoniam probatissimum ex iis fiat oleum, accedere etiam ratio pravitati videtur feruntque frigore austeritatem fieri, sicut copiam maturitate, cum sit illa bonitas non temporis, sed generis tarde putrescentium in amurcam. similis error collectam servandi in tabulatis nec prius quam sudet premendi, cum omni mora oleum decrescat, amurca augeatur. itaque vulgo non amplius senas libras singulis modiis exprimi dicunt. amurcae mensuram nemo agit, quanto ea copiosior reperiatur in eodem genere diebus adiectis. omnino invictus error et publicus tumore olivae crescere oleum existimandi, cum praesertim nec magnitudine copiam olei constare indicio sint quae regiae vocantur, ab aliis maiorinae, ab aliis babbiae, grandissimae alioqui, minimo suco. et in aegypto carnosissimis olei exiguum, decapoli vero syriae perquam parvae, nec cappari maiores, carne tamen commendantur. quam ob causam italicis transmarinae praeferuntur in cibis, cum oleo vincantur, et in ipsa italia ceteris picenae et sidicinae. sale illae privatim condiuntur et ut reliquae amurca sapave, nec non aliquae oleo suo et sine arcessita commendatione purae innatant, colymbades. franguntur eaedem herbarumque viridium sapore condiuntur. fiunt et praecoques ferventi aqua perfusae quamlibeat inmaturae; mirumque dulcem sucum olivas bibere et alieno sapore infici. purpureae sunt et in iis, ut uvis, in nigrum colorem transeuntibus posiis. sunt et superbae praeter iam dicta genera. sunt et praedulces, per se tantum siccatae uvisque passis dulciores, admodum rarae in africa et circa emeritam lusitaniae. oleum ipsum sale vindicatur a pinguitudinis vitio. cortice oleae conciso odorem accipit. medicatio alias ut vino; palati gratia nulla est nec tam numerosa differentia: tribus ut plurimum bonitatibus distat. odor in tenui argutior, et is tamen etiam in optimo brevis.

oleo natura tepefacere corpus et contra algores munire, eidem fervores capitis refrigerare. usum eius ad luxuriam vertere graeci, vitiorum omnium genitores, in gymnasiis publicando: notum est magistratus honoris eius octogenis sestertiis strigmenta olei vendidisse. oleae honorem romana maiestas magnum perhibuit turmas equitum idibus iuliis ea coronando, item minoribus triumphis

ovantes. athenae quoque victores olea coronant, graecia oleastro olympiae.

nunc dicentur catonis placita de olivis. in calido et pingui solo radium maiorem, sallentinam, orchitem, posiam, sergianam, cominianam, albiceram seri iubet adicitque singulari prudentia: quam earum in iis locis optimam esse dicent, in frigido autem et macro liciniam. pingui enim aut ferventi vitiari eius oleum arboremque ipsa fertilitate consumi, musco praeterea et rubore infestari. spectare oliveta in favonium loco exposito solibus censet, nec alio ullo modo laudat. condi olivas optime orchites et posias, vel virides in muria vel fractas in lentisco. oleum quam acerbissima oliva optimum fieri. cetero quam primum e terra colligendam, si inquinata sit, lavandam; siccari triduo satis esse. si gelent frigora, quarto die premendam; hanc et sale aspergi. oleum in tabulato minui deteriusque fieri, item in amurca et fracibus - hae sunt carnes et inde faeces - ; quare saepius die capulandum, praeterea concha et in plumbeas cortinas; aere vitiari. ferventibus omnia ea fieri clausisque torcularibus et quam minime ventilatis, ideo nec ligna ibi caedi oportere - qua de causa e nucleis ipsarum ignis aptissimus - ; ex cortinis in labra fundendum, ut fraces et amurca linquantur. ob id crebrius vasa mutanda, fiscinas spongia tergendas, ut quam maxime pura sinceritas constet. postea inventum ut lavarentur utique ferventi aqua, protinus prelo subicerentur solidae - ita enim amurca exprimitur - , mox trapetis fractae premerentur iterum. premi plus quam centenos modios non probant: factus vocatur; quod vero post molam primum expressum est, flos. factus tres gemino foro a quaternis hominibus nocte et die premi iustum est.

non erat tum ficticium oleum, ideoque arbitror de eo nihil a catone dictum. nunc eius genera plura, primumque persequemur ea quae ex arboribus fiunt, et inter illas ante omnes ex oleastro. tenue id multoque amarius quam oleae et tantum ad medicamenta utile. simillimum huic est ex chamelaea, frutice saxoso, non altiore palmo, foliis oleastri bacisque. proximum fit e cici, arbore in aegypto copiosa (alii crotonem, alii sibi, alii sesamon silvestre eam appellant), ibique, non pridem et in hispania, repente provenit altitudine oleae, caule ferulaceo, folio vitium, semine uvarum gracilium pallidarumque. nostri eam ricinum vocant a similitudine

seminis. coquitur id in aqua, innatansque oleum tollitur. at in aegypto, ubi abundat, sine igni et aqua sale adspersum exprimitur, cibis foedum, lucernis exile. amygdalinum, quod aliqui neopum vocant, ex amaris nucibus arefactis et in offam contusis adspersam aqua iterumque tusis exprimitur. fit et lauru admixto drupparum oleo, quidamque e bacis exprimunt tantum, alii foliis modo, aliqui folio et cortice bacarum, nec non styracem addunt aliosque odores; optima laurus ad id latifolia, silvestris, nigris bacis. simile est et e myrto nigra, et haec latifolia melior. tunduntur bacae adspersae calida aqua, mox decoquuntur. alii foliorum mollissima decoquunt in oleo et exprimunt, alii deiecta ea in oleum prius sole maturant. eadem ratio et in sativa myrto, sed praefertur silvestris minore semine, quam quidam oxymyrsinen, alii chamaemyrsinen vocant, aliqui acoron a similitudine; est enim brevis, fruticosa. fit et e citro, cupresso, nucibus iuglandibus quod caryinum vocant, malis, cedro quod pisselaeon, e grano quoque cnidio purgato semine et tunso, item lentisco. nam cyprinum et e glande aegyptia ut fieret odorum causa dictum est. indi e castaneis ac sesima atque oryza facere dicuntur, ichthyophagi e piscibus. inopia cogit aliquando luminum causa et e platani bacis fieri aqua et sale maceratis. et oenanthinum fit; de ipsa oenanthe dictum est in unguentis. gleucino mustum incoquitur vapore lento, ab aliis sine igni circumdatis vinaceis diebus xxi bis singulis permixtum, consumiturque mustum oleo. aliqui non sampsuchum tantum admiscent, sed etiam pretiosiora odoramenta, ut in gymnasiis quoque conditur odoribus, sed vilissimis. fit ex aspalatho, calamo, balsamo, iri, cardamomo, meliloto, nardo gallico, panace, sampsucho, helenio, cinnamomi radice, omnium sucis in oleo maceratis expressisque. sic et rhodinum e rosis, iuncinum e iunco, quod et rosaceo simillimum, item hyoscyamo et lupinis, narcisso. plurimum autem in aegypto e raphani semine aut gramine herba quod chortinon vocant, item e sesima et urtica quod cnidinum appellant. e lilio et alibi fit sub diu sole, luna, pruina maceratum. suis herbis componunt inter cappadociam et galatiam quod selgiticum vocant, nervis admodum utile, sicut in italia iguvini. e pice fit quod pissinum appellant, cum coquitur, velleribus supra halitum eius expansis atque ita expressis. probatum maxime e bruttia; est enim pinguissima et resinosissima. color oleo fulvus. sponte nascitur in

syriae maritimis quod elaeomeli vocant; manat ex arboribus pingue, crassius melle, resina tenuius, sapore dulci, et hoc medicis. veteri quoque oleo usus est ad quaedam genera morborum; existimaturque et ebori vindicando a carie utile esse: certe simulacrum saturni romae intus oleo repletum est.

super omnia vero celebravit amurcam laudibus cato. dolia olearia cadosque illa imbui, ne bibant oleum; amurca subigi areas terendis messibus, ut formicae rimaeque absint; quin et lutum parietum ac tectoria et pavimenta horreorum frumenti, vestiaria etiam contra teredines ac noxia animalium amurca aspergi, semina frugum perfundi. morbis quadripedum, arborum quoque, illa medendum, efficaci ad ulcera interiora humani quoque oris. lora etiam et coria omnia et calceamina axesque decocta ungui atque aeramenta contra aeruginem colorisque gratia elegantioris et totam supellectilem ligneam ac vasa fictilia, in quis ficum aridam libeat adservare, aut si folia bacasque in virgis myrti aliudve quod genus simile. postremo ligna macerata amurca nullo fumi taedio ardere. oleam si lambendo capra lingua contigerit depaveritque primo germinatu, sterilescere auctor est M. Varro. et hactenus de olea atque oleo.

reliqui arborum fructus vix specie figurave, non modo saporibus sucisque totiens permixtis atque insitis, enumerari queunt.

grandissimus pineis nucibus altissimeque suspensus. intus exiles nucleos lacunatis includit toris, vestitos alia ferruginis tunica, mira naturae cura molliter semina conlocandi. harum genus alterum tarentinae digitis fragili putamine aviumque furto in arbore. et tertium sappini e picea sativa, nucleorum cute verius quam putamine adeo molli, ut simul mandatur. quartum pitydia vocant e pinastris, singularis remedii adversus tussim in melle decoctis nucleis. taurini ravicelos vocant. pinea corona victores apud isthmum coronantur.

his proxima amplitudine mala quae vocamus cotonea et graece cydonea, e creta insula advecta. incurvatos trahunt ramos prohibentque crescere parentem. plura eorum genera: chrysomela incisuris distincta, colore ad aurum inclinato, qui candidior nostratia cognominat, odoris praestantissimi. est et neapolitanis suus honos. minora ex eodem genere struthea odoratius vibrant, serotino proventu, praecoci vero mustea. strutheis autem cotonea insita suum genus fecere mulvianum, quae sola ex iis vel cruda manduntur, iam

et virorum salutatoriis cubiculis inclusa ac simulacris noctium consciis inposita. sunt praeterea parva silvestria, e strutheis odoratissima et in saepibus nascentia.

mala appellamus, quamquam diversi generis, persica et granata, quae in punicis arboribus novem generum dicta sunt. his acinus sub cortice intus, illis lignum in corpore. nec non et quaedam e piris libralia appellata amplitudinem sibi ponderis nomine adserunt. sed persicorum palma duracinis. nationum habent cognomen gallica et asiatica. post autumnum maturescunt asiatica, aestate praecocia intra xxx annos reperta et primo denariis singula venumdata. supernatia e sabinis veniunt, popularia undique. pomum innocuum expetitur aegris, pretiumque iam singulis triceni nummi fuere, nullius maiore, quod miremur, quia non aliud fugacius. longissima namque decerpto bidui mora est cogitque se venumdari.

ingens postea turba prunorum: versicoloria e nigro candicant, hordearia appellata a comitatu frugis eius; alia eodem colore seriora maioraque, asinina cognominata a vilitate. sunt minora, at laudatiora cerina atque purpurea, nec non ab externa gente armeniaca, quae sola et odore commendantur. peculiaris inpudentia est nucibus insitorum, quae faciem parentis sucumque adoptionis exhibent, appellata ab utroque nucipruna. et haec autem et persica et cerina ac silvestria ut uvae cadis condita usque ad alia nascentia aetatem sibi prorogant, reliquorum velocitas cito mitescentium transvolat. nuper in baetica malina appellari coeperunt malis insita et alia amygdalina amygdalis. his intus in ligno nucleus amygdalae est, nec aliud pomum ingeniosius geminatum est. in peregrinis arboribus dicta sunt damascena, a syriae damasco cognominata, iam pridem in italia nascentia, grandiore quamquam ligno et exiliore carne nec umquam in rugas siccata, quoniam soles sui desunt. simul dici possunt populares eorum myxae, quae et ipsae nunc coeperunt romae nasci insitae in sorvis.

in totum quidem persica peregrina etiam asiae graeciaeque esse ex nomine ipso apparet atque e perside advecta. sed pruna silvestria ubique nasci certum est, quo magis miror huius pomi mentionem a catone non habitam, praesertim cum condenda demonstraret quaedam et silvestria. nam persicae arbores sero et cum difficultate transiere, ut quae in rhodo nihil ferant, quod primum ab aegypto

earum fuerat hospitium. falsum est venenata cum cruciatu in persis gigni et poenarum causa ab regibus tralata in aegyptum terra mitigata. id enim de persea diligentiores tradunt, quae in totum alia est, myxis rubentibus similis, nec extra orientem nasci voluit. eam quoque eruditiores negaverunt ex perside propter supplicia tralatam, sed a perseo memphi satam, et ob id alexandrum illa coronari victores ibi instituisse in honorem atavi sui. semper autem folia habet et poma subnascentibus aliis. sed pruna quoque omnia post catonem coepisse manifestum erit.

malorum plura sunt genera. de citreis cum sua arbore diximus, medica autem graeci vocant patriae nomine. aeque peregrina sunt zizipha et tubures, quae et ipsa non pridem venere in italiam, haec ex africa, illa ex syria. sex. papinius, quem consulem vidimus, primus utraque attulit Divi Augusti novissimis temporibus in castris sata, bacis similiora quam malis, sed aggeribus praecipue decora, quoniam et in tecta iam silvae scandunt. tuburum duo genera: candidum et a colore syricum dictum. paene peregrina sunt in uno italiae agro veroniensi nascentia quae lanata appellantur; lanugo ea obducit, strutheis quidem persicisque plurima, iis tamen peculiare nomen dedit, nulla alia commendatione insignibus.

reliqua cur pigeat nominatim indicare, cum conditoribus suis aeternam propagaverint memoriam, tamquam ob egregium aliquod in vita factum nisi fallor, apparebit ex eo ingenium inserendi nihilque tam parvum esse quod non gloriam parere possit. ergo habent originem a matio cestioque et mallio, item scaudio; quibus cotoneo insito ab appio e claudia gente appiana sunt cognominata. odor est iis cotoneorum, magnitudo quae scaudianis, color rubens. ac ne quis sic ambitum valuisse claritatis e familia putet, sunt et sceptiana ab inventore libertino, insignia rotunditate. cato adicit quiriniana et quae tradit in doliis condi scantiana. omnium autem nuperrime adoptata sunt parva gratissimi saporis, quae petisia nominantur. patrias nobilitavere amerina et graecula. cetera e causis traxere nomen: germanitatis cohaerentia gemella, numquam singula in fetu, colore syrica, cognatione melapia, mustea a celeritate mitescendi, quae nunc melimela dicuntur a sapore melleo, orbiculata a figura orbis in rotunditatem circumacti - haec in epiro primum provenisse argumento sunt graeci, qui epirotica vocant - , mammarum effigie

orthomastia, condicione castrati seminis quae spadonia appellant belgae. melofoliis folium unum, aliquando et geminum, erumpit e latere medio. celerrime in rugas marcescunt pannucea. stolide tument pulmonea. est quibusdam sanguineus colos origine ex mori insitu tracta. cunctis vero quae fuere a sole partes rubent. sunt et parva gratia saporis atque etiam acutiora odore silvestria. peculiare inprobae iis acerbitatis convicium et vis tanta, ut aciem gladii praestringat. dat aliis farina vilissimis nomen, quamquam primis adventu decerpique properantibus.

eadem causa in piris taxatur superbiae cognomine; parva haec, sed ocissima. e cunctis autem crustumia gratissima, proxima iis falerna potu, quoniam tanta vis suci abundat - lactere hoc vocatur - , in iisque alia colore nigro, dona syriae. reliquorum nomina aliter in aliis atque aliis locis appellantur. sed confessis urbis vocabulis auctores suos nobilitavere decimiana et ex eo tractum quod pseudodecimianum vocant, dolabelliana longissimi pediculi, pomponiana cognomine mammosa, liceriana, seviana et quae ex iis nata sunt turraniana, longitudine pediculi distantia, favoniana rubra, paulo superbis maiora, lateriana, aniciana postautumnalia, acidulo sapore iucunda. tiberiana appellantur quae maxime tiberio principi placuere. colorantur magis sole grandescuntque, alioqui eadem essent quae liceriana. patriae nomina habent serissima omnium amerina, picentina, numantina, alexandrina, numidiana, graeca et in iis tarentina, signina, quae alii a colore testacea appellant, sicut onychina, purpurea, ab odore myrapia, laurea, nardina, tempore hordearia, collo ampullacea, et coriolana, bruttia gentilitatis, cucurbitina, acidula suci. incerta nominum causa est barbaricis, veneriis quae colorata dicunt, regiis quae minimo pediculo sessilia, patriciis, vocimis, viridibus oblongisque. praeterea dixit volema vergilius a catone sumpta, qui et sementiva et mustea nominat.

pars haec vitae iam pridem pervenit ad columen, expertis cuncta hominibus, quippe cum vergilius insitam nucibus arbutum, malis platanum, cerasis ulmum dicat. nec quicquam amplius excogitari potest; nullum certe pomum novum diu iam invenitur. neque omnia insita misceri fas est, sicut nec spinas inseri, quando fulgura piari non queunt facile, quotque genera insita fuerint, tot fulgura uno ictu fieri pronuntiatur.

turbinatior piris figura. in iis serotina ad hiemes usque in matre pendent gelu maturescentia graeca, ampullacea, laurea, sicut in malis amerina, scaudiana. conduntur vero pira ut uvae ac totidem modis, neque aliud in cadis praeterquam pruna. e pomis proprietas piris quae vini, similiterque in aegris medentes cavent. e vino et aqua cocuntur atque pulmentari vicem inplent, quod non alia praeter cotonea ac struthea.

in universum autem de pomis servandis praecipitur pomaria in loco frigido ac sicco contabulari, septentrionalibus fenestris sereno die patere, austros specularibus arcere, aquilonis quoque adflatu poma deturpante rugis. colligi mala post aequinoctium autumni neque ante xvi lunam neque ultra duodetricesimam, nec pluvio die neque ante primam horam; cadiva separari; stramentis solidis paleisve substerni, rara componi, uti limites pervii spiritum aequalem accipiant. amerina maxime durare, melimela minime. - cotoneis in concluso spiramentum omne adimendum aut incoqui melle ea mergive oportere. punica aqua marina fervente indurari, mox triduo sole siccata ita ne nocturno rore contingantur suspendi et, cum libeat uti, aqua dulci perlui. M. Varro et in doliis harenae servari iubet; et inmatura obrui terra in ollis fundo effracto, sed spiritu excluso ac surculo pice inlito: sic etiam crescere amplitudine maiore quam possint in arbore. cetera mala et foliis ficulnis, praeterquam cadivis, singula convolvi cistisque vitilibus condi vel creta figulinarum inlini. - pira in vasis fictilibus picatis inversis obrui scrobe. tarentina serissima legi, aniciana servari et in passo, sorva quoque et scrobibus gypsato operculo, duum pedum terra superiniecta, in loco aprico inversis vasis et in doliis ut uvas interque uvas cum ramis suspendi.

e proximis auctoribus quidam altius curam repetunt deputarique statim poma ac vites ad hunc usum praecipiunt decrescente luna, post horam diei tertiam, caelo sereno aut siccis ventis. similiter deligi et ex locis siccis et ante perfectam maturitatem, addito ut luna infra terram sit, uvas cum malleolo sarmenti duro, demptis forfice corruptoribus acinis, in dolio picato recenti suspendi, exclusa omni aura operculo et gypso. sic et sorva ac pira, inlitis omnium surculis pice. dolia procul ab aqua esse. quidam sic cum palmite ipso condunt, capitibus eius scillae infixis utrimque, alii etiam vina habentibus doliis, dum ne contingant ea uvae, aliqui mala in patinis

fictilibus fluitantia, quo genere et vino odorem adquiri putant. aliqui omnia haec in milio servari malunt, plerique vero in scrobe duum pedum altitudinis harena substrato et fictili operculo, dein terra operto. creta quidam figlina etiam uvas inlinunt siccataque sole suspendunt, in usu diluentes cretam. eandem pomis vino subigunt. mala vero generosissima eadem ratione crustant gypso vel cera, quae, nisi maturuerint, incremento calcem rumpunt. semper autem in pediculos conlocant ea. alii decerpunt cum surculis eosque in medullam sabuci additos obruunt, ut supra scriptum est. alii singulis malis pirisque singula vasa fictilia adsignant et operculo eorum picato dolio iterum includunt, nec non aliqui in floccis capsisque, quas luto paleato inlinunt; alii hoc idem in patinis fictilibus, aliqui et in scrobe subiecta harena: ita sicca operiunt mox terra. sunt qui cotonea cera pontica inlita melle demergant. columella auctor est in puteos cisternasve uvas in fictilibus vasis pice diligenti cura inlitis mergi. liguria maritima alpibus proxima uvas sole siccatas iunci fasceis involvit cadisque conditas gypso includit. hoc idem graeci platani foliis aut vitis ipsius aut fici uno die in umbra siccatis atque in cado vinaceis interpositis. quo genere coa uva et berytia servantur, nullius suavitati postferendae. quidam, ut has faciant, in cinere lixivo tingunt protinus quam detraxere vitibus, mox in sole siccant passasque in aquam calidam mergunt et iterum sole siccant, tum foliis, ut supra dictum est, involutas vinaceis stipant. sunt qui malunt uvas in scobe ramentisve abietis, populi, fraxini servare. sunt qui suspendi procul malis protinusque in granariis iubent, quoniam optime siccet frumenti pulvis. pensilibus contra vespas remedio est oleo adspergi ex ore. de palmis diximus.

e reliquo genere pomorum ficus amplissima est, quaedamque et piris magnitudine aemulae. de aegyptiae cypriaeque miraculis retulimus inter externas. idaea rubet olivae magnitudine, rotundior tantum, sapore mespili. alexandrinam hanc ibi vocant, crassitudine cubitali, ramosam, materie validam, lentam, sine lacte, cortice viridi, folio tiliae, sed molli. onesicritus tradit in hyrcania multum nostris esse dulciores fertilioresque, ut quae modios cclxx singulae ferant. ad nos ex aliis transiere gentibus, chalcide, chio, quarum plura genera. si quidem et lydiae, quae sunt purpureae, et mamillanae similitudinem earum habent et callistruthiae farti sapore praestantiores, ficorum

omnium frigidissimae. nam de africanis, quoniam multi praeferunt cunctis, magna quaestio est, cum id genus in africam nuperrime transierit. patriae nomen optinent etiam alexandrinae ex nigris, candicante rima, cognomine delicatae. nigra et rhodia est et tiburtina de praecocibus. sunt et auctorum nomina iis, liviae, pompei. siccandis haec sole in annuos usus aptissima cum mariscis et quas harundinum folii macula variat. est et herculanea et albicerata et aratia alba, pediculo minimo, latissima. primo autem provenit porphyritis, longissimo pediculo. comitatur eam e minimis, vilissimis popularis dicta. contra novissima sub hieme maturatur chelidonia. sunt praeterea eaedem serotinae et praecoces, biferae, alba ac nigra, cum messe vindemiaque maturescentes. serotinae et a corio appellatae duro, ex chalcidicis quarundam trifero proventu. tarenti tantum praedulces nascuntur, quas vocant onas. cato de ficis ita memorat: “ficos mariscas in loco cretoso aut aperto serito, in loco autem crassiore aut stercorato africanas et herculaneas, sacontinas, hibernas, tellanas atras pediculo longo.” postea tot subiere nomina atque genera, ut vel hoc solum aestimantibus appareat mutatam esse vitam. sunt et hibernae quibusdam provinciis, uti moesiae, sed artis, non naturae. parvarum genus arborum post autumnum fimo contegunt, deprehensasque in his hieme grossos, quae mitiore caelo refossae cum arbore atque in lucem remissae novos soles aliosque, quam quibus vixere, avide tamquam iterum natae accipiunt et cum venientium flore maturescunt, alieno praecoces anno, in tractu vel gelidissimo.

sed a catone appellata iam tum africana admonet africae ad ingens docimentum usi eo pomo. namque perniciali odio carthaginis flagrans nepotumque securitatis anxius, cum clamaret omni senatu carthaginem delendam, adtulit quodam die in curiam praecocem ex ea provincia ficum ostendensque patribus: “interrogo vos,” inquit, “quando hanc pomum demptam putetis ex arbore.” cum inter omnes recentem esse constaret: “atqui tertium,” inquit, “ante diem scitote decerptam carthagine. tam prope a moeris habemus hostem!” statimque sumptum est punicum tertium bellum, quo carthago deleta est, quamquam catone anno sequente rapto. quid primum in eo miremur, curam ingeni an occasionem fortuitam, celeritatemque cursus an vehementiam viri super omnia est, quo nihil equidem duco

mirabilius, tantam illam urbem et de terrarum orbe per cxx annos aemulam unius pomi argumento eversam, quod non trebia aut trasimenus, non cannae busto romani nominis perficere potuere, non castra punica ad tertium lapidem vallata portaeque collinae adequitans ipse Hannibal. tanto propius carthaginem pomo cato admovit!

colitur ficus arbor in foro ipso ac comitio romae nata, sacra fulguribus ibi conditis magisque ob memoriam eius quae, nutrix romuli ac remi, conditores imperii in lupercali prima protexit, ruminalis appellata, quoniam sub ea inventa est lupa infantibus praebens rumim (ita vocabant mammam), miraculo ex aere iuxta dicato, tamquam in comitium sponte transisset atto navio augurante. nec sine praesagio aliquo arescit rursusque cura sacerdotum seritur. fuit et ante saturni aedem, urbis anno ... sublata sacro a vestalibus facto, cum silvani simulacrum subverteret. eadem fortuito satu vivit in medio foro, qua sidentia imperii fundamenta ostento fatali curtius maximis bonis, hoc est virtute ac pietate ac morte praeclara, expleverat. aeque fortuita eodem loco est vitis atque olea, umbrae gratia sedulitate plebeia satae, ara inde sublata gladiatorio munere divi iuli, quod novissime pugnavit in foro.

admirabilis est pomi huiusce festinatio, unius in cunctis ad maturitatem properantis arte naturae. caprificus vocatur e silvestri genere ficus numquam maturescens, sed quod ipsa non habet alii tribuens, quoniam est naturalis causarum transitus fitque ut e putrescentibus gignatur aliquid. ergo culices parit; hi fraudati alimento in matre, putri eius tabe, ad cognata evolant morsuque ficorum crebro, hoc est avidiore pastu, aperientes ora earum, ita penetrantes intus solem primo secum inducunt cerialesque auras inmittunt foribus adapertis. mox lacteum umorem, hoc est infantiam pomi, absumunt - quod fit et sponte - , ideoque ficetis caprificus permittitur ad rationem venti, ut flatus evolantes in ficos ferat. inde repertum ut inlatae quoque aliunde et inter se colligatae inicerentur fico, quod in macro solo et aquilonio non desiderant, quoniam sponte arescunt loci situ rimisque eadem quae culicum opere causa perficit, nec ubi multus pulvis, quod evenit maxime frequenti via adposita. namque et pulveri vis siccandi sucumque lactis absorbendi. quae ratio pulvere et caprificatione hoc quoque praestat ne decidant,

absumpto umore tenero et cum quadam fragilitate ponderoso. ficis mollis omnibus tactus, maturis frumenta intus, sucus maturescentibus lactis, percoctis mellis. senescunt in arbore anusque destillant cummium lacrima. siccat honos laudatas, servat in capsis, ebuso in insula praestantissimas amplissimasque, mox in marrucinis; at ubi copia abundat, implentur orcae in asia, cadi autem in ruspina africae urbe, panisque simul et opsonii vicem siccatae implent, utpote cum cato cibaria ruris operariis iusta ceu lege sanciens minui iubeat per fici maturitatem. cum recenti fico salis vice caseo vesci nuper excogitatum est. ex hoc genere sunt, ut diximus, cottana et caricae quaeque conscendenti navem adversus parthos omen fecere M. Crasso venales praedicantis voce, cavneae. omnia haec in albense rus e syria intulit l. vitellius, qui postea censor fuit, cum legatus in ea provincia esset, novissimis ti. caesaris temporibus.

malorum pirorumque generi adnumerentur iure mespila atque sorva. mespilis tria genera: anthedon, setania; tertium degenerat, anthedoni tamen similius, quod gallicum vocant. setaniae maius pomum candidiusque, acini molliore ligno; ceteris minus pomum, sed odore praestantius et quod diutius servetur. arbor ipsa de amplissimis. folia ante quam decidant rubescunt; radices multae atque altae et ideo inexstirpabiles. non fuit haec arbor in italia catonis aevo.

sorvis quadriplex differentia. aliis enim eorum rotunditas mali, aliis turbinatio piri, aliis ovata species ceu malorum aliquis; haec obnoxia acori. odore et suavitate rotunda praecellunt, ceteris vini sapor. generosissima quibus circa pediculos tenera folia. quartum genus torminale appellant, remedio tantum probabile, adsiduum proventu minimumque pomo, arbore dissimile, foliis paene platani. non ferunt ante trimatum ex ullo genere. cato et sorva condi sapa tradit.

ab his locum amplitudine vindicaverint, quae cessere auctoritate, nuces iuglandes, quamquam et ipsae nuptialium fescenninorum comites, multum pineis minores universitate eademque portione ampliores nucleo. nec non et honor iis naturae peculiaris gemino protectis operimento, pulvinati primum calycis, mox lignei putaminis. quae causa eas nuptiis fecit religiosas, tot modis fetu munito, quod est veri similius quam quia cadendo tripudium

sonivium faciant. et has e perside regibus translatas indicio sunt graeca nomina: optimum quippe genus earum persicum atque basilicon vocant, et haec fuere prima nomina; caryon a capitis gravedine propter odoris gravitatem convenit dictum. tinguntur cortice earum lanae et rufatur capillus primum prodeuntibus nuculis; id conpertum infectis tractatu manibus. pinguescunt vetustate. sola differentia generum in putamine duro fragilive et tenui aut crasso, loculoso aut simplici. solum hoc pomum natura conpactili operimento clausit. namque sunt bifidae putaminum carinae nucleorumque alia quadripertita distinctio, lignea intercursante membrana. ceteris quidquid est solidum est, ut in abellanis, et ipso nucum genere, quas antea abellinas patriae nomine appellabant. in asiam graeciamque e ponto venere eae ideoque et ponticae nuces vocantur. has quoque mollis protegit barba, sed putamini nucleisque solida rotunditas inest. hae et torrentur. umbilicus illis intus in ventre medio. tertia in his natura amygdalis tenuiore, sed simili iuglandium, summo operimento, item secundo putaminis; nucleus dissimilis latitudine et acriore callo. haec arbor an fuerit in italia catonis aetate dubitatur, quoniam graecas nominat, quas quidam et in iuglandium genere servant. adicit praeterea abellanas et galbas, praenestinas, quas maxime laudat et conditas ollis in terra servari virides tradit. nunc thasiae et albenses celebrantur et tarentinarum duo genera, fragili putamine ac duro, quae sunt et amplissimae ac minime rotundae; praeterea molluscae putamen rumpentes. sunt qui honori nomen interpretentur et iovis glandem esse dicant. nuper consularem virum audivi biferas et iuglandes nuces habere se profitentem. de pistaciis, et ipso nucum genere, in suo loco retulimus. et haec autem idem vitellius in italiam primus intulit eodem tempore, simulque in hispaniam flaccus pompeius eques romanus, qui cum eo militabat.

nuces vocamus et castaneas, quamquam adcommodatiores glandium generi. armatum iis echinato calyce vallum, quod inchoatum glandibus, mirumque vilissima esse quae tanta occultaverit cura naturae. trini quibusdam partus ex uno calyce; cortexque lentus, proxima vero corpori membrana et in his et in nucibus saporem, ni detrahatur, infestat. torrere has in cibis gratius, modo molantur, et praestant ieiunio feminarum quandam imaginem panis. sardibus hae provenere primum, ideo apud graecos sardianos

balanos appellant, nam Διὸς βαλάνου nomen postea inposuere excellentioribus satu factis. nunc plura earum genera. tarentinae faciles nec operosae cibo, planae figura. rotundior quae balanitis vocatur, purgabilis maxime et sponte prosiliens pura. plana est et salariana, tarentina minus tractabilis, laudatior corelliana et ex ea facta quo dicemus in insitis modo tereiana, quam rubens cortex praefert triangulis et popularibus nigris, quae coctivae vocantur. patria laudatissimis tarentum et in campania neapolis. ceterae suum pabulo gignuntur, scrupulosa corticis intra nucleos quoque ruminatione.

haut procul abesse videantur et praedulces siliquae, nisi quod in iis ipse manditur cortex. digitorum omnis longitudo illis et interim falcata, pollicari latitudine. glandes inter poma numerari non possunt, quam ob rem in sua natura dicentur.

reliqua carnosi sunt generis, eaque bacis atque carnibus distant. alia acinis caro, alia moris, alia unedonibus, et alia acinis, inter cutem sucumque, alia myxis, alia bacis ut olivis. moris sucus in carne vinosus, trini colores, candidus primo, mox rubens, maturis niger. in novissimis florent, inter prima maturescunt. tingunt manus suco matura, eluunt acerba. minimum in hac arbore ingenia profecerunt, nec nominibus nec insitis; nec alio modo quam pomi magnitudine differunt mora ostiensia et tusculana romae. nascuntur et in rubis, multum differente callo.

aliud corpus et terrestribus fragis, aliud congeneri eorum unedoni, quod solum pomum simul e frutice terraeque gignitur. arbor ipsa fruticosa. fructus anno maturescit, pariterque floret subnascens et prior coquitur. mas sit an femina sterilis, inter auctores non constat. pomum inhonorum, ut cui nomen ex argumento sit unum tantum edendi. duobus tamen his nominibus appellant graeci comaron et memaecylon, quo apparet totidem esse genera; et apud nos alio nomine arbutus vocatur. iuba auctor est quinquagenum cubitorum altitudine in arabia esse eas.

acinorum quoque magna est differentia, primum inter uvas ipsas callo, teneritate, crassitudine, interiore ligno aliis parvo et aliis etiam gemino, qui minime feraces musti. plurimum vero differunt hederae sabucique acini, et figura etiam punici, angulosi quippe soli. nec cutis ulla singulis praeter communem quae est candida. totisque sucus et

caro est, iis praecipue quibus parvolum inest ligni. magna et bacis differentia: aliae namque sunt olivis, lauris et alio modo loto, cornis, alio myrtis, lentisco. aquifolio enim ac spinae sine suco, medioque etiamnum genere inter bacas acinosque cerasis. pomum iis primo candidum et fere omnibus bacis; mox aliis virescit, ut olivis, lauris, rubet vero moris, cerasis, cornis. dein nigrescit moris, cerasis, olivis.

cerasi ante victoriam mithridaticam l. luculli non fuere in italia, ad urbis annum dclxxx. is primum invexit e ponto, annisque cxx trans oceanum in britanniam usque pervenere; eadem ut diximus in aegypto nulla cura potuere gigni. cerasorum aproniana maxime rubent, nigerrima sunt lutatia, caeciliana vero et rotunda. iunianis gratus sapor, sed paene tantum sub arbore sua, adeo teneris, ut gestatum non tolerent. principatus duracinis quae pliniana campania appellat, in belgica vero lusitanis, in ripis etiam rheni. tertius iis colos e nigro ac rubenti viridique, similis maturescentibus semper. minus quinquennium est quod prodiere quae vocant laurea, non ingratae amaritudinis, insitae in lauru. sunt et macedonica, parvae arboris raroque tria cubita excedentis, et minore etiamnum frutice chamaecerasi. inter prima hoc e pomis colono gratiam annuam refert. septentrione frigidisque gaudet, siccatur etiam sole conditurque ut oliva cadis. quae cura et cornis atque etiam lentisco adhibetur. ne quid non hominis ventri natum esse videatur, miscentur sapores et alio alius placere cogitur; miscentur vero et terrae caelique tractus: in alio cibi genere india advocatur, in alio aegyptus, creta, cyrene singulaeque terrae. nec cessat in veneficiis vita, dum modo omnia devoret. planius hoc fiet in herbarum natura.

interim quae sunt communia et pomis omnibusque sucis saporum genera xiii reperiuntur: dulcis, suavis, pinguis, amarus, austerus, acer, acutus, acerbus, acidus, salsus. praeter haec tria sunt genera mirabili maxime natura: unum in quo plures pariter sentiuntur sapores, ut vinis; namque in iis et austerus et acutus et dulcis et suavis, omnes alieni. alterum est genus in quo sit et alienus quidem, sed et suus quidam ac peculiaris, ut in lacte; si quidem inest ei quod tamen iure dici dulce et pingue et suave non possit, optinente lenitate, quae ipsa succedit in saporis vicem. nullus hic aquis nec sucus, ut tamen eo ipso fiat aliquis ac suum genus faciat. sentiri quidem aquae saporem ullum sucumve vitium est. magnum his

omnibus in odore momentum et magna cognatio; qui et ipse nullus est aquis aut, si sentitur omnino, vitium est. mirum tria naturae praecipua elementa sine sapore esse, sine odore, sine suco: aquas, ae +ra, ignes.

ergo sucorum vinosi piro, moro, myrto, minime, quod miremur, uvis; pingues olivae, lauro, nuci iuglandi, amygdalis; dulces uvis, ficis, palmis; aquosus prunis. magna differentia et in colore suci: sanguineus moris, cerasis, cornis, uvis nigris; idem albis candidus, lacteus in capite ficis, in corpore non item, spumeus malis, nullus persicis, cum praesertim duracina suco abundent. sed quis eius ullum dixerit colorem sua et in odore miracula: malis acutus, persicis dilutus, dulcibus nullus. nam et vinum tale sine odore, tenue odoratius multoque celerius talia ad usum veniunt quam pinguia. quae odorata, non eadem in gustu tenera, quia non sunt pariter odor et sapor. quam ob rem citreis odor acerrimus, sapor asperrimus, quadamtenus et cotoneis, nullusque odor ficis.

et hactenus sint species ac genera pomorum: naturas artius colligi par est. alia siliquis distinguntur, ipsis dulcibus semenque conplexis amarum, cum in pluribus semina placeant, in siliqua damnentur; alia bacis, quarum intus lignum et extra caro, ut olivis, cerasis; aliquorum intus bacae, foris lignum, ut iis quae in aegypto diximus gigni. quae bacis natura, eadem et pomis. aliorum intus corpus et foris lignum, ut nucum; aliis foris corpus, intus lignum, ut persicis et prunis, vitiumque cinctum fructu, cum fructus alibi muniatur vitio. putamine clauduntur nuces, corio castaneae; detrahitur hoc iis, at in mespilis manditur. crusta teguntur glandes, cute uvae, corio et membrana punica. carne et suco mora constant, cute et suco cerasi. quaedam statim a ligno recedunt, ut nuces et palmae; quaedam adhaerent, ut olivae laurusque. quorundam generi utraque est natura, ut in persicis; etenim duracinis adhaeret corpus et ligno avelli non quit, cum in ceteris facile separetur. quibusdam nec intus nec extra lignum, ut in palmarum genere. aliquorum lignum ipsum in usu et pomi vice, ut genera e nucleis quaedam in aegypto diximus. quorundam extra geminantur vitia, ut in castaneis et amygdalis nucibusque iuglandibus. quorundam natura trigemina: corpus est, dein lignum rursusque semen in ligno, ut in persicis. quaedam inter se densa, ut uvae, sorva, quae ramos circumdata ex omni parte uvarum modo

degravant; alia rara, ut in persicis; quaedam alvo continentur, ut granata. dependent alia pediculis, ut pira, alia racemis, ut uvae, palmae, alia et pediculis et racemis, ut hederae, sabuci; alia ramo adhaerent, ut in lauru; quaedam utroque modo, ut olivae. nam et breves pediculi et longi. quaedam vasculis constant, ut punica et mespila lotosque in aegypto et euphrate. iam vero diversa gratia et commendatio: carne palmae placent, crusta thebaicae, suco uvae et caryotae, callo pira ac mala, corpore mora, cartilagine nuclei, grano quaedam in aegypto, cute caricae. detrahitur haec ficis virentibus ut putamen, eademque in siccis maxime placet. in papyris et ferulis spinaque alba caulis ipse pomum est, sicut et ficulni caules, in fruticoso genere cum caule capparis; in siliquis vero quod manditur quid nisi lignum est non omittenda seminis earum proprietate: nam neque corpus nec lignum nec cartilago dici potest neque aliud nomen inveniat.

sucorum natura praecipuam admirationem in myrto habet, quando ex una omnium olei vinique bina genera fiunt, item myrtidanum, ut diximus. et alius usus bacae fuit apud antiquos ante quam piper reperiretur illam optinens vicem, in quodam etiam genere opsonii nomine inde tracto, quod etiam nunc myrtatum vocatur. eademque origine aprorum sapor commendatur, plerumque ad intinctus additis myrtis.

arbor ipsa in europae citeriore caelo, quod a cerauniis montibus incipit, primum cerceis in elpenoris tumulo visa traditur graecumque ei nomen remanet, quo peregrinam esse apparet. fuit, ubi nunc roma est, iam cum conderetur; quippe ita traditur, myrtea verbena romanos sabinosque, cum propter raptas virgines dimicare voluissent, depositis armis purgatos in eo loco qui nunc signa veneris cluacinae habet; cluere enim antiqui purgare dicebant. et in ea quoque arbore suffimenti genus habetur, ideo tum electa, quoniam coniunctioni et huic arbori venus praeest, haud scio an prima etiam omnium in locis publicis romae sata, fatidico quidem et memorabili augurio. inter antiquissima namque delubra habetur quirini, hoc est ipsius romuli. in eo sacrae fuere myrti duae ante aedem ipsam per longum tempus, altera patricia appellata, altera plebeia. patricia multis annis praevaluit exuberans ac laeta; quamdiu senatus quoque floruit, illa ingens, plebeia retorrida ac squalida. quae postquam evaluit

flavescente patricia, a marsico bello languida auctoritas patrum facta est ac paulatim in sterilitatem emarcuit maiestas. quin et ara vetus fuit veneri myrteae, quam nunc murciam vocant.

cato tria genera myrti prodidit, nigram, candidam, coniugulam, fortassis a coniugiis, ex illo cluacinae genere. nunc et alia distinctio sativae aut silvestris et in utraque latifoliae, in silvestri propria oxymyrsinae. sativarum genera topiarii faciunt tarentinam folio minuto, nostratem patulo, hexasticham densissimo, senis foliorum versibus. haec non est in usu, ramosa atque non alta. coniugalem existimo nunc nostratem dici. myrtus odoratissima aegypto. cato docuit vinum fieri e nigra siccata usque in ariditatem in umbra atque ita musto indita. si non siccentur bacae, oleum gigni. postea conpertum et ex alba vinum fieri album, duobus sextariis myrti tusae in vini tribus heminis maceratae expressaeque. folia et per se siccantur in farinam ad ulcerum remedia in corpore humano, leniter mordaci pulvere, ac refrigerandis sudoribus. quin immo oleo quoque, mirum dictu, inest quidam vini sapor simulque pinguis liquor, praecipua vi ad corrigenda vina saccis ante perfusis. retinet quippe faecem nec praeter purum liquorem transire patitur datque se comitem praecipua commendatione liquato. virgae quoque eius, gestatae modo, viatori prosunt in longo itinere pediti; quin et virgei anuli expertes ferri inguinum tumori medentur.

bellicis quoque se rebus inseruit, triumphansque de sabinis p. postumius tubertus in consulatu, qui primus omnium ovans ingressus urbem est, quoniam rem leniter sine cruore gesserat, myrto veneris victricis coronatus incessit optabilemque arborem etiam hostibus fecit. haec postea ovantium fuit corona excepto M. Crasso, qui de fugitivis et spartaco laurea coronatus incessit. masurius auctor est curru quoque triumphantes myrtea corona usos. l. piso tradit papirium masonem, qui primus in monte albano triumphavit de corsis, myrto coronatum ludos circenses spectare solitum; avus maternus africani sequentis hic fuit. marcus valerius duabus coronis utebatur, laurea et myrtea, qui et hoc voverat.

laurus triumphis proprie dicatur, vel gratissima domibus, ianitrix caesarum pontificumque. sola et domos exornat et ante limina excubat. duo eius genera tradidit cato, delphicam et cypriam. pompeius lenaeus adiecit quam mustacem appellavit, quoniam

mustaceis subiceretur: hanc esse folio maximo flaccidoque et albicante; delphicam aequali colore viridiorem, maximis bacis atque e viridi rubentibus ac victores delphis coronare ut triumphantes romae; cypriam esse folio brevi, nigro, per margines imbricato crispam. postea accessere genera: tinus - hanc silvestrem laurum aliqui intellegunt, nonnulli sui generis arborem - differt colore; est enim caerula baca. accessit et regia, quae coepit augusta appellari, amplissima et arbore et folio, bacis gustatu quoque non asperis. aliqui negant eandem esse et suum genus regiae faciunt longioribus foliis latioribusque. iidem in alio genere bacaliam appellant hanc quae vulgatissima est bacarumque fertilissima, sterilem vero earum, quod maxime miror, triumphalem eaque dicunt triumphantes uti, nisi id a Divo Augusto coepit, ut docebimus, ex ea lauru quae ei missa e caelo est, minima altitudine, folio crispo, brevi, inventu rara. accedit in topiario opere thasia, excrescente in medio folio parvola veluti lacinia folii, et sine ea spadonina, mira opacitatis patientia, itaque quantalibeat sub umbra solum implet. est et chamaedaphne silvestris frutex et alexandrina, quam aliqui idaeam, alii hypoglottion, alii danaen, alii carpophyllon, alii hypelaten vocant. ramos spargit a radice dodrantales, coronarii operis, folio acutiore quam myrti ac molliore et candidiore, maiore, semine inter folia rubro, plurima in ida et circa heracleam ponti, nec nisi in montuosis. id quoque quod daphnoides vocatur genus in nominum ambitu est; alii enim pelasgum, alii eupetalon, alii stephanon alexandri vocant. et hic frutex est ramosus, crassiore ac molliore quam laurus folio, cuius gustatu accendatur os, bacis e nigro rufis. notatum antiquis, nullum genus laurus in corsica fuisse, quod nunc satum et ibi provenit.

ipsa pacifera, ut quam praetendi etiam inter armatos hostes quietis sit indicium. romanis praecipue laetitiae victoriarumque nuntia additur litteris et militum lanceis pilisque, fasces imperatorum decorat. ex iis in gremio iovis optimi maximique deponitur, quotiens laetitiam nova victoria adtulit, idque non quia perpetuo viret nec quia pacifera est, praeferenda ei utroque olea, sed quia spectatissima in monte parnaso ideoque etiam grata apollini visa, adsuetis eo dona mittere, oracula inde repetere iam et regibus romanis teste L. Bruto, fortassis etiam in argumentum, quoniam ibi libertatem publicam is meruisset lauriferam tellurem illam osculatus ex responso et quia

manu satarum receptarumque in domos fulmine sola non icitur. ob has causas equidem crediderim honorem ei habitum in triumphis potius quam quia suffimentum sit caedis hostium et purgatio, ut tradit masurius, adeoque in profanis usibus pollui laurum et oleam fas non est, ut ne propitiandis quidem numinibus accendi ex iis altaria araeve debeant. laurus quidem manifesto abdicat ignes crepitu et quadam detestatione, interaneorum etiam vitia et nervorum ligno torquente. ti. principem tonante caelo coronari ea solitum ferunt contra fulminum metus.

sunt et circa Divum Augustum eventa eius digna memoratu. namque liviae drusillae, quae postea augusta matrimonii nomen accepit, cum pacta esset illa caesari, gallinam conspicui candoris sedenti aquila ex alto abiecit in gremium inlaesam, intrepideque miranti accessit miraculum. quoniam teneret in rostro laureum ramum onustum suis bacis, conservari alitem et subolem iussere haruspices ramumque eum seri ac rite custodiri: quod factum est in villa caesarum fluvio tiberi inposita iuxta nonum lapidem flaminiae viae, quae ob id vocatur ad gallinas, mireque silva provenit. ex ea triumphans postea caesar laurum in manu tenuit coronamque capite gessit, ac deinde imperatores caesares cuncti. traditusque mos est ramos quos tenuerunt serendi, et durant silvae nominibus suis discretae, fortassis ideo mutatis triumphalibus. unius arborum latina lingua nomen inponitur viris, unius folia distinguntur appellatione; lauream enim vocamus. durat et in urbe inpositum loco, quando loretum in aventino vocatur ubi silva laurus fuit. eadem purificationibus adhibetur, testatumque sit obiter et ramo eam seri, quoniam dubitavere democritus atque theophrastus.

nunc dicemus silvestrium naturas.

pomiferae arbores quaeque mitioribus sucis voluptatem primae cibis attulerunt et necessario alimento delicias miscere docuerunt, sive illae ultro ab homine didicere blandos sapores adoptione et conubio - idque munus etiam feris volucribusque dedimus - , intra praedictas constant. proximum erat narrare glandiferas, quae primae victum mortalium aluerunt nutrices inopis ac ferae sortis, ni praeverti cogeret admiratio usu comperta, quaenam qualisque esset vita sine arbore ulla, sine frutice viventium.

diximus et in oriente quidem iuxta oceanum complures ea in necessitate gentes. sunt vero et in septentrione visae nobis chaucorum, qui maiores minoresque appellantur. vasto ibi meatu bis dierum noctiumque singularum intervallis effusus in inmensum agitur oceanus, operiens aeternam rerum naturae controversiam dubiamque terrae sit an partem maris. illic, misera gens, tumulos optinent altos aut tribunalia exstructa manibus ad experimenta altissimi aestus, casis ita inpositis navigantibus similes, cum integant aquae circumdata, naufragis vero, cum recesserint, fugientesque cum mari pisces circa tuguria venantur. non pecudem his habere, non lacte ali, ut finitimis, ne cum feris quidem dimicare contingit omni procul abacto frutice. ulva et palustri iunco funes nectunt ad praetexenda piscibus retia captumque manibus lutum ventis magis quam sole siccantes terra cibos et rigentia septentrione viscera sua urunt. potus non nisi ex imbre servato scrobibus in vestibulo domus. et hae gentes, si vincantur hodie a populo romano, servire se dicunt! ita est profecto: multis fortuna parcit in poenam.

aliud e silvis miraculum: totam reliquam germaniam operiunt adduntque frigori umbras, altissimae tamen haud procul supra dictis chaucis circa duos praecipue lacus. litora ipsa optinent quercus maxima aviditate nascendi, suffossaeque fluctibus aut propulsae flatibus vastas complexu radicum insulas secum auferunt, atque ita libratae stantes navigant, ingentium ramorum armamentis saepe territis classibus nostris, cum velut ex industria fluctibus agerentur in proras stantium noctu, inopesque remedii illae proelium navale adversus arbores inirent. in eadem septentrionali plaga hercyniae

silvae roborum vastitas intacta aevis et congenita mundo prope inmortali sorte miracula excedit. ut alia omittantur fide caritura, constat attolli colles occursantium inter se radicum repercussu aut, ubi secuta tellus non sit, arcus ad ramos usque et ipsos inter se rixantes curvari portarum patentium modo, ut turmas equitum tramittant.

glandiferi maxime generis omnes, quibus honos apud romanos perpetuus. hinc civicae coronae, militum virtutis insigne clarissimum, iam pridem vero et clementiae imperatorum, postquam civilium bellorum profano meritum coepit videri civem non occidere. cedunt his murales vallaresque et aureae, quamquam pretio antecedentes, cedunt et rostratae, quamvis in duobus maxime ad hoc aevi celebres, M. Varrone e piraticis bellis dante magno pompeio, itemque m. agrippa tribuente caesare e siculis, quae et ipsa piratica fuere. antea rostra navium tribunali praefixa fori decus erant, veluti p. r. ipsi corona inposita. postquam vero tribuniciis seditionibus calcari ac pollui coepere, postquam vires ex publico in privatum agi singulisque civium quaeri et sacrosancti omnia profana facere, tum a pedibus eorum subiere in capita civium rostra. dedit hanc Augustus coronam agrippae, sed civicam a genere humano accepit ipse.

antiquitus quidem nulla nisi deo dabatur - ob id homerus caelo tantum eam et proelio universo tribuit, viritim vero ne in certamine quidem ulli - feruntque primum omnium liberum patrem inposuisse capiti suo ex hedera. postea deorum honori sacrificantes sumpsere, victimis simul coronatis. novissime et in sacris certaminibus usurpatae, in quibus hodieque non victori dantur, sed patriam ab eo coronari pronuntiatur; inde natum ut et triumphaturis conferrentur in templis dicandae, mox ut et ludis darentur. longum est nec instituti operis disserere, quis quamque romanorum primus acceperit; neque enim alias noverant quam bellicas. quod certum est, uni gentium huic plura sunt genera quam cunctis.

romulus frondea coronavit hostum hostilium, quod fidenam primus inrupisset. avus hic tulli hostilii regis fuit. p. decium patrem tribunum militum frondea donavit exercitus ab eo servatus imperatore cornelio cosso cos. samnitium bello. civica iligna primo fuit, postea magis placuit ex aesculo iovi sacra, variatumque et cum quercu est ac data ubique quae fuerat, custodito tantum honore

glandis. additae leges artae et ideo superbae quasque conferre libeat cum illa graecorum summa, quae sub ipso iove datur cuique muros patria gaudens rumpit: civem servare, hostem occidere, utque eum locum, in quo sit actum, hostis optineat eo die, ut servatus fateatur - alias testes nihil prosunt - , ut civis fuerit. auxilia quamvis rege servato decus non dant, nec crescit honos idem imperatore conservato, quoniam conditores in quocumque cive summum esse voluere. accepta licet uti perpetuo. ludis ineunti semper adsurgi etiam ab senatu in more est, sedendi ius in proximo senatui, vacatio munerum omnium ipsi patrique et avo paterno. xiiii eas accepit siccius dentatus, ut retulimus suo loco, vi capitolinus, is quidem et de duce servilio. africanus de patre accipere noluit apud trebiam. o mores aeternos, qui tanta opera honore solo donaverint et, cum reliquas coronas auro commendarent, salutem civis in pretio esse noluerint, clare professi ne servari quidem hominem fas esse lucri causa!

glande opes nunc quoque multarum gentium etiam pace gaudentium constant. nec non et inopia frugum arefactis emolitur farina spissaturque in panis usum; quin et hodieque per hispanias secundis mensis glans inseritur. dulcior eadem in cinere tosta. cautum est praeterea lege xii tabularum, ut glandem in alienum fundum procidentem liceret colligere.

genera earum multa. distant fructu, situ, sexu, sapore. namque alia fageae glandi figura, quernae alia et ilignae, atque inter se quoque generum singulorum differentiae. praeterea sunt aliquae silvestres, aliae placidiores, quae culta optinent. iam montuosis planisque distant, sicut et sexu, mares ac feminae, item sapore: dulcissima omnium fagi, ut qua obsessos etiam homines durasse in oppido chio tradat cornelius alexander. genera distinguere non datur nominibus, quae sunt alia alibi, quippe cum robur quercumque vulgo nasci videamus, aesculum non ubique, quartam vero generis eiusdem, quae cerrus vocatur, ne italiae quidem maiore ex parte notam esse. distinguemus ergo proprietate naturaque et, ubi res coget, etiam graecis nominibus.

fagi glans nucleis similis triangula cute includitur. folium tenue atque e levissimis, populo simile, celerrime flavescens et media parte plerumque gignens superne parvolam bacam viridem, cacumine

aculeatam. fagum muribus gratissimum est, et ideo animalis eius una proventus, glires quoque saginat, expetitur et turdis. arborum fertilitas omnium fere alternat, sed maxime fagi.

glandem, quae proprie intellegitur, ferunt robur, quercus, aesculus, cerrus, ilex, suber. continent hispido calyce per genera plus minusve complectente. folia praeter ilicem gravia, carnosa, procera, sinuosa lateribus, nec, cum cadunt, flavescentia, ut fagi, pro differentia generum breviora vel longiora.

ilicis duo genera. ex his in italia folio non multum ab oleis distant milaces a quibusdam graecis dictae; in provinciis aquifoliae sunt ilices. glans utriusque brevior et gracilior, quam homerus aculon appellat eoque nomine a glande distinguit. masculas ilices negant ferre.

glans optima in quercu atque grandissima, mox aesculo. nam robori parva, cerro tristis, horrida, echinato calyce ceu castaneae. sed et in querna alia dulcior, molliorque feminae, mari spissior. maxime autem probantur latifoliae ex argumento dictae. distant inter se magnitudine et cutis tenuitate, item quod aliis subest tunica robigine scabra, aliis protinus candidum corpus. probatur et ea, cuius in balano utrimque ex longitudine extrema lapidescit duritia, melior cui in cortice quam cui in corpore, utrumque non nisi mari. praeterea aliis ovata, aliis rotunda, aliis acutior figura, sicut et colos nigrior candidiorve, qui praefertur. amaritudo in extremitatibus, mediae dulces. quin et pediculi brevitas proceritasque differentiam habet. in ipsis vero arboribus quae maximam fert hemeris vocatur, brevior et in orbem comosa alasque ramorum crebro cavata. fortius lignum quercus habet et incorruptius, ramosa et ipsa, procerior tamen et crassior caudice, excelsissima autem aegilops, incultis amica.

ab hac proxima latifoliae proceritas, sed minus utilis aedificiis atque carboni: dolata vitiis obnoxia est, quamobrem solida utuntur; carbo in aerariorum tantum officinis compendio, quoniam desinente flatu protinus emoriens saepius recoquitur, cetero plurimus scintillis. idem e novellis melior. acervi consertis taleis recentibus luto caminantur, accensa strue contis pungitur durescens calyx atque ita sudorem emittit.

pessima et carboni et materiae haliphloeos dicta, cui crassissimus cortex atque caudex et plerumque cavus fungosusque. nec alia

putrescit ex hoc genere, etiam cum vivit. quin et fulmine saepissime icitur, quamvis altitudine non excellat. ideo ligno eius nec ad sacrificia uti fas habetur. eidem rara glans et, cum tulit, amara, quam praeter sues nullum attingat animal, ac ne hae quidem, si aliud pabulum habeant. hoc quoque inter reliqua neglectae religionis est, quod emortuo carbone sacrificatur.

glans fagea suem hilarem facit, carnem cocibilem ac levem et utilem stomacho; iligna suem angustam, nitidam, strigosam; ponderosam querna, diffusam, gravissima et ipsa glandium atque dulcissima. proximam huic cerream tradit nigidius, nec ex alia solidiorem carnem, sed duram. iligna temptari sues, nisi paulatim detur. hanc novissimam cadere. fungosam carnem fieri aesculo, robore, subere.

quae glandem ferunt, omnes et gallam alternisque annis glandem, sed gallam hemeris optimam et coriis perficiendis aptissimam, similem huic latifolia, sed leviorem multoque minus probatam. fert et nigram - duo enim genera sunt - ; haec tinguendis lanis utilior. nascitur autem galla sole de geminis exeunte erumpens noctu semper universa. crescit uno die candidior et, si aestu excepta est, arescit protinus neque ad iustum incrementum pervenit, hoc est ut nucleum fabae magnitudine habeat. nigra diutius viret crescitque, ut interdum mali compleat magnitudinem. optima commagena, deterrima ex robore. signum eius quod cavernae tralucent.

robur praeter fructum plurima et alia gignit. namque fert et gallae utrumque genus et quaedam veluti mora, ni distarent arida duritie, plerumque et tauri caput imitantia, quibus fructus inest nucleis olivae similis. nascuntur in eo et pilulae nucibus non absimiles, intus habentes floccos molles, lucernarum luminibus aptos. nam et sine oleo flagrant, sicuti galla nigra. fert et aliam inutilem pilulam cum capillo, verno tamen tempore melliginis suci. gignunt et alae ramorum eius pilulas corpore, non pediculo adhaerentes, candicantes umbilicis, cetera nigra varietate dispersa; media cocci colorem habent, apertis atra inanitas est. aliquando et pumices gignit nec non et e foliis convolutas pilulas et in foliorum venis aquosos nucleos candicantes ac tralucidos, quamdiu molles sint, in quibus et culices nascuntur. maturescunt in modum ... .

ferunt robora et cachrym; ita vocatur pilula in medicina urendi

vim habens. gignitur et in abiete, larice, picea, tilia, nuce, platano, postquam folia cecidere, hieme durans. continet nucleum pineis similem. is crescit hieme, aperitur vere. pilula tota cadit, cum folia coepere crescere. tam multifera sunt, tot res praeter glandem pariunt robora, sed et boletos suillosque - gulae novissima inritamenta - , qui circa radices gignuntur, quercus probatissimos, robur autem et cupressus et pinus noxios. robora ferunt et viscum et mella, ut auctor est hesiodus, constatque rores melleos e caelo, ut diximus, cadentes non aliis magis insidere frondibus. crematoque robore cinerem nitrosum esse certum est.

omnes tamen has eius dotes ilex solo provocat cocco. granum hoc primoque ceu scabies fruticis, parvae aquifoliae ilicis. cusculium vocant. pensionem alteram tributi pauperibus hispaniae donat. usum eius ac rationem in conchylii mentione tradidimus. gignitur et in galatia, africa, pisidia, cilicia, pessimum in sardinia.

galliarum glandiferae maxime arbores agaricum ferunt. est autem fungus candidus, odoratus, antidotis efficax, in summis arboribus nascens, nocte relucens. signum hoc eius, quo in tenebris decerpitur. e glandiferis sola quae vocatur aegilops fert pannos arentes, muscoso villo canos, non in cortice modo, verum et e ramis dependentes cubitali magnitudine, odoratos, uti diximus inter unguenta. suberi minima arbor, glans pessima, rara, cortex tantum in fructu, praecrassus ac renascens atque etiam in denos pedes undique explanatus. usus eius ancoralibus maxime navium piscantiumque tragulis et cadorum obturamentis, praeterea in hiberno feminarum calceatu. quamobrem non infacete graeci corticis arborem appellant. sunt et qui feminam ilicem vocent atque, ubi non nascitur ilex, pro ea subere utantur in carpentariis praecipue fabricis, ut circa elim et lacedaemonem. nec in italia tota nascitur aut in gallia omnino.

cortex et fagis, tiliae, abieti, piceae in magno usu agrestium. vasa eo corbesque ac patentiora quaedam messibus convehendis vindemiisque faciunt atque protecta tuguriorum. scribit in recenti ad duces explorator incidens litteras a suco. nec non et in quodam usu sacrorum religiosus est fagi cortex. sed non durat arbor ipsa.

scandula e robore aptissima, mox e glandiferis aliis fagoque, facillima ex omnibus, quae resinam ferunt, sed minime durans praeterquam e pino. scandula contectam fuisse romam ad pyrrhi

usque bellum annis cccclxx cornelius nepos auctor est. silvarum certe distinguebatur insignibus, fagutali iove etiam nunc ubi lucus fageus fuit, porta querquetulana, colle in quem vimina petebantur, totque lucis, quibusdam et geminis. q. hortensius dictator, cum plebes secessisset in ianiculum, legem in aesculeto tulit, ut quod ea iussisset omnes quirites teneret.

peregrinae tum videbantur, quoniam non erant suburbanae, pinus atque abies omnesque, quae picem gignunt. de quibus nunc dicemus, simul ut tota condiendi vina origo cognoscatur, quae ferunt in asia aut oriente praedictis.

picem in europa sex genera cognatarum arborum ferunt. ex his pinus atque pinaster folium habent capillamenti modo praetenue longumque et mucrone aculeatum. pinus fert minimum resinae, interdum et nucibus ipsis, de quibus dictum est, vixque ut adscribatur generi.

pinaster nihil est aliud quam pinus silvestris minor altitudine et a medio ramosa, sicut pinus in vertice. copiosiorem dat haec resinam quo dicemus modo. gignitur et in planis. easdem arbores alio nomine esse per oram italiae quas tibulos vocant, plerique arbitrantur, sed graciles succinctioresque et enodes liburnicarum ad usus, paene sine resina.

picea montes amat atque frigora, feralis arbor et funebri indicio ad fores posita ac rogis virens, iam tamen et in domos recepta tonsili facilitate. haec plurimam fundit interveniente candida gemma, tam simili turis, ut mixta visu discerni non queat; unde fraus seplasiae. omnibus his generibus folia brevia, sed crassiora duraque ceu cupressis. piceae rami paene statim ab radice modici velut bracchia lateribus inhaerent.

similiter abieti expetitae navigiis situs in excelso montium, ceu maria fugerit, nec forma alia. materies vero praecipua est trabibus et plurimis vitae operibus. resina in ea vitium, unde fructus piceae, exiguumque sudat aliquando contactu solis. e diverso materies, quae abieti pulcherrima, piceae ad fissiles scandulas cupasque et pauca alia secamenta.

quinto generi est situs idem, facies eadem. larix vocatur. materies praestantior longe, incorrupta aevis, umori contumax, rubens praeterea et odore acrior. plusculum huic erumpit liquoris melleo

colore atque lentore, numquam durescentis.

sextum genus est taeda proprie dicta, abundantior suco quam reliqua, parcior liquidiorque quam picea, flammis ac lumini sacrorum etiam grata. hae, mares dumtaxat, ferunt et eam, quam graeci sycen vocant, odoris gravissimi. laricis morbus est ut taeda fiat.

omnia autem haec genera accensa fuligine inmodica carbonem repente exspuunt cum eruptionis crepitu eiaculanturque longe, excepta larice, quae nec ardet nec carbonem facit nec alio modo ignis vi consumitur quam lapides. omnia ea perpetuo virent nec facile discernuntur in fronde etiam a peritis; tanta natalium mixtura est. sed picea minus alta quam larix; illa crassior leviorque cortice, folio villosior, pinguior et densior, mollius flexo; at piceae rariora siccioraque folia et tenuiora ac magis algentia, totaque horridior et perfusa resina, lignum abieti similius. larix ustis radicibus non repullulat, picea repullulat, ut in lesbo accidit incenso nemore pyrrhaeo. alia etiamnunc generibus ipsis in sexu differentia. mas brevior et durior, femina procerior, pinguioribus foliis et simplicibus atque non rigentibus. lignum maribus durum et in fabrili opere contortum, feminae mollius, publico discrimine in securibus. hae in quocumque genere deprehendunt marem, quippe respuuntur et fragosius sidunt, aegrius revelluntur. ipsa materies retorrida et nigrior maribus. laricis circa idam in troade et alia differentia, montanae maritimaeque. nam in macedonia et arcadia circaque elim permutant nomina, nec constat auctoribus, quod cuique generi adtribuant. nos ista romano discernimus iudicio. abies e cunctis amplissima est et femina etiam prolixior, materie mollior utiliorque, arbore rotundior, folio pinnato densa, ut imbres non tramittat, atque hilarior in totum. e ramis generum horum panicularum modo nucamenta squamatim compacta dependent praeterquam larici. haec abietis masculae primori parte nucleos habent, non item feminae. piceae vero totis paniculis, minoribus gracilioribusque, minimos ac nigros, propter quod graeci phthiropoeon eam appellant. in eadem nucamenta maribus compressiora sunt ac minus resina roscida.

similis his etiamnunc aspectu est, ne quid praetereatur, taxus minime virens gracilisque et tristis ac dira, nullo suco, ex omnibus sola bacifera. mas noxio fructu; letale quippe bacis in hispania praecipue venenum inest, vasa etiam viatoria ex ea vinis in gallia

facta mortifera fuisse compertum est. hanc sextius milacem a graecis vocari dicit et esse in arcadia tam praesentis veneni, ut qui obdormiant sub ea cibumve capiant moriantur. sunt qui et taxica hinc appellata dicant venena - quae nunc toxica dicimus - , quibus sagittae tinguantur. repertum innoxiam fieri, si in ipsam arborem clavus aereus adigatur.

pix liquida in europa e taeda coquitur, navalibus muniendis multosque alios ad usus. lignum eius concisum furnis undique igni extra circumdato fervet. primus sudor aquae modo fluit canali. hoc in syria cedrium vocatur, cui tanta vis est, ut in aegypto corpora hominum defunctorum perfusa eo serventur.

sequens liquor crassior iam picem fundit. haec rursus in cortinas aereas coniecta aceto spissatur ut coagulo et bruttiae cognomen accepit, doliis dumtaxat vasisque ceteris utilis, lentore ab alia pice differens, item colore rutilante et quod pinguior est reliqua omni. illa fit e piceae resina ferventibus coacta lapidibus in alveis validi roboris aut, si alvei non sint, struis congerie, velut in carbonis usu. haec in vinum additur farinae modo tusa, nigrior colore. eadem resina si cum aqua lenius decoquatur coleturque, rufo colore lentescit ac stillaticia vocatur. seponuntur autem ad id fere vitia resinae cortexque. alia temperies ad crapulam. namque flos crudus resinae cum multa astula tenui brevique avulsus conciditur ad cribrum minuta. dein ferventi aqua, donec coquatur, perfunditur.

huius expressum pingue praecipua resina fit atque rara nec nisi paucis in locis subalpinae italiae, conveniens medicis. resinae albae congium in ii aquae pluviae cocunt. alii utilius putant sine aqua coquere lento igne toto die, utique vase aeris albi, item terebinthinam in sartagine cinere ferventi, hanc ceteris praeferentes. proxima e lentisco. non omittendum apud eosdem zopissam vocari derasam navibus maritimis picem cum cera, nihil non experiente vita, multoque efficaciorem ad omnia, quibus pices resinaeque prosunt, videlicet adiecto salis callo.

aperitur picea e parte solari, non plaga, sed vulnere ablati corticis, cum plurimum bipedali hiatu, ut a terra cubito cum minimum absit. nec corpori ipsi parcitur, ut in ceteris, quoniam astula in fructu est. verum haec proxima laudatur, altior amaritudinem adfert. postea umor omnis e tota confluit in ulcus. item in taeda. cum id manare

desiit, simili modo ex alia parte aperitur ac deinde alia. postea tota arbor succiditur et medulla eius uritur. sic et in syria terebintho detrahunt cortices, ibi quidem et e ramis ac radicibus, cum resina damnetur ex his partibus. in macedonia laricem masculam urunt, feminae radices tantum. theopompus scripsit in apolloniatarum agro picem fossilem, non deteriorem macedonica, inveniri. pix optima ubique ex apricis aquilonis situ, ex opacis horridior virusque praeferens, frigida hieme deterior ac minus copiosa et decolor. quidam arbitrantur in montuosis copia praestantiorem ac colore et dulciorem fieri, odore quoque gratiorem, dum resina sit, decoctam autem minus picis reddere, quoniam in serum abeat, tenuioresque esse ipsas arbores quam in planis, sed has et illas serenitate steriliores. fructum quaedam proximo anno ab incisu largiuntur, aliae secundo, quaedam tertio. expletur autem plaga resina, non cortice nec cicatrice, quae in hac arbore non coit.

inter haec genera propriam quidam fecere sappinum, quoniam ex cognatione harum seritur, qualis dicta est in nucleis, eiusdemque arboris imas partes taedas vocant, cum sit illa arbor nil aliud quam picea feritatis paulum mitigatae satu, sappinus autem materies caesurae genere fiat, sicuti docebimus.

materiae enim causa reliquas arbores natura genuit copiosissimamque fraxinum. procera haec ac teres, pinnata et ipsa folio, multumque homeri praeconio et achillis hasta nobilitata. materies est ad plurima utilis; ea quidem, quae fit in ida troadis, in tantum cedro similis, ut ementes fallat cortice ablato. graeci duo genera eius fecere: longam enodem, alteram brevem duriorem fuscioremque, laureis foliis. bumeliam vocant in macedonia amplissimam lentissimamque. alii situ divisere, campestrem enim esse crispam, montanam spissam. folia earum iumentis mortifera, ceteris ruminantium innocua graeci prodidere; in italia nec iumentis nocent. contra serpentes vero suco expresso ad potum et inposita ulceri opifera, ut nihil aeque, reperiuntur, tantaque est vis, ut ne matutinas quidem occidentesve umbras, cum sunt longissimae, serpens arboris eius adtingat, adeo ipsam procul fugiat. experti prodimus, si fronde ea circumcludantur ignis et serpens, in ignes potius quam in fraxinum fugere serpentem. mira naturae benignitas, prius quam hae prodeant, florere fraxinum nec ante conditas folia

demittere.

in tilia mas et femina differunt omni modo. namque et materies maris dura rufiorque ac nodosa et odoratior, cortex quoque crassior ac detractus inflexibilis. nec semen fert aut florem ut femina, quae crassior arbore, materie candida praecellensque est. mirum in hac arbore fructum a nullo animalium adtingi, foliorum corticisque sucum esse dulcem. inter corticem ac lignum tenues tunicae multiplici membrana, e quibus vincula tiliae vocantur tenuissimumque eorum philyrae, coronarum lemniscis celebres antiquorum honore. materies teredinem non sentit, proceritate perquam modica, verum utilis.

acer eiusdem fere amplitudinis, operum elegantia ac subtilitate citro secundum. plura eius genera: album, quod praecipui candoris, vocatur gallicum in transpadana italia transque alpes nascens. alterum genus crispo macularum discursu, qui cum excellentior fuit, a similitudine caudae pavonum nomen accepit, in histria raetiaque praecipuum. e viliore genere crassivenium vocatur. graeci situ discernunt, campestre enim candidum esse nec crispum - quod glinon vocant - , montanum vero crispius duriusque, etiamnunc e mascula crispius ad lautiora opera, tertium genus zygian rubentem, fissili ligno, cortice livido, scabro. hoc alii generis proprii esse malunt et latine carpinum appellant.

pulcherrimum vero est bruscum, multoque excellentius etiamnum molluscum. tuber utrumque arboris eius, bruscum intortius crispum, molluscum simplicius sparsum et, si magnitudinem mensarum caperet, haud dubie praeferretur citro; nunc intra pugillares lectorumque solidos aut lamnas raro usu spectatur. e brusco fiunt et mensae nigrescentes. reperitur et in alno tuber, tanto deterius, quantum ab acere alnus ipsa distat. aceris mares prius florent. etiamnum in siccis natae praeferuntur aquaticis, sicut et fraxini. est trans alpes arbor simillima aceri albo materie, quae vocatur staphylodendron. fert siliquas et in iis nucleos sapore nucis abellanae.

in primis vero materies honorata buxo est raro crispanti nec nisi radice, de cetero ... levisque est materiae, set lentore quodam et duritie ac pallore commendabilis, ipsa vero arbor et topiario opere. tria eius genera: gallicum, quod in metas emittitur amplitudinemque

proceriorem. oleastrum, in omni usu damnatum, gravem praefert odorem. tertium genus nostratis vocant, e silvestri, ut credo, mitigatum satu, diffusius et densitate parietum, virens semper ac tonsile. buxus pyrenaeis ac cytoriis montibus plurima et berecyntio tractu, crassissima in corsica, flore non spernendo, quae causa amaritudinis mellis. semen cunctis animantibus invisum. nec in olympo macedoniae gracilior, sed brevis. amat frigida, aprica. in igni quoque duritia quae ferro, nec flamma nec carbone utili.

inter has atque frugiferas materie vitiumque amicitia accipitur ulmus. graeci duo genera eius novere: montanam quae sit amplior, campestrem quae fruticosa. italia atinias vocat excelsissimas et ex iis siccaneas praefert, quae non sint riguae, alterum genus gallicas, tertium nostrates, densiore folio et ab eodem pediculo numerosiore, quartum silvestre. atiniae non ferunt samaram - ita vocatur ulmi semen - , omnesque radicum plantis proveniunt, reliquae semine.

nunc celeberrimis arborum dictis quaedam in universum de cunctis indicanda sunt. montes amant cedrus, larix, taeda et ceterae, e quibus resina gignitur, item aquifolia, buxus, ilex, iuniperus, terebinthus, populus, ornus, carpinus. est in appennino et frutex, qui vocatur cotinus, ad linamenta modo conchylii colore insignis. montes et valles diligit abies, robur, castaneae, tilia, ilex, cornus. aquosis montibus gaudent acer, fraxinus, sorbus, tilia, cerasus. non temere in montibus visae sunt prunus, punicae, oleastri, iuglans, mori, sabuci. descendunt et in plana cornus, corylus, quercus, ornus, acer, fraxinus, fagus, carpinus. subeunt et in montuosa ulmus, malus, pirus, laurus, myrtus, sanguinei frutices, ilex tinguendisque vestibus nascentes genistae. gaudet frigidis sorbus, sed magis etiam betulla. gallica haec arbor mirabili candore atque tenuitate, terribilis magistratuum virgis, eadem circulis flexilis, item corbium costis. bitumen ex ea galliae excoquunt. in eosdem situs comitantur et spina, nuptiarum facibus auspicatissima, quoniam inde fecerint pastores qui rapuerunt sabinas, ut auctor est masurius. nunc facibus carpinus, corylus familiarissimae.

aquas odere cupressi, iuglandes, castaneae, laburnum. alpina et haec arbor, nec vulgo nota, dura ac candida materie, cuius florem cubitalem longitudine apes non adtingunt. odit et quae appellatur iovis barba, in opere topiario tonsilis et in rotunditatem spissa,

argenteo folio. non nisi in aquosis proveniunt salices, alni, populi, siler, ligustra tesseris utilissima, item vaccinia italiae in aucupiis sata, galliae vero etiam purpurae tinguendae causa ad servitiorum vestes. quaecumque communia sunt montibus planisque, maiora fiunt et aspectu pulchriora quae in campestribus, meliora autem fructu, materie crispiora quae in montibus, exceptis malis pirisque.

praeterea arborum aliis decidunt folia, aliae sempiterna coma virent, quam differentiam antecedat necesse est prior. sunt enim arborum quaedam omnino silvestres, quaedam urbaniores, quoniam his placet nominibus distinguere ac mites, quae fructu aut aliqua dote umbrarumque officio humanius iuvant, non improbe dicantur urbanae.

harum generis non decidunt oleae, lauro, palmae, myrto, cupressis, pinis, hederae, rhododendro et, quamvis herba dicatur, sabinae. rhododendron, ut nomine apparet, a graecis venit. alii nerium vocarunt, alii rhododaphnen, sempiternum fronde, rosae similitudine, caulibus fruticosum. iumentis caprisque et ovibus venenum est, idem homini contra serpentium venena remedio.

silvestrium generis folia non decidunt abieti, larici, pinastro, iunipero, cedro, terebintho, buxo, ilici, aquifolio, suberi, taxo, tamarici. inter utraque genera sunt andrachle in graecia et ubique unedo; reliqua enim folia decidunt iis praeterquam in cacuminibus. non decidunt autem et in fruticum genere cedro cuidam, rubo, calamo. in thurino agro, ubi sybaris fuit, ex ipsa urbe prospiciebatur quercus una numquam folia demittens nec ante mediam aestatem germinans; idque mirum est, graecis auctoribus proditum, apud nos postea sileri. nam locorum tanta vis est, ut circa memphim aegypti et in elephantine thebaidis nulli arborum decidant, ne vitibus quidem.

ceterae omnes extra praedictas - etenim enumerare longum est - folia deperdunt, observatumque non arescere nisi tenuia et lata et mollia, quae vero non decidant, callo crassa et angusta esse. falsa definitio est non decidere iis, quarum pinguior sucus sit. quis enim potest in ilice intellegere decidere timaeus mathematicus sole scorpionem transeunte sideris vi et quodam veneno ae+ris putat. cur ergo non eadem causa adversum omnes polleat, iure miremur. cadunt plurimis autumno, quaedam amittunt tardius atque in hiemes prorogant moras, neque interest maturius germinasse, utpote cum

quaedam primae germinent et inter novissimas nudentur, ut amygdalae, fraxini, sabuci, morus autem novissima germinet, cum primis folia demittat. magna et in hoc vis soli. prius decidunt in siccis macrisque, et vetustae prius arbori, multis etiam antequam maturescat fructus, ut serotinae fico et hibernae piro et malo, granatumque est pomum tali tantum aspici in matre. neque iis autem, quae semper retinent comas, eadem folia durant subnascentibus aliis; tum arescunt vetera, quod evenit circa solstitia maxime.

foliorum unitas in suo cuique genere permanet, praeterquam populo, hederae, crotoni, quam et cici diximus vocari. populi tria genera: alba ac nigra et quae libyca appellatur, minima folio ac nigerrima fungisque enascentibus laudatissima. alba folio bicolor, superne candicans, inferiore parte viridi. huic nigraeque et crotoni in iuventa circinatae rotunditatis sunt, vetustiora in angulos exeunt. e contrario hederae angulosa rotundantur. populorum foliis grandissima lanugo evolat candida et radiata, folio numerosiore candicant ut villi. folia granatis et amygdalis rubentia.

mirum in primis id quod ulmo tiliaeque et oleae et populo albae et salici evenit. circumaguntur enim folia earum post solstitium, nec alio argumento certius intellegitur sidus confectum. est et publica omnium foliorum in ipsis differentia. namque pars inferior a terra herbido viret colore, ab eadem leviora nervos callumque et articulos in superiore habent parte, incisuras vero subter, ut manus humana. oleae superne candidiora et minus levia, item hederae. sed omnium folia cotidie ad solem oscitant, inferiores partes tepefieri volentia. superior pars omnium lanuginem quantulamcumque habet, quae in aliis gentium lana est.

in oriente funes validos e foliis palmae fieri dictum est, eosque in umore utiliores esse. et apud nos vero palmis a messe decerpuntur. ex his meliora quae sese non diviserint. siccantur sub tecto quaternis diebus, mox in sole expanduntur et noctibus relicta, donec candore inarescant, postea in opera finduntur.

latissima fico, viti, platano, angusta myrto, punicae, oleae, capillata pino, cedro, aculeata aquifolio et ilicum generi - nam iuniperis spina pro folio est - , carnosa cupresso, tamarici, crassissima alno, longa harundini, salici, palmae et duplicia, circinata piro, mucronata malo, angulosa hederae, divisa platano, insecta

pectinum modo piceae, abieti, sinuosa toto ambitu robori, spinosa cute rubo. mordacia sunt quibusdam, ut urticis, pungentia pino, piceae, abieti, larici, cedro, aquifoliis, pediculo brevi oleae, ilici, longo vitibus, tremulo populis, et iisdem solis inter se crepitantia. iam et in pomo ipso mali quodam in genere parva mediis emicant folia, interim et gemina, praeterea aliis circa ramos, aliis et in cacumine ramorum, robori et in caudice ipso. iam densa aut rara semperque lata rariora. disposita myrto, concava buxo, inordinata pomis, plura eodem pediculo exeuntia malis pirisque, ramulosa ulmo et cytiso. quibus adicit cato decidua populea quernaque, animalibus iubens dari non perarida, bubus quidem et ficulnea ilignaque et hederacea. dantur et ex harundine ac lauru. decidunt sorbo universa, ceteris paulatim. et de foliis hactenus.

ordo autem naturae annuus ita se habet: primus est conceptus flare incipiente vento favonio, ex a. d. fere vi idus febr. hoc maritantur vivescentia e terra, quippe cum etiam equae in hispania, ut diximus. hic est genitalis spiritus mundi a fovendo dictus, ut quidam existimavere. flat ab occasu aequinoctiali ver inchoans. catlitionem rustici vocant, gestiente natura semina accipere eaque animam ferente omnibus satis. concipiunt variis diebus et pro sua quaeque natura alia protinus, ut animalia, tardius aliqua et diutius gravida partus gerunt, quod germinatio ideo vocatur. pariunt vero, cum florent, flosque ille ruptis constat utriculis; educatio in pomo est.

haec et germinatio labor arborum, flos est pleni veris indicium et anni renascentis, flos gaudium arborum. tunc se novas aliasque quam sunt ostendunt, tunc variis colorum picturis in certamen usque luxuriant. sed hoc negatum plerisque; non enim omnes florent, et sunt tristes quaedam quaeque non sentiant gaudia annorum. nam neque ilex, picea, larix, pinus ullo flore exhilarantur natalesve pomorum annuos versicolori nuntio promittunt, nec fici atque caprifici; protinus enim fructum pro flore gignunt. in ficis mirabiles sunt et abortus qui numquam maturescunt. nec iuniperi florent. quidam earum duo genera tradunt: alteram florere nec ferre, quae vero non floreat ferre protinus bacis nascentibus, quae biennio haereant. sed id falsum, omnibusque his dura facies semper. sic et hominum multis fortuna sine flore est.

omnes autem germinant, etiam quae non florent, magna et

locorum differentia, quippe cum ex eodem genere quae sunt in palustribus priora germinent, mox campestria, novissima in silvis, per se autem tardius piri silvestres quam ceterae. primo favonio cornus, proxime laurus pauloque ante aequinoctium tilia, acer, inter primas vero populus, ulmus, salix, alnus, nuces. festinat et platanus. cetera vere coepturo, aquifolium, terebinthus, paliurus, castanea, glandes, serotino autem germine malus, tardissimo suber. quibusdam geminatur germinatio, nimia soli ubertate aut invitantis caeli voluptate, quod magis in herbis segetum evenit. in arboribus tamen nimia germinatio elactescit. sunt aliae naturales quibusdam praeterque vernam, quae suis constant sideribus - quorum ratio aptius reddetur tertio ab hoc volumine - , hiberna aquilae exortu, aestiva canis ortu, tertia arcturi. has duas quidam omnibus arboribus communes putant, sentiri autem maxime in fico, vite, punicis, causam adferentes, quoniam in thessalia macedoniaque plurima tum ficus exeat. maxime tamen in aegypto apparet haec ratio. et reliquae quidem arbores, ut primum coepere, continuant germinationem, robur et abies et larix intermittunt tripertito ac terna germina edunt. ideo et ter squamas corticum spargunt, quod omnibus arboribus in germinatione evenit, quoniam praegnatium rumpitur cortex. est autem prima earum incipiente vere circiter xv diebus. iterum germinant transeunte geminos sole. sic fit, ut prima cacumina inpelli secutis appareat, geniculato incremento. tertia est earundem a solstitio brevissima, nec diutius septenis diebus, clareque et tunc cernitur excrescentium cacuminum articulatio. vitis sola bis parturit, primum cum emittit uvam, iterum cum digerit. eorum, quae non florent, partus tantum est et maturitas. quaedam statim in germinatione florent properantque in eo, sed tarde maturescunt, ut vitis. serotino quaedam germinatu florent maturantque celeriter, sicuti morus, quae novissima urbanarum germinat nec nisi exacto frigore, ob id dicta sapientissima arborum. sed cum coepit, in tantum universa germinatio erumpit, ut una nocte peragatur etiam cum strepitu.

ex iis, quae hieme aquila exoriente, ut diximus, concipiunt, floret prima omnium amygdala mense ianuario, martio vero pomum maturat. ab ea proximae florent armeniaca, dein tuberes et praecoces, illae peregrinae, hae coactae; ordine autem naturae silvestrium

primae sabucus, cui medulla plurima, et cui nulla, cornus mascula, urbanarum malus parvoque post, ut simul possit videri, pirus et cerasus et prunus. sequitur laurus, illam cupressus, dein punica, fici. et vites et oleae florentibus iam his germinant, concipiunt vergiliarum exortu. hoc sidus illarum est. floret autem solstitio vitis et, quae paulo serius incipit, olea. deflorescunt omnia septenis diebus non celerius, quaedam tardius, sed nulla pluribus bis septenis, omnia et intra viii id. iul. etesiarum praecursu. nec statim fructus sequitur in aliquibus. cornus enim circa solstitia reddit primo candidum, postea sanguineum. ex eo genere femina post autumnum fert bacas acerbas et ingustabiles cunctis animantibus, ligno quoque fungosa et inutilis, cum mas e fortissimis durissimisque sit. tanta differentia ab eodem genere fit sexu. et terebinthus messibus reddit semen et acer et fraxinus, nuces et mala et pira praeterquam hiberna aut praecocia autumno, glandiferae serius etiamnum, vergiliarum occasu, aesculus tantum autumno, incipiente autem hieme quaedam genera mali pirique et suber. abies floret croci colore circa solstitium, semen reddit post vergiliarum occasum. pinus autem et picea praeveniunt germinatione xv fere diebus, semen vero post vergilias et ipsae reddunt.

citreae et iuniperus et ilex anniferae habentur, novusque fructus in his cum annotino pendet. in maxima tamen admiratione pinus est: habet fructum maturescentem, habet proximo anno ad maturitatem venturum ac deinde tertio. nec ulla arborum avidius se promittit; quo mense ex ea nux decerpitur, eodem maturescit alia; sic dispensatur, ut nullo non mense maturescant. quae se in arbore ipsa divisere, azaniae vocantur laeduntque ceteras, nisi detrahantur.

fructum arborum solae nullum ferunt - hoc est ne semen quidem - tamarix, scopis tantum nascens, populus, alnus, ulmus atinia, alaternus, cui folia inter ilicem et olivam. infelices autem existimantur damnataeque religione, quae neque seruntur umquam neque fructum ferunt. cremutius auctor est numquam virere arborem, ex qua phyllis se suspenderit. quae cummim gignunt, post germinationem aperiunt; cummis non nisi fructu detracto spissatur.

novellae arbores carent fructu, quamdiu crescunt. perdunt facillime ante maturitatem palma, ficus, amygdala, malus, pirus, item punica, quae etiam roribus nimiis et pruinis florem amittit. qua de

causa inflectunt ramos eius, ne subrecti umorem infestum excipiant atque contineant. pirus et amygdala, etiam si non pluat, sed fiat austrinum caelum aut nubilum, amittunt florem et primos fructus, si, cum defloruere, tales dies fuerint. ocissime autem salix amittit semen, antequam omnino maturitatem sentiat, ob id dicta homero frugiperdia. secuta aetas scelere suo interpretata est hanc sententiam, quando semen salicis mulieri sterilitatis medicamentum esse constat. sed in hoc quoque providens natura facile nascenti et depacto surculo incuriosius semen dedit. una tamen proditur ad maturitatem perferre solita in creta insula ipso descensu iovis speluncae durum ligneumque, magnitudine ciceris.

fiunt vero quaedam loci vitio infructuosa, sicut in paro silva cende quae nihil fert. persicae arbores in rhodo florent tantum. fit haec differentia et sexu, ut in iis quae mares non ferunt; aliqui hoc permutant et mares esse quae ferant tradunt. facit et densitas sterilitatem.

gignentium autem quaedam et lateribus ramorum et cacuminibus ferunt, ut pirus, punica, ficus, myrtus. cetero eadem natura quae frugibus. namque et in eis spica in cacumine nascitur, legumina in lateribus. palma sola, ut dictum est, in spathis habet fructum, racemis propendentem.

reliquis sub folio pomum, ut protegatur, excepta fico, cui folium maximum umbrosissimumque, et ideo supra id pomum. eidem uni serius folium nascitur quam pomum. insigne proditur in quodam genere ciliciae, cypri, helladis, ficos sub folio, grossos vero post folium nasci. ficus et praecoces habet, quas athenis prodromos vocant, in laconico genere maxime.

sunt et biferae in isdem; in ceo insula caprifici triferae sunt; primo fetu sequens evocatur, sequenti tertius. hoc fici caprificantur. et caprifici autem ab adversis foliis nascuntur. biferae et in malis ac piris quaedam, sicut et praecoces. malus silvestris bifera. sequens eius fructus post arcturum, in apricis maxime. vites quidem et triferae sunt, quas ob id insanas vocant, quoniam in his alia maturescunt, alia turgescunt, alia florent. M. Varro auctor est vitem fuisse zmyrnae apud matroon triferam et malum in agro consentino. hoc autem evenit perpetuo in venesi africae agro, de quo plura alias. ea est soli fertilitas. trifera est et cupressus. namque bacae eius colliguntur

mense ianuario et maio et septembri, ternasque earum gerit magnitudines.

est vero et in ipsis arboribus etiam onustis peculiaris differentia. summa sui parte fertiliores arbutus, quercus, inferiore iuglandes, fici mariscae. omnes quo magis senescunt, hoc maturius ferunt, et in apricis locis nec pingui terra. silvestria omnia tardiora. quaedam ex his omnino nec maturescunt. item quae subarantur aut quae ablaqueantur celeriora neglectis. haec et fertiliora.

est etiamnum aetatis differentia. amygdala enim et pirus in senecta fertilissimae, ut et glandiferae et quoddam genus ficorum, ceterae in iuventa tardiusque maturantes, quod maxime notatur in vitibus. vetustioribus enim vinum melius, novellis copiosius. celerrime vero senescit et in senecta deteriorem fructum gignit malus. namque et minora poma proveniunt et vermiculis obnoxia; quin et in ipsa arbore nascuntur. ficus sola ex omnium arborum fetu maturitatis causa medicatur, iam quidem et portentis, quoniam maiora sunt pretia praeposteris. omnia autem celerius senescunt praefecunda. quin et protinus moriuntur aliqua caelo fecunditatem omnem eblandito, quod maxime vitibus evenit. contra morus tardissime senescit, fructu minime laborans, tarde et ea, quorum crispa materies, ut palma, acer, populus. et subarata ocius senescunt, silvestria autem tardissime. atque in totum omnis cura fertilitatem adicit, fertilitas senectam. ideo et praeflorent talia et praegerminant, in totum praecocia fiunt, quoniam omnis infirmitas caelo magis oboedit.

multae plura gignunt, ut diximus in glandiferis, inter quas laurus uvas suas maximeque sterilis, quae non gignit aliud; ob id a quibusdam mas existimatur. ferunt et abellanae iulos compactili callo, ad nihil utiles, plurima vero ilices, nam et semen suum et granum, quod crataegum vocant, et a septentrione viscum, a meridie hyphear - de quis plura mox paulo - interdumque pariter res quaternas habent.

arbores quaedam simplices, quibus a radice caudex unus et rami frequentes, ut olivae, fico, viti. quaedam fruticosi generis, ut paliurus, myrtus, item nux abellana, quin immo melior et copiosior fructu in plures dispersa ramos. hi quibusdam omnino nulli, ut in sato genere buxi, loto transmarinae. quaedam bifurcae atque etiam in quinas partes diffusae, quaedam dividuae nec ramosae, ut sabuci, quaedam

individuae, ramosae, ut piceae. quibusdam ramorum ordo, sicut piceae, abieti, aliis inconditus, ut robori, malo, piro. et abieti quidem subrecta divisura ramique in caelum tendentes, non in latera proni. mirum, cacuminibus eorum decisis moritur, totis vero detruncatis durat. et si infra quam rami fuere praecidatur, quod superest vivit, si vero cacumen tantum auferatur, tota moritur. alia ab radice bracchiata, ut ulmus, alia in cacumine ramosa, ut pinus, faba graeca, quam romae a suavitate fructus, silvestris quidem, sed cerasorum paene natura, loton appellant. praecipue domibus expetitur ramorum petulantia brevi caudice latissima expatiantium umbra et in vicinas domos saepe transilientium. nulla opacitas brevior, nec auferunt rami solem hieme decidentibus foliis. nullis cortex iucundior aut oculos excipiens blandius, nullis rami longiores validioresque aut plures, ut dixisse totidem arbores liceat. cortice pelles tingunt, radice lanas. malis proprium genus. ferarum enim rostra reddunt adhaerentibus uni maximo minoribus.

ramorum aliqui caeci, qui non germinant, quod natura fit, si non evaluere, aut poena, cum deputatos cicatrix hebetavit. quae dividuis in ramo natura est, haec viti in oculo, harundini in geniculo. omnium terrae proxima crassiora. in longitudinem excrescunt abies, larix, palma, cupressus, ulmus et si qua unistirpia. ramosarum cerasus etiam in xl cubitorum trabes aequali per totam duum cubitorum crassitudine reperitur. quaedam statim in ramos sparguntur, ut mali.

cortex aliis tenuis, ut lauro, tiliae, aliis crassus, ut robori, aliis levis, ut malo, fico, idem scaber robori, palmae, omnibus in senecta rugosior. quibusdam rumpitur sponte, ut viti, quibusdam etiam cadit, ut malo, unedoni, carnosus suberi, populo, membranaceus viti, harundini, libris similis ceraso, multiplex tunicis vitibus, tiliae, abieti, quibusdam simplex, ut fico, harundini.

magna et radicum differentia: copiosae fico, robori, platano, breves et angustae malo, singulares abieti, larici; singulis enim innituntur, quamquam minutis in latera dispersis. crassiores lauro et inaequales, item oleae, cui et ramosae. at robori carnosae. robora suas in profundum agunt; si vergilio quidem credimus, aesculus quantum corpore eminet, tantum radice descendit. oleae malisque et cupressis per summa caespitum, aliis recto meatu, ut lauro, oleae, aliis flexuoso, ut fico. minutis haec capillamentis hirsuta et abies

multaeque silvestrium, e quibus montani praetenuia fila decerpentes spectabiles lagoenas et alia vasa nectunt. quidam non altius descendere radices, quam solis calor tepefaciat, idque natura loci tenuioris crassive dixere, quod falsum arbitror. apud auctores certe invenitur, abietis planta cum transferretur, octo cubitorum in altitudinem nec totam refossam, sed abruptam. maxima spatio atque plenitudine citri est, ab ea platani, roboris et glandiferarum. quarundam radix vivacior superficie, ut laurus. itaque cum trunco inaruit, recisa etiam laetius fruticat. quidam brevitate radicum celerius senescere arbores putant, quod coarguunt fici, quarum radices longissimae et senectus ocissima. falsum arbitror et quod aliqui prodidere, radices arborum vetustate minui. visa enim est annosa quercus eversa tempestatis vi, iugerum soli amplexa.

prostratas restitui plerumque et quadam terrae cicatrice vivescere volgare est. familiarissimum hoc platanis, quae plurimum ventorum concipiunt propter densitatem ramorum, quibus amputatis levato onere in suo scrobe reponuntur; factumque iam est hoc et in iuglandibus oleisque ac multis aliis. est in exemplis et sine tempestate ullave causa alia quam prodigi cecidisse multas ac sua sponte resurrexisse. factum hoc populi romani quiritibus ostentum cimbricis bellis nuceriae in luco iunonis ulmo, postquam etiam cacumen amputatum erat, quoniam in aram ipsam procumbebat, restituta sponte ita ut protinus floreret, a quo deinde tempore maiestas p. r. resurrexit, quae ante vastata cladibus fuerat. memoratur hoc idem factum et in philippis salice procidua atque detruncata et stagiris in museo populo alba, omnia fausti ominis. sed maxime mirum, antandri platanus etiam circumdolatis lateribus restibilis sponte facta vitaeque reddita longitudine xv cubitorum, crassitudine quattuor ulnarum.

arbores quas naturae debemus tribus modis nascuntur, sponte aut semine aut ab radice. cura numerosior extitit, de qua suo dicemus volumine. nunc enim totus sermo de natura est multis modis mirisque memorabili. namque non omnia in omnibus locis nasci docuimus nec tralata vivere. hoc alias fastidio, alias contumacia, saepius inbecillitate eorum quae transferantur evenit, alias caelo invidente, alias solo repugnante.

fastidit balsamum alibi nasci, nata assyria malus alibi ferre, nec

non et palma ubique nasci aut nata parere vel, cum promisit etiam ostenditque, educare, tamquam invita pepererit. non habet vires frutex cinnami in syriae vicina perveniendi. non ferunt amomi nardique deliciae, ne in arabiam quidem, ex india et nave peregrinari; temptavit enim seleucus rex. illud maxime mirum, ipsas plerumque arbores exorari, ut vivant atque tramigrent, aliquando et a solo impetrari, ut alienas alat advenasque nutriat, caelum nullo modo flecti. vivit in italia piperis arbor, casiae vero etiam in septentrionali plaga, vixit in lydia turis, sed unde sorbentes sucum omnem ex iis soles coquentesve lacrimam illud proxime mirum, mutari naturam in iisdem atque pro indiviso valere. cedrum aestuosis partibus dederat, set in lyciis phrygiisque montibus nascitur. frigus inimicum lauro fecerat, sed in olympo copiosior nulla est. circa bosporum cimmerium in panticapaeo urbe omni modo laboravit mithridates rex et ceteri incolae sacrorum certe causa laurum myrtumque habere: non contigit, cum teporis arbores abundent ibi, punicae ficique, iam mali et piri laudatissimae. frigidas eodem tractu non genuit arbores, pinum, abietem, piceam. et quid attinet in pontum abire iuxta romam ipsam castaneae cerasique aegre proveniunt, persica in tusculano, nuces graecae cum taedio inseruntur tarracina silvis scatente earum.

cupressus advena et difficillime nascentium fuit, ut de qua verbosius saepiusque quam de omnibus aliis prodiderit cato, satu morosa, fructu supervacua, bacis torva, folio amara, odore violenta ac ne umbra quidem gratiosa, materie rara, ut paene fruticosi generis, diti sacra et ideo funebri signo ad domos posita. femina ... sterilis. diu metae demum aspectu non repudiata distinguendis tantum pinorum ordinibus, nunc vero tonsilis facta in densitatem parietum coercitaque gracilitate perpetuo teres trahitur etiam in picturas operis topiarii, venatus classesve et imagines rerum tenui folio brevique et virente semper vestiens. duo genera earum: meta in fastigium convoluta, quae et femina appellatur. mas spargit extra se ramos deputaturque et accipit vitem. utraque autem immittitur in perticas asseresve amputatione ramorum, qui xiii anno denariis singulis veneunt, quaestuosissima in satus ratione silva, vulgoque dotem filiae antiqui plantaria ea appellabant. huic patria insula creta, quamquam cato tarentinam eam appellat, credo, quod primum eo venerit. et in aenaria succisa regerminat; sed in creta quocumque in loco terram

moverit quispiam, nisu naturali haec gignitur protinusque emicat, illa vero etiam non appellato solo ac sponte maximeque in idaeis montibus et quos albos vocant summisque in his, unde numquam nives absunt, plurima, quod miremur, alibi non nisi in tepore proveniens et nutricem magno opere fastidiens.

nec terrae tantum natura circa has refert aut perpetua caeli, verum et quaedam temporaria vis. imbres aliqua plerumque semina adferunt et certo fluunt genere, aliquando etiam incognito, quod accidit cyrenaicae regioni, cum primum ibi laserpicium natum est, ut in herbarum natura dicemus. nata est et silva urbi ei proxima imbre piceo crassoque.

hedera iam dicitur in asia nasci. circiter urbis romae annum ccccxxxx negaverat theophrastus, nec in india nisi in monte mero, quin et harpalum omni modo laborasse, ut sereret eam in medis frustra, alexandrum vero ob raritatem ita coronato exercitu victorem ex india redisse exemplo liberi patris. cuius dei et nunc adornat thyrsos galeasque etiam ac scuta in thraciae populis sollemnibus sacris, inimica arboribus satisque omnibus, sepulchra, muros rumpens, serpentium frigori gratissima, ut mirum sit ullum honorem habitum ei.

duo genera prima, ut reliquarum, mas atque femina. maior traditur mas et corpore et folio, duriore etiam ac pinguiore et flore ad purpuram accedente; utriusque autem similis est rosae silvestri, nisi quod caret odore. species horum generum tres: est enim candida aut nigra hedera tertiaque vocatur helix. etiamnum haec species dividuntur in alias, quoniam est aliqua fructu tantum candida, alia et folio. fructum quoque candidum ferentium aliis densus acinus et grandior, racemis in orbem circumactis, qui vocantur corymbi, iidem silenici, cum est minor acinus, sparsior racemus, simili modo ut in nigra. alicui et semen nigrum, alii crocatum, cuius coronis poetae utuntur, foliis minus nigris, quam quidam nysiam, alii bacchicam vocant, maximis inter nigras corymbis. quidam apud graecos etiamnum duo genera huius faciunt a colore acinorum, erythranum et chrysocarpum.

plurimas autem habet differentias helix, quoniam folio maxime distat. parva sunt et angulosa concinnioraque, cum reliquorum generum simplicia sint. distat et longitudine internodiorum,

praecipue tamen sterilitate, quoniam fructum non gignit. quidam hoc aetatis esse, non generis existimant primoque helicem esse, fieri hederam vetustate. horum error manifestus intellegitur, quoniam helicis plura genera reperiuntur, sed tria maxime insignia: herbacea ac virens, quae plurima est, altera candido folio, tertia versicolori, quae thracia vocatur. etiamnum herbaceae tenuiora folia et in ordinem digesta densioraque; in alio genere diversa omnia ea. in versicolori alia tenuioribus foliis et similiter ordinatis densioribusque est, alteri generi neglecta haec omnia; maiora quoque aut minora sunt folia macularumque habitu distant. et in candidis aliis sunt candidiora. adulescit in longitudinem maxime herbacea. arbores autem necat candida omnemque sucum auferendo tanta crassitudine augetur, ut ipsa arbor fiat. signa eius folia maxima atque latissima, mammae rigentes, quae sunt ceteris inflexae, racemi stantes ac subrecti. et quamquam omnium hederarum generi radicosa bracchia, huic tamen maxime ramosa ac robusta, ab ea nigrae. sed proprium albae, quod inter media folia emittit bracchia utrimque semper amplectens, hoc et in muris, quamvis ambire non possit. itaque etiam pluribus locis intercisa vivit tamen duratque, et totidem initia radicum habet quot bracchia, quibus incolumis et solida arbores sugit ac strangulat. est et in fructu differentia albae nigraeque hederae, quoniam aliis tanta amaritudo acini, ut aves non attingant. est et rigens hedera, quae sine adminiculo stat sola omnium generum, ob id vocata orthocissos, e diverso numquam nisi humi repens chamaecissos.

similis est hederae e cilicia quidem primum profecta, sed in graecia frequentior, quam vocant smilacem, densis geniculata caulibus, spinosis frutectosa ramis, folio hederaceo, parvo, non anguloso, a pediculo emittente pampinos, flore candido, olente lilium. fert racemos labruscae modo, non hederae, colore rubro, conplexa acinis maioribus nucleos ternos, minoribus singulos, nigros durosque, infausta omnibus sacris et coronis, quoniam sit lugubris virgine eius nominis propter amorem iuvenis croci mutata in hunc fruticem. id volgus ignorans plerumque festa sua polluit hederam existimando, sicut in poetis aut libero patre aut sileno quis omnino scit quibus coronentur

e smilace fiunt codicilli, propriumque materiae est, ut admota

auribus lenem sonum reddat. - hederae mira proditur natura ad experienda vina, si vas fiat e ligno eius, vina transfluere ac remanere aquam, si qua fuerit mixta.

inter ea, quae frigidis gaudent, et aquaticos frutices dixisse conveniat. principatum in his tenebunt harundines belli pacisque experimentis necessariae atque etiam deliciis gratae.

tegulo earum domus suas septentrionales populi operiunt, durantque aevis tecta talia; et in reliquo vero orbe et camaras levissime suspendunt. chartisque serviunt calami, aegyptii maxime cognatione quadam papyri. probatiores tamen cnidii et qui in asia circa anaeticum lacum nascuntur. nostratibus fungosior subest natura, cartilagine bibula, quae cavo corpore intus, superne tenui inarescit ligno, fissilis, praeacuta semper acie. geniculata cetero gracilitas nodisque distincta leni fastigio tenuatur in cacumina, crassiore paniculae coma, neque hac supervacua. aut enim pro pluma strata cauponarum replet aut, ubi lignosiore induruit callo, sicut in belgis, contusa et interiecta navium commissuris feruminat textus glutino tenacior rimisque explendis fidelior pice.

calamis orientis populi bella conficiunt, calamis mortem adcelerant pinna addita, calamis spicula addunt inrevocabili hamo noxia fitque et ex ipso telum aliud fracto in vulneribus. his armis solem ipsum obumbrant. propter hoc maxime serenos dies optant, odere ventos et imbres, qui inter illos pacem esse cogunt. ac si quis aethiopas, aegyptum, arabas, indos, scythas, bactros, sarmatarum tot gentes et orientis omniaque parthorum regna diligentius conputet, aequa ferme pars hominum in toto mundo calamis superata degit. praecipuus hic usus in creta bellatores suos nobilitavit. sed in hoc quoque, ut ceteris in rebus, vicit italia, quando nullus sagittis aptior calamus quam in rheno bononiensi amne, cui plurima inest medulla pondusque volucre et contra flatus quoque pervicax libra. quippe non eadem gratia belgicis haec et creticis commendatioribus. quamquam praeferuntur indici, quorum alia quibusdam videtur natura, quando et hastarum vicem praebent additis cuspidibus. harundini quidem indicae arborea amplitudo, quales vulgo in templis videmus. differre mares ac feminas in his quoque indi tradunt. spissius mari corpus, feminae capacius. navigiorumque etiam vicem praestant, si credimus, singula internodia. circa acesinen amnem maxime nascitur.

harundo omnis ex una stirpe numerosa, atque etiam recisa fecundius resurgit. radix natura vivax, geniculata et ipsa. folia indicis tantum brevia, omnibus vero a nodo orsa conplexu tenues per ambitum inducunt tunicas, atque a medio internodio cum plurimum desinunt vestire procumbuntque. latera harundini calamoque in rotunditate bina, super nodos alterno semper inguine, ut alterum a dextera fiat, alterum superiore geniculo ab laeva per vices. inde exeunt aliquando rami, qui sunt calami tenues.

plura autem genera. alia spissior densiorque geniculis, brevibus internodiis, alia rarior maioribus, tenuiorque et ipsa. calamus vero alius totus concavus, quem vocant syringian, utilissimus fistulis, quoniam nihil est ei cartilaginis atque carnis. orchomenio et nodi continuo foramine pervii, quem auleticon vocant. hic tibiis utilior, fistulis ille. est alius crassiore ligno et tenui foramine. hunc totum fungosa replet medulla. alius brevior, alius procerior, exilior crassiorque. fruticosissimus, qui vocatur donax, non nisi in aquaticis natus, quoniam et haec differentia est, multum praelata harundine quae in siccis proveniat. suum genus sagittario calamo, ut diximus, sed cretico longissimis internodiis, obsequiumque quo libeat flecti calefacto. differentias faciunt et folia non multitudine tantum et longitudine, verum et colore. varia laconicis et ab ima parte densiora, quales in totum circa stagna gigni putant dissimiles amnicis longisque vestiri foliis spatiosius a nodo scandente complexu. est et obliqua harundo, non in excelsitatem nascens, sed iuxta terram fruticis modo se spargens, suavissima in teneritate animalibus. vocatur a quibusdam eletia. est et in italia palustris ex cortice tantum sub ipsa coma nascens, adarca nomine, utilissima dentibus, quoniam vis eadem est quae sinapi.

de orchomenii lacus harundinetis accuratius dici cogit admiratio antiqua. characian vocabant crassiorem firmioremque, plocimon vero subtiliorem, hanc in insulis fluvitantibus natam, illam in ripis exspatiantis lacus. tertia est harundo tibialis calami, quem auleticon dicebant. nono hic anno nascebatur. nam et lacus incrementa hoc temporis spatio servabat, prodigiosus, si quando amplitudinem biennio extendisset, quod notatum apud chaeroniam infausto atheniensium proelio est. ... aepe ... lebadia ... vocatur influente cephiso. cum igitur anno permansit inundatio, proficiunt in

aucupatoriam quoque amplitudinem. vocabantur zeugitae, contra bombyciae maturius reciproco; graciles, feminarum latiore folio atque candidiore, modica lanugine; at omnino nulla spadonum nomine insignibus. hinc erant armamenta ad inclutos cantus, non silendo et reliquo curae miraculo, ut venia sit argento iam potius cani. caedi solebant tempestivae usque ad antigeniden tibicinem, cum adhuc simplici musica uterentur, sub arcturo. sic praeparatae aliquot post annos utiles esse incipiebant, tunc quoque multa domandae exercitatione et canere tibiae ipsae edocendae, comprimentibus se linguis, quod erat illis theatrorum moribus utilius. postquam varietas accessit et cantus quoque luxuria, caedi ante solstitia coeptae et fieri utiles in trimatu, apertioribus earum lingulis ad flectendos sonos, quae inde sunt et hodie. sed tum ex sua quamque tantum harundine congruere persuasum erat, et eam, quae radicem antecesserat, laevae tibiae convenire, quae cacumen, dexterae, inmensum quantum praelatis quas ipse cephisus abluisset. nunc sacrificae tuscorum e buxo, ludicrae vero e loto ossibusque asininis et argento fiunt. - aucupatoria harundo e panhormo laudatissima, piscatoria abaritana ex africa.

harundinis italiae usus ad vineas maxime. cato seri eam iubet in umidis agris bipalio subacto prius solo, oculis dispositis intervallo ternorum pedum, simul et corrudae, unde asparagi fiant, concordare amicitiam, salicis vero circa. qua nulla aquaticarum utilior, licet populi vitibus placeant et caecuba educent, licet alni saepibus muniant contraque erumpentium amnium impetus riparum muro in tutela ruris excubent in aqua satae densius caesaeque innumero herede prosint.

salicis etiam plura genera. namque et in proceritatem magnam emittunt iugis vinearum perticas pariuntque balteo corticis vincula, et aliae virgas sequacis ad vincturas lentitiae, aliae praetenues viminibus texendis spectabili subtilitate, rursus aliae firmiores corbibus ac plurimae agricolarum supellectili, candidiores ablato cortice lenique tractatu maioribus vasis, quam ut e corio fiant eadem, atque etiam supinarum in delicias cathedrarum aptissimae. caedua salici fertilitas densiorque tonsura ex brevi pugno verius quam ramo, non, ut remur, in novissimis curanda arbore. nullius quippe tutior reditus est minorisve inpendi aut tempestatium securior.

tertium locum ei in aestimatione ruris cato adtribuit prioremque quam olivetis quamque frumento aut pratis, nec quia desint alia vincula. siquidem et genistae et populi et ulmi et sanguinei frutices et betullae et harundo fissa et harundinum folia, ut in liguria, et vitis ipsa recisisque aculeis rubi alligant et intorta corylus - mirumque contuso ligno alicui maiores ad vincula esse vires - , salici tamen praecipua dos. finditur graeca rubens, candidior amerina, sed paulo fragilior, ideo solido ligat nexu. in asia tria genera observant: nigram utiliorem viminibus, candidam agricolarum usibus, tertiam, quae brevissima est, helicem vocant. apud nos quoque multi totidem generibus nomina inponunt, viminalem vocant eandemque purpuream, alteram nitelinam a colore, quae sit tenuior, tertiam gallicam, quae tenuissima.

nec in fruticum nec in veprium cauliumve neque in herbarum aut alio ullo quam suo genere numerentur iure scirpi fragiles palustresque, e quibus et tegulum tegetesque, detracto cortice candelae luminibus et funeribus serviunt. firmior quibusdam in locis eorum rigor. namque iis velificant non in pado tantum nautici, verum et in mari piscator africus praepostero more velum intra malos suspendens, et mapalia sua mauri tegunt, proximeque aestimanti hoc videantur esse, quod in interiore parte mundi papyrum.

sui, sed frutectosi generis sunt inter aquaticas et rubi atque sabuci, fungosi generis, aliter tamen quam ferulae, quippe plus ligni est, utique sabuco, ex qua magis canoram bucinam tubamque credit pastor ibi caesa, ubi gallorum cantum frutex ille non exaudiat. rubi mora ferunt et alio genere similitudinem rosae quae vocatur cynosbatos. tertium genus idaeum vocant graeci a loco, tenerius quam cetera minoribusque spinis et minus aduncis. flos eius contra lippitudines inlinitur ex melle et igni sacro; contra stomachi quoque vitia bibitur ex aqua. sabuci acinos habent nigros atque parvos, umoris lenti, inficiendo maxime capillo. qui et ipsi aqua decocti manduntur.

umor et corpori arborum est, qui sanguis earum intellegi debet, non idem omnibus: ficis lacteus - huic ad caseos figurandos coaguli vis - , cerasis cumminosus, ulmis salivosus, lentus ac pinguis, malis, vitibus, piris aquosus. vivaciora quibus lentior. atque in totum corpori arborum, ut reliquorum animalium, cutis, sanguis, caro,

nervi, venae, ossa, medullae. pro cute cortex. mirum, is in moro medicis sucum quaerentibus vere hora diei secunda lapide incisus manat, altius fractus siccus videtur. proximi plerisque adipes. hi vocantur a colore alburnum, mollis ac pessima pars ligni, etiam in robore facile putrescens, teredini obnoxia, quare semper amputabitur. subest huic caro, carni ossa, id est materiae optimum. alternant fructus quibus siccius lignum, ut olea, magis quam quibus carnosum, ut cerasus. nec omnibus adipes carnesve largae, uti nec animalium acerrimis. neutrum habent buxus, cornus, olea, nec medullam minimumque etiam sanguinis, sicuti ossa non habent sorba, carnem sabuci - at plurimam ambae medullam - nec harundines maiore ex parte.

in quarundam arborum carnibus pulpae venaeque sunt. discrimen earum facile; venae latiores candidioresque. pulpae fissilibus insunt. ideo fit, ut aure ad caput trabis quamlibet praelongae admota ictus ab altero capite vel graphii sentiantur penetrante rectis meatibus sono, unde deprehenditur, an torta sit materies nodisque concisa. quibus sunt tubera, sicut sunt in carne glandia, in iis nec vena nec pulpa, quodam callo carnis in se convoluto. hoc pretiosissimum in citro et acere. cetera mensarum genera fissis arboribus circinantur in pulpam; alioqui fragilis esset vena in orbem arboris caesa. fagis pectines traversi in pulpa. apud antiquos inde et vasis honos. m'. curius iuravit se nihil ex praeda attigisse praeter guttum faginum, quo sacrificaret. - lignum in longitudinem fluvitat, ut quaeque pars fuit ab radice, validius sidit. - quibusdam pulpa sine venis mero stamine et tenui constat. haec maxime fissilia. alia frangi celeriora quam findi, quibus pulpa non est, ut oleae, vites. at e contrario totum e carne corpus fico, tota ossea ilex, ornus, robur, cytisus, morus, hebenus, lotos et quae sine medulla esse diximus. ceteris nigricans color, fulva cornus in venabulis nitet incisuris nodata propter decorem. cedrus et larix et iuniperus rubent. larix femina habet quam graeci vocant aegida mellei coloris. hoc lignum proximum medullae est. in abiete lusson graeci vocant. inventum pictorum tabellis inmortale nullisque fissile rimis. cedri quoque durissima quae medullae proxima, ut in corpore ossa, deraso modo limo. et sabuci interiora mire firma traduntur, quidamque venabula ex ea praeferunt omnibus, constat enim ex cute et ossibus.

caedi tempestivum quae decorticentur et teretes ad templa ceteraque usus rotundi, cum germinant, alias cortice inextricabili et carie subnascente ei materiaque nigrescente; tigna et quibus aufert securis corticem a bruma ad favonium aut, si praevenire cogamur, arcturi occasu et ante eum fidiculae, novissima ratione solstitio. dies siderum horum reddentur suo loco. vulgo satis putant observare, ne qua dedolanda sternatur ante editos suos fructus. robur vere caesum teredinem sentit, bruma autem neque vitiatur neque pandatur, alias obnoxium etiam, ut torqueat sese findatque, quod in subere tempestive quoque caeso evenit. infinitum refert et lunaris ratio, nec nisi a xx in xxx caedi volunt. inter omnes vero convenit utilissime in coitu eius sterni, quem diem alii interlunii, alii silentis lunae appellant. sic certe tiberius caesar concremato ponte naumachiario larices ad restituendum caedi in raetia praefinivit. quidam dicunt, ut in coitu et sub terra sit luna, quod fieri non potest nisi noctu. si competant coitus in novissimum diem brumae, illa fit aeterna materies; proxime, cum supra dictis sideribus. quidam et canis ortum addunt, et sic caesas materias in forum augustum. nec novellae autem ad materiem nec veteres utilissimae. circumcisas quoque in medullam aliqui non inutiliter relinquunt, ut omnis umor stantibus defluat. mirum apud antiquos primo punico bello classem duilli imperatoris ab arbore lx die navigavisse, contra vero hieronem regem ccxx naves effectas diebus xlv tradit l. piso. secundo quoque punico scipionis classis xl die a securi navigavit. tantum tempestivitas etiam in rapida celeritate pollet.

cato hominum summus in omni usu de materiis haec adicit: “prelum ex sappino atra potissimum facito. ulmeam, pineam, nuceam, hanc atque aliam materiem omnem cum ecfodies, luna decrescente eximito post meridiem sine vento austro. tum erit tempestiva, cum semen suum maturum erit. cavetoque per rorem trahas aut doles.” idemque mox: “nisi intermestri lunaque dimidiata ne tangas materiem. quam effodias aut praecidas abs terra. diebus vii proximis, quibus luna plena fuerit, optime eximitur. omnino caveto ni quam materiem doles neve caedas neve tangas nisi siccam, neve gelidam neve rorulentam.” tiberius item et in capillo tondendo servavit interlunia. M. Varro adversus defluvia praecipit observandum id a pleniluniis.

larici et magis abieti succisis umor diu defluit. haec omnium arborum altissimae ac rectissimae. navium malis antemnisque propter levitatem praefertur abies. communia his pinoque, ut quadripertitos venarum cursus bifidosve habeant vel omnino simplices. fabrorum in intestina opera medulla sectilis optima quadripertitis, ... materies et mollior quam ceterae. intellectus in cortice protinus peritis. abietis quae pars a terra fuit, enodis est. haec qua diximus ratione fluviata detoratur atque ita sappinus vocatur, superior pars nodosa duriorque fusterna. et in ipsis autem arboribus robustiores aquiloniae partes, et in totum deteriores ex umidis opacisque, spissiores ex apricis ac diuturnae. ideo romae infernas abies supernati praefertur.

est per se gentium quoque in his differentia. alpibus appenninoque laudatissimae, in gallia iuribus ac monte vosego, in corsica, bithynia, ponto, macedonia. deterior aenianica et arcadica, pessima parnasia et euboica, quoniam ramosae ibi et contortae putrescentesque facile. at cedrus in creta, africa, syria laudatissima. cedri oleo peruncta materies nec tiniam nec cariem sentit. iunipero eadem virtus quae cedro. vasta haec in hispania maximeque vaccaeis. medulla eius ubicumque solidior etiam quam cedris. publicum omnium vitium vocant spiras, ubi convolvere se venae atque nodi. inveniuntur in quibusdam, sicut in marmore, centra, id est duritia clavo similis, inimica serris. et quaedam forte accidunt, ut lapide comprehenso aut recepto in corpus aut alterius arboris ramo. megaris diu stetit oleaster in foro, cui viri fortes adfixerant arma, quae cortice ambiente aetas longa occultaverat, fuitque arbor illa fatalis excidio urbis praemonitae oraculo, cum arbor arma peperisset, quod succisae accidit ocreis galeisque intus repertis. ferunt lapides ita inventos ad continendos partus esse remedio.

amplissima arborum ad hoc aevi existimatur romae visa, quam propter miraculum tiberius caesar in eodem ponte naumachiario exposuerat advectam cum reliqua materie, duravitque ad neronis principis amphitheatrum. fuit autem trabs ea e larice, longa pedes cxx, bipedali crassitudine aequalis, quo intellegebatur vix credibilis reliqua altitudo fastigium ad cacumen aestimantibus. fuit memoria nostra et in porticibus saeptorum a m. agrippa relicta aeque miraculi causa, quae diribitorio superfuerat, xx pedibus brevior, sesquipedali

crassitudine. abies admirationis praecipuae visa est in nave, quae ex aegypto gai principis iussu obeliscum in vaticano circo statutum quattuorque truncos lapidis eiusdem ad sustinendum eum adduxit. qua nave nihil admirabilius visum in mari certum est. [cxx] modium lentis pro saburra ei fuere. longitudo spatium obtinuit magna ex parte ostiensis portus latere laevo. ibi namque demersa est claudio principe cum tribus molibus turrium altitudine in ea exaedificatis obiter puteolano pulvere advectisque. arboris eius crassitudo quattuor hominum ulnas conplectentium implebat, vulgoque auditur [lxxx] nummum et pluris malos venundari ad eos usus, rates vero conecti [xl] sestertium plerasque. at in aegypto ac syria reges inopia abietis cedro ad classes feruntur usi. maxima ea in cypro traditur ad undeciremem demetri succisa [cxxx] pedum, crassitudinis vero ad trium hominum conplexum. germaniae praedones singulis arboribus cavatis navigant, quarum quaedam et xxx homines ferunt. spississima ex omni materie, ideo et gravissima iudicatur hebenus et buxus, graciles natura. neutra in aquis fluvitat, nec suber, si dematur cortex, nec larix. ex reliquis spississima lotos, quae romae ita appellatur, dein robur exalburnatum. et huic nigricans color magisque etiam cytiso, quae proxime accedere hebenum videtur, quamquam non desunt qui syriacas terebinthos nigriores adfirment. celebravit et thericles nomine calices ex terebintho solitus facere torno; perquam probatur materies. omnium haec sola ungui vult meliorque fit oleo. colos mire adulteratur iuglande ac piro silvestri tinctis atque in medicamine decoctis. omnibus quae diximus spissa firmitas. ab iis proxima est cornus, quamquam non potest videri materies propter exilitatem, sed lignum non alio paene quam ad radios rotarum utile aut si quid cuneandum sit in ligno clavisve figendum ceu ferreis. ilex item et oleaster et olea atque castanea, carpinus, populus. haec et crispa aceris modo, si ulla materies idonea esset ramis saepe deputatis. castratio illa est adimitque vires. de cetero plerisque horum, sed utique robori, tanta duritia, ut terebrari nisi madefactum non queat et ne sic quidem adactus avelli clavus. e diverso clavum non tenet cedrus. mollissima tilia. eadem videtur et calidissima. argumentum adferunt quod citissime ascias retundat. calidae et morus, laurus, hederae et omnia, e quibus igniaria fiunt.

exploratorum hoc usus in castris pastorumque repperit, quoniam

ad excudendum ignem non semper lapidis occasio est. teritur ergo lignum ligno ignemque concipit adtritu, excipiente materie aridi fomitis, fungi vel foliorum facillimo conceptu. sed nihil hedera praestantius quae teratur, lauro quae terat. probatur et vitis e silvestribus - alia quam labrusca - , et ipsa hederae modo arborem scandens. frigidissima quaecumque aquatica, lentissima autem et ideo scutis faciendis aptissima quorum plaga contrahit se protinus cluditque suum vulnus et ob id contumacius tramittit ferrum, in quo sunt genere vitis, vitex, salix, tilia, betulla, sabucus, populus utraque. levissimae ex his vitex, salix ideoque utilissimae; omnes autem ad cistas quaeque flexili crate constent. habent et candorem, rigorem et in sculpturis facilitatem. est lentitia platano, sed madida, sicut alno. siccior eadem ulmo, fraxino, moro, ceraso, sed ponderosior. rigorem fortissime servat ulmus, ob id cardinibus coassamentisque portarum utilissima, quoniam minime torquetur, permutanda tantum sic, ut cacumen ab inferiore sit cardine, radix superior. palma est ... similis et suberis materies, spissae et malus pirusque, nec non acer, sed fragile, et quaecumque crispa. in omnibus silvestria et mascula differentiam cuiusque generis augent. et infecunda firmiora fertilibus, nisi quo in genere mares ferunt, sicut cupressus et cornus.

cariem vetustatemque non sentiunt cupressus, cedrus, hebenus, lotus, buxum, taxus, iuniperus, oleaster, olea, e reliquis tardissime larix, robur, suber, castanea, iuglans. rimam fissuramque non capit sponte cedrus, cupressus, olea, buxum.

maxime aeternam putant hebenum et cupressum cedrumque, claro de omnibus materiis iudicio in templo ephesiae dianae, utpote cum tota asia extruente cxx annis peractum sit. convenit tectum eius esse e cedrinis trabibus. de simulacro ipso deae ambigitur. ceteri ex hebeno esse tradunt, mucianus iii cos. ex iis, qui proxime viso eo scripsere, vitigineum et numquam mutatum septies restituto templo, hanc materiam elegisse endoeon, etiam nomen artificis nuncupans, quod equidem miror, cum antiquiorem minerva quoque, non modo libero patre, vetustatem ei tribuat. adicit multis foraminibus nardo rigari, ut medicatus umor alat teneatque iuncturas - quas et ipsas esse modico admodum miror - , valvas esse e cupresso et iam cccc prope annis durare materiem omnem novae similem. id quoque notandum, valvas in glutinis compage quadriennio fuisse. cupressus in eas

electa, quoniam praeter cetera in uno genere materiae nitor maxime valeat aeternus. non et simulacrum veiovis in arce e cupresso durat a condita urbe dlxi anno dicatum memorabile et uticae templum apollinis, ubi cedro numidica trabes durant ita, ut positae fuere prima urbis eius origine annis mclxxviii, et in hispania sagunti templum dianae a zacyntho advectae cum conditoribus annis cc ante excidium troiae, ut auctor est bocchus; infra ipsum oppidum id habent - pepercit religione inductus Hannibal - iuniperi trabibus etiam nunc durantibus. super omnia memoratur aedis aulide eiusdem deae saeculis ante troianum bellum exaedificata, quonam genere materiae, scientia oblitterata. in plenum dici potest utique quae odore praecellant, eas et aeternitate praestare. a praedictis morus proxume laudatur, quae vetustate etiam nigrescit. et quaedam tamen in aliis diuturniora sunt usibus quam alia: ulmus in perflatu firma, robur defossum et in aquis quercus obruta. eadem supra terram rimosa facit opera torquendo sese. larix in umore praecipua et alnus nigra. robur marina aqua conrumpitur. non inprobatur et fagus in aqua et iuglans, hae quidem in iis quae defodiuntur vel principales, item iuniperus, eadem et subdialibus aptissima. fagus et cerrus celeriter marcescunt. aesculus quoque umoris inpatiens. contra adacta in terram in palustribus alnus aeterna onerisque quantilibet patiens. cerasus firma, ulmus et fraxinus lentae, sed facile pandantur, flexiles tamen, stantesque ac circumcisura siccatae fideliores. laricem in maritimis navibus obnoxiam teredini tradunt, omniaque praeterquam oleastrum et oleam. quaedam enim in mari, quaedam in terra vitiis opportuniora.

infestantium quattuor genera: teredines capite ad portionem grandissimo rodunt dentibus. hae tantum in mari sentiuntur, nec aliam putant teredinem proprie dici. terrestres tinias vocant, culicibus vero similes thripas. quartum est et e vermiculorum genere, et eorum alii putrescente suco ipsa materie, alii pariuntur sicut in arboribus ex eo, qui cerastes vocatur. cum tantum erosit, ut circumagat se, generat alium. haec nasci prohibet in aliis amaritudo, ut cupresso, in aliis duritia, ut buxo. tradunt et abietem circa germinationes decorticatam qua diximus luna aquis non corrumpi. alexandri magni comites prodiderunt in tylo rubri maris insula arbores esse, ex quibus naves fierent; quas ducentis annis durantes inventas, etsi mergerentur,

incorruptas. in eadem esse fruticem baculis tantum idoneae crassitudinis, varium tigrium maculis, ponderosum et, cum in spissiora decidat, vitri modo fragilem.

apud nos materiae finduntur aliquae sponte, ob id architecti eas fimo inlitas siccari iubent, ut adflatus ne noceant. pondus sustinere validae abies, larix, etiam in traversum positae. robur, olea incurvantur ceduntque ponderi. illae renituntur nec temere rumpuntur, priusque carie quam viribus deficiunt. et palmae arbor valida; in diversum enim curvatur, et populus cetera omnia in inferiora pandantur, palma ex contrario fornicatim. pinus et cupressus adversus cariem tiniasque firmissimae. facile pandatur iuglans, fiunt enim et ex ea trabes. frangi se praenuntiat crepitu, quod et in antandro accidit, cum e balineis territi sono profugerunt. pinus, piceae, alni ad aquarum ductus in tubos cavantur; obrutae terra plurimis duraturae annis eaedem, si non integantur, cito senescunt, mirum in modum fortiores, si umor extra quoque supersit.

firmissima in rectum abies, eadem valvarum paginis et ad quaecumque libeat intestina opera aptissima sive graeco sive campano sive siculo fabricae artis genere, spectabilis ramentorum crinibus, pampinato semper orbe se volvens ad incitatos runcinae raptus, eadem e cunctis maxime sociabilis glutino in tantum, ut findatur ante, qua solida est.

magna autem et glutinatio propter ea, quae sectilibus laminis aut alio genere operiuntur. stamineam in hoc usu probant venam, et vocant ferulaceam argumento similitudinis, quoniam lacunosa et crispa in omni genere glutinum abdicant. quaedam et inter se et cum aliis insociabilia glutino, sicut robur, nec fere cohaerent nisi similia natura, ut si quis lapidem lignumque coniungat. cornum maxime odit sorbus, carpinus, buxus, postea tilia. cuicumque operi facilia flexilia omnia, quae lenta diximus, praeterque morus et caprificus. forabilia ac sectilia, quae modice umida. arida enim latius quam teras cedunt, viridia praeter robur et buxum pertinacius resistunt serrarumque dentes replent aequalitate inerti. qua de causa alterna inclinatione egerunt scobem.

oboedientissima quocumque in opere fraxinus, eademque hastis corylo melior, cornu levior, sorbo lentior, gallica vero etiam ad currus flexili levitate. aemularetur ulmus, ni pondus esset in culpa.

facilis et fagus, quamquam fragilis et tenera. eadem sectilibus lamnis in tenui flexilis capsisque ac scrineis sola utilis. secatur in lamnas praetenues et ilex, colore quoque non ingrata, sed maxime fida iis, quae terantur, ut rotarum axibus, ad quos lentore fraxinus sicut duritia ilex et utroque legitur ulmus. sunt vero et parvi usus fabrilium ministeriorum insignes, ideoque proditum, terebris vaginas ex oleastro, buxo, ilice, ulmo, fraxino utilissimas fieri, ex iisdem malleos, maioresque e pinu et ilice. et his autem maior ad firmitatem causa tempestivae caesurae quam inmaturae, quippe cum ex olea, durissimo ligno, cardines in foribus diutius immoti plantae modo germinaverint. cato vectes aquifolios, laureos, ulmeos fieri iubet, hyginus manubria rusticis carpinea, iligna, cerrea.

quae in lamnas secentur quorumque operimento vestiatur alia materies, praecipua sunt citrum, terebinthus, aceris genera, buxum, palma, aquifolium, ilex, sabuci radix, populus. dat et alnus, ut dictum est, tuber sectile, sicut citrum acerque. nec aliarum tuber iam in pretio. media pars arborum crispior et, quo propior radici, minoribus magisque flexilibus maculis. haec prima origo luxuriae arborum, alia integi et vilioris ligni e pretiosiore corticem fieri. ut una arbor saepius veniret, excogitatae sunt et ligni bratteae. nec satis, coepere tingui animalium cornua, dentes secari lignumque ebore distingui, mox operiri. placuit deinde materiem et in mari quaeri. testudo in hoc secta, nuperque portentosis ingeniis principatu neronis inventum, ut pigmentis perderet se plurisque veniret imitata lignum. sic lectis pretia quaeruntur, sic terebinthum vinci iuvat, sic citrum pretiosius fieri, sic acer decipi. modo luxuria non fuerat contenta ligno, iam lignum et e testudine facit.

vita arborum quarundam inmensa credi potest, si quis profunda mundi et saltus inaccessos cogitet. verum ex iis, quas memoria hominum custodit, durant in liternino africani prioris manu satae olea, item myrtus eodem loco conspicuae magnitudinis - subest specus, in quo manes eius custodire draco traditur - , romae vero lotos in lucinae area, anno, qui fuit sine magistratibus, ccclxxix urbis aede condita. incertum, ipsa quanto vetustior; esse quidem vetustiorem non est dubium, cum ab eo luco lucina nominetur. haec nunc d circiter annum habet. antiquior, sed incerta eius aetas, quae capillata dicitur, quoniam vestalium virginum capillus ad eam

defertur.

verum altera lotos in volcanali, quod romulus constituit ex victoria de decumis, aequaeva urbi intellegitur, ut auctor est masurius. radices eius in forum usque caesaris per stationes municipiorum penetrant. fuit cum ea cupressus aequalis, circa suprema neronis principis prolapsa atque neglecta.

vetustior autem urbe in vaticano ilex, in qua titulus aereis litteris etruscis religione arborem iam tum dignam fuisse significat. tiburtes quoque originem multo ante urbem romam habent. apud eos extant ilices tres etiam tiburno conditore eorum vetustiores, apud quas inauguratus traditur. fuisse autem eum tradunt filium amphiarai, qui apud thebas obierit una aetate ante iliacum bellum.

sunt auctores et delphicam platanum agamemnonis manu satam et alteram in caphya arcadiae loco. sunt hodie ex adverso iliensium urbis iuxta hellespontum in protesilai sepulchro arbores, quae omnibus ex eo aevis, cum in tantum adcrevere, ut ilium aspiciant, inarescunt rursusque adolescunt. iuxta urbem autem quercus in ili tumulo tunc satae dicuntur, cum coepit ilium vocari.

argis olea etiamnum durare dicitur, ad quam io in tauram mutatam argus alligaverit. in ponto citra heracleam arae sunt iovis Στρατίου cognomine, ibi quercus duae ab hercule satae. in eodem tractu portus amyci est, bebryce rege interfecto clarus. eius tumulus a supremo die lauro tegitur, quam insanam vocant, quoniam, si quid ex ea decerptum inferatur navibus, iurgia fiunt, donec abiciatur. regionem aulocrenen diximus, per quam apamea in phrygiam itur. ibi platanus ostenditur, ex qua pependerit marsuas victus ab apolline, quae iam tum magnitudine electa est. nec non palma deli ab eiusdem dei aetate conspicitur, olympiae oleaster, ex quo primus hercules coronatus est, et nunc custoditur religio. athenis quoque olea durare traditur in certamine edita a minerva.

ex diverso brevissima vita est punicis, fico, malis, et ex his praecocibus brevior quam serotinis, dulcibus quam acidis, et dulciori in punicis, item in vitibus, praecipueque fertilioribus. graecinus auctor est sexagenis annis durasse vites. videntur et aquaticae celerius interire. senescunt quidem velociter, sed e radicibus repullulant laurus et mali et punicae. firmissimae ergo ad vivendum oleae, ut quas durare annis cc inter auctores conveniat.

est in suburbano tusculani agri colle, qui corne appellatur, lucus antiqua religione dianae sacratus a latio, velut arte tonsili coma fagei nemoris. in hoc arborem eximiam aetate nostra amavit passienus crispus bis cos., orator, agrippinae matrimonio et nerone privigno clarior postea, osculari conplectique eam solitus, non modo cubare sub ea vinumque illi adfundere. vicina luco est ilex, et ipsa nobilis xxxiv pedum ambitu caudicis, decem arbores emittens singulas magnitudinis visendae silvamque sola faciens.

hedera necari arbores certum est. similem quidam et in visco, tametsi tardiorem, iniuriam earum arbitrantur. namque et hoc praeter fructus adgnascitur, non in novissimis mirabile. quaedam enim in terra gigni non possunt et in arboribus nascuntur. namque cum suam sedem non habeant, in aliena vivunt, sicut viscum et in syria herba quae vocatur cadytas, non tantum arboribus, sed ipsis etiam spinis circumvolvens sese, item circa tempe thessalica quae polypodion vocatur et quae dolichos ac serpyllum. oleastro quoque deputato quod gignatur, vocant phaunos; quod vero in spina fullonia, hippophaeston, cauliculis inanibus, foliis parvis, radice alba, cuius sucus ad detractiones in comitiali morbo utilissimus habetur.

visci tria genera. namque in abiete, larice stelin dicit euboea nasci, hyphear arcadia, viscum autem in quercu, robore, ilice, piro silvestri, terebintho, nec non et aliis arboribus adgnasci plerique. copiosissimum in quercu quod hyphear vocant. in omni arbore, excepta ilice et quercu, differentiam facit ... odor virusque, et folium non iucundi odoris, utroque visci amaro et lento. hyphear ad saginanda pecora utilius. vitia modo purgat primo, dein pinguefacit quae suffecere purgationi; quibus sit aliqua tabes intus, negant durare. ea medendi ratio aestatis quadragenis diebus. adiciunt discrimen: visco in iis, quae folia amittant, et ipsi decidere, contra inhaerere nato in aeterna fronde. omnino autem satum nullo modo nascitur nec nisi per alvum avium redditum, maxime palumbis ac turdi. haec est natura, ut nisi maturatum in ventre avium non proveniat. altitudo eius non excedit cubitalem, semper frutectosi ac viridis. mas fertilis, femina sterilis, nisi quod et fertilis aliquando non fert.

viscum fit ex acinis, qui colliguntur messium tempore inmaturi. nam si accessere imbres, amplitudine quidem augentur, visco vero

marcescunt. siccantur deinde et aridi tunduntur ac conditi in aqua putrescunt duodenis fere diebus, unumque hoc rerum putrescendo gratiam invenit. inde in profluente, rursus malleo tusi, amissis corticibus interiore carne lentescunt. hoc est viscum pinnis avium tactu ligandis oleo subactum, cum libeat insidias moliri.

non est omittenda in hac re et galliarum admiratio. nihil habent druidae - ita suos appellant magos - visco et arbore, in qua gignatur, si modo sit robur, sacratius. iam per se roborum eligunt lucos nec ulla sacra sine earum fronde conficiunt, ut inde appellati quoque interpretatione graeca possint druidae videri. enimvero quidquid adgnascatur illis e caelo missum putant signumque esse electae ab ipso deo arboris. est autem id rarum admodum inventu et repertum magna religione petitur et ante omnia sexta luna, quae principia mensum annorumque his facit et saeculi post tricesimum annum, quia iam virium abunde habeat nec sit sui dimidia. omnia sanantem appellant suo vocabulo. sacrificio epulisque rite sub arbore conparatis duos admovent candidi coloris tauros, quorum cornua tum primum vinciantur. sacerdos candida veste cultus arborem scandit, falce aurea demetit, candido id excipitur sago. tum deinde victimas immolant precantes, suum donum deus prosperum faciat iis quibus dederit. fecunditatem eo poto dari cuicumque animalium sterili arbitrantur, contra venena esse omnia remedio. tanta gentium in rebus frivolis plerumque religio est.

LIBER XVII

natura arborum terra marique sponte sua provenientium dicta est; restat earum, quae arte et humanis ingeniis fiunt verius quam nascuntur. sed prius mirari succurrit, quae retulimus paenuria pro indiviso possessa feris, depugnante cum his homine circa caducos fructus, circa pendentes vero et cum alitibus, in tanta deliciarum pretia venisse, clarissimo, ut equidem arbitror, exemplo L. Crassi atque cn. domiti ahenobarbi. Crassus orator fuit in primis nominis romani. domus ei magnifica, sed aliquanto praestantior in eodem palatio q. catuli, qui cimbros cum c. mario fudit, multo vero pulcherrima consensu omnium aetate ea in colle viminali c. aquili, equitis romani clarioris illa etiam quam iuris civilis scientia, cum tamen obiecta Crasso sua est. nobilissimarum gentium ambo censuram post consulatus simul gessere anno conditae urbis dclxii frequentem iurgiis propter dissimilitudinem morum. tum cn. domitius, ut erat vehemens natura, praeterea accensus odio, quod ex aemulatione avidissimum est, graviter increpuit tanti censorem habitare, [30lx]30 hs pro domo eius identidem promittens, et Crassus, ut praesens ingenio semper, ut faceto lepore sollers, addicere se respondit exceptis sex arboribus. ac ne uno quidem denario, si adimerentur, emptam volente domitio, Crassus: “utrumne igitur ego sum,” inquit, “quaeso, domiti, exemplo gravis et ipsa mea censura notandus, qui domo, quae mihi hereditate obvenit, comiter habitem, an tu, qui sex arbores [30lx]30 aestimes” haec fuere lotoe patula ramorum opacitate lascivae, caecina largo e proceribus crebro iuventa nostra eas in domo sua ostentante, duraveruntque - quoniam et de longissimo aevo arborum diximus - ad neronis principis incendia cultu virides iuvenesque, ni princeps ille adcelerasset etiam arborum mortem. ac ne quis vilem de cetero Crassi domum nihilque in ea iurganti domitio fuisse licendum praeter arbores iudicet, iam columnas vi hymetti marmoris, aedilitatis gratia ad scenam ornandam advectas, in atrio eius domus statuerat, cum in publico nondum essent ullae marmoreae. tam recens est opulentia, tantoque tunc plus honoris arbores domibus adferebant, ut sine illis ne inimicitiarum quidem pretium servaverit domitius.

fuere ab his et cognomina antiquis: frondicio militi illi, qui praeclara facinora volturnum transnatans fronde inposita adversus Hannibalem edidit, stolonum liciniae genti. ita appellatur in ipsis arboribus fruticatio inutilis, unde et pampinatio inventa primo stoloni dedit nomen. fuit et arborum cura legibus priscis, cautumque est xii tabulis ut, qui iniuria cecidisset alienas, lueret in singulas aeris xxv. quid existimamus venturasne eas credidisse ad supra dictam aestimationem illos, qui vel frugiferas tanti taxaverant nec minus miraculum in pomo est multarum circa suburbana fructu annuo addicto binis milibus nummum, maiore singularum reditu quam erat apud antiquos praediorum. ob hoc insita et arborum quoque adulteria excogitata sunt, ut nec poma pauperibus nascerentur. nunc ergo dicemus, quonam maxime modo tantum ex his vectigal contingat, veram colendi rationem absolutamque prodituri, et ideo non volgata tractabimus nec quae constare animo advertimus, sed incerta atque dubia, in quibus maxime fallitur vita. nam diligentiam supervacuis adfectare non nostrum est. ante omnia autem in universum et quae ad cuncta arborum genera pertinent in commune de caelo terraque dicemus.

aquilone maxime gaudent, densiores ab adflatu eius laetioresque et materie firmiores. qua in re plerique falluntur, cum in vineis pedamenta non sint a vento eo opponenda et id tantum a septentrione servandum. quin immo tempestiva frigora plurimum arborum firmitati conferunt, et sic optime germinant, alioqui, si blandiantur austri, defetiscentes, ac magis etiam in flore. nam si, cum defloruere, protinus sequantur imbres, in totum poma depereunt, adeo ut amygdalae et piri, etiam si omnino nubilum fuit austrinusve flatus, amittant fetus. circa vergilias quidem pluvere inimicissimum viti et oleae, quoniam tum coitus est earum. hoc est illud quadriduum oleis decretorium, hic articulus austrinus nubili spurci, quod diximus. fruges quoque peius maturescunt austrinis diebus, sed celerius. illa sunt noxia frigora, quae septentrionibus aut praeposteris fiunt horis. hiemem quidem aquiloniam esse omnibus satis utilissimum. imbres vero tum expetendi evidens causa est, quoniam arbores fetu exinanitas et foliorum quoque amissione languidas naturale est avide esurire, cibus autem earum imber. quare tepidam esse hiemem, ut absumpto partu arborum sequatur protinus conceptus, id est

germinatio, ac deinde alia florescendi exinanitio, inutilissimum experimentis creditur. quin immo si plures ita continuentur anni, etiam ipsae moriuntur arbores, quando nemini dubia poena est in fame laborantium. ergo qui dixit hiemes serenas optandas, non pro arboribus vota fecit; nec per solstitia imbres vitibus conducunt; hiberno quidem pulvere laetiores fieri messes luxuriantis ingenii fertilitate dictum est. alioqui vota arborum frugumque communia sunt nives diutinas sedere. causa non solum quia animam terrae evanescentem exhalatione includunt et conprimunt retroque agunt in vires frugum atque radices, verum quod et liquorem sensim praebent, purum praeterea levissimumque, quando nix aquarum caelestium spuma est. ergo umor ex his non universus ingurgitans diluensque, sed quomodo sititur destillans velut ex ubere, alit omnia, quia non inundat. tellus quoque illo modo fermentescit, et sui plena, a lactescentibus satis non effeta, cum tempus aperit, tepidis adridet horis. ita maxime frumenta pinguescunt, praeterquam ubi calidus semper ae+r est, ut in aegypto. continuatio enim et ipsa consuetudo idem quod modus aliubi efficit, plurimumque prodest ubicumque non esse quod noceat. in maiore parte orbis, cum praecoces excurrere germinationes evocatae indulgentia caeli, secutis frigoribus exuruntur. qua de causa serotinae hiemes noxiae, silvestribus quoque, quae magis etiam dolent urguente umbra sua nec adiuvante medicina, quando vestire teneras intorto stramento in silvestribus non est. ergo tempestivae aquae hibernis primum imbribus, dein germinationem antecedentibus; tertium tempus est, cum educant poma, nec protinus, sed iam valido fetu. quae fructus suos diutius continent longioresque desiderant cibos, his et serotinae aquae utiles, ut viti, oleae, punicis. hae tamen pluviae generis cuiusque arboribus diverso modo desiderantur, aliis alio tempore maturantibus. quapropter eisdem imbribus aliqua laedi videas, aliqua iuvari, etiam in eodem genere, sicut in piris alio die hiberna quaerunt pluvias, alio vero praecocia, ut pariter quidem omnia desiderent hibernum tempus, set ante germinationem. quae aquilonem austro utiliorem facit ratio, eadem mediterranea maritimis praefert - sunt enim plerumque frigidiora - et montuosa planis et nocturnos imbres diurnis. magis fruuntur aquis sata non statim auferente eas sole.

conexa et situs vinearum arbustorumque ratio est, quas in horas

debeant spectare. vergilius ad occasus seri damnavit, aliqui sic maluere quam in exortus. a pluribus meridiem probari adverto, nec arbitror perpetuum quicquam in hoc praecipi posse. ad soli naturam, ad loci ingenium, ad caeli cuiusque mores dirigenda sollertia est. in africa meridiem vineas spectare et viti inutile et colono insalubre est, quoniam ipsa meridianae subiacet plagae, quapropter ibi, qui in occasum aut septentriones conseret, optime miscebit solum caelo. cum vergilius occasus improbet, nec de septentrione relinqui dubitatio videtur. atqui in cisalpina italia magna ex parte vineis ita positis compertum est nullas esse fertiliores. multum rationis optinent et venti. in narbonensi provincia atque liguria et parte etruriae contra circium serere imperitia existimatur, eundemque oblicum accipere providentia. is namque aestates ibi temperat, sed tanta plerumque violentia, ut auferat tecta. quidam caelum terrae parere cogunt, ut, quae in siccis serantur, orientem ac septentriones spectent, quae in umidis, meridiem. nec non ex ipsis vitibus causas mutuantur in frigidis praecoces serendo, ut maturitas antecedat algorem, quae poma vitesque rorem oderint, contra ortus, ut statim auferat sol, quae ament, ad occasus vel etiam ad septentriones, ut diutius eo fruantur. ceteri fere rationem naturae secuti in aquilonem obversas vites et arbores poni suasere. odoratiorem etiam fieri talem fructum democritus putat. aquilonis situm ventorumque reliquorum diximus secundo volumine dicemusque proximo plura caelestia. interim manifestum videtur salubritatis argumentum, quoniam in meridiem etiam spectantium semper ante decidunt folia. similis et in maritimis causa. quibusdam locis adflatus maris noxii, in plurimis iidem alunt. quibusdam satis e longinquo aspicere maria iucundum, propius admoveri salis halitum inutile. similis et fluminum stagnorumque ratio. nebulis adurunt aut aestuantia refrigerant. opacitate atque etiam rigore gaudent quae diximus. quare experimentis optime creditur.

a caelo proximum est terrae dixisse rationem, haud faciliore tractatu, quippe non eadem arboribus convenit et frugibus plerumque, nec pulla, qualem habet campania, ubique optima vitibus, aut quae tenues exhalat nebulas, nec rubrica multis laudata. cretam in albensium pompeianorum agro et argillam cunctis ad vineas generibus anteponunt, quamquam praepingues, quod excipitur in eo

genere. invicem sabulum album in ticiniensi multisque in locis nigrum itemque rubrum, etiam pingui terrae permixtum, infecundum est. argumenta quoque iudicantium saepe fallunt. non utique laetum solum est, in quo procerae arbores nitent, praeterquam illis arboribus. quid enim abiete procerius at quae vixisse possit alia in loco eodem nec luxuriosa pabula pinguis soli semper indicium habent. nam quid laudatius germaniae pabulis at statim subest harena tenuissimo caespitum corio. nec semper aquosa est terra, cui proceritas herbarum, non, hercules, magis quam pinguis, adhaerens digitis, quod in argillis arguitur. scrobes quidem regesta in eos nulla conplet, ut densa atque rara ad hunc modum deprehendi possit, ferroque omnis rubiginem obducit. nec gravis aut levior iusto deprehenditur pondere. quod enim pondus terrae iustum intellegi potest neque fluminibus adgesta semper laudabilis, quando senescant sata quaedam aqua. sed neque illa, quae laudatur, diu praeterquam salici utilis sentitur. inter argumenta stipulae crassitudo est, tanta alioqui in leborino campaniae nobili campo, ut ligni vice utantur. sed id solum ubicumque arduum opere, difficili cultu, bonis suis acrius paene, quam vitiis posset, adfligit agricolam. et carbunculus, quae terra ita vocatur, emendari intenta cura videtur. nam tofus naturae friabilis expetitur quoque ab auctoribus. vergilius et quae felicem ferat non inprobat vitibus. salsaeque terrae multa melius creduntur, tutiora a vitiis innascentium animalium. nec colles opere nudantur, si quis perite fodiat, nec campi omnes minus solis atque perflatus, quam opus sit, accipiunt, et quasdam pruinis ac nebulis pasci diximus vites. omnium rerum sunt quaedam in alto secreta et suo cuique corde pervidenda. quid quod mutantur saepe iudicata quoque et diu comperta in thessalia circa larisam emisso lacu frigidior facta ea regio est, oleaeque desierunt, quae prius fuerant, item vites aduri, quod non antea, ... aenos sensit admoto hebro, et circa philippos cultura siccata regio mutavit caeli habitum. at in syracusano agro advena cultor elapidato solo perdidit fruges luto, donec regessit lapides. in syria levem tenui sulco inprimunt vomerem, quia subest saxum exurens aestate semina. iam in quibusdam locis similes aestus inmodici et frigorum effectus. est fertilis thracia frugum rigore, aestibus africa et aegyptus. in chalcia rhodiorum insula locus quidam est in tantum fecundus, ut suo tempore satum demetant hordeum

sublatumque protinus serant et cum aliis frugibus metant. glareosum oleis solum aptissimum in venafrano, pinguissimum in baetica. pucina vina in saxo cocuntur, caecubae vites in pomtinis paludibus madent. tanta est argumentorum ac soli varietas ac differentia. caesar vopiscus, cum causam apud censores ageret, campos rosiae dixit italiae sumen esse, in quibus perticas pridie relictas gramen operiret, sed non nisi ad pabulum probantur. non tamen indociles natura nos esse voluit, et vitia confessa fecit etiam ubi bona certa non fecerat. quamobrem primum crimina dicemus.

terram amaram probaverim demonstrant eius atrae degeneresque herbae, frigidam autem retorride nata, item uliginosam tristia, rubricam oculi argillamque, operi difficillimas quaeque rastros aut vomeres ingentibus glaebis onerent, quamquam non quod operi, hoc et fructui adversum; item e contrario cineraceam et sabulum album. nam sterilis denso callo facile deprehenditur vel uno ictu cuspidis. cato breviter atque ex suo more vitia determinat: “terram cariosam cave, neve plaustro neve pecore inpellas.” quid putamus hac appellatione ab eo tantopere reformidari, ut paene vestigiis quoque interdicat redigamus ad ligni cariem, et inveniemus illa, quae in tantum abominatur, vitia aridae, fistulosae, scabrae, canescentis, exesae, pumicosae. plus dixit una significatione quam possit ulla copia sermonis enarrari. est enim interpretatione vitiorum quaedam non aetate (quae nulla in ea intellegi potest), sed natura sua anus terra, et ideo infecunda ad omnia atque inbecilla. idem agrum optimum iudicat ab radice montium planitie in meridiem excurrente, qui est totius italiae situs, terram vero teneram, quae vocetur pulla. erit igitur haec optima et operi et satis. intellegere modo libeat dictam mira significatione teneram, et quidquid optari debet, in eo vocabulo invenietur. illa temperatae ubertatis, illa mollis facilisque culturae, nec madida nec sitiens. illa post vomerem nitescens, qualem fons ingeniorum homerus in armis a deo caelatam dixit addiditque miraculum nigrescentis, quamvis fieret ex auro. illa quam recentem exquirunt inprobae alites vomerem comitantes corvique aratoris vestigia ipsa rodentes. reddatur hoc in loco luxuriae quoque sententia et aliqua in propositum certe. cicero, lux doctrinarum altera, “meliora,” inquit, “unguenta sunt quae terram, quam quae crocum sapiunt.” hoc enim maluit dixisse quam “redolent.” ita est profecto,

illa erit optima quae unguenta sapiet. quod si admonendi sumus, qualis sit terrae odor ille qui quaeritur, contingit saepe etiam quiescente ea sub occasum solis, in quo loco arcus caelestes deiecere capita sua, et cum a siccitate continua immaduit imbre. tunc emittit illum suum halitum divinum ex sole conceptum, cui conparari suavitas nulla possit. is esse e commota debebit repertusque neminem fallet, ac de terra odor optime iudicabit. talis fere est in novalibus caesa vetere silva, quae consensu laudatur. et in frugibus quidem ferendis eadem terra utilior intellegitur, quotiens intermissa cultura quievit, quod in vineis non fit, eoque est diligentius eligenda, ne vera existat opinio eorum, qui iam italiae terram existimavere lassam. operis quidem facilitas in aliis generibus constat et caelo, nec potest arari post imbres aliqua, ubertatis vitio lentescens. contra in byzacio africae illum centena quinquagena fruge fertilem campum nullis, cum siccum est, arabilem tauris, post imbres vili asello et a parte altera iugi anu vomerem trahente vidimus scindi. terram enim terra emendandi, ut aliqui praecipiunt, super tenuem pingui iniecta aut gracili bibulaque super umidam ac praepinguem, dementis operae est. quid potest sperare qui colit talem

alia est ratio, quam britanniae et galliae invenere, alendi eam ipsa, genusque, quod vocant margam. spissior ubertas in ea intellegitur et quidam terrae adipes ac velut glandia in corporibus, ibi densante se pinguitudinis nucleo. non omisere et hoc graeci - quid enim intemptatum illis - leucargillon vocant candidam argillam, qua in megarico agro utuntur, sed tantum in umida frigidaque terra. illam gallias britanniasque locupletantem cum cura dici convenit.

duo genera fuerant, plura nuper exerceri coepta proficientibus ingeniis. est enim alba, rufa, columbina, argillacea, tofacea, harenacea. natura duplex, aspera aut pinguis; experimenta utriusque in manu. usus aeque geminus, ut fruges tantum alant aut eaedem et pabulum. fruges alit tofacea albaque, si inter fontes reperta est, ad infinitum fertilis, verum aspera tractatu; si nimia iniecta est, exurit solum. proxima est rufa, quae vocatur acaunumarga, intermixto lapide terrae minutae, harenosae. lapis contunditur in ipso campo, primisque annis stipula difficulter caeditur propter lapides; inpendio tamen minima levitate dimidio minoris, quam ceterae, invehitur. inspergitur rara; sale eam misceri putant. utrumque hoc genus semel

iniectum in l annos valet et frugum et pabuli ubertate.

quae pingues esse sentiuntur, ex his praecipua alba. plura eius genera: mordacissimum quod supra diximus. alterum genus albae creta argentaria est. petitur ex alto, in centenos pedes actis plerumque puteis, ore angusto intus, ut in metallis, spatiante vena. hac maxime britannia utitur. durat annis lxxx, neque est exemplum ullius, qui bis in vita hanc eidem iniecerit. tertium genus candidae glisomargam vocant. est autem creta fullonia mixta pingui terra, pabuli quam frugum fertilior, ita ut messe sublata ante sementem alteram laetissimum secetur. dum fruges, nullum aliud gramen emittit. durat xxx annis. densior iusto signini modo strangulat solum. columbinam galliae suo nomine eglecopalam appellant. glaebis excitatur lapidum modo, sole et gelatione ita solvitur, ut tenuissimas bratteas faciat. haec ex aequo fertilis. harenacea utuntur, si alia non sit; in uliginosis vero, et si alia sit. ubios gentium solos novimus, qui fertilissimum agrum colentes quacumque terra infra pedes tres effossa et pedali crassitudine iniecta laetificent. sed ea non diutius annis x prodest. aedui et pictones calce uberrimos fecere agros, quae sane et oleis vitibusque utilissima reperitur. omnis autem marga arato inicienda est. ut medicamentum rapiatur, et fimi desiderat quantulumcumque, primo plus aspera et quae in herbas non effunditur; alioquin novitate quaecumque fuerit solum laedet, ne sic quidem primo anno fertilis. interest et quali solo quaeratur. sicca enim umido melior, arido pinguis. temperato alterutra, creta vel columbina, convenit.

transpadanis cineris usus adeo placet, ut anteponant fimo iumentorumque, quod levissimum est, ob id exurant. utroque tamen pariter non utuntur in eodem arvo, nec in arbustis cinere nec quasdam ad fruges, ut dicemus. sunt qui pulvere quoque uvas ali iudicent pubescentesque pulverent et vitium arborumque radicibus adspergant. quod certum est, narbonensi provinciae et vindemias circius sic coquit, plusque pulvis ibi quam sol confert.

fimi plures differentiae, ipsa res antiqua. iam apud homerum regius senex agrum ita laetificans suis manibus reperitur. augeas rex in graecia excogitasse traditur, divulgasse vero hercules in italia, quae regi suo stercuto fauni filio ob hoc inventum inmortalitatem tribuit. M. Varro principatum dat turdorum fimo ex aviariis, quod etiam pabulo boum suumque magnificat neque alio cibo celerius

pinguescere adseverat. de nostris moribus bene sperare est, si tanta apud maiores fuere aviaria, ut ex his agri stercorarentur. primum columella e columbariis, mox gallinariis facit, natantium alitum damnato. ceteri auctores consensu humanas dapes ad hoc in primis advocant. alii ex his praeferunt potus hominum in coriariorum officinis pilo madefacto, alii per sese aqua iterum largiusque etiam, quam cum bibitur, admixta. quippe plus ibi mali domandum est, cum ad virus illud vini homo accesserit. haec sunt certamina, invicemque ad tellurem quoque alendam aluntur homines. proxime spurcitias suum laudant, columella solus damnat. alii cuiuscumque quadripedis ex cytiso, aliqui columbaria praeferunt. proximum deinde caprarum est, ab hoc ovium, dein boum, novissimum iumentorum.

hae fuere apud priscos differentiae, simulque praecepta non invenio recenti utendi, quando et hic vetustas utilior; visumque iam est apud quosdam provincialium inveteratum, abundante geniali copia pecudum, farinae vice cribris superinici, faetore aspectuque temporis viribus in quandam etiam gratiam mutato. - (nuper repertum oleas gaudere maxime cinere e calcariis fornacibus.) Varro praeceptis adicit equino, quod sit levissimum, segetes alendi, prata vero graviore et quod ex hordeo fiat multasque gignat herbas. quidam etiam bubulo iumentorum praeferunt ovillumque caprino, omnibus vero asininum, quoniam lentissime mandant. e contrario usus adversus utrumque pronuntiat. inter omnes autem constat nihil esse utilius lupini segete, priusquam siliquetur, aratro vel bidentibus versa manipulisve desectae circa radices arborum ac vitium obrutis. et ubi non sit pecus, culmo ipso vel etiam felice stercorare arbitrantur.

cato: “stercus unde facias, stramenta, lupinum, paleas, fabalia ac frondis iligneam querneam. ex segete evellito ebulum, cicutam et circum salicta herbam altam ulvamque. eam substernito ovibus, bubusque frondem putidam. - vinea si macra erit, sarmenta sua comburito et indidem inarato.” idemque: “ubi saturus eris frumentum, oves ibi delectato.”

nec non et satis quibusdam ipsis pasci terram dicit: “segetem stercorant fruges: lupinum, faba, vicia”; sicut e contrario: “cicer, quia vellitur et quia salsum est, hordeum, fenum graecum, ervum, haec omnia segetem exurunt et omnia quae velluntur. nucleos in segetem ne indideris.” - vergilius et lino segetem exuri et avena et papavere

arbitratur.

fimeta sub diu concavo loco et qui umorem colligat, stramento intecta, ne in sole arescant, palo e robore depacto fieri iubent. ita fore ne innascantur iis serpentes. fimum inicere terrae plurimum refert favonio flante ac luna sitiente. id plerique prave intellegunt a favonii ortu faciendum ac februario mense tantum, cum id pleraque sata aliis postulent mensibus. quocumque tempore facere libeat, curandum, ut ab occasu aequinoctiali flante vento fiat lunaque decrescente ac sicca. mirum in modum augetur ubertas effectusque eius observatione tali.

et abunde praedicta ratione caeli ac terrae nunc de iis arboribus dicemus, quae cura hominum atque arte proveniunt. nec pauciora prope sunt genera; tam benigne naturae gratiam retulimus. aut enim semine proveniunt aut plantis radicis aut propagine aut avolsione aut surculo aut insito aut consecto arboris trunco. nam folia palmarum apud babylonios seri atque ita arborem provenire trogum credidisse demiror. quaedam autem pluribus generibus seruntur, quaedam omnibus.

ac pleraque ex his natura ipsa docuit et in primis semen serere, cum decidens exceptumque terra vivesceret. sed quaedam non aliter proveniunt, ut castaneae, iuglandes, caeduis dumtaxat exceptis; et semine autem, quamquam dissimili, ea quoque, quae aliis modis seruntur, ut vites et mala atque pira. namque his pro semine nucleus, non, ut supra dictis, fructus ipse. et mespila semine nasci possunt. omnia haec tarda proventu ac degenerantia et insito restituenda, interdumque etiam castaneae.

quibusdam natura contra omnino non degenerandi, quoquo modo serantur, ut cupressis, palmae, lauris. namque et laurus pluribus modis seritur. genera eius diximus. ex his augusta et bacalis et tinus simili modo seruntur. bacae mense ianuario aquilonis adflatu siccatae leguntur expandunturque rarae, ne calefiant acervo. postea quidam fimo ad satum praeparatas urina madefaciunt, alii in qualo pedibus in profluente deculcant, donec auferatur cutis, quae alioqui uligine infestat nec patitur partum. in sulco repastinato palmi altitudine vicenae fere acervatim seruntur, mense martio. eaedem et propagine, triumphalis talea tantum. myrti genera omnia in campania bacis seruntur, romae propagine. tarentinam democritus et alio modo seri docet, grandissimis bacarum tusis leviter, ne grana frangantur, ...

eaque intrita restem circumlini atque ita seri. parietem fore ... densitatis, ex quo virgulae differantur. sic et spinas saepis causa serunt, tomice moris spinarum circumlita. pilas autem laurus et myrti inopia a trimatu tempestivum est transferre.

inter ea, quae semine seruntur, mago in nucibus operosus est. amygdalam in argilla molli meridiem spectante seri iubet; gaudere et dura calidaque terra, in pingui aut umida mori aut sterilescere; serendas quam maxime falcatas et e novella fimoque diluto maceratas per triduum aut pridie, quam serantur, aqua mulsa; mucrone defigi, aciem lateris in aquilonem spectare; ternas simul serendas, triangula ratione palmo inter se distantes; denis diebus adaquari, donec grandescant. iuglandes nuces porrectae seruntur commissuris iacentibus, pineae nucleis septenis fere in ollas perforatas additis aut ut laurus, quae bacis seritur. citrea grano et propagine, sorba semine et a radice planta et avolsione proveniunt, sed illa in calidis, sorba in frigidis et umidis.

natura et plantaria demonstravit multarum radicibus pullulante subole densa et pariente matre, quas necet: eius quippe umbra turba indigesta premitur, ut in lauris, punicis, platanis, cerasis, prunis. paucarum in hoc genere rami parcunt suboli, ut ulmorum palmarumque. nullis vero tales pulluli proveniunt nisi quarum radices amore solis atque imbris in summa tellure spatiantur. omnia ea non statim moris est in sua locari, sed prius nutrici dari atque in seminariis adolescere iterumque migrare, qui transitus mirum in modum mitigat etiam silvestres, sive arborum quoque, ut hominum, natura novitatis ac peregrinationis avida est, sive discedentes virus relincunt mansuescuntque tractatu ceu ferae, dum radici avellitur planta.

et aliud genus simile monstravit, avolsique arboribus stolones vixere, quo in genere et cum perna sua avelluntur partemque aliquam e matris quoque corpore auferunt secum fimbriato corpore. hoc modo plantantur punicae, coryli, mali, sorbi, mespilae, fraxini, fici inprimisque vites. cotoneum ita satum degenerat. ex eodem inventum est surculos abscisos serere. hoc primo saepis causa factum, sabucis, cotoneo et rubis depactis, mox et culturae, ut populis, alnis, salici, quae vel inverso surculo seritur. iam haec ibi disponuntur, ubi libeat esse eas. quamquam seminarii curam ante convenit dici, quam

transeatur ad alia genera.

namque ad id praecipuum eligi solum refert, quoniam nutricem indulgentiorem esse quam matrem saepe convenit. sit ergo siccum sucosumque, bipalio subactum, advenis hospitale et quam simillimum terrae ei, in quam transferendae sint, ante omnia elapidatum munitumque ab incursu etiam gallinacei generis, quam minime rimosum, ne penetrans sol exurat fibras. intervallo sesquipedum seri - nam si inter se contingant, praeter alia vitia etiam verminosa fiunt - , sariri convenit saepius herbasque evelli, praeterea semina ipsa fruticantia supputare ac falcem pati consuescere. cato et furcis crates inponi iubet altitudine hominis ad solem recipiendum atque integi culmo ad frigora arcenda. sic pirorum malorumque semina nutriri, sic pineas nuces, sic cupressos semine satas et ipsas. minimis id granis constat, vix ut perspici quaedam possint, non omittendo naturae miraculo e tam parvo gigni arbores, tanto maiore tritici et hordei grano, ne quis fabam reputet. quid simile origini suae habent malorum pirorumque semina his principiis respuentem securis materiem nasci, indomita ponderibus inmensis prela, arbores velis, turribus murisque inpellendis arietes! haec est naturae vis haec potentia. super omnia erit e lacrima nasci aliquid, ut suo loco dicemus.

ergo e cupresso femina - mas enim, ut diximus, non gignit - pilulae collectae quibus docui mensibus siccantur sole, ruptaeque emittunt semen formicis mire expetitum, ampliato etiam miraculo tantuli animalis cibo absumi natalem tantarum arborum. seritur aprili mense, area aequata cylindris aut volviculis, densum, terraque cribris superincernitur pollicis crassitudine. contra maius pondus attollere se non valet torqueturque sub terra. ob hoc et pavitur vestigiis. leniter rigatur a solis occasu in trinis diebus, ut aequaliter bibat, donec erumpant. differuntur post annum dodrantali filo, custodita temperie, ut viridi caelo serantur ac sine aura. mirumque dictu, periculum eo tantum die est, si roravit quantulumcumque imbris, aut si adflavit. de reliquo tutae sunt perpetua securitate aquasque postea odere. et zizipha grano seruntur aprili mense. tubures melius inseruntur in pruno silvestri et malo cotoneo et in calabrice. ea est spina silvestris; quaecumque optime et myxas recipit; utiliter et sorbos.

plantas ex seminario transferre in aliud, priusquam suo loco

ponantur, operose praecipi arbitror, licet translatione folia latiora fieri spondeant.

ulmorum, priusquam foliis vestiantur, samara colligenda est circa martias kalendas, cum flavescere incipit. dein, biduo in umbra siccata, serenda densa in refracto, terra super minuta incribrata crassitudine, qua in cupressis. pluviae si non adiuvent, rigandum. differendae ex arearum venis post annum in ulmaria intervallo pedali in quamque partem. atinias ulmos autumno serere utilius, quia carentes semine plantis seruntur. in arbustum quinquennes sub urbe transferunt aut, ut quibusdam placet, quae vicenum pedum esse coeperunt. sulco, qui novenarius dicitur, altitudine pedum iii, pari latitudine et eo amplius circa positas pedes terni undique e solido adaggerantur. arulas id vocant in campania. intervalla ex loci natura sumuntur. rariores serendas in campestribus convenit. populos et fraxinos, quia festinantius germinant, disponi quoque maturius convenit, hoc est ab idibus februariis, plantis et ipsas nascentes. in disponendis arboribus arbustisque ac vineis quincuncialis ordinum ratio vulgata et necessaria, non perflatu modo utilis, verum et aspectu grata, quoquo modo intueare, in ordinem se porrigente versu. populos eadem ratio semine quae ulmos serendi, transferendi quoque e seminariis eadem et silvis.

ante omnia igitur in similem transferri terram aut meliorem oportet, nec ex tepidis aut praecocibus in frigidos aut serotinos situs, ut neque ex his in illos; praefodere scrobes ante; si fieri possit, tanto, donec pingui caespite obducantur. mago ante annum iubet, ut solem pluviasque conbibant, aut, si id condicio largita non sit, ignes in mediis fieri ante menses duos, nec nisi post imbres in his seri, altitudinem eorum in argilloso aut duro solo trium cubitorum esse in quamque partem, in pronis palmo amplius, iubetque caminata fossura ore conpressiore esse, in nigra vero terra duo cubita et palmum quadratis angulis eadem mensura. graeci auctores consentiunt non altiores quino semipede esse debere nec latiores ii pedibus, nusquam vero semisquipede minus altos. quoniam in umido solo ad vicina aquae perveniatur, cato, si locus aquosus sit, latos pedes ternos in faucibus imosque palmum et pedem, altitudine iiii pedum, eos lapide consterni aut, si non sit, perticis salignis viridibus, si neque hae sint, sarmentis, ita ut in altitudinem semipes detrahatur. nobis adiciendum

videtur ex praedicta arborum natura, ut altius demittantur ea, quae summa tellure gaudent, tamquam fraxinus, olea. haec et similia quaternos pedes oporteat demitti. ceteris altitudinis pedes terni suffecerint. est innoxium adradi partes, quae se nudaverint. “excide radicem,” inquit, “istam”, papirius cursor imperator, ad terrorem praenestinorum praetoris destringi securi iussa. testas, aliqui lapides rotundos subici malunt, qui et contineant umorem et transmittant, non idem planos facere et a terreno arcere radicem existimantes. glarea substrata inter utramque sententiam fuerit.

arborem nec minorem bima nec maiorem trima transferre quidam praecipiunt, alii cum manum conpleat, cato crassiorem v digitis. non omisisset idem, si attineret, meridianam caeli partem signare in cortice, ut translatae isdem et adsuetis statuerentur horis, ne aquiloniae meridianis oppositae solibus finderentur et algerent meridianae aquilonibus. quod e diverso adfectant etiam quidam in vite ficoque, permutantes in contrarium. densiores enim folio ita fieri magisque protegere fructum et minus amittere, ficumque sic etiam scansilem fieri. plerique id demum cavent, ut plaga deputati cacuminis meridiem spectet, ignari fissuris nimii vaporis opponi. id quidem in horam diei quintam vel octavam spectare maluerim. aeque latet non neglegendum, ne radices mora inarescant neve a septentrionibus aut ab ea parte caeli usque ad exortum brumalem vento flante effodiantur arbores, aut certe non adversae his ventis radices praebeantur, propter quod emoriuntur ignaris causae agricolis. cato omnes ventos et imbrem quoque in tota translatione damnat. et ad haec proderit quam plurimum terrae, in qua vixerint, radicibus cohaerere ac totas cum caespite circumligari, cum ob id cato in corbibus transferri iubeat, procul dubio utilissime. qui quidem summam terram contentus est subdi. quidam punicis malis substrato lapide non rumpi pomum in arboribus tradunt. radices inflexas poni melius; arborem ipsam ita locari, ut media sit totius scrobis, necessarium. ficus si in scilla - bulborum hoc genus est - seratur, ocissime ferre traditur pomum neque vermiculationi obnoxium, quo vitio carent et reliqua poma similiter sata. radicum filis magnam adhibendam curam, ut exemptas appareat, non evolsas, quis dubitet qua ratione et reliqua confessa omittimus, sicuti terram circa radices festuca cospissandam, quod cato primum in ea re esse censet, plagam

quoque a trunco oblini fimo et foliis praeligari praecipiens.

huius loci pars est ad intervalla pertinens: quidam punicas et myrtos et lauros densiores seri iusserunt, in pedibus tamen novenis, malos amplius paulo, vel magis etiam piros magisque amygdalas et ficos. quamquam optime diiudicabit ramorum amplitudinis ratio locorumque; et umbrae cuiusque arboris, quoniam has quoque observari oportet. breves sunt quamvis magnarum arborum, cum ramos in orbem circinant, ut in malis pirisque; eaedem enormes cerasis, lauris.

iam quaedam umbrarum proprietas: iuglandum gravis et noxia, etiam capiti humano omnibusque iuxta satis. necat gramina et pinus, sed ventis utraque resistit, quoniam et protecta vinearum ratione egent. stilicidia pinus, quercus, ilicis ponderosissima, nullum cupressi, umbra minima et in se convoluta. ficorum levis, quamvis sparsa, ideoque inter vineas seri non vetentur. ulmorum lenis, etiam nutriens, quacumque opacat. attico haec quoque videtur e gravissimis, nec dubito, si emittantur in ramos; constrictae quidem illius noxiam esse non arbitror. iucunda et platani, quamquam crassa. licet gramini credere non sub alia laetius operienti toros. populo nulla ludentibus foliis, pinguis alno, sed pascens sata. vitis sibi sufficit, mobili folio iactatuque crebro solem umbra temperans, eodem gravi protegens in imbre. omnium fere levis umbra, quorum pediculi longi. non fastidienda haec quoque scientia atque non in ultimis ponenda, quando satis quibusque umbra aut nutrix aut noverca est. iuglandum quidem pinorumque et picearum et abietis quaecumque attingere non dubie venenum.

stilicidii brevis definitio est: omnium, quae proiectu frondis ita defenduntur, ut per ipsas non defluant imbres, stilla saeva est. ergo plurimum intererit hac in quaestione, terra, in qua seremus, in quantum arbores quasque alat. iam per se colles minora quaerunt intervalla. ventosis locis crebriores seri conducit, oleam tamen maximo intervallo, de qua catonis italica sententia est in xxv pedibus, plurimum xxx seri. sed hoc variatur locorum natura. non alia maior in baetica arbor, in africa vero - fides penes auctores erit - miliarias vocari multas narrant a pondere olei, quod ferant annuo proventu. ideo lxxv pedes mago intervallo dedit undique aut in macro solo ac duro atque ventoso, cum minimum, xlv. baetica quidem uberrimas

messes inter oleas metit. illam inscientiam pudendam esse conveniet adultas interlucare iusto plus et in senectam praecipitare aut, ut plerumque ipsis, qui posuere, coarguentibus imperitiam suam, totas excidere. nihil est foedius agricolis quam gestae rei poenitentia, multo iam ut praestet laxitate delinquere.

quaedam autem natura tarde crescunt, et in primis semine tantum nascentia et longo aevo durantia. at quae cito occidunt, velocia sunt, ut ficus, punica, prunus, malus, pirus, myrtus, salix, et tamen antecedunt divitiis. in trimatu enim ferre incipiunt, ostendentes et ante. ex his lentissima est pirus, ocissima omnium cypirus et pseudocypirus frutex. protinus enim floret semenque perfert. omnia vero celerius adolescunt stolonibus ablatis unamque in stirpem redactis alimentis.

eadem natura et propagines docuit. rubi namque curvati gracilitate et simul proceritate nimia defigunt rursus in terram capita iterumque nascuntur ex sese repleturi omnia, ni resistat cultura, prorsus ut possint videri homines terrae causa geniti. ita pessima atque execranda res propaginem tamen docuit ac viviradicem. eadem autem natura et hederis. cato propagari praeter vitem tradit ficum, oleam, punicam, malorum genera omnia, laurus, pruna, myrtum, nuces abellanas et praenestinas, platanum.

propaginum duo genera: ramo ab arbore depresso in scrobem iiii pedum quoquo et post biennium amputato flexu plantaque translata post trimatum, quas si longius ferre libeat, in qualis statim aut vasis fictilibus defodere propagines aptissimum, ut in his transferantur. alterum genus luxuriosius, in ipsa arbore radices sollicitando traiectis per vasa fictilia vel qualos ramis terraque circumfartis, atque hoc blandimento inpetratis radicibus inter poma ipsa et cacumina - in summa etenim cacumina hoc modo petuntur audaci ingenio arborem aliam longe a tellure faciendi - eodem quo supra biennii spatio abscisa propagine et cum quasillis sata. sabina herba propagine seritur et avolsione; tradunt faece vini aut e parietibus latere tuso mire ali. iisdem modis rosmarinum seritur et ramo, quoniam neutri semen, rhododendrum propagine et semine.

semine quoque inserere natura docuit raptim avium fame devorato solidoque et alvi tepore madido cum fecundo fimi medicamine abiecto in mollibus arborum lecticis et ventis saepe translato in

aliquas corticum rimas, unde vidimus cerasum in salice, platanum in lauru, laurum in ceraso et bacas simul discolores. tradunt et monedulam condentem semina in thensauros cavernarum eiusdem rei praebere causas.

hinc nata inoculatio sutoriae simili fistula aperiendi in arbore oculum cortice exciso semenque includendi eadem fistula sublatum ex alia. in ficis et malis haec fuit inoculatio antiqua. vergiliana quaerit sinum in nodo germine expulsi corticis gemmamque ex alia arbore includit.

et hactenus natura ipsa docuit, insitionem autem casus, magister alius et paene numerosior, ad hunc modum: agricola sedulus casam saepis munimento cingens, quo minus putrescerent sudes, limen subdidit ex hedera. at illae vivaci morsu adprehensae suam ex aliena fecere vitam, apparuitque truncum esse pro terra. aufertur ergo serra aequaliter superficies, levigatur falce truncus. ratio postea duplex, et prima inter corticem lignumque inserendi. timebant prisci truncum findere, mox inforare ausi medio ipsique in eo medullae calamum imprimebant, unum inserentes, neque enim plures capiebat medulla. subtilior postea ratio vel senos addi, mortalitati eorum et numero, per media trunco leniter fisso cuneoque tenui fissuram custodiente, donec cuspidatim decisus descendat in rimam calamus.

multa in hoc servanda: primum omnium, quae patiatur coitum talem arbor et cuius arboris. varie quoque et non isdem in partibus subest omnibus sucus. vitibus ficisque media sicciora et e summa parte conceptus; ideo illinc surculi petuntur. oleis circa media sucus, inde et surculi; cacumina sitiunt. facillime coalescunt quibus eadem corticis natura quaeque pariter florentia eiusdem horae cognationem sucorumque societatem habent. lenta res, quotiens umidis repugnant sicca, mollibus corticum duri. reliqua observatio, ne fissura in nodo fiat - repudiat quippe advenam inhospitalis duritia - , ut in parte nitidissima, ne longior multo tribus digitis, ne obliqua, ne tralucens. vergilius e cacumine inseri vetat, certumque est ab umeris arborum orientem aestivum spectantibus surculos petendos, et e feracibus et e germine novello, nisi vetustae arbori inserantur; ii enim robustiores esse debent. praeterea ut praegnates, hoc est germinatione turgentes et qui parere illo speraverint anno, bimi utique nec tenuiores digito minimo. inseruntur autem et inversi, cum id agitur, ut minor altitudo

in latitudinem se fundat. ante omnia gemmantes nitere conveniet; nihil usquam ulcerosum aut retorridum spei favet. medulla calami commissurae in matre ligni corticisque iungatur, id enim satius quam foris cortici aequari. calami exacutio medullam ne nudet, tamen tenui fistula detegat. fastigatio levi descendat cuneo tribus non ampliore digitis, quod facillime contingit tinctum aqua radentibus. ne exacuatur in vento, ne cortex a ligno decedat alterutri. calamus ad corticem usque suum deprimatur. ne luxetur, dum deprimitur, neve cortex replicetur in rugas. ideo lacrimantes calamos inseri non oportet, non, hercules, magis quam aridos, quia illo modo labat umore nimio cortex, hoc vitali defectu non umescit neque concorporatur. id etiam religionis servant, ut luna crescente, ut calamus utraque deprimatur manu. et alioqui hoc in opere duae simul manus minus nituntur, necessario temperamento. validius demissi tardius ferunt, fortius durant, contraria ex diverso. ne hiscat nimium rima laxeque capiat, aut ne parum et exprimat aut conpressum necet; hoc maxime cavendum in praevalide accipientis trunco. ut media fissura relinquatur, quidam vestigio fissurae falce in truncis facto salice praeligant marginem ipsum, postea cuneo findunt continente vinculo libertatem dehiscendi. - (quaedam in plantario insita eodem die transferuntur). - si crassior truncus inseratur, inter corticem et lignum inseri melius, cuneo optime osseo, cortex ne rumpatur, laxato. cerasi libro dempto finduntur. hae solae et post brumam inseruntur. dempto libro habent veluti lanuginem, quae si conprehendit insitum, putrefacit. vinculum cuneo adacto utilissime adstringitur. inserere aptissimum, quam proxime terrae patiatur nodorum truncique ratio. eminere calami vi digitorum longitudine non amplius debent. cato argillae vel cretae harenam fimumque bubulum admiscet atque ita usque ad lentorem subigi iubet idque interponi et circumlini. ex iis, quae commentatus est, facile apparet illa aetate inter lignum et corticem nec alio modo inserere solitos aut ultra latitudinem ii digitorum calamos demittere. inseri autem praecipit pira ac mala per ver et post solstitium diebus l et post vindemiam, oleas autem et ficos per ver tantum, luna sitiente, hoc est sicca praeterea post meridiem ac sine vento austro. mirum quod non contentus insitum munisse, ut dictum est, et caespite ab imbre frigoribusque protexisse ac mollibus bifidorum viminum fasciis,

lingua bubula - herbae id genus est - insuper optegi iubet eamque inligari opertam stramentis. nunc abunde arbitrantur paleato luto sarcire et libro ii digitos insito exstante. verno inserentes tempus urguet, incitantibus se gemmis praeterquam in olea, cuius diutissime oculi parturiunt, minimumque suci habet sub cortice, qui nimius insitis nocet. punica vero et ficum quaeque alia sicca sunt recrastinare minime utile. pirum vel florentem inserere licet et in maium quoque mensem protendere insitiones. quod si longius adferantur pomorum calami, rapo infixos optime custodire sucum arbitrantur, servari inter duos imbrices iuxta rivos vel piscinas utrimque terra obstructos, vitium vero in scrobibus siccis stramento opertos ac deinde terra obrutos, ut cacumine exstent.

cato vitem tribus modis inserit: praesectam findi iubet per medullam, in eam surculos exacutos, ut dictum est, addi, medullas iungi. altero, si inter se vites contingant, utriusque in obliquum latere contrario adraso iunctis medullis colligari. tertium genus est terebrare vitem in obliquum ad medullam calamosque addere longos pedes binos atque ita ligatum insitum intritaque inlitum operire terra calamis subrectis. nostra aetas correxit, ut gallica uteretur terebra, quae excavat nec urit - quoniam adustio omnis hebetat - , atque ut gemmascere incipiens eligeretur calamus, nec plus quam binis ab insito emineret oculis, ulmi ... vimine alligato ... bina circumdarentur ... acie a duabus partibus, ut inde potius destillaret mucor, qui maxime vites infestat; dein cum evaluissent flagella pedes binos, vinculum insiti incideretur, ubertati crassitudine permissa. vitibus inserendis tempus dedere ab aequinoctio autumno ad germinationis initia. sativae plantae silvestrium radicibus inseruntur natura siccioribus; si sativae silvestribus inserantur, degenerant in feritatem. reliqua caelo constant. aptissima insitis siccitas; huius enim remedium: adpositis fictilibus vasis modicus umor per cinerem destillat. inoculatio rores amat lenes.

emplastratio et ipsa ex inoculatione nata videri potest, Crasso autem maxime cortici convenit, sicut est ficis. ergo amputatis omnibus ramis, ne sucum avocent, nitidissima in parte quaque praecipua cernatur hilaritas, exempta scutula ita, ne descendat ulta corticem ferrum, inprimitur ex alia cortex par cum sui germinis mamma, sic conpage densata, ut cicatrici locus non sit et statim fiat

unitas, nec umorem nec adflatum recipiens; nihilominus tamen et luto munire et vinculo melius. hoc genus non pridem repertum volunt qui novis moribus favent, sed iam et apud veteres graecos invenitur et apud catonem, qui oleam ficumque sic inseri iussit, mensura etiam praefinita secundum reliquam diligentiam suam: cortices scalpro excidi quattuor digitorum longitudine et trium latitudine atque ita coagmentari et illa sua intrita oblini, eadem ratione ut in malo. quidam huic generi miscuere fissuram in vitibus, exempta cortici tessella latere plano adigendo. tot modis insitam arborem vidimus iuxta tiburtes tullios omni genere pomorum onustam, alio ramo nucibus, alio bacis, aliunde vite, piris, ficis, punicis malorumque generibus. sed huic brevis fuit vita. nec tamen omnia experimentis adsequi in natura possumus. quaedam enim nasci nisi sponte nullo modo queunt, eaque inmitibus tantum et desertis locis proveniunt. capacissima insitorum omnium ducitur platanus, postea robur, verum utraque sapores corrumpit. quaedam omni genere inseruntur, ut ficus, ut punicae. vitis non recipit emplastra, nec quibus tenuis aut caducus rimosusque cortex, neque inoculationem siccae aut umoris exigui. fertilissima omnium inoculatio, postea emplastratio, sed utraque infirmissima; et quae cortice tantum nituntur, vel levi aura ocissime deplantantur. inserere firmissimum et fecundius quam serere.

non est omittenda raritas unius exempli. corellius eques romanus ateste genitus insevit castaneam suomet ipsam surculo in neapolitano agro. sic facta est castanea, quae ab eo nomen accepit inter laudatas. postea tereus eiusdem libertus corellianam iterum insevit. haec est inter eas differentia: illa copiosior, haec tereiana melior.

reliqua genera casus ingenio suo excogitavit ac defractos serere ramos docuit, cum pali defixi radices cepissent. multa sic seruntur inprimisque ficus omnibus aliis modis nascens praeterquam talea, optime quidem, si vastiore ramo pali modo exacuto adigatur alte, exiguo super terram relicto capite eoque ipso harena cooperto. ramo seruntur et punica, palis laxato prius meatu, item myrtus, omnium horum longitudine iii pedum, crassitudine minus bracchiali, cortice diligenter servato, trunco exacuto.

myrtus et taleis seritur, morus talea tantum, quoniam in ulmo eam inseri religio fulgurum prohibet. quapropter de talearum satu nunc dicendum est. servandum in eo ante omnia, ut taleae ex feracibus

fiant arboribus, ne curvae neve scabrae aut bifurcae, ne tenuiores quam ut manum impleant, ne minores pedalibus, ut inlibato cortice atque ut sectura inferior ponatur semper et quod fuerit ab radice, adcumuleturque germinatio terra, donec robur planta capiat.

quae custodienda in olearum cura cato iudicaverit, ipsius verbis optime praecipiemus: “taleas oleagineas, quas in scrobe saturus eris, tripedaneas facito, diligenterque tractato, ne liber laboret, cum dolabis aut secabis. quas in seminario saturus eris, pedales facito. eas sic inserito: locus bipalio subactus sit beneque gluttus. cum taleam demittes, pede taleam opprimito. si parum descendet, malleo aut mateola adigito, cavetoque, ne librum scindas, cum adiges. palo prius locum ne feceris, quo taleam demittas; ita melius vivet. taleae ubi trimae sunt, tum denique maturae sunt, ubi liber se vertet. si in scrobibus aut in sulcis seres, ternas taleas ponito easque divaricato. supra terram ne plus quattuor digitos traversos emineant, vel oculos serito. - diligenter eximere oleam oportet et radices quam plurimas cum terra ferre, ubi radices bene operueris, calcare bene, ne quid noceat. si quis quaeret, quod tempus oleae serendae sit, agro sicco per sementem, agro laeto per ver. olivetum diebus xv ante aequinoctium vernum incipito putare. ex eo die dies xl recte putabis. id hoc modo putato: qua locus recte ferax erit, quae arida erunt et si quid ventus interfregerit, inde ea omnia eximito. qua locus ferax non erit, id plus concidito aratoque bene enodatoque stirpisque leves facito. - circum oleas autumnitate ablaqueato et stercus addito. - qui oletum saepissime et altissime miscebit, is tenuissimas radices exarabit. si male arabit, radices susum abibunt, crassiores fient et eo in radices vires oleae abibunt.”

quae genera olearum et in quo genere terrae iuberet seri quoque spectare oliveta, diximus in ratione olei. mago in colle et siccis et argilla inter autumnum et brumam seri iussit, in crasso aut umido aut subriguo solo a messe ad brumam. quod praecepisse eum africae intellegitur. italia quidem nunc vere maxime serit. sed si et autumno libeat, post aequinoctium xl diebus ad vergiliarum occasum iiii soli dies sunt, quibus seri noceat. africae peculiare, quod in oleastro eas inserit quadam aeternitate, cum senescant, proxima adoptione virga emissa atque ita alia arbore ex eadem iuvenescente iterumque et quotiens opus sit, ut aevis eadem oliveta constent. inseritur autem

oleaster calamo et inoculatione.

olea, ubi quercus effossa est, male ponitur, quoniam vermes, qui raucae vocantur, in radice quercus nascuntur et transeunt. non infumare taleas aut siccare prius, quam serantur, utilius conpertum. vetus olivetum ab aequinoctio verno intra vergiliarum exortum interradi alternis annis melius inventum, item muscum radi, circumfodi autem omnibus annis a solstitio ii cubitorum scrobe pedali altitudine, stercorari tertio anno.

mago idem amygdalas ab occasu arcturi ad brumam seri iubet, pira non eodem tempore omnia, quoniam neque floreant eodem, oblonga aut rotunda ab occasu vergiliarum ad brumam, reliqua genera media hieme ab occasu sagittae, subsolanum aut septentrionis spectantia, laurum ab occasu aquilae ad occasum sagittae. conexa enim de tempore serendi inserendique ratio est. vere et autumno id magna ex parte fieri decrevere. est et alia hora circa canis ortus, paucioribus nota, quoniam non omnibus locis pariter utilis intellegitur, sed haud omittenda nobis non tractus alicuius rationem, verum naturae totius indagantibus. in cyrenaica regione sub etesiarum flatu conserunt, nec non et in graecia, oleam maxime in laconia. coos insula et vites tunc serit, ceteri apud graecos inoculare et inserere non dubitant, sed arbores non serunt. plurimumque in eo locorum natura pollet; namque in aegypto omni serunt mense et ubicumque imbres aestivi sunt, ut in india et aethiopia, necessario post haec autumno seruntur arbores. ergo tria tempora eadem germinationis, ver et canis arcturique ortus. neque enim animalium tantum est ad coitus aviditas, sed multo maior est terrae ac satorum omnium libido, qua tempestive uti plurimum interest conceptus, peculiare utique in insitis, cum sit mutua cupiditas utrimque coeundi. qui ver probant, ab aequinoctio statim admittunt, praedicantes germina parturire, ideo faciles corticum esse conplexus. qui praeferunt autumnum, ab arcturi ortu, quoniam statim radicem quandam capiant et ad ver parata veniant atque non protinus germinatio auferat vires. quaedam tamen statutum tempus anni habent ubique, ut cerasi et amygdalae circa brumam serendi vel inserendi. de pluribus locorum situs optime iudicabit. frigida enim et aquosa verno conseri oportet, sicca et calida autumno. communis quidem italiae ratio tempora ad hunc modum distribuit: moro ab

idibus februariis in aequinoctium, piro autumnum, ita ut brumam xv ne minus diebus antecedant, malis aestivis et cotoneis, item sorbis, prunis, post mediam hiemem in idus februarias, siliquae graecae et persicis ante brumam per autumnum, nucibus iuglandi et pineae et abellanae et graecae atque castaneae a kal. martiis ad idus easdem, salici et genistae circa martias kal. hanc in siccis semine, illam in umidis virga seri diximus.

est etiamnum nova inserendi ratio, ne quid sciens quidem praeteream, quod usquam invenerim, columellae excogitata, ut adfirmat ipse, qua vel diversae insociabilesque arborum naturae copulentur, ut fici atque oleae. iuxta hanc seri ficum iubet non ampliore intervallo, quam ut contingi large possit ramo oleae quam maxime sequaci atque oboedituro, eumque omni interim tempore edomari meditatione curvandi. postea fico adepta vires, quod evenire trimae aut utique quinquenni, detruncata superficie ipsum quoque deputatum et, ut dictum est, adraso cacumine defigi in crure fici, custoditum vinculis, ne curvatura fugiat. ita quodam propaginum insitorumque temperamento triennio communem inter duas matres coalescere, quarto anno abscisum totum adoptantis esse, nondum vulgata ratione aut mihi certe satis conperta.

cetero eadem illa de calidis frigidisque et umidis aut siccis supra dicta ratio et scrobes fodere monstravit. in aquosis enim neque amplos neque altos facere expediet, aliter in aestuoso et sicco, ut quam maxime accipiant aquam contineantque. haec et veteres arbores colendi ratio est. ferventibus enim locis adcumulant aestate radices operiuntque, ne solis ardor exurat. aliubi ablaqueant perflatusque admittunt. iidem hieme cumulis a gelu vindidicant. contra illi hieme aperiunt umoremque sitientibus quaerunt. ubicumque circumfodiendi arbores ratio in circuitum pedes in orbem ternos, neque id in pratis, quoniam amore solis umorisque in summa tellure oberrant.

et de arboribus quidem fructus gratia serendis inserendisque in universum sint dicta haec: restat earum ratio, quae propter alias seruntur ac vineas maxime, caeduo ligno.

principatum in his optinent salices, quas serunt loco madido, tamen refosso pedes ii et semipedem, talea sesquipedali vel pertica, quae utilior, quo plenior. intervallo esse debent pedes seni. trimae

pedibus binis a terra putatione coercentur, ut se in latitudinem fundant ac sine scalis tondeantur. salix enim fecundior, quo terrae propior. has quoque omnibus annis confodi iubent mense aprili. haec est viminalium cultura. perticalis et virga et talea seritur, fossura eadem. perticas ex ea caedi iustum est quarto fere anno. et hae autem senescentium locum propagine sarciunt praecisa post annum. salicis viminalis iugera singula sufficiunt xxv vineae iugeribus. eiusdem rei causa populus alba seritur bipedaneo pastinato, talea sesquipedali, biduo siccata, palmipedi intervallo, terra superiniecta ii cubitorum crassitudine.

harundo etiamnum dilutiore quam hae solo gaudet. seritur bulbo radicis, quod alii oculum vocant, dodrantali scrobe, intervallo ii pedum et semipedis, reficiturque ex sese vetere harundineto exstirpato, quod utilius repertum quam castrare, sicut antea. namque inter se radices serpunt mutuoque discursu necantur. tempus conserendi, priusquam oculi harundinum intumescant, ante kal. martias. crescit ad brumam usque desinitque, cum durescere incipit. hoc signum tempestivam habet caesuram. et hanc autem, quotiens et vineam, fodiendam putant. seritur et traversa, non alte terra condita, erumpuntque e singulis oculis totidem plantae. seritur et deplantata pedali sulco, binis obrutis gemmis, ut tertius nodus terram attingat, prono cacumine, ne rores concipiat. caeditur decrescente luna. vineis anno siccata utilior quam viridis.

castanea pedamentis omnibus praefertur facilitate tractatus, perdurandi pervicacia; regerminatione caedua vel salice laetior. quaerit solum facile nec tamen harenosum, maximeque sabulum umidum aut carbunculum vel tofi etiam farinam, quamlibet opaco septentrionalique et praefrigido situ, vel etiam declivi. recusat eadem glaream, rubricam, cretam omnemque terrae fecunditatem. seri nuce diximus, sed nisi ex maximis non provenit, nec nisi quinis acervatim satis. refringi solum debet sub ea ex novembri mense in februarium, quo solutae sponte cadunt ex arbore atque subnascuntur. intervalla sint pedalia, undique sulco dodrantali. ex hoc seminario transferuntur in aliud bipedali intervallo post biennium. sunt et propagines, nulli quidem faciliores. nudata enim radice tota in sulco prosternitur; tum ex cacumine supra terram relicto renascitur et alia ab radice. sed tralata nescit hospitari pavetque novitatem biennio fere; postea

prosilit. ideo nucibus potius quam viveradicibus plantaria caedua implentur. cultura non alia quam supra dictis, fodiendo supputandisque per biennium sequens. de cetero ipsa se colit umbra stolones supervacuos enecante. caeditur intra septimum annum. sufficiunt pedamenta iugeri vicenis vinearum iugeribus, quando etiam bifida ex stirpe fiunt, durantque ultra alteram silvae suae caesuram.

aesculus similiter provenit, caesura triennio serior, minus morosa nasci in quacumque terra seritur vere balano, sed non nisi aesculi, scrobe dodrantali, intervallis ii pedum. saritur leviter quater anno. hoc pedamentum minime putrescit caesumque maxime fruticat.

praeter haec, quae diximus, sunt caedua fraxinus, laurus, persica, corulus, malus, sed tardius nascuntur terramque defixa vix tolerant, non modo umorem. sabucus contra firmissima ad palum taleis seritur, ut populus. nam de cupresso satis diximus.

et praedictis velut armamentis vinearum restat ipsarum natura praecipua tradenda cura. vitium surculis et quarundam arborum, quibus fungosior intus natura, geniculati scaporum nodi intersaepiunt medullam. ferulae ipsae breves, et ad summa breviores articuli utrimque sua internodia includunt. medulla, sive illa vitalis anima est, ante se tendit longitudinem inplens, quamdiu nodi pervia patent fistula. cum vero concreti ademere transitum, repercussa erumpit ab ima sui parte iuxta priorem nodum alternis laterum semper inguinibus, ut dictum est in harundine ac ferula, quorum dexterum ab imo intellegitur articulo, laevum in proximo, atque ita per vices. hoc vocatur in vite gemma, cum ibi caespitem fecit; ante vero quam faciat, in concavo oculus et in cacumine ipso germen. sic palmites, nepotes, uvae, folia, pampini gignuntur, mirumque firmiora esse in dextera parte genita.

hos ergo in surculis nodos, cum seruntur, medios secare oportet ita, ne profluat medulla. et in fico quidem dodrantales, paxillis solo patefacto, seruntur sic, ut descendant quae proxima arbori fuerint, ii oculi extra terram emineant. oculi autem in arborum surculis proprie vocantur, unde germinantur. hac de causa et in plantariis aliquando eodem anno ferunt, quo fuere laturi fructus in arbore, cum tempestive sati praegnates inchoatos conceptus aliubi pariunt. ita satas ficos tertio anno transferre facile. hoc pro senescendi celeritate adtributum

huic arbori, ut citissime proveniat.

vitium numerosior satus est. primum omnium nihil seritur ex his nisi inutile et deputatum in sarmenta. opputatur autem quidquid proximo tulit fructum. solebat capitulatus utrimque e duro surculus seri, eoque argumento malleolus vocatur etiamnunc. postea avelli cum sua calce coeptus est, ut in fico, neque est aliud vivacius. tertium genus adiectum etiamnum expeditius sine calce, quod sagittae vocantur, cum intorti panguntur, iidem cum recisi nec intorti, trigemmes. plures autem ex eodem surculo hoc modo fiunt. serere e pampinariis sterile est, nec nisi fecundo oportet. quae raros habet nodos, infecunda iudicatur; densitas gemmarum fertilitatis indicium est. quidam seri vetant nisi eos qui floruerint surculos. sagittas serere minus utile, quoniam in transferendo facile rumpitur quod intortum fuit. seruntur pedali, non breviores, longitudine, quinque sexve nodorum. pauciores tribus gemmis in hac mensura esse non poterunt. inseri eodem die, quo deputentur, utilissimum; si multo postea necesse sit serere custoditos, uti praecepimus, caveri utique, ne extra terram positi sole inarescant, vento aut frigore hebetentur. qui diutius in sicco fuerint, priusquam serantur, in aqua pluribus diebus revirescant.

solum apricum et quam amplissimum in seminario sive in vinea bidente pastinari debet, ternos pedes bipalio alto, marra reici quaternum pedum fermento, ita ut in pedes binos fossa procedat, fossum purgari et extendi, ne crudum relinquatur, verum exigi mensura. male pastinatum deprendunt scamna inaequalia. metienda est et ea pars, quae interiacet, pulvini. surculi seruntur et in scrobe et in sulco longiore; super quam tenerrima ingeritur terra, sed in gracili solo frustra nisi substrato pinguiore corio ... quam duas integi oportet et proximam attingi, terram eodem paxillo deprimi et spissari, interesse in plantario sesquipedes inter bina semina in latitudinem, in longitudinem semisses; ita satos malleolos xxiiii mense recidere ad imum articulum, nisi ipsi parcatur. oculorum inde materia emicat, cum qua xxxvi mense viveradix transfertur.

est et luxuriosa ratio vites serendi, ut quattuor malleoli vehementi vinculo colligentur ima parte luxuriosa atque ita vel per ossa bubuli cruris vel per colla fictilia traiecti obruantur binis eminentibus gemmis. uniscunt hoc modo recisisque palmitem emittunt. postea

fistula fracta radix libere capit vires, uvaque fert omnium corporum suorum acinos. in alio genere invento novicio finditur malleolus, medullaque erasa in se colligantur ipsi caules ita, ut gemmis parcatur omni modo. tum malleolus in terra fimo mixta seritur et, cum spargere caules coepit, deciditur foditurque saepius. talis uvae acinos nihil intus ligni habituros columella promittit, cum vivere semina ipsa perquam mirum sit medulla adempta.

nasci surculis etiam, quibus non sit articulatio, arbores non omittendum videtur. namque buxi tenuissimis quinis senisve colligatis depacti proveniunt. quondam in observatione erat, ut defringerentur ex inputata buxo, aliter vivere non crediti. detraxere hoc experimenta.

seminarii curam sequitur vinearum ratio. quinque generum hae: sparsis per terram palmitibus aut per se vite subrecta vel cum amminiculo sine iugo aut pedatae simplici iugo aut conpluviatae quadriplici. quae pedatae ratio, eadem intellegetur eius quoque, in qua sine amminiculo vitis per se stabit. id enim non fit nisi pedamenti inopia. simplici iugo constat porrecto ordine quem canterium appellant. melior ea vino, quoniam sibi ipsa non obumbrat adsiduoque sole coquitur et adflatum magis sentit, celerius rorem dimittit, pampinationi quoque et occationi omnique operi facilior. super cetera deflorescit utilius. iugum fit pertica aut harundine aut crine funiculove, ut in hispania brundisique. conpluviata copiosior vino est, dicta a cavis aedium conpluviis. dividitur in quaternas partes totidem iugis. huius serendi ratio dicetur, eadem valitura in omni genere, in hoc vero numerosior tantum. iii vero seritur modis: optime in pastinato, proxime in sulco, novissime in scrobe.

de pastinatione dictum est; sulco latitudo palae satis est, scrobibus ternorum pedum in quamque partem. altitudo in quocumque genere tripedalis, ideo nec vitis minor transferri debet, exstatura etiamnum duabus gemmis. emolliri terram minutis in scrobe imo sulcis fimoque misceri necessarium. clivosa altiores scrobes poscunt, praeterea pulvinatis a devexitate labris. qui ex his longiores fient, ut vites binas accipiant e diverso, alvei vocabuntur. esse vitis radicem in medio scrobe oportet, sed ipsam innixam solido in orientem aequinoctialem spectare, adminicula prima e calamo accipere; vineas limitari decumano xviii pedum latitudinis ad contrarios vehiculorum

transitus, aliisque traversis limitibus denum pedum distingui per media iugera aut, si maior modus sit, totidem pedum cardine, quot decumano, limitari, semper vero quintanis semitari, hoc est ut quinto quoque palo singulae iugo paginae includantur; solo spisso non nisi repastinato nec nisi viveradicem seri, tenero et soluto vel malleolum sulco vel scrobe. in colles sulcos agere traversos melius quam pastinare, ut defluvia transtris eorum contineantur; aquoso caelo vel sicco solo malleolos serere autumno, nisi si tractus ratio mutabit. siccus enim et calidus autumno poscet, umidus frigidusque etiam veris exitu. in arido solo viveradix quoque frustra seritur, male et in siccis malleolus, nisi post imbrem, at in riguis vel frondens vitis et usque ad solstitium recte, ut in hispania. quiescere ventos sationis die utilissimum. plerique austros optant, cato abdicat.

interesse medio temperamento inter binas vites oportet pedes quinos, minimum autem laeto solo pedes quaternos, tenui plurimum octonos - umbri et marsi ad vicenos intermittunt arationis gratia in his, quae vocant porculeta - , pluvio et caliginoso tractu rariores poni, sicco densiores. subtilitas parsimoniae conpendia invenit, cum vinea in pastinato seratur, obiter seminarium faciendi, ut et viveradix loco suo et malleolus, qui transferatur, inter vites et ordines seratur, quae ratio in iugero circiter [xvi] viveradicum donat. interest autem biennium fructus, quo tardius in sato provenit quam in tralato.

viveradix posita in vinea post annum resecatur usque ad terram, ut unus tantum emineat oculus, adminiculo iuxta adfixo et fimo addito. simili modo et secundo anno reciditur viresque concipit et intra se pascit suffecturas oneri. alias festinatione pariendi gracilis atque eiuncida, ni cohibeatur castigatione tali, in fetum exeat tota. nihil avidius nascitur ac, nisi ad pariendum vires serventur, tota fit fetus.

pedamenta optuma, quae diximus, aut ridicae e robore oleaque, si non sint, pali e iunipero, cupresso, laburno, sabuco. reliquorum generum sudes omnibus annis reciduntur. saluberrima in iugo harundo conexa fasciculis durat annis quinis. cum breviores palmites sarmento iunguntur inter se funium modo, ex hoc arcus funeta dicuntur.

tertius vineae annus palmitem velocem robustumque emittit et quem faciat aetas vitem. hic in iugum insilit. aliqui tum excaecant eum supina falce auferendo oculos, ut longius evocent, noxia iniuria.

utilior enim consuetudo pariendi satiusque pampinos adiugatae detergere usque quo placeat roborari eam. sunt qui vetant tangi proximo anno, quam tralata sit, neque ante lx mensem falce curari, tunc autem ad iii gemmas recidi. alii et proximo quidem anno recidunt, sed ut ternos quaternosve singulis annis adiciant articulos, quarto demum perducant ad iugum. id utrimque fructu tardum, praeterea retorridum et nodosum pumilionum incremento. optimum autem matrem esse firmam, postea fetum audacem. nec tutum est quod cicatricosum, magno imperitiae errore; quidquid est tale, plagis nascitur, non e matre. totas habeat illa vires, dum roboratur, et annuos accipiet tota fetus, cum permissum fuerit nasci. nihil natura portionibus parit. quae excreverit satis firma, protinus in iugo collocari debebit; si etiamnum infirmior erit, sub ipso iugo hospitari recisa. viribus, non aetate, decernitur. temerarium est ante crassitudinem pollicarem viti imperare. sequente anno palmites educentur pro viribus matris singuli aut gemini. iidem et secuto, si coget infirmitas, nutriantur, tertioque demum ii adiciantur. nec sunt plures quaternis umquam permittendi, breviterque non indulgendum et semper inhibenda fecunditas est. ea est natura, ut parere malit quam vivere. quidquid materiae adimitur, fructui accedit. illa semina mavult quam fructum gigni, quoniam fructus caduca res est. sic perniciose luxuriat, nec ampliat se, sed egerit.

dabit consilium et soli natura. in macro, etiamsi vires habebit, recisa intra iugum moretur, ut omnis fetura sub eo exeat. minimum id esse debebit intervallum, ut attingat iugum speretque, non teneat, adeo non recumbat in eo nec delicate se spargat. ita temperetur hic modus, ut crescere etiamnum malit quam parere.

palmes duas tresve gemmas habere sub iugo debet, ex quibus materia nascatur, tunc per iugum mergi alligarique, ut sustineatur iugo, non pendeat, vinculo mox adstrictius a tertia gemma alligari, quoniam et sic coercetur impetus materiae densioresque citra pampini exultant. cacumen religari vetant. natura haec est: deiecta pars aut praeligata fructum dat, plurimumque ipsa curvatura. quod citra est, materiem emittit, offensante, credo, spiritu et illa quam diximus medulla. quae ita emicuerit materia fructum dabit anno sequente. sic duo genera palmitum: quod e duro exit materiamque in proximum annum promittit, pampinarium vocatur aut, ubi supra

cicatricem est, fructuarium; alterum ex anniculo palmite semper fructuarium. relinquitur sub iugo et qui vocatur custos - hic est novellus palmes, non longior tribus gemmis - proximo anno materiam daturus, si vitis luxuria se consumpserit, et alius iuxta eum, verrucae magnitudine, qui furunculus appellatur, si forte custos fallat.

vitis, antequam septumum annum a surculo conpleat, evocata ad fructum eiuncescit ac moritur. nec veterem placet palmitem in longum et ad quartum usque pedamentum emitti, quod alii dracones, alii funiculos vocant, ut faciant quae masculeta appellant. cum induruit vitis, pessimum in vinea traducere. quinto anno et ipsi palmites intorquentur singulaeque singulis materiae emittuntur ac deinde proximis, prioresque amputantur. semper custodem relinqui melius, sed is proximus viti esse debet, nec longior quam dictum est, et, si luxuriaverint palmites, intorqueri, ut iv materias vel ii, si uniiuga erit vinea, emittat.

si per se vitis ordinabitur sine pedamento, qualecumque initio adminiculum desiderabit, dum stare condiscat et recta surgere, cetera a primordio eadem, dividi autem putatione pollices in aequali examine undique, ne praegravet fructus parte aliqua. obiter idem deprimens prohibebit in excelsum emicare. huic vineae trium pedum altitudo excelsior nutat, ceteris a quinto, dum ne excedat hominis longitudinem iustam. iis quoque, quae sparguntur in terra, breves ad limitandum caveas circumdant, scrobibus per ambitum factis, ne vagi palmites inter se pugnent occursantes, maiorque pars terrarum ita supinam in tellure vindemiam metit, siquidem et in africa et in aegypto syriaque ac tota asia et multis locis europae hic mos praevalet. ibi ergo iuxta terram conprimi debet vitis, eodem modo et tempore nutrita radice, quo in iugata vinea, ut semper pollices tantum relinquantur, fertili solo cum tribus gemmis, graciliore binis, praestatque multos esse quam longos. quae de natura soli diximus, tanto potentiora sentientur, quanto propior fuerit uva terrae.

genera separari ac singulis conseri tractus utilissimum - mixtura enim generum etiam in vino, non modo in musto, discors - aut, si misceantur, non alia quam pariter maturescentia iungi necessarium. iuga altiora, quo laetior ager et quo planior, item roscido, nebuloso minusque ventoso conveniunt, contra humiliora gracili et arido et aestuoso ventisque exposito. iuga ad pedamentum quam artissimo

nodo vinciri oportet, vitem levi contineri. quae genera vitium et in quali solo caeloque essent conserenda, cum enumeraremus naturas earum et vinorum, docuimus.

de reliquo cultu vehementer ambigitur. plerique aestate tota post singulos rores confodi iubent vineam, alii vetant gemmantem; decuti enim oculos tractuque intrantium deteri, et ob id arcendum procul omne quidem pecus, sed maxime lanatum, quoniam facillime auferat gemmas. inimicos et pubescente uva rastros, satisque esse vineam ter anno confodi, ab aequinoctio verno ad vergiliarum exortum et canis ortu et nigrescente acino. quidam ita determinant: veterem semel a vindemia ante brumam, cum alii ablaqueare et stercorare satis putent, iterum ab idibus aprilibus, antequam concipiat, hoc est in vi idus maias; dein prius quam florere incipiat et cum defloruerit et variante se uva. peritiores adfirmant, si iusto saepius fodiatur, in tantum tenerescere acinos, ut rumpantur. quae fodiantur, ante ferventes horas diei fodiendas convenit, sicuti lutum neque arare neque fodere, fossione pulverem excitatum contra soles nebulasque prodesse.

pampinatio verna in confesso est ab idibus maiis, intra dies x, utique antequam florere incipiat, et eam infra iugum debere fieri. de sequente variant sententiae. cum defloruerit, aliqui pampinandum putant, alii sub ipsa maturitate. sed de his catonis praecepta decernent. namque et putationum tradenda ratio est.

protinus hanc a vindemia, ubi caeli tepor indulget, adoriuntur. sed et in hoc fieri numquam debet ratione naturae ante exortum aquilae, ut in siderum causis docebimus proximo volumine, immo vero favonio, quoniam anceps culpa sit praeproperae festinationis. si saucias recenti medicina mordeat quaedam hiemis ruminatio, certum est gemmas earum frigore hebetari plagasque findi et caeli vitio exuri oculos lacrima destillante. nam gelu fragiles fieri quis nescit operarum ista conputatio est in latifundis, non legitima naturae festinatio. quo maturius putantur aptis diebus, eo plus materiae fundunt; quo serius, eo fructum uberiorem. quare macras prius conveniet putare, validas novissime, plagam omnem obliquam fieri, ut facile decidant imbres, et ad terram verti quam levissima cicatrice acie falcis exacuta plagaque conlevata, recidi autem semper inter ii gemmas, ne sit vulnus oculis in recisa parte. nigram esse eam existimant et, donec ad sincera veniatur, recidendam, quoniam e

vitioso materia utilis non exeat. si macra vitis idoneos palmites non habeat, ad terram recidi eam novosque elici utilissimum, in pampinatione non hos detrahere pampinos, qui cum uva sint; id enim et uvas supplantat praeterquam in novella vinea. inutiles iudicantur in latere nati, non ab oculo, quippe etiam uva, quae nascatur e duro, rigescente, ut nisi ferro detrahi non possit. pedamentum quidam inter ii vites utilius putant statui, et facilius ablaqueantur ita, meliusque est uniiugae vineae, si tamen et ipsi iugo sint vires nec flatu infesta regio. in quadripertita quam proximum oneri adminiculum esse debet, ne tamen inpedimentum sentiat ablaqueatio, cubito abesse non amplius, ablaqueari autem prius quam putari iubent.

cato de omni cultura vitium ita praecipit: “quam altissimam vineam facito alligatoque recte, dum ne nimium constringas. hoc modo eam curato: capita vitium per sementim ablaqueato. vineam putatam circumfodito, arare incipito, ultro citroque sulcos perpetuos ducito. vites teneras quam primum propagato, sic occato: veteres quam minimum castrato; potius, si opus erit, deicito biennioque post praecidito. vitem novellam resecari tum erit tempus, ubi valebit. si vinea ab vite calvata erit, sulcos interponito ibique vivam radicem serito. umbram a sulcis removeto, crebroque fodito. in vinea vetere serito ocinum, si macra erit - quod granum capit ni serito - , et circum capita addito stercus, paleas, vinaceas, aliquid horumce. ubi vinea frondere coeperit, pampinato. vineas novellas alligato crebro, ne caulis praefringatur, et quae iam in perticam ibit, eius pampinos teneros alligato leviter porrigitoque, uti recte stent. ubi uva varia fieri coeperit, vites subligato ... vitis insitio una est per ver, altera cum uva floret; ea optima est. - vineam veterem si in alium locum transferre voles, dumtaxat bracchium crassam licebit. primum deputato; binas gemmas ne amplius relinquito. ex radicibus bene exfodito et cave, ne radices saucies. ita uti fuerit, ponito in scrobe aut in sulco operitoque et bene occulcato, eodemque modo vineam statuito, alligato flexatoque, uti fuerit, crebroque fodito.” - ocinum, quod in vinea seri iubet, antiqui appellabant pabulum umbrae patiens, quod celerrime proveniat.

sequitur arbusti ratio mirum in modum damnata sasernae patri filioque, celebrata scrofae, vetustissimis post catonem peritissimisque, ac ne a scrofa quidem nisi italiae concessa, cum tam

longo iudicetur aevo nobilia vina non nisi in arbustis gigni et in his quoque laudatiora summis sicut uberiora imis. adeo excelsitate proficitur. hac ratione et arbores eliguntur. prima omnium ulmus, excepta propter nimiam frondem atinia. dein populus nigra, eadem de causa, minus densa folio. non spernunt plerique et fraxinum ficumque, etiam oleam, si non sit umbrosa ramis. harum satus cultusque abunde tractatus est. ante xxxvi mensem attingi falce vetantur. alterna servantur bracchia, alternis putantur annis, sexto anno maritantur. transpadana italia praeter supra dictas cornu, opulo, tilia, acere, orno carpino, quercu arbustat agros, venetia salice propter uliginem soli. et ulmus detruncata media in tria ramorum scamna digeritur, nulla fere xx pedum altiore arbore. tabulata earum ab octavo pede altitudinis dilatantur in collibus siccisque agris, a duodecumo in campestribus et umidis. meridianum solem spectare palmae debent, rami a proiectu digitorum modo subrigi, tonsili in his tenuium quoque virgultorum barba, ne obumbrent. intervallum iustum arborum, si aretur solum, quadrageni pedes in terga frontemque, in latera viceni; si non aretur, hoc in omnes partes. singulis denas saepe adnutriunt vites, damnato agricola minus ternis. maritare nisi validas inimicum, enecante veloci vitium incremento. serere tripedaneo scrobe necessarium distantes inter sese arboremque singulis pedibus. nihil ibi malleoli atque pastinationis, nulla fodiendi inpendia, utpote cum arbusti ratio hac peculiari dote praestet, quod ab eodem solo ferri fruges et vitibus prodest, superque quod vindicans se altitudo non, ut in vinea, ad arcendas animalium iniurias pariete vel saepe vel fossarum utique inpendio muniri se cogit.

in arbusto e praedictis sola viveradicum ratio, item propaginum, et haec gemina, ut diximus: qualorum ex ipso tabulato maxime probata, quoniam a pecore tutissima est, altera deflexa vite vel palmite iuxta suam arborem aut circa proximam caelibem. quod supra terram est e matre, radi iubetur, ne fruticet. in terra non pauciores iv gemmae obruuntur ad radicem capiendam, extra in capite binae relincuntur. vitis in arbusto iv pedes longo constat omnis sulco, tres lato, alto duos cum semipede. post annum propago inciditur ad medullam, ut paulatim radicibus suis adsuescat; caulis a capite ad duas gemmas reciditur; tertio totus mergus absciditur repetiturque altius in terram, ne ex reciso frondeat. tolli viveradix a vindemia protinus debet.

nuper repertum draconem serere iuxta arborem; ita appellamus palmitem emeritum pluribusque induratum annis. hunc praecisum quam maxima amplitudine, tribus partibus longitudinis deraso cortice, quatenus obruatur - unde et rasilem vocant - , deprimere sulco, reliqua parte ad arborem erecta, ocissimum in vite. si gracilis sit vitis aut terra, usitatum est quam proxime solum decidi, donec firmetur radix, sicuti neque roscidam seri neque a septentrionis flatu. vites aquilonem spectare debent ipsae, palmites autem earum meridiem.

non est festinandum ad putationem novellae, sed primo in circulos materies colligenda, nec nisi validae putatio admovenda, seriore anno fere ad fructum arbusta vite quam iugata. sunt qui omnino putari vetent, priusquam arborem longitudine aequaverit. prima falce vi pedes a terra recidatur, flagello infra relicto et nasci coacto incurvatione materiae. iii ei gemmae, non amplius, deputato supersint. ex his omissi palmites proximo anno imis digerantur scamnis ac per singulos annos ad superiora scandant, relicto semper duramento in singulis tabulatis et emissario uno, qui subeat usque quo placuerit. de cetero putatione omnia flagella, quae proxime tulerint, recidantur, nova circumcisis undique capreolis spargantur in tabulatis. vernacula putatio deiectis per ramos vitium crinibus circumvestit arborem crinesque ipsos uvis, gallica in traduces porrigitur, aemiliae viae in ridicas atiniarum ambitu, frondem earum fugiens.

est quorundam inperitia sub ramo vitem vinculo suspendendi, suffocante iniuria. contineri debet vimine, non artari; quin immo etiam quibus salices supersunt, molliore hoc vinculo facere malunt, herbaque siculi, quam vocant ampelodesmon, graecia vero universa iunco, cypero, ulva. liberata quoque vinculo per aliquot dies vagari et incondita spargi atque in terra, quam per totum annum spectaverit, recumbere; namque ut veterina a iugo et canes a cursu volutatio iuvat, ita tum et vitium porrigi lumbos. arbor quoque ipsa gaudet adsiduo levata onere, similis respiranti, nihilque est in opere naturae, quod non exemplo dierum noctiumque aliquas vices feriarum velit. ob id protinus a vindemia putari et lassas etiamnum fructu edito inprobatur. putatae rursus alligentur alio loco, namque orbitas vinculi sentiunt vexatione non dubia.

traduces gallicae culturae bini utrimque e lateribus, si par quadrageno distet spatio, quaterni, si viceno, inter se obvii miscentur alliganturque una conciliati, virgultorum comitatu obiter rigorati, qua deficiant, aut, si brevitas non patiatur ipsorum, adalligato protenduntur in viduam arborem unco. traducem bimum praecidere solebant - onerat enim vetustate - ; melius donare tempus, ut rasilem faciant, si largiatur crassitudo. alias utile toros futuri draconis pasci.

unum etiamnum genus est medium inter hoc et propaginem, totas supplantandi in terram vites cuneisque findendi et in sulcos plures simul ex una propagandi, gracilitate singularum firmata circumligatis hastilibus nec recisis, qui a lateribus excurrant, pampinis. novariensis agricola, traducum turba non contentus nec copia ramorum, inpositis etiamnum patibulis palmites circumvolvit; itaque praeter soli vitia cultura quoque torva fiunt vina. alia culpa iuxta urbem aricinis, quae alternis putantur annis, non quia id viti conducat, sed quia vilitate reditum inpendia exuperent. medium temperamentum in carsulano secuntur cariosasque tantum vitis partes incipientesque inarescere deputando, ceteris ad uvam relictis. detracto onere supervacuo pro nutrimento omni est raritas volneris; sed nisi pingui solo talis cultura degenerat in labruscam.

arbusta arari quam altissime desiderant, tametsi frumenti ratio non exigit. pampinari ea non est moris; et hoc conpendium operae. deputantur cum vite pariter interlucata densitate ramorum, qui sint supervacui et absumant alimenta. plagas ad septentriones aut ad meridiem spectare vetuimus; melius, si neque in occasus solis. diu dolent talia quoque ulcera et difficile sanescunt algendo nimis aestuandove. non eadem ut in vite libertas, quoniam certa latera, sed facilius abscondere et detorquere, quo velis, plagas. in arborum tonsura supiniore velut calices faciendi, ne consistat umor.

viti adminicula addenda, quae scandat adprehensa, si maiora sint. vitium generosarum pergulas quinquatribus putandas et, quarum servare uvas libeat, decrescente luna tradunt; quae vero interlunio sint putatae, nullis animalium obnoxias esse. alia ratione plena luna noctu tondendas, cum sit ea in leone, scorpione, sagittario, tauro, atque in totum serendas plena aut crescente utique censent. sufficiunt in italia cultores deni in centena iugera vinearum.

et abunde satu cultuque arborum tractato, quoniam de palmis et

cytiso in peregrinis arboribus adfatim diximus, ne quid desit, indicanda reliqua natura est magno opere pertinens ad omnia ea. infestantur namque et arbores morbis. quid enim genitum caret his malis et silvestrium quidem perniciosos negant esse vexarique tantum grandine in germinatione aut flore, aduri quoque fervore aut flatu frigidiore, praepostero die, nam suo frigora etiam prosunt, ut diximus. quid ergo non et vites algore intereunt hoc quidem est, quo deprehendatur soli vitium, quoniam non evenit nisi in frigido. itaque per hiemes caeli rigorem probamus, non soli. nec infirmissimae arbores gelu periclitantur, sed maximae, vexatisque ita cacumina prima inarescunt, quoniam praestrictus non potuit eo pervenire umor.

arborum quidam communes morbi, quidam privati generum. communis vermiculatio et sideratio ac dolor membrorum, unde partium debilitas, societate nominum quoque cum hominis miseriis. trunca dicimus certe corpora et oculos germinum exustos ac multa simili sorte. itaque laborant et fame et cruditate, quae fiunt umoris quantitate, aliqua vero et obesitate, ut omnia, quae resinam ferunt, nimia pinguitudine in taedam mutantur et, cum radices quoque pinguescere coepere, intereunt, ut animalia nimio adipe, aliquando et pestilentia per genera, sicut inter homines nunc servitia, nunc plebes urbana vel rustica.

vermiculantur magis minusve quaedam, omnes tamen fere, idque aves cavi corticis sono experiuntur. iam quidem et hoc in luxuria esse coepit, praegrandesque roborum delicatiore sunt in cibo - cosses vocant - atque etiam farina saginati hi quoque altiles fiunt. maxime autem arborum hoc sentiunt piri, mali, fici, minus quae amarae sunt et odoratae. eorum, qui in ficis existunt, alii nascuntur ex ipsis, alios parit qui vocatur cerastes, omnes tamen in cerasten figurantur sonumque edunt parvoli stridoris. et sorbus arbor infestatur vermiculis rufis ac pilosis atque ita emoritur; mespila quoque in senecta obnoxia ei morbo est.

sideratio tota e caelo constat. quapropter et grando in his causis intellegi debet et carbunculatio et quod pruinarum iniuria evenit. haec enim verno tepore invitatis et erumpere audentibus satis mollibus insidens adurit lactescentes germinum oculos, quod in flore carbunculum vocant. pruinae perniciosior natura, quoniam lapsa persidit gelatque ac ne aura quidem ulla depellitur, quia non fit nisi

inmoto ae+re et sereno. proprium tamen siderationis est sub ortu canis siccitatum vapor, cum insita ac novellae arbores moriuntur, praecipue ficus et vitis.

olea praeter vermiculationem, quam aeque ac ficus sentit, clavum etiam patitur, sive fungum placet dici vel patellam. haec est solis exustio. nocere tradit cato et muscum rubrum. nocet plerumque vitibus atque oleis et nimia fertilitas. scabies communis omnium est. inpetigo et, quae adgnasci solent, cocleae peculiaria ficorum vitia, nec ubique. sunt enim quaedam aegritudines et locorum.

verum ut homini nervorum cruciatus, sic et arbori, ac duobus aeque modis. aut enim in pedes, hoc est radices, inrumpit vis morbi, aut in articulos, hoc est cacuminum digitos, qui longissime a toto corpore exeunt. nigrescunt ergo, et sunt apud graecos sua nomina utrique vitio. undique primo dolor, mox et macies earum partium fragilis, postremo tabes morsque, non intrante suco aut non perveniente, maximeque id fici sentiunt. caprificus omnibus immunis est, quae adhuc diximus. scabies gignitur roribus lentis post vergilias; nam si largiores fuere, perfundunt arborem, non scalpunt scabie, et grossi cadunt; sive imbres nimii fuere, alio modo ficus laborat, radicibus madidis.

vitibus praeter vermiculationem et siderationem morbus peculiaris articulatio tribus de causis: una vi tempestatium germinibus ablatis, altera, ut notavit theophrastus, in supinum excisis, tertia culturae imperitia laesis. omnes enim earum iniuriae in articulis sentiuntur. siderationis genus est et his deflorescentibus roratio, aut cum acini, priusquam crescant, decocuntur in callum. aegrotant et cum alsere, laesis uredine attonsarum oculis. et calore hoc evenit intempestivo, quoniam omnia modo constant certoque temperamento. fiunt et culpa colentium vitia, cum praestringuntur, ut dictum est, aut circumfossor iniurioso ictu verberavit vel etiam subarator inprudens luxavit radices corpusve desquamavit. est et quaedam contusio falcis hebetioris. quibus omnibus causis difficilius tolerant frigora aut aestus, quoniam in ulcus penetrat iniuria omnis a foris. infirmissima vero malus, maximeque quae dulcis est. quibusdam debilitas sterilitatem, non necem, adfert, ut si quis pino cacumen auferat vel palmae. sterilescunt enim nec moriuntur. aegrotant aliquando et poma ipsa per se sine arbore, si necessariis temporibus imbres aut tepores vel

adflatus defuere aut contra abundavere. decidunt enim aut deteriora fiunt. pessimum est inter omnia, cum deflorescentem vitem et oleam percussit imber, quoniam simul defluit fructus.

sunt ex eadem causa nascentes et urucae, dirum animal, eroduntque frondem, aliae florem quoque, olivarum, ut in mileto, ac depastam arborem turpi facie relinquunt. nascitur hoc malum tepore umido et lento. fit aliud ex eodem, si sol acrior insecutus inussit ipsum vitium ideoque mutavit. est etiamnum peculiare olivis et vitibus - araneum vocant - , cum veluti telae involvunt fructum et absumunt. adurunt et flatus quidam eas maxime, sed et alios fructus. nam vermiculationem et poma ipsa per se quibusdam annis sentiunt, mala, pira, mespila, punica. in oliva ancipiti eventu, quando sub cute innati fructum adimunt, augent, si in ipso nucleo fuere erodentes eum. gigni illos prohibent pluviae, quae fiunt post arcturum. eaedem si austrinae fuere, generant druppis quoque, quae maturescentes tum sunt praecipue caducae. id riguis magis evenit, etiam si non cecidere, fastidiendis. sunt et culicum genera aliquis molesta, ut glandibus, fico; qui videntur ex umore nasci, tum dulci subdito corticibus. et aegrotatio quidem fere in his est.

quaedam temporum causae aut locorum non proprie dicantur morbi, quoniam protinus necant, sicut tabes cum invasit arborem aut uredo vel flatus alicuius regionis proprius, ut est in apulia atabulus, in euboea olympias. hic enim si flavit circa brumam, frigore exurit arefaciens, ut nullis postea solibus recreari possint. hoc genere convalles et adposita fluminibus laborant, praecipueque vitis, olea, ficus. quod cum evenit, detegitur statim in germinatione, in oliva tardius. sed in omnibus signum est revivescendi, si folia amisere. alioqui quas putes praevaluisse moriuntur. nonnumquam inarescunt folia eademque revivescunt. alia in terris septentrionalibus, ut ponto, thracia, frigore aut gelu laborant, si post brumam continuavere xl diebus. et ibi autem et in reliquis partibus, si protinus editis fructibus gelatio magna consecuta est, etiam paucis diebus necat.

quae iniuria hominum constant, secundum ... habent causas. pix, oleum, adeps inimica praecipue novellis. cortice in orbem detracto necantur, excepto subere, quod sic etiam iuvatur; crassescens enim praestringit et strangulat. nec andrachle offenditur, si non simul incidatur et corpus. alioqui et cerasus et tilia et vitis corticem mittunt,

sed non vitalem nec proximum corpori, verum eum, qui subnascente alio expellitur. quarundam natura rimosus cortex, ut platanis. tiliae renascitur paulo minus quam totus. ergo his, quarum cicatricem trahit, medentur luto fimoque, et aliquando prosunt, si non vehementior frigorum aut calorum vis secuta est. quaedam tardius ita moriuntur, ut robora et quercus. refert et tempus anni. abieti enim et pino si quis detraxerit sole taurum vel geminos transeunte, cum germinant, statim moriuntur; eandem iniuriam hieme passae diutius tolerant. similiter ilex et robur quercusque. si angusta decorticatio fuit, nihil nocetur supra dictis; infirmioribus quidem et in solo gracili vel ab una tantum parte detractus interemit. similem et decacuminatio rationem habet piceae, cedri, cupressi - haec enim detracto cacumine aut ignibus adusto intereunt - , similem et depastio animalium. oleam quidem etiam, si lambat capra, sterilescere auctor est Varro, ut diximus. quaedam hac iniuria moriuntur, aliqua deteriora tantum fiunt, ut amygdalae - ex dulcibus enim transfigurantur in amaras - , aliqua vero etiam utiliora, ut apud chios pirus, quam phocida appellant. nam detruncatio diximus quibus prodesset. intereunt pleraque et fissa stirpe, exceptis vite, malo, fico, punicis, quaedam vel ab ulcere tantum. pinus hanc iniuriam spernit et omnia, quae resinam gignunt. radicibus amputatis mori minime mirum est; pleraeque etiam non omnibus, sed maximis aut, quae sunt inter illas vitales, abscisis moriuntur.

necant invicem inter sese umbra vel densitate atque alimenti rapina. necat et hedera vinciens - nec viscum prodest - et cytisus, necatur eo, quod halimon vocant graeci. quorundam natura non necat quidem, sed laedit odorum aut suci mixtura, ut raphanus et laurus vitem. olfactatrix enim intellegitur et tingui odore mirum in modum, ideo, cum iuxta sit, averti et recedere saporemque inimicum fugere. hinc sumpsit androcydes medicinam contra ebrietates, raphanum manducari praecipiens. odit et caulem et olus omne, odit et corylum, ni procul absint, tristis atque aegra. nitrum quidem et alumen, marina aqua calida et fabae putamina vel ervi ultima venena sunt.

inter vitia arborum est et prodigiis locus. invenimus ficos sub foliis natas, vitem et malum punicam stirpe fructum tulisse, non palmite aut ramis, vitem uvas sine foliis, oleas quoque amisisse folia bacis haerentibus. sunt et miracula fortuita. nam et oliva in totum

ambusta revixit et in boeotia derosae locustis fici regerminavere. mutantur arbores et colore fiuntque ex nigris candidae, non semper prodigio, sed eae maxime, quae ex semine nascuntur. et populus alba in nigram transit. quidam et sorbum, si in calidiora loca venerit, sterilescere putant. prodigio autem fiunt ex dulcibus acerba poma aut dulcia ex acerbis, e caprifico fici aut contra, gravi ostento, cum in deteriora mutantur, ex olea in oleastrum, ex candida uva et fico in nigras aut, ut laudiceae xerxis adventu, platano in oleam mutata. qualibus ostentis aristandri apud graecos volumen scatet, ne in infinitum abeamus, apud nos vero c. epidii commentarii, in quibus arbores locutae quoque reperiuntur. subsedit in cumano arbor gravi ostento paulo ante pompei magni bella civilia paucis ramis eminentibus; inventum sibyllinis libris internicionem hominum fore, tantoque eam maiorem, quanto propius ab urbe postea facta esset. sunt prodigia et cum alienis locis enascuntur, ut in capitibus statuarum vel aris, et cum in arboribus ipsis alienae. ficus in lauro nata est cyzici ante obsidionem. simili modo trallibus palma in basi caesaris dictatoris circa bella civilia eius. nec non et romae in capitolio in ara iovis bello persei enata palma victoriam triumphosque portendit. hac tempestatibus prostrata eodem loco ficus enata est m. messalae c. cassii censorum lustro, a quo tempore pudicitiam subversam piso gravis auctor prodidit. super omnia, quae umquam audita sunt, erit prodigium in nostro aevo neronis principis ruina factum in agro marrucino, vetti marcelli e primis equestris ordinis oliveto universo viam publicam transgresso arvisque inde e contrario in locum oliveti profectis.

nunc expositis arborum morbis consentaneum est dicere et remedia. ex his quaedam sunt communia omnium, quaedam propria quarundam. communia ablaqueatio, adcumulatio, adflari radices aut cooperiri, riguus dato potu vel ablato, fimum suco defectis, putatio levandis onere, item suco emisso quaedam veluti detractio sanguinis, circumrasio corticis, vitium extenuatio et domitura palmitum, gemmarum, si frigus retorridas hirtasque fecerit, repumicatio et quaedam politura. arborum his aliae magis, aliae minus gaudent, veluti cupressus et aquas aspernatur et fimum et circumfossuram amputationemque et omnia remedia odit, quin etiam necatur riguis, vitis et punicae praecipue aluntur. ficus arbor ipsa riguis alitur,

pomum vero eius marcescit. amygdalae, si colantur fossione, florem amittunt. nec insitas circumfodere oportet, priusquam validae ferre coeperint poma. plurimae autem amputari sibi volunt onerosa ac supervacua, sicut nos ungues et capillum. reciduntur veteres totae ac rursus a stolone aliquo resurgunt, sed non omnes nec nisi quarum naturam pati diximus.

rigua aestivis vaporibus utilia, hieme inimica, autumno varie et e natura soli, quippe cum vindemiator hispaniarum stagnante solo uvas demetat. cetero maiore in parte orbis etiam pluvias autumni aquas derivare convenit. circa canis ortum rigua maxime prosunt ac ne tum quidem nimia, quoniam inebriatis radicibus nocent. et aetas modum temperat, novellae enim minus sitiunt. desiderant autem maxime rigari quae adsuevere, contra siccis locis genita non expetunt umorem nisi necessarium.

asperiora vina rigari utique cupiunt in sulmonense italiae agro, pago fabiano, ubi et arva rigant. mirumque, herbae aqua illa necantur, fruges aluntur, et riguus pro sarculo est. in eodem agro bruma - tanto magis, si nives iaceant geletve - , ne frigus vites adurat, circumfundunt riguis, quod ibi tepidare vocant, memorabili natura in amne solis, eodem aestate vix tolerandi rigoris.

carbunculi ac robiginum remedia demonstrabimus volumine proximo. interim est et scariphatio quaedam in remediis, cum macie corticis ex aegritudine adstringente se iustoque plus vitalia arborum conprimente exacutam falcis aciem utraque manu inprimentes perpetuis incisuris diducunt ac veluti cutem laxant. salutare id fuisse argumento sunt dilatatae cicatrices et internato corpore expletae, magnaque ex parte similis hominum medicina et arborum est, quando earum quoque terebrantur ossa. amygdalae ex amaris dulces fiunt, si circumfosso stipite et ab ima parte circumforato defluens pituita abstergeatur. et ulmis detrahitur sucus inutilis, supra terram foratis usque ad medullam, in senecta aut cum alimento nimio abundare sentiuntur. idem et ficorum turgido cortice incisuris in oblicum levibus emittitur. ita fit, ne decidant fructus. pomiferis, quae germinant nec ferunt fructum, fissa radice inditur lapis fertilesque fiunt, hoc idem in amygdalis e robore cuneo adacto, in piris sorbisque e taeda ac cinere et terra cooperto. etiam radices circumcidisse prodest vitium luxuriantium ficorumque et circumcisis

cinerem addidisse. fici serotinae fiunt, si primae grossi, cum fabae magnitudinem excessere, detrahantur. subnascuntur enim quae serius maturescunt. eaedem, cum frondere incipiunt, si cacumina rami cuiusque detrahantur, firmiores fertilioresque fiunt, nam caprificatio maturat.

in ea culices nasci e grossis manifestum, quoniam, cum evolavere, non inveniuntur intus grana, quae in eos versa apparet. exeundi tanta est aviditas, ut plerique aut pede relicto aut pinnae parte erumpant. est et aliud genus culicum, quos vocant centrinas, fucis apium similes ignavia malitiaque cum pernicie verorum et utilium; interemunt enim illos atque ipsi commoriuntur. vexant et tineae semina ficorum, contra quas remedium in eodem scrobe defodere taleam lentisci inversa parte, quae fuerit a cacumine. uberrimas autem ficus rubrica amurca diluta et cum fimo infusa radicibus frondere incipientium facit. caprificorum laudantur maxime nigrae et in petrosis, quoniam frumenta plurima habeant. caprificatio ipsa post imbrem.

in primis autem cavendum, ne ex remediis vitia fiant, quod evenit nimia aut intempestiva medicina. interlucatio arboribus prodest, sed omnium annorum trucidatio inutilissima. vitis tantum tonsuram annuam quaerit, alternam vero myrtus, punicae, oleae, quia celeriter fruticescunt. ceterae rarius tondeantur, nulla autumno, ac ne radantur quidem nisi vere. putatione plaga ad vitalia ... sunt omnia, quaecumque non supervacua.

similis fimi ratio. gaudent eo, sed cavendum, ne in fervore solis admoveatur, ne inmaturum, ne validius quam opus sit. urit vineas suillum nisi quinquennio interposito, praeterquam si riguis diluatur, et e coriariorum sordibus nisi admixta aqua, item largius. iustum existimant in denos pedes quadratos iii modios. id quidem soli natura decernet.

columbino ac suillo plagis quoque arborum medentur. si mala punica acida nascantur, ablaqueatis radicibus fimum suillum addi iubent. eo anno vinolenta, proximo dulcia futura. alii urina hominis aqua mixta riganda censent quater anno, singulis amphoris, aut cacumina spargi vino lasere diluto; si findantur in arbore, pediculum intorqueri; ficis utique amurcam adfundi, ceteris arboribus aegris faecem vini, aut lupinum circum radices earum seri. aqua quoque lupini decocti circumfusa pomis prodest. fici, cum volcanalibus

tonuit, cadunt. remedium est, ut ante stipula hordeacea areae stringantur. cerasos praecoces facit cogitque maturescere calx admota radicibus. et haec autem, ut omnia poma, intervelli melius est, ut quae relicta sint grandescant.

quaedam poena emendantur aut morsu excitantur, ut palmae ac lentisci; salsis enim aquis aluntur. salis vim et cineres, sed leniorem, habent; ideo ficis adsperguntur rutaeque, ne fiant vermiosae neve radices putrescant. quin et vitium radicibus aquam salsam iubent adfundi, si sint lacrimosae; si vero fructus earum decidant, cinerem aceto conspergi ipsasque inlini aut sandaraca, si putrescat uva; si vero fertiles non sint, aceto acri subacto cinere rigari atque oblini; quod si fructum non maturent prius inarescentem, praecisarum ad radices plagam fibrasque aceto acri et urina vetusta madefacere atque eo luto obruere, saepe fodere. olearum, si parum promisere fructus, nudatas radices hiberno frigori opponunt, eaque castigatione proficiunt. omnia haec annua caeli ratione constant et aliquando serius poscuntur, aliquando celerius. nec non ignis aliquis prodest, ut harundini. ambusta namque densior mitiorque surgit. cato et medicamenta quaedam conponit, mensurae quoque distinctione, ad maiorum arborum radices amphoram, ad minorum urnam, amurcae et aquae portione aequa, ablaqueatis prius radicibus paulatim, adfundi iubens, in olea hoc amplius stramentis ante circumpositis, item fico; huius praecipue vere terram adaggerari radicibus; ita futurum, ut non decidant grossi maiorque fecunditas nec scabra proveniat. simili modo, ne convolvolus fiat in vinea, amurcae congios duos decoqui in crassitudinem mellis, rursusque cum bituminis tertia parte et sulpuris quarta sub diu coqui, quoniam exardescat sub tecto. hoc vites circa capita ac sub bracchiis ungui; ita non fore convolvolum. quidam contenti sunt fumo huius mixturae suffire vineas secundo flatu continuo triduo. plerique non minus auxilii et alimenti arbitrantur in urina quam cato in amurca, addita modo pari aquae portione, quoniam per se noceat. aliqui volucre appellant animal praerodens pubescentes uvas. quod ne accidat, falces, cum sint exacutae, fibrina pelle detergent atque ita putant aut sanguine ursino linunt post putationem easdem. sunt arborum pestes et formicae. has abigunt rubrica ac pice liquida perunctis caudicibus, nec non et pisce suspenso iuxta in unum locum congregant aut lupino

trito cum oleo radices linunt. multi et has et talpas amurca necant, contraque urucas et, ne mala putrescant, lacerti viridis felle tangi cacumina iubent, privatim autem contra urucas ambiri arbores singulas a muliere incitati mensis, nudis pedibus, recincta. item ne quod animal pastu malefico decerpat frondem, fimo boum diluto spargi folia, quotiens imber interveniat, quoniam abluatur ita virus medicaminis, mira quaedam excogitante sollertia humana, quippe cum averti grandines carmine credant plerique, cuius verba inserere non equidem serio ausim, quamquam a catone proditis contra luxata membra iungenda harundinum fissurae. idem arbores religiosas lucosque succidi permisit, sacrificio prius facto, cuius rationem precationemque eodem volumine tradidit.

LIBER XVIII

sequitur natura frugum hortorumque ac florum quaeque alia praeter arbores aut frutices benigna tellure proveniunt, vel per se tantum herbarum inmensa contemplatione, si quis aestimet varietatem, numerum, flores, odores coloresque et sucos ac vires earum, quas salutis aut voluptatis hominum gratia gignit. qua in parte primum omnium patrocinari terrae et adesse cunctorum parenti iuvat, quamquam inter initia operis defensae. quoniam tamen ipsa materia accedimus ad reputationem eiusdem parientis et noxia: nostris eam criminibus urguemus nostramque culpam illi inputamus. genuit venena. set quis invenit illa praeter hominem cavere ac refugere alitibus ferisque satis est. atque cum arbore exacuant limentque cornua elephanti et uri, saxo rhinocerotes, utroque apri dentium sicas, sciantque ad nocendum praeparare se animalia, quod tamen eorum excepto homine et tela sua venenis tinguit nos et sagittas tinguimus ac ferro ipsi nocentius aliquid damus, nos et flumina inficimus et rerum naturae elementa, ipsumque quo vivitur in perniciem vertimus. neque est, ut putemus ignorari ea ab animalibus; quae praepararent contra serpentium dimicationes, quae post proelium ad medendum excogitarent, indicavimus. nec ab ullo praeter hominem veneno pugnatur alieno. fateamur ergo culpam ne iis quidem, quae nascuntur, contenti; etenim quanto plura eorum genera humana manu fiunt! quid non et homines quidem ut venena nascuntur atra ceu serpentium lingua vibrat tabesque animi contacta adurit culpantium omnia ac dirarum alitum modo tenebris quoque suis et ipsarum noctium quieti invidentium gemitu, quae sola vox eorum est, ut inauspicatarum animantium vice obvii quoque vetent agere aut prodesse vitae. nec ullum aliud abominati spiritus praemium novere quam odisse omnia. verum et in hoc eadem naturae maiestas. quanto plures bonos genuit ut fruges! quanto fertilior in his, quae iuvent alantque! quorum aestimatione et gaudio nos quoque, relictis exustioni suae istis hominum rubis, pergemus excolere vitam eoque constantius, quo operae nobis maior quam famae gratia expetitur. quippe sermo circa rura est agrestesque usus, sed quibus vita constet honosque apud priscos maximus fuerit.

arvorum sacerdotes romulus in primis instituit seque duodecimum fratrem appellavit inter illos acca larentia nutrice sua genitos, spicea corona, quae vitta alba colligaretur, sacerdotio ei pro religiosissimo insigni data; quae prima apud romanos fuit corona, honosque is non nisi vita finitur et exules etiam captosque comitatur. bina tunc iugera p. r. satis erant, nullique maiorem modum adtribuit, quo servorum paulo ante principis neronis contento huius spatii viridiariis piscinas iuvat maiores habere, gratumque, si non aliquem culinas. numa instituit deos fruge colere et mola salsa supplicare atque, ut auctor est hemina, far torrere, quoniam tostum cibo salubrius esset, id uno modo consectus, statuendo non esse purum ad rem divinam nisi tostum. is et fornacalia instituit farris torrendi ferias et aeque religiosas terminis agrorum. hos enim deos tum maxime noverant, seiamque a serendo, segestam a segetibus appellabant, quarum simulacra in circo videmus - tertiam ex his nominare sub tecto religio est - , ac ne degustabant quidem novas fruges aut vina, antequam sacerdotes primitias libassent.

iugum vocabatur, quod uno iugo boum in die exarari posset; actus, in quo boves agerentur cum aratro uno impetu iusto. hic erat cxx pedum duplicatusque in longitudinem iugerum faciebat. dona amplissima imperatorum ac fortium civium quantum quis uno die plurimum circumaravisset, item quartarii farris aut heminae, conferente populo. cognomina etiam prima inde: pilumni, qui pilum pistrinis invenerat, pisonis a pisendo, iam fabiorum, lentulorum, ciceronum, ut quisque aliquod optime genus sereret. iuniorum e familia bubulcum nominarunt, qui bubus optime utebatur. quin et in sacris nihil religiosius confarreationis vinculo erat, novaeque nuptae farreum praeferebant. agrum male colere censorium probrum iudicabatur, atque, ut refert cato, cum virum bonum laudantes bonum agricolam bonumque colonum dixissent, amplissime laudasse existimabantur. hinc et locupletes dicebant loci, hoc est agri, plenos. pecunia ipsa a pecore appellabatur. etiam nunc in tabulis censoriis pascua dicuntur omnia, ex quibus populus reditus habet, quia diu hoc solum vectigal fuerat. multatio quoque non nisi ovium boumque inpendio dicebatur, non omittenda priscarum legum benivolentia: cautum quippe est, ne bovem prius quam ovem nominaret, qui indiceret multam. ludos boum causa celebrantes bubetios vocabant.

servius rex ovium boumque effigie primum aes signavit. frugem quidem aratro quaesitam furtim noctu pavisse ac secuisse puberi xii tabulis capital erat, suspensumque cereri necari iubebant gravius quam in homicidio convictum, inpubem praetoris arbitratu verberari noxiamve duplionemve decerni. iam distinctio honosque civitatis ipsius non aliunde erat. rusticae tribus laudatissimae eorum, qui rura haberent, urbanae vero, in quas transferri ignominia esset, desidiae probro. itaque quattuor solae erant, a partibus urbis, in quis habitabant, suburana, palatina, collina, esquilina. nundinis urbem revisitabant et ideo comitia nundinis habere non licebat, ne plebes rustica avocaretur. quies somnusque in stramentis erat. gloriam denique ipsam a farris honore adoriam appellabant. equidem ipsa etiam verba priscae significationis admiror; ita enim est in commentariis pontificum: "augurio canario agendo dies constituantur, priusquam frumenta vaginis exeant nec antequam in vaginas perveniant."

ergo his moribus non modo sufficiebant fruges nulla provinciarum pascente italiam, verum etiam annonae vilitas incredibilis erat. manius marcius aedilis plebis primum frumentum populo in modios assibus datavit. l. minucius augurinus, qui spurium maelium coarguerat, farris pretium in trinis nundinis ad assem redegit undecimus plebei tribunus, qua de causa statua ei extra portam trigeminam a populo stipe conlata statuta est. seius in aedilitate assibus populo frumentum praestitit, quam ob causam et ei statuae in capitolio ac palatio dicatae sunt, ipse supremo die populi umeris portatus in rogum est. quo vero anno mater deum advecta romam est, maiorem ea aestate messem quam antecedentibus annis decem factam esse tradunt. M. Varro auctor est, cum l. metellus in triumpho plurimos duxit elephantos, assibus singulis farris modios fuisse, item vini congios ficique siccae pondo xxx, olei pondo x, carnis pondo xii. nec e latifundiis singulorum contingebat arcentium vicinos, quippe etiam lege stolonis licini incluso modo quingentorum iugerum, et ipso sua lege damnato, cum substituta filii persona amplius possideret. luxuriantis iam rei p. fuit ista mensura. mani quidem curi post triumphos inmensumque terrarum adiectum imperio nota contio est: perniciosum intellegi civem, cui septem iugera non essent satis. haec autem mensura plebei post exactos reges adsignata est.

quaenam ergo tantae ubertatis causa erat ipsorum tunc manibus imperatorum colebantur agri, ut fas est credere, gaudente terra vomere laureato et triumphali aratore, sive illi eadem cura semina tractabant, qua bella, eademque diligentia arva disponebant, qua castra, sive honestis manibus omnia laetius proveniunt, quoniam et curiosius fiunt. serentem invenerunt dati honores serranum, unde ei et cognomen. aranti quattuor sua iugera in vaticano, quae prata quintia appellantur, cincinnato viator attulit dictaturam et quidem, ut traditur, nudo, plenoque nuntius morarum: “vela corpus,” inquit, “ut perferam senatus populique romani mandata.” tales tum etiam viatores erant, quod ipsum nomen inditum est subinde ex agris senatum ducesque arcessentibus. at nunc eadem illa vincti pedes, damnatae manus inscriptique vultus exercent, non tam surda tellure, quae parens appellatur colique dicitur et ipso honore his absumpto, ut non invita ea et indignante credatur id fieri. et nos miramur ergastulorum non eadem emolumenta esse, quae fuerint imperatorum!

igitur de cultura agri praecipere principale fuit etiam apud exteros, siquidem et reges fecere, hiero, philometor, attalus, archelaus, et duces, xenophon et poenus etiam mago, cui quidem tantum honorem senatus noster habuit carthagine capta, ut, cum regulis africae bibliothecas donaret, unius eius duodetriginta volumina censeret in latinam linguam transferenda, cum iam m. cato praecepta condidisset, peritisque punicae dandum negotium, in quo praecessit omnes vir clarissimae familiae d. silanus. sapientiae vero auctores et carminibus excellentes quique alii illustres viri conposuissent, quos sequeremur, praetexuimus hoc in volumine, non in grege nominando M. Varrone, qui lxxxi vitae annum agens de ea re prodendum putavit.

apud romanos multo serior vitium cultura esse coepit, primoque, ut necesse erat, arva tantum coluere, quorum a nobis nunc ratio tractabitur, non volgari modo, verum, ut adhuc fecimus, et vetustis et postea inventis omni cura perquisitis causaque rerum et ratione simul eruta. dicemus et sidera siderumque ipsorum terrestria signa dabimus indubitata, quandoquidem qui adhuc diligentius ea tractavere, quibusvis potius quam agricolis scripsisse possunt videri. ac primum omnium oraculis maiore ex parte agemus, quae non in alio vitae

genere plura certiorave sunt. cur enim non videantur oracula, a certissimo deo maximeque veridico, usu, profecta

principium autem a catone sumemus: “fortissimi viri et milites strenuissimi ex agricolis gignuntur minimeque male cogitantes. - praedium ne cupide emas.” in re rustica “operae ne parcas, in agro emendo” minime. quod male emptum est, semper paenitet. agrum paraturos ante omnia intueri oportet “aquam, viam, vicinum.” singula magnas interpretationes habent nec dubias. cato in conterminis hoc amplius aestimari iubet, quo pacto niteant. “in bona enim,” inquit, “regione bene nitent.” atilius regulus ille punico bello bis consul aiebat neque fecundissimis locis insalubrem agrum parandum neque effetis saluberrimum. salubritas loci non semper incolarum colore detegitur, quoniam adsueti etiam in pestilentibus durant. praeterea sunt quaedam partibus anni salubria, nihil autem salutare est, nisi quod toto anno salubre. malus est ager, cum quo dominus luctatur.

cato inter prima spectari iubet, ut solum sua virtute valeat qua dictum est positione, ut operariorum copia prope sit oppidumque validum, ut navigiorum evectus vel itinerum, ut bene aedificatus et cultus. in quo falli plerosque video; segnitiem enim prioris domini pro emptore esse arbitrantur. nihil est damnosius deserto agro. itaque cato, de bono domino melius emi, nec temere contemnendam alienam disciplinam, agroque ut homini, quamvis quaestuosus sit, si tamen et sumptuosus, non multum superesse. ille in agro quaestuosissimam iudicat vitem, non frustra, quoniam ante omnia de inpensae ratione cavit; proxime hortos irriguos, nec id falso, si sub oppido sint; et prata antiqui parata dixere, idemque cato interrogatus, quis esset certissimus quaestus, respondit: “si bene pascas;” qui proximus: si “sat bene.” summa omnium in hoc spectando fuit, ut fructus is maxime probaretur, qui quam minimo inpendio constaturus esset. hoc ex locorum occasione aliter alibi decernitur. eodemque pertinet, quod agricolam vendacem esse oportere dixit, fundum in adulescentia conserendum sine cunctatione, aedificandum non nisi consito agro, tunc quoque cunctanter, optimumque est, ut volgo dixere, aliena insania frui, sed ita, ut villarum tutela non sit oneri. eum tamen, qui bene habitet, saepius ventitare in agrum, frontemque domini plus prodesse quam occipitium non mentiuntur.

modus hic probatur, ut neque fundus villam quaerat neque villa

fundum, non, ut fecere iuxta diversis in eadem aetate exemplis l. lucullus et q. scaevola, cum villa scaevolae fructus non caperet, villam luculli ager, quo in genere censoria castigatio erat minus arare quam verrere. nec hoc sine arte quadam est. novissimus villam in misenensi posuit c. marius vii cos., sed peritia castra metandi sic, ut conparatos ei ceteros etiam sulla felix caecos fuisse diceret. convenit neque iuxta paludes ponendam esse neque adverso amne, quamquam homerus omnino e flumine semper antelucanas auras insalubres verissime tradidit. spectare in aestuosis locis septentriones debet, meridiem in frigidis, in temperatis exortum aequinoctialem.

agri ipsius bonitas quibus argumentis iudicanda sit, quamquam de terrae genere optimo disserentes abunde dixisse possumus videri, etiamnum tamen traditas notas subsignabimus catonis maxime verbis: “ebulum vel prunus silvestris vel rubus, bulbus minutus, trifolium, herba pratensis, quercus, silvestris pirus malusque frumentarii soli notae, item nigra terra et cinerei coloris. omnis creta coquet, nisi permacra, sabulumque, nisi id etiam pertenue est, et multo campestribus magis quam clivosis respondent eadem.”

modum agri in primis servandum antiqui putavere, quippe ita censebant, satius esse minus serere et melius arare; qua in sententia et vergilium fuisse video. verumque confitentibus latifundia perdidere italiam, iam vero et provincias - sex domini semissem africae possidebant, cum interfecit eos nero princeps - , non fraudando magnitudine hac quoque sua cn. pompeio, qui numquam agrum mercatus est conterminum. agro empto domum vendendam inclementer atque non ex utilitate publici status mago censuit, hoc exordio praecepta pandere ingressus, ut tamen appareat adsiduitatem desideratam ab eo.

dehinc peritia vilicorum in cura habenda est, multaque de his cato praecepit. nobis satis sit dixisse, quam proximum domino corde esse debere et tamen sibimet ipsi non videri. coli rura ab ergastulis pessumum est, ut quidquid agitur a desperantibus. temerarium videatur unam vocem antiquorum posuisse, et fortassis incredibile, ni penitus aestimetur, “nihil minus expedire, quam agrum optime colere.” l. tarius rufus infima natalium humilitate consulatum militari industria meritus, antiquae alias parsimoniae, circiter [30m]30 hs liberalitate Divi Augusti congestum usque ad detractationem heredis

exhausit agros in piceno coemendo colendoque in gloriam. internicionem ergo famemque censemus immo, hercules, modum iudicem rerum omnium utilissimum. bene colere necessarium est, optime damnosum, praeterquam subole sua colono aut pascendis alioqui colente. domino aliquas messes colligere non expedit, si conputetur inpendium operae, nec temere olivam, nec quasdam terras diligenter colere, sicut in sicilia tradunt, itaque decipi advenas.

quonam igitur modo utilissime colentur agri ex oraculo scilicet: “malis bonis.” sed defendi aequum est abavos, qui praeceptis suis prospexere vitae. namque cum dicerent “malis”, intellegere voluere vilissimos, summumque providentiae illorum fuit, ut quam minimum esset inpendii. praecipiebant enim ista, qui triumphales denas argenti libras in supellectile crimini dabant, qui mortuo vilico relinquere victorias et reverti in rura sua postulabant, quorum heredia colenda suscipiebat res p., exercitusque ducebant senatu illis vilicante. inde illa reliqua oracula: “nequam agricolam esse quisquis emeret quod praestare ei fundus posset; malum patrem familias quisquis interdiu faceret, quod noctu posset, nisi in tempestate caeli; peiorem qui profestis diebus ageret, quod feriatis deberet; pessimum qui sereno die sub tecto potius operaretur quam in agro.” nequeo mihi temperare, quo minus unum exemplum antiquitatis adferam, ex quo intellegi possit, apud populum etiam de culturis agendi morem fuisse qualiterque defendi soliti sint illi viri. c. furius cresimus e servitute liberatus, cum in parvo admodum agello largiores multo fructus perciperet, quam ex amplissimis vicinitas, in invidia erat magna, ceu fruges alienas perliceret veneficiis. quamobrem ab spurio albino curuli aedile die dicta metuens damnationem, cum in suffragium tribus oporteret ire, instrumentum rusticum omne in forum attulit et adduxit familiam suam validam atque, ut ait piso, bene curatam ac vestitam, ferramenta egregie facta, graves ligones, vomeres ponderosos, boves saturos. postea dixit: “veneficia mea, quirites, haec sunt, nec possum vobis ostendere aut in forum adducere lucubrationes meas vigiliasque et sudores.” omnium sententiis absolutus itaque est. profecto opera, non inpensa, cultura constat, et ideo maiores fertilissimum in agro oculum domini esse dixerunt.

reliqua praecepta reddentur suis locis, quae propria generum singulorum erunt. interim communia, quae succurrunt, non

omittemus, et in primis catonis humanissimum utilissimumque: id agendum, ut diligant vicini. causas reddit ille, nos existimamus nulli esse dubias. - inter prima idem cavet, ne familiae male sit. - nihil sero faciendum in agricultura omnes censent, iterumque suo quaeque tempore facienda, et tertio praecepto praetermissa frustra revocari. - de terra cariosa execratio catonis abunde indicata est, quamquam praedicere non cessantis. - quidquid per asellum fieri potest, vilissime constat. - filex biennio moritur, si frondem agere non patiaris. id efficacissime contingit germinantis ramis baculo decussis; sucus enim ex ipsa defluens necat radices. aiunt et circa solstitium avolsas non renasci nec harundine sectas aut exaratas vomeri harundine inposita. similiter et harundinem exarari filice vomeri inposita praecipiunt. - iuncosus ager verti pala debet aut in saxoso bidentibus. frutecta igni optime tolluntur. umidiorem agrum fossis concidi atque siccari utilissimum est, fossas autem cretosis locis apertas relinqui, in solutiore terra saepibus firmari vel proclivibus ac supinis lateribus procumbere; quasdam obcaecari et in alias dirigi maiores patentioresque et, si sit occasio, silice vel glarea sterni, ora autem earum binis utrimque lapidibus statuminari et alio superintegi. silvae extirpandae rationem democritus prodidit, lupini flore in suco cicutae uno die macerato sparsisque radicibus.

et quoniam praeparatus est ager, nunc indicabitur natura frugum. sunt autem duo prima earum genera: frumenta, ut triticum, hordeum, et legumina, ut faba, cicer. differentia notior, quam ut indicari deceat.

frumenti ipsius totidem genera per tempora satu divisa: hiberna, quae circa vergiliarum occasum sata terra per hiemem nutriuntur, ut triticum, hordeum; aestiva, quae aestate ante vergiliarum exortum seruntur, ut milium, panicum, sesama, horminum, irio, italiae dumtaxat ritu. alioquin in graecia et in asia omnia a vergiliarum occasu seruntur, quaedam autem utroque tempore in italia, ex his quaedam et tertio veris. aliqui verna milium, panicum, lentem, cicer, alicam appellant, sementiva autem triticum, hordeum, fabam, rapam. et in tritici genere pars aliqua pabuli est quadripedum causa sati, ut farrago, et in leguminibus, ut vicia; ad communem quadripedum hominumque usum lupinum.

legumina omnia singulas habent radices praeter fabam, easque surculosas, quia non in multa dividuntur, altissimas autem cicer.

frumenta multis radicantur fibris sine ramis. erumpit a primo satu hordeum die septimo, legumen quarto vel, cum tardissime, septimo, faba a xv ad xx, legumina in aegypto tertio die. ex hordeo alterum caput grani in radicem exit, alterum in herbam, quae et prior floret. radicem crassior pars grani fundit, tenuior florem, ceteris seminibus eadem pars et radicem et florem.

frumenta hieme in herba sunt, verno tempore fastigantur in stipulam quae sunt hiberni generis, at milium et panicum in culmum geniculatum et concavum, sesama vero in ferulaceum. omnium satorum fructus aut spicis continetur, ut tritici, hordei, muniturque vallo aristarum contra aves et parvas quadripedes, aut includitur siliquis, ut leguminum, aut vasculis, ut sesamae ac papaveris. milium et panicum tantum pro indiviso et parvis avibus expositum est; indefensum quippe membranis continetur.

panicum a paniculis dictum, cacumine languide nutante, paulatim extenuato culmo paene in surculum, praedensis acervatur granis, cum longissima, pedali phoba. milio comae granum complexae fimbriato capillo curvantur. sunt et panico genera mammosa, e pano parvis racemata paniculis, et cacumine gemino; quin et colore distinguntur candido, nigro, rufo, etiam purpureo. panis multifariam et e milio fit, e panico rarus; sed nullum ponderosius frumentum est aut quod coquendo magis crescat. lx pondo panis e modio reducunt modiumque pultis ex tribus sextariis madidis. milium intra hos x annos ex india in italiam invectum est nigrum colore, amplum grano, harundineum culmo. adolescit ad pedes altitudine vii, praegrandibus comis - iubas vocant - , omnium frugum fertilissimum. ex uno grano sextarii terni gignuntur. seri debet in umidis.

frumenta quaedam in tertio genu spicam incipiunt concipere, quaedam in quarto, sed etiamnum occultam. genicula autem sunt tritico quaterna, farri sena, hordeo octona. sed non ante supra dictum geniculorum numerum conceptus est spicae, qui ut spem sui fecit, iiii aut v tardissime diebus florere incipiunt totidemque aut paulo pluribus deflorescunt, hordea vero, cum tardissime, diebus vii. Varro quater novenis diebus fruges absolvi tradit et mense nono meti.

fabae in folia exeunt ac deinde caulem emittunt nullis distinctum internodiis. reliqua legumina surculosa sunt. ex his ramosa cicer, ervum, lens. quorundam caules sparguntur in terram, si non habeant

adminiculum; at pisa scandunt, si habuere, aut deteriora fiunt. leguminum unicaulis faba sola, unus et lupino, sed ... , ceteris ramosis praetenui surculo, omnibus vero fistulosis. folium quaedam ab radice emittunt, quaedam a cacumine, ut frumentum et hordeum. utrumque et quidquid in stipula est in cacumine unum folium habet - sed hordeo scabra sunt, ceteris levia - , multifolia contra faba, cicer, pisum. frumentis folium harundinaceum, fabae rotunda et magnae leguminum parti, longiora erviliae et piso, phasiolis venosa, sesamae et irioni sanguinea. cadunt folia lupino tantum et papaveri. legumina diutius florent, et ex his ervum ac cicer, sed diutissime faba, xl diebus, non autem singuli scapi tamdiu, quoniam alio desinente alius incipit, nec tota seges, sicut frumenti, pariter. siliquantur vero omnia diversis diebus et ab ima primum parte, paulatim flore subeunte.

frumenta cum defloruere, crassescunt maturanturque, cum plurimum, diebus xl, item faba, paucissimis cicer. id enim a sementi diebus xl perficitur. milium et panicum et sesama et omnia aestiva xl diebus maturantur a flore, magna terrae caelique differentia. in aegypto enim hordeum sexto a satu mense, frumenta septumo metuntur, in hellade vii hordeum, in peloponneso octavo, et frumenta etiamnum tardius. grana in stipula crinito textu spicantur. in faba leguminibusque alternis lateribus siliquantur. fortiora contra hiemes frumenta, legumina in cibo.

tunicae frumento plures. hordeum maxime nudum et arinca, set praecipue avena. calamus altior frumento quam hordeo, arista mordacior hordeo. in area exteruntur triticum et siligo et hordeum. sic et seruntur pura, qualiter moluntur, quia tosta non sunt. e diverso far, milium, panicum purgari nisi tosta non possunt. itaque haec cum suis folliculis seruntur cruda. et far in vaginulis suis servant ad satus atque non torrent.

levissimum ex his hordeum raro excedit xv libras et faba xxii. ponderosius far magisque etiamnum triticum. far in aegypto ex olyra conficitur. tertium genus spicae hoc ibi est. galliae quoque suum genus farris dedere, quod illic bracem vocant, apud nos scandalam, nitidissimi grani. est et alia differentia, quod fere quaternis libris plus reddit panis quam far aliud. populum romanum farre tantum e frumento ccc annis usum verrius tradit.

tritici genera plura, quae fecere gentes. italico nullum equidem

comparaverim candore ac pondere, quo maxime decernitur. montanis modo comparetur italiae agris externum, in quo principatum tenuit boeotia, dein sicilia, mox africa. tertium pondus erat thracio, syrio, deinde et aegyptio, athletarum cum decreto, quorum capacitas iumentis similis quem diximus ordinem fecerat. graecia et ponticum laudavit, quod in italiam non pervenit. ex omni autem genere grani praetulit dracontian et strangian et selinusium argumento crassissimi calami. itaque pingui solo haec genera adsignabat. levissimum et maxime inane speudian, tenuissimi calami, in umidis seri iubebat, quoniam multo egeret alimento. haec fuere sententiae alexandro magno regnante, cum clarissima fuit graecia atque in toto orbe terrarum potentissima, ita tamen ut ante mortem eius annis fere cxlv sophocles poeta in fabula triptolemo frumentum italicum ante cuncta laudaverit, ad verbum tralata sententia: “et fortunatam italiam frumento serere candido.” quae laus peculiaris hodieque italico est; quo magis admiror posteros graecorum nullam mentionem huius fecisse frumenti.

nunc ex his generibus, quae romam invehuntur, levissimum est gallicum atque chersonneso advectum, quippe non excedunt modii vicenas libras, si quis granum ipsum ponderet. sardum adicit selibram, alexandrinum et trientem - hoc et siculi pondus - , baeticum totam libram addit, africum et dodrantem. in transpadana italia scio vicenas quinas libras farris modios pendere, circa clusium et senas. lex certa naturae, ut in quocumque genere pani militari tertia portio ad grani pondus accedat, sicut optumum frumentum esse, quod in subactum congium aquae capiat. quibusdam generibus per se pondus, sicut baliarico: modio tritici panis p. xxxv reddit; quibusdam binis mixtis, ut cyprio et alexandrino xx prope libras non excedentibus. cyprium fuscum est panemque nigrum facit, itaque miscetur alexandrinum candidum, redeuntque xxv pondo. thebaicum libram adicit. marina aqua subigi, quod plerique in maritimis locis faciunt occasione lucrandi salis, inutilissimum. non alia de causa opportuniora morbis corpora existunt. galliae et hispaniae frumento in potum resoluto quibus diximus generibus spuma ita concreta pro fermento utuntur, qua de causa levior illis quam ceteris panis. est differentia et calami, crassior quippe melioris est generis. plurimis tunicis thracium triticum vestitur ob nimia frigora illi plagae

exquisitum. eadem causa et trimenstre invenit detinentibus terras nivibus, quod tertio fere a satu mense, cum et in reliquo orbe, metitur. totis hoc alpibus notum, et hiemalibus provinciis nullum hoc frumento laetius, unicalamum praeterea nec usquam capax, seriturque non nisi tenui terra. est et bimestre circa thraciae aenum, quod xl die, e quo satum est, maturescit, mirumque nulli frumento plus esse ponderis et furfuribus carere. utitur eo et sicilia et achaia, montuosis utraque partibus, euboea quoque circa carystum. in tantum fallitur columella, qui ne trimestris quidem proprium genus existimaverit esse, cum sit antiquissimum. graeci setanion vocant. tradunt in bactris grana tantae magnitudinis fieri, ut singula spicas nostras aequent.

primum ex omnibus frumentis seritur hordeum. dabimus et dies serendo cuique generi natura singulorum exposita. hordeum indis sativum et silvestre, ex quo panis apud eos praecipuus et alica. maxume quidem oryza gaudent, ex qua tisanam conficiunt, quam reliqui mortales ex hordeo. oryzae folia carnosa, porro similia, sed latiora, altitudo cubitalis, flos purpureus, radix gemmeae rotunditatis.

antiquissimum in cibis hordeum, sicut atheniensium ritu menandro auctore apparet et gladiatorum cognomine, qui hordearii vocabantur. polentam quoque graeci non aliunde praeferunt. pluribus fit haec modis. graeci perfusum aqua hordeum siccant nocte una ac postero die frigunt, dein molis frangunt. sunt qui vehementius tostum rursus exigua aqua adspergant et siccent, priusquam molant. alii vero virentibus spicis decussum hordeum recens purgant madidumque in pila tundunt atque in corbibus eluunt ac siccatum sole rursus tundunt et purgatum molunt. quocumque autem genere praeparato vicenis hordei libris ternas seminis lini et coriandri selibram salisque acetabulum, torrentes omnia ante, miscent in mola. qui diutius volunt servare, cum polline ac furfuribus suis condunt novis fictilibus. italia sine perfusione tostum in subtilem farinam molit, isdem additis atque etiam milio.

panem ex hordeo antiquis usitatum vita damnavit, quadripedumque fere cibus est, cum tisanae inde usus validissimus saluberrimusque tanto opere probetur. unum laudibus eius volumen dicavit hippocrates e clarissimis medicinae scientia. tisanae bonitas praecipua uticensi. in aegypto vero est quae fiat ex hordeo, cui sunt

bini anguli. in baetica et africa genus, ex quo fiat, hordei glabrum appellat turranius. idem olyran et oryzan eandem esse existimat. tisanae conficiendae volgata ratio est.

simili modo e tritici semine tragum fit, in campania dumtaxat et aegypto, amylum vero ex omni tritico ac siligine, sed optimum e trimestri. inventio eius chio insulae debetur; et hodie laudatissimum inde. est appellatum ab eo quod sine mola fiat. proximum trimestri quod e minime ponderoso tritico. madescit dulci aqua in ligneis vasis, ita ut integatur quinquies in die mutata; melius, si et noctu, ita ut misceatur pariter. emollitum priusquam acescat, linteo aut sportis saccatum tegulae infunditur inlitae fermento, atque ita in sole densatur. post chium maxime laudatur creticum, mox aegyptium - probatur autem levore et levitate atque ut recens sit - , iam et catoni dictum apud nos.

hordei farina et ad medendum utuntur, mirumque in usu iumentorum ignibus durato ac postea molito offisque humana manu demissis in alvum maiores vires torosque corporis fieri. spicae quaedam binos ordines habent, quaedam plures usque ad senos. grano ipsi aliquot differentiae: longius leviusque aut brevius ac rotundius, candidius nigriusve, cui purpura est opimo ad polentam. contra tempestates candido maxima infirmitas. hordeum frugum omnium mollissimum est. seri non volt nisi in sicca et soluta terra ac nisi laeta. palea ex optimis, stramento vero nullum conparatur. hordeum ex omni frumento minime calamitosum, quia ante tollitur quam triticum occupet rubigo - itaque sapientes agricolae triticum cibariis tantum serunt, hordeum sacculo seri dicunt - , propterea celerrime redit, fertilissimumque quod in hispaniae carthagine aprili mense collectum est. hoc seritur eodem mense in celtiberia, eodemque anno bis nascitur. rapitur omne a prima statim maturitate festinantius quam cetera. fragili enim stipula et tenuissima palea granum continetur. meliorem etiam polentam fieri tradunt, si non excocta maturitate tollatur.

frumenti genera non eadem ubique nec, ubi eadem sunt, isdem nominibus. volgatissima ex his atque pollentissima far, quod adoreum veteres appellavere, siligo, triticum. haec plurimis terris communia. arinca galliarum propria, copiosa et italiae est, aegypto autem ac syriae ciliciaeque et asiae ac graeciae peculiares zea, oryza,

tiphe. aegyptus similaginem conficit e tritico suo nequaquam italicae parem. qui zea utuntur non habent far. est et haec italiae, in campania maxime, semenque appellatur. hoc habet nomen res praeclara, ut mox docebimus, propter quam homerus ζείδωρος ἄρουρα dixit, non, ut aliqui arbitrantur, quoniam vitam donaret. amylum quoque ex ea fit priore crassius; haec sola differentia est. ex omni genere durissimum far et contra hiemes firmissimum. patitur frigidissimos locos et minus subactos vel aestuosos sitientesque. primus antiquis latii cibus, magno argumento in adoriae donis, sicuti diximus. pulte autem, non pane, vixisse longo tempore romanos manifestum, quoniam et pulmentaria hodieque dicuntur et ennius, antiquissimus vates, obsidionis famem exprimens offam eripuisse plorantibus liberis patres commemorat. et hodie sacra prisca atque natalium pulte fitilla conficiuntur, videturque tam puls ignota graeciae fuisse quam italiae polenta.

tritici semine avidius nullum est nec quod plus alimenti trahat. siliginem proprie dixerim tritici delicias candore sive virtute sive pondere. conveniens umidis tractibus, quales italiae sunt et galliae comatae, sed trans alpes in allobrogum tantum remorumque agro pertinax, in ceteris ibi partibus biennio in triticum transit. remedium, ut gravissima quaeque grana eius serantur. e siligine lautissimus panis pistrinarumque opera laudatissima. praecellit in italia, si campana pisis natae misceatur. rufior illa, at pisana candidior ponderosiorque cretacea. iustum est e grano campanae, quam vocant castratam, e modio redire sextarios iv siliginis vel e gregali sine castratura sextarios v, praeterea floris semodium et cibarii, quod secundarium vocant, sextarios iv, furfuris sextarios totidem, e pisana autem siliginis sextarios v, cetera paria sunt. clusina arretinaque etiamnum sextarios siliginis adiciunt, in reliquis pares. si vero pollinem facere libeat, xvi pondo panis redeunt et cibarii iii furfurumque semodius. molae discrimine hoc constat. nam quae sicca moluntur, plus farinae reddunt, quae salsa aqua sparsa, candidiorem medullam, verum plus retinent in furfure. farinam a farre dictam nomine ipso apparet. siligineae farinae modius gallicae xx libras panis reddit, italicae duabus tribusve amplius in artopticio pane. nam furnaceis binas adiciunt libras in quocumque genere.

similiago e tritico fit, laudatissima ex africo. iustum est e modiis

redire semodios et pollinis sextarios v - ita appellant in tritico quod florem in siligine; hoc aerariae officinae chartariaeque utuntur - , praeterea secundarii sextarios iv furfurumque tantundem, panis vero e modio similaginis p. xxii, e floris modio p. xvi. pretium huic annona media in modios farinae xl asses, similagini octonis assibus amplius, siligini castratae duplum. est et alia distinctio semel ... pollinatam xvii p. panis reddere, bis xviii, ter xix cum triente et secundarii panis quinas selibras, totidem cibarii et furfurum sextarios vi.

siligo numquam maturescit pariter, nec ulla segetum minus dilationem patitur propter teneritatem, iis quae maturuere protinus granum dimittentibus. sed minus quam cetera frumenta in stipula periclitatur, quoniam semper rectam habet spicam nec rorem continet, qui robiginem faciat. ex arinca dulcissimus panis. ipsa spissior quam far, et maior spica, eadem et ponderosior. raro modius grani non xvi libras implet. exteritur in graecia difficulter, ob id iumentis dari ab homero dicta. haec enim est quam olyram vocat. eadem in aegypto facilis fertilisque.

far sine arista est, item siligo, excepta quae laconica appellatur. adiciuntur his genera bromos et tragos, externa omnia, ab oriente invectae oryzae similia. tiphe et ipsa eiusdem est generis, ex qua fit in nostro orbe oryza. apud graecos est et zea, traduntque eam ac tiphen, cum sint degeneres, redire ad frumentum, si pistae serantur, nec protinus, sed tertio anno.

tritico nihil est fertilius - hoc ei natura tribuit, quoniam eo maxime alebat hominem - , utpote cum e modio, si sit aptum solum, quale in byzacio africae campo, centeni quinquageni modii reddantur. misit ex eo loco Divo Augusto procurator eius ex uno grano, vix credibile dictu, cccc paucis minus germina, exstantque de ea re epistulae. misit et neroni similiter ccclx stipulas ex uno grano. cum centesimo quidem et leontini siciliae campi fundunt aliique et tota baetica et in primis aegyptus. fertilissima tritici genera ramosum ac quod centigranium vocant. inventus est iam et scapus unus centum fabis onustus.

aestiva frumenta diximus sesamam, milium, panicum. sesama ab indis venit. ex ea et oleum faciunt; colos eius candidus. huic simile est in asia graeciaque erysimum, idemque erat, nisi pinguius esset,

quod apud nos vocant irionem, medicaminibus adnumerandum potius quam frugibus. eiusdem naturae et horminum graecis dictum, sed cumino simile; seritur cum sesama. hac et irione nullum animal vescitur virentibus.

pistura non omnium facilis, quippe etruria spicam farris tosti pisente pilo praeferrato fistula serrata et stella intus denticulata, ut, si intenti pisant, concidantur grana ferrumque frangatur. maior pars italiae nudo utitur pilo, rotis etiam, quas aqua verset, obiter et mola. de ipsa ratione pisendi magonis proponemus sententiam: triticum ante perfundi aqua multa iubet, postea evalli, dein sole siccatum in pila repeti, simili modo hordeum. huius sextarios xx spargi ii sextariis aquae. lentem torreri prius, dein cum furfuribus leviter pisi aut addito in sextarios xx lateris crudi frusto et harenae semodio. erviliam iisdem modis, quibus lentem. sesamam in calida maceratam exporrigi, dein confricari et frigida mergi, ut paleae fluctuentur, iterumque exporrigi in sole super lintea, quod nisi festinato peragatur, lurido colore mucescere. et ipsa autem, quae evalluntur, variam pistrinarum rationem habent. acus vocatur, cum per se pisitur spica tantum, aurificum ad usus, si vero in area teritur cum stipula, palea, in maiore terrarum parte ad pabula iumentorum. mili et panici et sesamae purgamenta adpludam vocant et alibi aliis nominibus.

milio campania praecipue gaudet pultemque candidam ex eo facit. fit et panis praedulcis. sarmatarum quoque gentes hac maxime pulte aluntur et cruda etiam farina, equino lacte vel sanguine e cruris venis admixto. aethiopes non aliam frugem quam mili hordeique novere.

panico et galliae quidem, praecipue aquitania utitur, sed et circumpadana italia addita faba, sine qua ... ponticae gentes nullum panico praeferunt cibum. - cetera aestiva frumenta riguis magis etiam quam imbribus gaudent, milium et panicum aquis minime, cum in folia exeunt. vetant ea inter vites arboresve frugiferas seri, terram emaciari hoc satu existimantes.

mili praecipuus ad fermenta usus e musto subacti in annuum tempus. simile fit e tritici ipsius furfuribus minutis et optimis e musto albo triduo maceratis, subactis ac sole siccatis. inde pastillos in pane faciendo dilutos cum similagine seminis fervefaciunt atque ita farinae miscent, sic optimum panem fieri arbitrantes. graeci in binos semodios farinae satis esse bessem fermenti constituere. et haec

quidem genera vindemiis tantum fiunt; quo libeat vero tempore ex aqua hordeoque bilibres offae ferventi foco vel fictili patina torrentur cinere et carbone, usque dum rubeant. postea operiuntur in vasis, donec acescant. hinc fermentum diluitur. cum fieret autem panis hordeacius, ervi aut cicerculae farina ipse fermentabatur; iustum erat ii librae in v semodios. nunc fermentum fit ex ipsa farina, quae subigitur, priusquam addatur sal, ad pultis modum decocta et relicta, donec acescat. vulgo vero nec suffervefaciunt, sed tantum pridie adservata materia utuntur, palamque est naturam acore fermentari, sicut evalidiora esse corpora, quae fermentato pane alantur, quippe cum apud veteres ponderosissimo cuique tritico praecipua salubritas perhibita sit.

panis ipsius varia genera persequi supervacuum videtur, alias ab opsoniis appellati, ut ostrearii, alias a deliciis, ut artolagani, alias a festinatione, ut speustici, nec non a coquendi ratione, ut furnacei vel artopticii aut in clibanis cocti, non pridem etiam e parthis invecto quem aquaticum vocant, quoniam aqua trahitur ad tenuem et spongiosam inanitatem, alii parthicum. summa laus siliginis bonitate et cribri tenuitate constat. quidam ex ovis aut lacte subigunt, butyro vero gentes etiam pacatae, ad operis pistorii genera transeunte cura. durat sua piceno in panis inventione gratia ex alicae materia. eum novem diebus maceratum decumo ad speciem tractae subigunt uvae passae suco, postea in furnis ollis inditum, quae rumpantur ibi, torrent. neque est ex eo cibus nisi madefacto, quod fit lacte maxime mulso.

pistores romae non fuere ad persicum usque bellum annis ab urbe condita super dlxxx. ipsi panem faciebant quirites, mulierumque id opus maxime erat, sicut etiam nunc in plurimis gentium. artoptas iam plautus appellat in fabula, quam aululariam inscripsit, magna ob id concertatione eruditorum, an is versus poetae sit illius, certumque fit atei capitonis sententia cocos tum panem lautioribus coquere solitos, pistoresque tantum eos, qui far pisebant, nominatos. nec cocos vero habebant in servitiis, eosque ex macello conducebant. cribrorum genera galliae saetis equorum invenere, hispaniae lino excussoria et pollinaria, aegyptus papyro atque iunco.

sed inter prima dicatur et alicae ratio praestantissimae saluberrimaeque, quae palma frugum indubitata italiae contingit. fit

sine dubio et in aegypto, sed admodum spernenda, in italia vero pluribus locis, sicut veronensi pisanoque agro, in campania tamen laudatissima. campus est subiacens montibus nimbosis, totus quidem [xl] p. planities. terra eius, ut protinus soli natura dicatur, pulverea summa, inferior bibula et pumicis vice fistulosa quoque. montium culpa in bonum cedit. crebros enim imbres percolat atque transmittit, nec dilui aut madere voluit propter facilitatem culturae, eadem acceptum umorem nullis fontibus reddit, sed temperate concoquens intra se vice suci continet. seritur toto anno, panico semel, bis farre. et tamen vere segetes, quae interquievere, fundunt rosam odoratiorem sativa. adeo terra non cessat parere, unde volgo dictum, plus apud campanos unguenti quam apud ceteros olei fieri. quantum autem universas terras campus campanus antecedit, tantum ipsum pars eius, quae leboriae vocantur, quem phlegraeum graeci appellant. finiuntur leboriae via ab utroque latere consulari, quae a puteolis et quae a cumis capuam ducit.

alica fit e zea, quam semen appellavimus. tunditur granum eius in pila lignea, ne lapidis duritia conterat, mobili, ut notum est, pilo vinctorum poenali opera. primori inest pyxis ferrea. excussis inde tunicis iterum isdem armamentis nudata conciditur medulla. ita fiunt alicae tria genera: minimum ac secundarium, grandissimum vero aphaerema appellant. nondum habent candorem suum, quo praecellunt, iam tamen alexandrinae praeferuntur. postea, mirum dictu, admiscetur creta, quae transit in corpus coloremque et teneritatem adfert. invenitur haec inter puteolos et neapolim in colle leucogaeo appellato, extatque Divi Augusti decretum, quo annua ducena milia neapolitanis pro eo numerari iussit e fisco suo, coloniam deducens capuam, adiecitque causam adserendi, quoniam negassent campani alicam confici sine eo metallo posse. - (in eodem reperitur et sulpur, emicantque fontes araxi oculorum claritati et volnerum medicinae dentiumque firmitati.) -

alica adulterina fit maxime quidem e zea, quae in africa degenerat. latiores eius spicae nigrioresque et brevi stipula. pisunt cum harena et sic quoque difficulter deterunt utriculos, fitque dimidia nudi mensura, posteaque gypsi pars quarta inspargitur atque, ut cohaesit, farinario cribro subcernunt. quae in eo remansit, excepticia appellatur et grandissima est. rursus, quae transit, artiore cernitur et secundaria

vocatur, item cribraria, quae simili modo in tertio remansit cribro angustissimo et tantum harenas transmittente. alia ratio ubique adulterandi ex tritico: candidissima et grandissima eligunt grana ac semicocta in ollis postea arefaciunt sole ad dimidium rursusque leviter adspersa molis frangunt. ex zea pulchrius quam e tritico fit tragum, quamvis id alicae vitium sit. candorem autem ei pro creta lactis incocti mixtura confert.

sequitur leguminum natura, inter quae maxime honos fabae, quippe ex qua temptatus sit etiam panis. lomentum appellatur farina ex ea, adgravaturque pondus illa et omni legumine, iam vero et pabulo, in pane venali. fabae multiplex usus omnium quadripedum generi, praecipue homini. frumento etiam miscetur apud plerasque gentes, et maxime panico solida ac delicatius fracta. quin et prisco ritu puls fabata suae religionis diis in sacro est. praevalens pulmentari cibo, set hebetare sensus existimata, insomnia quoque facere, ob haec pythagoricae sententiae damnata, ut alii tradidere, quoniam mortuorum animae sint in ea, qua de causa parentando utique adsumitur. Varro et ob haec flaminem ea non vesci tradit et quoniam in flore eius litterae lugubres reperiantur. in eadem peculiaris religio, namque fabam utique ex frugibus referre mos est auspici causa, quae ideo referiva appellatur. et auctionibus adhibere eam lucrosum putant. sola certe frugum etiam exesa repletur crescente luna. aqua marina aliave salsa non percoquitur. seritur ante vergiliarum occasum leguminum prima, ut antecedat hiemem. vergilius eam per ver seri iubet circumpadanae italiae ritu, sed maior pars malunt fabalia maturae sationis quam trimestrem fructum. eius namque siliquae caulesque gratissimo sunt pabulo pecori. aquas in flore maxime concupiscit, cum vero defloruit, exiguas desiderat. solum, in quo sata est, laetificat stercoris vice. ideo circa macedoniam thessaliamque, cum florere coepit, vertunt arva. nascitur et sua sponte plerisque in locis, sicut septentrionalis oceani insulis, quas ob id nostri fabarias appellant, item in mauretania silvestris passim, sed praedura et quae percoqui non possit. nascitur et in aegypto spinoso caule, qua de causa crocodili oculis timentes refugiunt. longitudo scapo quattuor cubitorum est amplissima, crassitudo digiti. ni genicula abessent, molli calamo similis; caput papaveri, colore roseo, in eo fabae non supra tricenas; folia ampla,

fructus ipse amarus et odore, sed radix perquam grata incolarum cibis, cruda et omni modo cocta, harundinum radicibus similis. nascitur et in syria ciliciaque et in toronae chalcidices lacu.

ex leguminibus autumno vereve seruntur lens et in graecia pisum. lens amat solum tenue magis quam pingue, caelum utique siccum. duo genera eius aegypto, alterum rotundius nigriusque, alterum sua figura, unde vario usu tralatum est in lenticulas nomen. invenio apud auctores aequanimitatem fieri vescentibus ea. pisum in apricis seri debet frigorum inpatientissimum. ideo in italia et in austeriore caelo non nisi verno tempore terra facili, soluta.

ciceris natura est gigni cum salsilagine, ideo solum urit nec nisi madefactum pridie seri debet. differentiae plures, magnitudine, colore, figura, sapore. est enim arietino capiti simile, unde ita appellatur, album nigrumque; est et columbinum, quod alii venerium appellant, candidum, rotundum, leve, arietino minus, quod religio pervigiliis adhibet. est et cicercula minuti ciceris, inaequalis, angulosi, veluti pisum, dulcissimum autem id quod ervo simillimum, firmiusque quod nigrum et rufum quam quod album.

siliquae rotundae ciceri, ceteris leguminum longae et ad figuram seminis latae, piso cylindratae. passiolorum cum ipsis manduntur granis. serere eos qua velis terra licet ab idibus octobr. in kal. novembris. legumina, cum maturescere coeperunt, rapienda sunt, quoniam cito exiliunt latentque, cum decidere, sicut et lupinum. quamquam prius de rapis dixisse conveniat - in transcursu ea attigere nostri, paulo diligentius graeci, et ipsi tamen inter hortensia - si iustus ordo fiat, a frumento protinus aut certe faba dicendis, quando alius usus praestantior ab iis non est.

ante omnia namque cunctis animalibus nascuntur, nec in novissimis satiant ruris alitum quoque genera, magisque si decoquantur aqua. quadripedes et fronde eorum gaudent, et homini non minore rapiciorum suis horis gratia quam cymarum, flavidorum quoque et in horreis enecatorum vel maiore quam virentium. ipsa vero durant et in sua terra servata et postea passa paene ad alium proventum, famemque sentiri prohibent. a vino atque messe tertius hic transpadanis fructus. terram non morose eligit, paene ubi nihil aliud seri possit. nebulis et pruinis ac frigore ultro aluntur, amplitudine mirabili; vidi xl libras excedentia. in cibis quidem

nostris pluribus modis commendantur, durantque ad alia sinapis acrimonia domita, etiam coloribus picta praeter suum sex aliis, purpureo quoque. neque aliud in cibis tingui decet. genera eorum graeci duo prima fecere, masculinum femininumque, et ea serendi modo ex eodem semine: densiore enim satu masculescere, item in terra difficili. semen praestantius quo subtilius. species vero omnium tres. aut enim in latitudinem fundi, aut in rotunditatem globari. tertiam speciem silvestrem appellavere, in longitudinem radice procurrente, raphani similitudine et folio anguloso scabroque, suco acri, qui circa messem exceptus oculos purget medeaturque caligini admixto lacte mulierum. frigore dulciora fieri existimantur et grandiora. tepore in folia exeunt. palma in nursino agro nascentibus - taxatio in libras sesterti singuli et in penuria bini - , proxima in algido natis, napis vero amiterni. quorum eadem fere natura: gaudent aeque frigidis. seruntur et ante kalendas martias, in iugero sextarii iiii. diligentiores quinto sulco napum seri iubent, rapa quarto, utrumque stercorato, rapa laetiora fieri, si cum palea semen inaretur. serere nudum volunt precantem sibi et vicinis serere se. satus utrique generi iustus inter duorum numinum dies festos, neptuni atque volcani, feruntque subtili observatione, quota luna praecedente hieme nix prima ceciderit, si totidem luminum die intra praedictum temporis spatium serantur, mire provenire. seruntur et vere in calidis atque umidis.

lupino usus proximus, cum sit et homini et quadripedum generi ungulas habenti communis. remedium eius, ne metentes fugiat exiliendo, ut ab imbre tollatur. nec ullius quae seruntur natura ad sensum ... terraeque mirabilior est. primum omnium cotidie cum sole circumagitur horasque agricolis etiam nubilo demonstrat. ter praeterea floret. terram amat terraque operiri non vult. et unum hoc seritur non arato. quaerit maxime sabulosa et sicca atque etiam harenosa. coli utique non vult. tellurem adeo amat, ut, quamvis frutectoso solo coiectum inter folia vepresque, ad terram tamen radice perveniat. pinguescere hoc satu arva vineasque diximus; itaque adeo non eget fimo, ut optimi vicem repraesentet, nihilque aliud nullo inpendio constat, ut quod ne serendi quidem gratia opus sit adferre: protinus seritur ex area ac ne spargi quidem postulat decidens sponte. primumque omnium seritur, novissimum tollitur,

utrumque septembri fere mense, quia, si non antecessit hiemem, frigoribus obnoxium est. inpune praeterea iacet, vel derelictum etiam, si non protinus secuti obruant imbres, ab omnibus animalibus amaritudine sua tutum, plerumque tamen levi sulco integunt. ex densiore terra rubricam maxime amat. ad hanc alendam post tertium florem verti debet, in sabulo post secundum. cretosa tantum limosaque odit et in his non provenit. maceratum calida aqua homini quoque in cibo est. nam bovem unum modii singuli satiant validumque praestant, quando etiam inpositum puerorum ventribus pro remedio est. condi in fumo maxime convenit, quoniam in umido vermiculi umbilicum eius in sterilitatem castrant. si depastum sit in fronde, inarari protinus solum opus est.

et vicia pinguescunt arva, nec ipsa agricolis operosa. uno sulco sata non saritur, non stercoratur nec aliud quam deoccatur. sationis eius tria tempora: circa occasum arcturi, ut decembri mense pascat. tum optime seritur in semen. aeque namque fert depasta. secunda satio mense ianuario est, novissima martio, tum ad frondem utilissima. siccitatem ex omnibus, quae seruntur, maxime amat. non aspernatur etiam umbrosa. ex semine eius, si lecta matura est, palea ceteris praefertur. vitibus praeripit sucum, languescuntque, si in arbusto seratur.

nec ervi operosa cura est. hoc amplius quam vicia runcatur, et ipsum medicaminis vim optinens, quippe cum Divom Augustum curatum epistulis ipsius memoria exstet. sufficiunt singulis boum iugis modi quini sati. martio mense satum noxium esse bobus aiunt, item autumno gravedinosum, innoxium autem fieri primo vere satum.

et silicia, hoc est fenum graecum, scariphatione seritur, non altiore quattuor digitorum sulco, quantoque peius tractatur, tanto provenit melius. rarum dictu esse aliquid, cui prosit neglegentia. id autem, quod secale ac farrago appellatur, occari tantum desiderat.

secale taurini sub alpibus asiam vocant, deterrimum et tantum ad arcendam famem, fecunda, sed gracili stipula, nigritia triste, pondere praecipuum. admiscetur huic far, ut mitiget amaritudinem eius, et tamen sic quoque ingratissimum ventri est. nascitur qualicumque solo cum centesimo grano, ipsumque pro laetamine est.

farrago ex recrementis farris praedensa seritur, admixta aliquando et vicia. eadem in africa fit ex hordeo. omnia haec pabularia,

degeneransque ex leguminibus quae vocatur cracca, in tantum columbis grata, ut pastas ea negent fugitivas illius loci fieri.

apud antiquos erat pabuli genus, quod cato ocinum vocat, quo sistebant alvom bubus. id erat e pabuli segete viride desectum, antequam generaret. sura mamilius aliter id interpretatur et tradit fabae modios x, viciae ii, tantundem erviliae in iugero autumno misceri et seri solitos, melius et avena graeca, cui non cadit semen, admixta. hoc vocitatum ocinum boumque causa seri solitum. Varro appellatum a celeritate proveniendi e graeco, quod ὠκέως dicunt.

medica externa etiam graeciae est, ut a medis advecta per bella persarum, quae darius intulit, sed vel in primis dicenda tanta dos est cum ex uno satu amplius quam tricenis annis duret. similis est trifolio caule foliisque, geniculata. quidquid in caule adsurgit, folia contrahuntur. unum de ea et cytiso volumen amphilochus conposuit. solum, in quo seratur, elapidatum purgatumque subigitur autumno, mox aratum et occatum integitur crate iterum ac tertium, quinis diebus interpositis et fimo addito. poscit autem siccum sucosumque vel riguum. ita praeparato seritur mense maio, alias pruinis obnoxia. opus est densitate seminis omnia occupari internascentesque herbas excludi - id praestant in iugera modi iii - et cavendum ne adurat sol, terraque protinus integi debet. si sit umidum solum herbosumve, vincitur et desciscit in pratum. ideo protinus altitudine unciali herbis omnibus liberanda est, manu potius quam sarculo. secatur incipiens florere et quotiens refloruit. id sexies evenit per annos, cum minimum, quater. in semen maturescere prohibenda est, quia pabulum utilius est usque ad trimatum. verno sariri debet liberarique ceteris herbis, ad trimatum marris ad solum radi. ita reliquae herbae intereunt sine ipsius damno propter altitudinem radicum. si evicerint herbae, remedium unicum in aratro, saepius vertendo, donec omnes aliae radices intereant. dari non ad satietatem debet, ne deplere sanguinem necesse sit. et viridis utilior est. arescit surculose ac postremo in pulverem inutilem extenuatur. de cytiso, cui et ipsi principatus datur in pabulis, adfatim diximus inter frutices. et nunc frugum omnium natura peragenda est, cuius in parte de morbis quoque dicatur.

primum omnium frumenti vitium avena est, et hordeum in eam degenerat sic, ut ipsa frumenti sit instar, quippe cum germaniae

populi serant eam neque alia pulte vivant. soli maxime caelique umore hoc evenit vitium. sequentem causam habet inbecillitas seminis, si diutius retentum est terra, priusquam erumpat. eadem ratio et si cariosum fuit, cum sereretur. prima autem statim eruptione agnoscitur, ex quo apparet in radice esse causam. est et aliud ex vicino avenae vitium, cum amplitudine inchoata granum, sed nondum matura, prius quam roboret corpus, adflatu noxio cassum et inane in spica evanescit quodam abortu.

venti autem tribus temporibus nocent frumento et hordeo: in flore aut protinus cum defloruere vel maturescere incipientibus. tum enim exinaniunt grana, prioribus causis nasci prohibent. nocet et sol creber ex nube. nascuntur et vermiculi in radice, cum sementem imbribus secutis inclusit repentinus calor umorem. gignuntur et in grano, cum spica e pluviis calore infervescit. est et cantharis dictus scarabaeus parvus, frumenta erodens. omnia ea animalia cum cibo deficiunt. oleum, pix, adips contraria seminibus, cavendumque ne contacta eis serantur. imber in herba utilis a partu, florentibus autem frumento et hordeo nocet, leguminibus innocuus praeterquam ciceri. maturescentia frumenta imbre laeduntur et hordeum magis. nascitur et herba alba, panico similis, occupans arva, pecori quoque mortifera. nam lolium et tribulos et carduos lappasque non magis quam rubos inter frugum morbos potius quam inter ipsius terrae pestes numeraverim. caeleste frugum vinearumque malum nullo minus noxium est robigo. frequentissima haec in roscido tractu convallibusque ac perflatum non habentibus; e diverso carent ea ventosa et excelsa. inter vitia segetum et luxuria est, cum oneratae fertilitate procumbunt. commune autem omnium satorum vitium uricae, etiam ciceris, cum salsilaginem eius abluendo imber dulcius id facit.

est herba, quae cicer enecat et ervum circumligando se; vocatur orobanche. tritico simili modo aera, hordeo festuca, quae vocatur aegilops, lenti herba securiclata, quam graeci a similitudine pelecinum vocant; et hae conplexu necant. circa philippos ateramum nominant in pingui solo herbam, qua faba necatur, teramum, qua in macro, cum udam quidam ventus adflavit. aerae granum minimum est in cortice aculeato. cum est in pane, celerrime vertigines facit, aiuntque in asia et graecia balneatores, cum velint turbam pellere,

carbonibus id semen inicere. nascitur et phalangion in ervo, bestiola aranei generis, si hiems aquosa sit. limaces nascuntur in vicia et aliquando e terra, cocleae minutae, mirum in modum erodentes eam. et morbi quidem fere hi sunt.

remedia eorum, quaecumque pertinent ad herbas, in sarculo et, cum semen iactatur, cinere. quae vero in semine et circa radicem consistunt, praecedente cura caventur. vino ante semina perfusa minus aegrotare existimant. vergilius nitro et amurca perfundi iubet fabam; sic etiam grandescere promittit. quidam vero, si triduo ante satum urina et aqua maceretur, praecipue adolescere putant; ter quidem saritam modium fractae e modio solidae reddere. reliqua semina, cupressi foliis tusis si misceantur, non esse vermiculis obnoxia, nec si interlunio serantur. multi ad mili remedia rubetam noctu arvo circumferri iubent, priusquam sariatur, defodique in medio inclusam fictili. ita nec passerem nec vermes nocere, sed eruendam, priusquam metatur; alioquin amarum fieri. quin et armo talpae contacta semina uberiora esse. democritus suco herbae, quae appellatur aizoum, in tegulis nascens, et ab aliis aesum, latine vero sedum aut digitillum, medicata seri iubet omnia semina. vulgo vero, si dulcedo noceat et vermes radicibus inhaereant, remedium est amurca pura ac sine sale spargere, dein sarire, si in articulum seges ire coeperit, runcare, ne herbae vincant. pestem a milio atque panico, sturnorum passerumve agmina, scio abigi herba, cuius nomen ignotum est, in quattuor angulis segetis defossa, mirum dictu, ut omnino nulla avis intret. mures abiguntur cinere mustelae vel felis diluto et semine sparso vel decoctarum aqua. sed redolet virus animalium eorum etiam in pane. ob id felle bubulo semina attingi utilius putant. rubigo quidem, maxima segetum pestis, lauri ramis in arvo defixis transit in ea folia ex arvis. luxuria segetum castigatur dente pecoris in herba dumtaxat, et depastae quidem vel saepius nullam in spica iniuriam sentiunt. retonsarum etiam semel omnino certum est granum longius fieri et inane cassumque ac satum non nasci. babylone tamen bis secant, tertium depascunt; alioquin folia tantum fierent. sic quoque cum quinquagesimo fenore messes reddit eximia fertilitas soli, diligentioribus vel cum centesimo. neque est cura difficilis quam diutissime aqua rigandi, ut praepinguis et densa ubertas diluatur. limum autem non invehunt euphrates tigrisque sic ut

in aegypto nilus, nec terra ipsa herbas gignit. ubertas tamen tanta est, ut sequente anno sponte restibilis fiat seges inpressis vestigio seminibus. quae tanta soli differentia admonet terrae genera in fruges discribere.

igitur catonis haec sententia est: in agro crasso et laeto frumentum seri, si vero nebulosus sit idem, rapa, raphanos, milium, panicum. in frigido, aquoso prius serendum, postea in calido, in solo autem rubricoso vel pullo vel harenoso, si non sit aquosum, lupinum; in creta et rubrica et aquosiore agro adoreum; in sicco et non herboso nec umbroso triticum; in solo valido fabam; viciam vero quam minime aquoso herbidoque; siliginem et triticum in loco aperto, edito, qui sole quam diutissime torreatur; lentem in rudecto et rubricoso, qui non sit herbidus; hordeum in novali et in arvo, quod restibile possit fieri; trimestre, ubi sementem maturam facere non possis et cuius crassitudo sit restibilis.

subtilis et illa sententia: serenda ea in tenuiore terra, quae non multo indigent suco, ut cytisus et cicere excepto legumina quae velluntur e terra, non subsecantur - unde et legumina appellata, quia ita leguntur - , in pingui autem quae cibi sunt maioris, ut olus, triticum, siligo, linum. sic ergo tenue solum hordeo dabitur - minus enim alimenti radix poscit - , laetior terra densiorque tritico. in loco umidiore far adoreum potius quam triticum seretur, temperato et triticum et hordeum. colles robustius, sed minus reddunt triticum. far, siligo et cretosum et uliginosum solum patiuntur.

ex frugibus ostentum semel, quod equidem invenerim, accidit p. aelio cn. cornelio cos., quo anno superatus est Hannibal. in arboribus enim tum nata produntur frumenta.

et quoniam de frugum terraeque generibus abunde diximus, nunc de arandi ratione dicemus, ante omnia aegypti facilitate conmemorata. nilus ibi coloni vice fungens evagari incipit, ut diximus, a solstitio ac nova luna, primo lente, dein vehementius, quamdiu in leone sol est. mox pigrescit in virginem transgresso atque in libra residit. si xii cubita non excessit, fames certa est, nec minus si xvi exsuperavit. tanto enim tardius decedit, quanto abundantius crevit, et sementem arcet. vulgo credebatur a decessu eius serere solitos, mox sues inpellere vestigiis semina deprimentes in madido solo, et credo antiquitus factitatum, nunc quoque non multo graviore

opera; sed tamen inarari certum est abiecta prius semina in limo degressi amnis. hoc fit novembri mense incipiente, postea pauci runcant - botanismon vocant - , reliqua pars non nisi cum falce arva visit paulo ante kal. apriles. peragitur autem messis mense maio, stipula numquam cubitali, quippe sabulum subest granumque limo tantum continetur. excellentius thebaidis regioni frumentum, quoniam palustris aegyptus. similis ratio, sed felicitas maior babyloniae seleuciae, euphrate atque tigri restagnantibus, quoniam rigandi modus ibi manu temperatur. syria quoque tenui sulco arat, cum multifariam in italia octoni boves ad singulos vomeres anhelent. in omni quidem parte culturae, sed in hac maxime valet oraculum illud: “quid quaeque regio patiatur.”

vomerum plura genera: culter vocatur inflexus praedensam, priusquam proscindatur, terram secans futurisque sulcis vestigia praescribens incisuris, quas resupinus in arando mordeat vomer. alterum genus est volgare rostrati vectis. tertium in solo facili, nec toto porrectum dentali, sed exigua cuspide in rostro. latior haec quarto generi et acutior in mucronem fastigata eodemque gladio scindens solum et acie laterum radices herbarum secans. non pridem inventum in raetia galliae duas addere tali rotulas, quod genus vocant plaumorati. cuspis effigiem palae habet. serunt ita non nisi culta terra et fere nova. latitudo vomeris caespites versat. semen protinus iniciunt cratesque dentatas supertrahunt. nec sarienda sunt hoc modo sata, sed protelis binis ternisque sic arant. uno boum iugo censeri anno facilis soli quadragena iugera, difficilis tricena iustum est.

in arando magnopere servandum est catonis oraculum: “quid est bene agrum colere bene arare. quid secundum arare. quid tertium stercorare. sulco vario ne ares. tempestive ares.” tepidioribus locis a bruma proscindi arva oportet, frigidioribus ab aequinoctio verno, et maturius sicca regione quam umida, maturius densa terra quam soluta, pingui quam macra. ubi siccae et graves aestates, terra cretosa aut gracilis, utilius inter solstitium et autumni aequinoctium aratur; ubi leves aestus, frequentes imbres, pingue herbosumque solum, ibi mediis caloribus. altum et grave solum etiam hieme moveri placet, tenue valde et aridum paulo ante sationem.

sunt et huic suae leges: lutosam terram ne tangito. vi omni arato. prius quam ares proscindito. hoc utilitatem habet, quod inverso

caespite herbarum radices necantur. quidam utique ab aequinoctio verno proscindi volunt. - quod vere semel aratum est, a temporis argumento vervactum vocatur. hoc in novali aeque necessarium est. novale est quod alternis annis seritur. - araturos boves quam artissime iungi oportet, ut capitibus sublatis arent - sic minime colla contundunt - ; si inter arbores vitesque aretur, fiscellis capistrari, ne germinum tenera praecerpant; securiculam in stiva pendere, qua intercidantur radices - hoc melius quam convelli aratro bovesque luctari - ; in arando versum peragi nec strigare in actu spiritus. iustum est proscindi sulco dodrantali iugerum uno die, iterari sesquiiugerum, si sit facilitas soli; si minus, proscindi semissem, iterari assem, quando et animalium labori natura leges statuit. omne arvum rectis sulcis, mox et obliquis subigi debet. in collibus traverso tantum monte aratur, sed modo in superiora modo in inferiora rostrante vomere, tantumque est laboris homini, ut etiam boum vice fungatur. certe sine hoc animali montanae gentes sarculis arant. arator nisi incurvus praevaricatur. inde tralatum hoc crimen in forum. ibi utique caveatur, ubi inventum est. purget vomerem subinde stimulus cuspidatus rallo. scamna inter duos sulcos cruda ne relinquantur, glaebae ne exultent. male aratur arvom, quod satis frugibus occandum est. id demum recte subactum erit, ubi non intellegetur, utro vomer ierit. in usu est et collicias interponere, si ita locus poscat, ampliore sulco, quae in fossas aquam educant.

aratione per traversum iterata occatio sequitur, ubi res poscit, crate vel rastro, et sato semine iteratur haec quoque, ubi consuetudo patitur, crate contenta vel tabula aratro adnexa - quod vocant lirare - operiente semina; ni operiantur, quae primum appellata, deliratio est. quarto seri sulco vergilius existimatur voluisse, cum dixit optimam esse segetem, quae bis soles, bis frigora sensisset. spissius solum, sicut plerumque in italia, quinto sulco seri melius est, in tuscis vero nono. at fabam et viciam non proscisso serere sine damno conpendium operae est.

non omittemus unam etiamnum arandi rationem in transpadana italia bellorum iniuria excogitatam. salassi cum subiectos alpibus depopularentur agros, panicum miliumque iam excrescens temptavere. postquam respuebat natura, inararunt. at illae messes multiplicatae docuere quod nunc vocant artrare, id est aratrare, ut

credo, tunc dictum. hoc fit vel incipiente culmo, cum iam se ad bina ternave emiserit folia. nec recens subtrahemus exemplum in treverico agro tertio ante hunc annum conpertum. nam cum hieme praegelida captae segetes essent, reseverunt etiam campos mense martio uberrimasque messes habuerunt.

nunc reliqua cultura tradetur per genera frugum.

siliginem, far, triticum, semen, hordeum occato, sarito, runcato quibus dictum erit diebus. singulae operae cuique generi in iugero sufficient. sarculatio induratam hiberno rigore soli tristitiam laxat temporibus vernis novosque soles admittit. qui sariet, caveat ne frumenti radices subfodiat. triticum, semen, hordeum, fabam bis sarire melius. runcatio, cum seges in articulum exiit, evolsis inutilibus herbis, frugum radices vindicat segetemque discernit a caespite. leguminum cicer eadem quae far desiderat. faba runcari non gestit. quoniam evincit herbas lupinum, occatur tantum. milium et panicum occatur et saritur, non iteratur, non runcatur. silicia et phasioli occantur tantum. sunt genera terrae, quorum ubertas pectinari segetem in herba cogat - cratis et hoc genus dentatae stilis ferreis - , eademque nihilominus et depascuntur. quae depasta sunt, sarculo iterum excitari necessarium. at in bactris, africa, cyrenis omnia haec supervacua fecit indulgentia caeli, et a semente non nisi messibus in arva redeunt, quia siccitas coercet herbas, fruges nocturno tantum rore nutriens. vergilius alternis cessare arva suadet - si patiantur ruris spatia, utilissimum procul dubio est - ; quod si neget condicio, far serendum, unde lupinum aut vicia aut faba sublata sint et quae terram faciant laetiorem. inprimisque et hoc notandum, quaedam propter alia seri obiter, si parum provenere, ut priore diximus volumine, ne eadem saepius dicantur; plurimum enim refert soli cuiusque ratio.

civitas africae in mediis harenis petentibus syrtis leptimque magnam vocatur tacape, felici super omne miraculum riguo solo. ternis fere milibus passuum in omnem partem fons abundat, largus quidem, sed certis horarum spatiis dispensatur inter incolas. palmae ibi praegrandi subditur olea, huic ficus, fico punica, illi vitis, sub vite seritur frumentum, mox legumen, deinde olus, omnia eodem anno, omniaque aliena umbra aluntur. quaterna cubita eius soli in quadratum, nec ut a porrectis metiantur digitis, sed in pugnum

contractis, quaternis denariis venundantur. super omnia est bifera vite bis anno vindemiare. et nisi multiplici partu exinaniatur ubertas, pereant luxuria singuli fructus. nunc vero toto anno metitur aliquid, constatque fertilitati non occurrere homines. aquarum quoque differentia magna riguis. est in narbonensi provincia nobilis fons orgae nomine. in eo herbae nascuntur in tantum expetitae bubus, ut mersis capitibus totis eas quaerant. sed illas in aqua nascentes certum est non nisi imbribus ali. ergo suam quisque terram aquamque noverit.

si fuerit illa terra, quam appellavimus teneram, poterit sublato hordeo seri milium, eo condito rapae, his sublatis hordeum rursus vel triticum, sicut in campania, satisque talis terra aratur, cum saritur. alius ordo ut, ubi adoreum fuerit, cesset quattuor mensibus hibernis et vernam fabam recipiat. ante hiemalem ne cesset. nimis pinguis alternari potest ita, ut frumento sublato legumen tertio seratur. gracilior et in annum tertium cesset. frumentum seri quidam vetant nisi in ea, quae proximo anno quieverit.

maximam huius loci partem stercorationis optinet ratio, de qua et priore diximus volumine. hoc tantum nemini inconpertum est, nisi stercorato seri non oportere, quamquam et huic leges sunt propriae. milium, panicum, rapa, napus nisi in stercorato ne seritor. non stercorato frumentum potius quam hordeum seritor. item in novalibus, tametsi in illis fabam seri volunt, eandem ubicumque quam recentissime stercorato solo. autumno aliquid saturus septembri mense fimum in agro acervet, post imbrem utique. si verno erit saturus, per hiemem fimum disponat. iustum est vehes xviii iugero tribui, dispergere caveto, priusquam ares. at iacto semine, si haec omissa sit stercoratio, sequens est, priusquam sarias, ut fimi ex aviariis seminis vice spargas ante pulverem. quod ut hanc quoque curam determinemus, iustum mense singulas vehes fimi redire in singulas pecudes minores, in maiores denas. nisi contingat hoc, male substravisse pecori colonum appareat. sunt qui optime stercorari putent sub diu retibus inclusa pecorum mansione. ager si non stercoretur, alget; si nimium stercoratus est, aduritur, satiusque est id saepe quam supra modum facere. quo calidius solum est, eo minus addi stercoris ratio est.

semen optimum anniculum, bimum deterius, trimum pessimum,

ultra sterile; etenim omnium definita generatio est. quod in ima area subsedit, ad semen reservandum est; id enim optimum, quoniam gravissimum, neque alio modo utilius discernitur. quae spica intervallata semina habebit, abicietur. optimum granum, quod rubet et dentibus fractum eundem habet colorem; deterius, cui plus intus albi est. certum terras alias plus seminis recipere, alias minus, religiosumque inde et primum colonis augurium, cum avidius accipiat: esurire creditur et comesse semen. sationem locis umidis celerius fieri ratio est, ne semen imbre putrescat; siccis serius, ut pluviae sequantur nec diu iacens atque non concipiens evanescat; itemque festinata satione densum spargi semen, quia tarde concipiat, serotina rarum, quia densitate nimia necetur. artis quoque cuiusdam est aequaliter spargere. manus utique congruere debet cum gradu semperque cum dextro pede. fit quoque quorundam occulta ratione, quod sors genialis atque fecunda est. non transferendum est ex frigidis locis semen in calida, neque ex praecocibus in serotina nihilque in contrarium, ut praecepere quidam falsa diligentia.

serere in iugera temperato solo iustum est tritici aut siliginis modios v, farris aut seminis, quod frumenti genus ita appellamus, x, hordei vi, fabae quinta amplius quam tritici, viciae vii, ciceris et cicerculae et pisi iii, lupini x, lentis iii - sed hanc cum fimo arido seri volunt - , ervi vi, siliciae vi, passiolorum iiii, pabuli xx, milii, panici sextarios iiii, pingui solo plus, gracili minus. est et alia distinctio: in denso aut cretoso aut uliginoso tritici aut siliginis modios vi, in soluta terra et sicca et laeta iiii. macie enim solum, nisi rarum culmum habeat, spicam minutam facit et inanem; pinguia arva ex uno semine fruticem numerosum fundunt densamque segetem ex raro semine emittunt. ergo inter quattuor et sex modios, pro natura soli quinta minus seri plusve praecipiunt; item in consito aut clivoso, ut in macro. hoc pertinet oraculum illud magno opere custodiendum: “segetem ne defrudes.” adiecit his attius in praxidica, ut sereretur, cum luna esset in ariete, geminis, leone, libra, aquario, zoroastres sole scorpionis duodecim partes transgresso, cum luna esset in tauro.

sequitur huc dilata et maxima indigens cura de tempore fruges serendi quaestio magnaque ex parte rationi siderum conexa; quamobrem sententias omnium in primis ad id pertinentes exponemus. hesiodus, qui princeps hominum de agricultura

praecepit, unum tempus serendi tradidit a vergiliarum occasu. scribebat enim in boeotia helladis, ubi ita seri diximus. inter diligentissimos convenit, ut in alitum quadripedumque genitura, esse quosdam ad conceptum impetus et terrae. hoc graeci ita definiunt, cum sit calida et umida. vergilius triticum et far a vergiliarum occasu seri iubet, hordeum inter aequinoctium autumni et brumam, viciam vero et passiolos et lentem boote occidente. quo fit, ut horum siderum aliorumque exortus et occasus digerendi sint in suos dies. sunt qui et ante vergiliarum occasum seri iubeant, dumtaxat in arida terra calidisque provinciis; custodiri enim semen, corrumpente umore, et a proximo imbre uno die erumpere; alii statim ab occasu vergiliarum - sequi imbres a septimo fere die - ; aliqui in frigidis ab aequinoctio autumni, in calidis serius, ne ante hiemem luxurient. inter omnes autem convenit circa brumam serendum non esse, magno argumento, quoniam hiberna semina, cum ante brumam sata sint, septimo die erumpant; si post brumam, vix quadragesimo. sunt qui properent atque ita pronuntient, festinatam sementem saepe decipere, serotinam semper. e contrario alii vel vere potius serendum quam malo autumno atque, ubi fuerit necesse, inter favonium et vernum aequinoctium. quidam omissa caelesti subtilitate temporibus definiunt: vere linum et avenam et papaver atque, uti nunc etiam transpadani servant, usque in quinquatrus, fabam, siliginem novembri mense, far septembri extremo usque in idus octobres, alii post hunc diem in kal. novembres. ita his nulla naturae cura est, illis nimia, et ideo caeca subtilitas, cum res geratur inter rusticos litterarumque expertes, non modo siderum. et confitendum est caelo maxime constare ea, quippe vergilio iubente praedisci ventos ante omnia ac siderum mores neque aliter quam navigantibus servari. spes ardua, inmensa, misceri posse caelestem divinitatem inperitiae rusticae, sed temptanda iam grandi vitae emolumento. prius tamen sideralis difficultas, quam sensere etiam periti, subicienda contemplationi est, quo deinde laetior mens discedat a caelo et facta sentiat, quae futura praenosci non possint.

primum omnium dierum ipsorum anni solisque motus prope inexplicabilis ratio est, ad ccclxv adiciente anno intercalario diei noctisque quadrantes. ita fit, ut tradi non possint certa siderum tempora. accedit confessa rerum obscuritas, nunc praecurrente nec

paucis diebus tempestatum significatu, quod προχειμάζειν graeci vocant, nunc postveniente, quod ἐπιχειμάζειν, et plerumque alias celerius, alias tardius caeli effectu ad terram deciduo: vulgo serenitate reddita confectum sidus audimus. praeterea cum omnia haec statis sideribus caeloque adfixis constent, interveniunt motus stellarum, grandinum, imbrium, et ipsi non levi effectu, ut docuimus, turbantque conceptae spei ordinem. idque, ne nobis tantum putemus accidere, et reliqua fallit animalia sagaciora circa hoc, ut quo vita eorum constet, aestivasque alites praeposteri aut praeproperi rigores necant, hibernas aestus. ideo vergilius errantium quoque siderum rationem ediscendam praecipit, admonens observandum frigidae saturni stellae transitum. sunt qui certissimum veris indicium arbitrentur ob infirmitatem animalis papiliones. sed eo ipso anno, cum commentaremur haec, notatum est, proventum eorum ter repetito frigore extinctum advenasque volucres a. d. vi. kal. febr. spem veris adtulisse mox saevissima hieme conflictatas. res anceps primum omnium a caelo peti legem, deinde eam argumentis esse quaerendam. super omnia est mundi convexitatis terrarumque globi differentia, eodem sidere alio tempore aliis aperiente se gentibus, quo fit, ut causa eius non isdem diebus ubique valeat. addidere difficultatem et auctores diversis in locis observando, mox etiam in isdem diversa prodendo. tres autem fuere sectae, chaldaea, aegyptia, graeca. his addidit quartam apud nos caesar dictator annos ad solis cursum redigens singulos sosigene perito scientiae eius adhibito; et ea ipsa ratio postea conperto errore correcta est ita, ut duodecim annis continuis non intercalaretur, quia coeperat ad sidera annus morari, qui prius antecedebat. et sosigenes ipse trinis commentationibus - quamquam diligentior ceteris, non cessavit tamen addubitare ipse semet corrigendo - et auctores prodidere ea, quos praetexuimus volumini huic, raro ullius sententia cum alio congruente. minus hoc in reliquis mirum, quos diversi excusaverint tractus. eorum, qui in eadem regione dissedere, unam discordiam ponemus exempli gratia: occasum matutinum vergiliarum hesiodus - nam huius quoque nomine exstat astrologia - tradidit fieri, cum aequinoctium autumni conficeretur, thales xxv die ab aequinoctio, anaximander xxxi, euctemon xliiii, eudoxus xlviii. nos sequimur observationem caesaris maxime; haec erit italiae ratio. dicemus

autem et aliorum placita, quoniam non unius terrae, sed totius naturae interpretes sumus, non auctoribus positis - id enim verbosum est - , sed regionibus. legentes tantum meminerint brevitatis gratia, cum attica nominata fuerit, simul intellegere cycladas insulas; cum macedonia, magnesiam, threciam; cum aegyptus, phoenicen, cyprum, ciliciam; cum boeotia, locridem, phocidem et finitimos semper tractus; cum hellespontus, chersonesum et continentia usque atho montem; cum ionia, asiam et insulas asiae; cum peloponnesus, achaiam et ad vesperam iacentes terras. chaldaei assyriam et babyloniam demonstrabunt. africam, hispanias, gallias sileri non erit mirum; nemo enim observavit in iis, qui proderet siderum exortus. non tamen difficili ratione dinoscentur in illis quoque terris digestione circulorum, quam in sexto volumine fecimus, qua cognatio caeli non gentium modo, verum urbium quoque singularum intellegitur. ergo ex iis terris, quas nominavimus, sumpta convexitate circuli pertinentis ad quas quisque quaeret terras, iidem erunt siderum exortus per omnium circulorum pares umbras. indicandum et illud, tempestates ipsas cardines suos habere quadrinis annis, et easdem non magna differentia reverti ratione solis, octonis vero augeri easdem, centesima revolvente se luna.

omnis autem ratio observata est tribus modis, exortu siderum occasuque et ipsorum temporum cardinibus. exortus occasusque binis modis intelleguntur. aut enim adventu solis occultantur stellae et conspici desinunt aut eiusdem abscessu proferunt se, ut emersum hoc melius quam exortum consuetudo dixisset et illud occultationem potius quam occasum. alio modo, quo die incipiunt apparere vel desinunt oriente sole aut occidente, matutini vespertinive cognominati, prout alteruter eorum mane vel crepusculo contingit. dodrantes horarum, cum minimum, intervalla ea desiderant ante solis ortum vel post occasum, ut aspici possint. praeterea bis quaedam exoriuntur et occidunt, omnisque sermo de iis est stellis, quas adhaerere caelo diximus.

cardines temporum quadripertita anni distinctione constant per incrementa lucis. augetur haec a bruma et aequatur noctibus verno aequinoctio diebus xc horis tribus, dein superat noctes ad solstitium diebus xciiii horis xii; ... usque ad aequinoctium autumni, et tum aequata diei procedit nox ex eo ad brumam diebus lxxxviii horis

tribus - horae nunc in omni accessione aequinoctiales, non cuiuscumque diei, significantur - , omnesque eae differentiae fiunt in octavis partibus signorum, bruma capricorni a. d. viii kal. ian. fere, aequinoctium vernum arietis, solstitium cancri, alterumque aequinoctium librae, qui et ipsi dies raro non aliquos tempestatum significatus habent. rursus hi cardines singulis etiamnum articulis temporum dividuntur, per media omnes dierum spatia, quoniam inter solstitium et aequinoctium autumni fidiculae occasus autumnum inchoat die xlvi, ab aequinoctio eo ad brumam vergiliarum matutinus occasus hiemem die xliiii, inter brumam et aequinoctium die xlv flatus favoni vernum tempus, ab aequinoctio verno initium aestatis die xlviii vergiliarum exortus matutinus. nos incipiemus a sementibus frumenti, hoc est vergiliarum occasu matutino. nec deinde parvorum siderum mentione concidenda ratio est et difficultas rerum augenda, cum sidus vehemens orionis isdem diebus longo decedat spatio.

sementibus tempora plerique praesumunt et ab xi die autumnalis aequinoctii fruges serunt, novem a coronae exortu continuis diebus certo prope imbrium promisso, xenophon non antequam deus signum dederit. hoc cicero noster imbre fieri interpretatus est, cum sit vera ratio non prius serendi quam folia coeperint decidere. hoc ipso vergiliarum occasu fieri putant aliqui a. d. iii idus novembris, ut diximus, servantque id sidus etiam vestis institores, et est in caelo notatu facillimum. ergo ex occasu eius de hieme augurantur quibus est cura insidiandi, negotiatores avari. ita nubilo occasu pluviosam hiemem denuntiat, statimque augent lacernarum pretia; sereno asperam, et reliquarum vestium accendunt. sed ille indocilis caeli agricola hoc signum habeat inter suos vepres humumque suam aspiciens: cum folia viderit decidua. sic iudicetur anni temperies, alibi tardius, alibi maturius. ita enim sentitur, ut caeli locique adficit natura, idque in hac ratione praecellit, quod eadem et in mundo publica est et unicuique loco peculiaris. miretur hoc qui non meminerit ipso brumali die puleium in carnariis florere. adeo nihil occultum esse natura voluit. et serendi igitur hoc dedit signum. haec est vera interpretatio argumenta naturae secum adferens, quippe sic terram peti suadet promittitque quandam stercoris vicem et contra rigores terram satusque operiri a se nuntiat ac monet festinare.

Varro in fabae utique satu hanc observationem custodiri praecepit. alii plena luna serendam, lentim vero a vicesima quinta ad tricesimam, viciam quoque iisdem lunae diebus. ita demum sine limacibus fore. quidam pabuli causa sic iubent seri, seminis autem vere.

est et alia manifestior ratio mirabiliore naturae providentia, in qua ciceronis sententiam ipsius verbis subsignabimus:

"iam vero semper viridis semperque gravata
lentiscus triplici solita est grandescere fetu
ter fruges fundens tria tempora monstrat
arandi." ex his unum hoc erit idem et lino ac papaveri serendo. cato de papavere ita tradit: "virgas et sarmenta, quae tibi usioni supererunt, in segete comburito. ubi eas combusseris, ibi papaver serito." silvestre in miro usu est melle decoctum ad faucium remedia, visque somnifera etiam sativo. et hactenus de hiberna semente. verum ut pariter omnis culturae quoddam breviarium peragatur, eodem tempore conveniet arbores stercorare, adcumulare item vineas - sufficit in iugerum opera - et, ubi patietur loci ratio, arbusta ac vineas putare, solum seminariis bipalio praeparare, incilia aperire, aquam de agro pellere, torcular lavare et recondere. a kal. novemb. gallinis ova supponere nolito, donec bruma conficiatur. in eum diem ternadena subicito aestate tota, hieme pauciora, non tamen infra novena. democritus talem futuram hiemem arbitratur, qualis fuerit brumae dies et circa eum terni; item solstitio aestatem. circa brumam plerisque bis septeni halcyonum feturae ventorum quiete molliunt caelum. sed et in his et in aliis omnibus ex eventu significationum intellegi sidera debebunt, non ad dies utique praefinitos expectari tempestatum vadimonia.

per brumam vitem ne colito. vina tum defaecari vel etiam diffundi hyginus suadet a confecta ea septimo die, utique si septima luna conpetat; cerasa circa brumam seri. bubus glandem tum adspergi convenit in iuga singula modios. largior valetudinem infestat, et quocumque tempore detur, si minus xxx diebus continuis data sit, narrant verna scabie poenitere. materiae caedendae tempus hoc dedimus. reliqua opera nocturna maxime vigilia constent, cum sint noctes tanto ampliores, qualos, crates, fiscinas texere, faces incidere, ridicas praeparare interdiu xxx, palos lx et in lucubratione vespertina

ridicas v, palos x, totidem antelucana.

a bruma in favonium caesari nobilia sidera significant, iii kal. ian. matutino canis occidens, quo die atticae et finitimis regionibus aquila vesperi occidere traditur. pridie nonas ian. caesari delphinus matutino exoritur et postero die fidicula, quo aegypto sagitta vesperi occidit. item ad vi idus ian. eiusdem delphini vespertino occasu continui dies hiemant italiae, et cum sol in aquarium sentiatur transire, quod fere xvi kal. feb. evenit. viii kal. stella regia appellata tuberoni in pectore leonis occidit matutina, et pridie nonas feb. fidicula vespera. huius temporis novissimis diebus, ubicumque patietur caeli ratio, terram ad rosaria et vineae satum vertere bipalio oportet - iugero operae lxx sufficiunt - , fossas purgare aut novas facere, antelucanis ferramenta acuere, manubria aptare, dolia quassa sarcire, ovium tegimenta concinnare ipsarumque lanas scabendo purgare.

a favonio in aequinoctium vernum caesari significat, xiiii kal. mart. triduum varie, et viii kal. hirundinis visu et postero die arcturi exortu vespertino, item iii non. mart. - caesar cancri exortu id fieri observavit, maior pars auctorum vindemitoris emersu - viii idus aquilonii piscis exortu et postero die orionis. in attica miluum apparere servatur. caesar et idus mart. ferales sibi notavit scorpionis occasu, xv kal. vero april. italiae miluum ostendi, xii kal. equum occidere matutino.

hoc intervallum temporis vegetissimum agricolis maximeque operosum est, in quo praecipue falluntur. neque enim eo die vocantur ad munia, quo favonius flare debeat, sed quo coeperit. hoc acri intentione servandum est; hoc illo mense signum dies habet observatione minime fallaci aut dubia, si quis adtendat. unde autem spiret is ventus quaque parte veniat, diximus secundo volumine et dicemus mox paulo operosius. interim ab eo die, quisquis ille fuerit, quo flare coeperit - non utique vi id. feb., sed sive ante, quando praevernat, sive postea, quando hiemat post diem hunc - , innumera rusticos cura distringat et prima quaeque peragantur, quae differri nequeunt. trimestria serantur, vites putentur qua diximus ratione, oleae curentur, poma serantur inseranturque, vineae pastinentur, seminaria digerantur, instaurentur alia, harundines, salices, genistae serantur caedanturque, serantur vero ulmi, populi, platani, uti dictum est. tum et segetes convenit purgare, sarire hibernas fruges

maximeque far. lex certa in eo, cum quattuor fibrarum esse coeperit, faba vero non antequam trium foliorum, tunc quoque levi sarculo purgare verius quam fodere, florentem utique xv primis diebus non attingere. hordeum nisi sicco ne sarito. putationem aequinoctio peractam habeto. vineae iugerum quaternae operae putant, alligant in arbusto singulae operae arbores xv. eodem hoc tempore hortorum rosariorumque cura est, quae separatim proximis voluminibus dicetur, eodem et topiarii. tum optime scrobes fiunt. terra in futurum proscinditur vergilio maxime auctore, ut glaebas sol coquat. utilior sententia, quae non nisi temperatum solum medio vere arari iubet, quoniam in pingui statim sulcos occupent herbae, gracili insecuti aestus exsiccent omnemque sucum venturis seminibus auferant. talia autumno melius arari certum est.

cato verna opera sic definit: “scrobes fieri, seminaria ... propagari, in locis crassis et umidis ulmos, ficos, poma, oleas seri, prata stercorari luna sitiente; quae rigua non erunt, a flatu favoni defendi et purgari, herbas malas radicitus erui, ficos interputari, seminaria fieri et vetera sarciri: haec antequam vineam fodere incipias.” idemque: “piro florente arare incipito macra harenosaque. postea uti quaeque gravissima et aquosissima, ita postremo arato.” ergo haec aratio has habebit notas: lentisci primum fructum ostendentis ac piri florentis. erit et tertia in bulborum satu scillae, item in coronamentorum narcissi, namque et haec ter florent primoque flore primam arationem ostendunt, medio secundam, tertio novissimam, quando inter sese alia aliis notas praebent. ac non in novissimis cavetur, ne fabis florentibus attingatur hedera; id enim noxium et exitiale ei est tempus. quaedam vero et suas habent notas, sicuti ficus. cum folia pauca in cacumine acetabuli modo germinent, tunc maxime serendas ficus.

aequinoctium vernum a. d. viii kal. april. peragi videtur. ab eo ad vergiliarum exortum matutinum caesari significant kal. april. iii non. april. in attica vergiliae vesperi occultantur, eaedem postridie in boeotia, caesari autem et chaldaeis nonis, aegypto orion et gladius eius incipiunt abscondi. caesari vi idus significatur imber librae occasu. xiiii kal. mai. aegypto suculae occidunt vesperi, sidus vehemens et terra marique turbidum. xvi atticae, xv caesari continuo quatriduo significat, assyriae autem xii kal. hoc est vulgo appellatum

sidus parilicium, quoniam xi kal. mai. urbis romae natalis, quo fere serenitas redditur, claritatem observationi dedit, nimborum argumento hyadas appellantibus graecis eas stellas quod nostri a similitudine cognominis graeci, propter sues inpositum arbitrantes, inperitia appellavere suculas. caesari et viii kal. notatur dies. vii kal. aegypto haedi exoriuntur, vi boeotiae et atticae canis vesperi occultatur, fidicula mane oritur. v kal. assyriae orion totus absconditur, iiii autem canis. vi non. mai. caesari suculae matutino exoriuntur et viii id. capella pluvialis, aegypto autem eodem die canis vesperi occultatur. sic fere in vi id. mai., qui est vergiliarum exortus, decurrunt sidera.

in hoc temporis intervallo xv diebus primis agricolae rapienda sunt quibus peragendis ante aequinoctium non suffecerit, dum sciat inde natam exprobrationem foedam putantium vites per imitationem cantus alitis temporariae, quam cuculum vocant. dedecus enim habetur obprobriumque meritum, falcem ab illa volucre in vite deprehendi, et ob id petulantiae sales, etiam cum primo vere, laudantur, auspicio tamen detestabiles videntur. adeo minima quaeque in agro naturalibus trahuntur argumentis.

extremo autem hoc tempore panici miliique satio est. iustum haec seri maturato hordeo. atque etiam in eodem arvo signum illius maturitati et horum sationi commune lucentes vespere per arva cicindelae - ita appellant rustici stellantes volatus, graeci vero lampyridas - incredibili benignitate naturae. iam vergilias in caelo notabiles caterva fecerat, non tamen his contenta terrestres fecit alias veluti vociferans: ‘cur caelum intuearis, agricola cur sidera quaeras, rustice iam te breviore somno fessum premunt noctes. ecce tibi inter herbas tuas spargo peculiares stellas easque vespera et ab opere disiungenti ostendo ac, ne possis praeterire, miraculo sollicito. videsne ut fulgor igni similis alarum conpressu obtegatur, secumque lucem habeat et nocte dedi tibi herbas horarum indices et, ut ne sole quidem oculos tuos a terra avoces, heliotropium ac lupinum circumaguntur cum illo. cur etiamnum altius spectes ipsumque caelum scrutere habes ante pedes tuos ecce vergilias.’ incertis hae diebus proveniunt durantque, sed esse sideris huiusce partum eas certum est. proinde quisquis aestivos fructus ante illas severit, ipse frustrabitur sese. hoc intervallo et apicula procedens fabam florere

indicat, fabaque florescens eam evocat. dabitur et aliud finiti frigoris indicium: cum germinare videris morum, iniuriam postea frigoris timere nolito.

ergo opera: taleas olivarum ponere ipsasque oleas interradere, rigare prata aequinoctii diebus primis, cum herba creverit in festucam, arcere aquas, vineam pampinare - et huic lex sua: cum pampini iiii digitos longitudine expleverint; pampinat una opera iugerum - , segetes iterare. saritur diebus xx. ab aequinoctio sartura nocere et vineae et segeti existimatur. et oves lavandi hoc idem tempus est.

a vergiliarum exortu significant caesari postridie arcturi occasus matutinus, iii id. mai. fidiculae exortus, xii kal. iun. capella vesperi occidens et in attica canis. xi kal. caesari orionis gladius occidere incipit, iiii non. iun. caesari et assyriae aquila vesperi oritur, vii id. arcturus matutino occidit italiae, iiii delphinus vesperi exoritur. xvii kal. iul. gladius orionis exoritur, quod in aegypto post quatriduum. xi kal. eiusdem orionis gladius caesari occidere incipit. viii kal. vero iul. longissimus dies totius anni et nox brevissima solstitium conficiunt. in hoc temporis intervallo vineae pampinantur, curatur ut vinea vetus semel fossa sit, bis novella. oves tondentur, lupinum stercorandi causa vertitur, terra proscinditur, vicia in pabulum secatur, faba metitur, dein cuditur.

prata circa kal. iun. caeduntur, quorum facillima agricolis cura ac minimi inpendii haec de se postulat dici. relinqui debent in laeto solo vel umido vel riguo, eaque aqua pluvia rigari aut publica. utilissimum, si malae herbae, arare, dein cratire, sarire, florem ex fenilibus atque e praesepibus feno delapsum spargere, priusquam cratiantur, nec primo anno rigari, nec pasci ante secunda fenisecia, ne herbae vellantur obtrituque hebetentur. senescunt prata restituique debent faba in iis sata vel rapis vel milio, mox insequente anno frumento, rursusque inarata tertio relinqui, praeterea quotiens secta sint siciliri, hoc est quae feniseces praeterierunt secari. est enim in primis inutile enasci herbas sementaturas. herba optima in prato trifoli, proxima graminis, pessima nummuli siliquam etiam diram ferentis. invisa et equisaeti est, a similitudine equinae saetae. secandi tempus, cum spica deflorescere coepit atque roborari. secandum, antequam inarescat. cato: “fenum,” inquit, “ne sero seces: prius quam

semen maturum sit." quidam pridie rigant. ubi non sunt rigua, noctibus roscidis secari melius. quaedam partes italiae post messem secant. fuit hoc quoque maioris inpendii apud priores, creticis tantum transmarinisque cotibus notis nec nisi oleo aciem falcis excitantibus; igitur cornu propter oleum ad crus ligato fenisex incedebat. italia aquarias cotes dedit limae vice imperantes ferro, set aquariae protinus virent. falcium ipsarum duo genera: italicum brevius ac vel inter vepres quoque tractabile, galliarum latifundia maioribus ... conpendia, quippe medias caedunt herbas brevioresque praetereunt. italus fenisex dextra una manu secat. iustum est una opera in die iugerum desecari, alligarique manipulos mcc quaterna pondo. sectum verti ad solem nec nisi siccum construi oportet. ni fuerit observatum hoc diligenter, exhalare matutino nebulam quandam metas, mox sole accendi et conflagrare certum est. rursus rigari desecta oportet, ut secetur autumnale fenum, quod vocant cordum. interamnae in umbria quater anno secantur, etiam non rigua; rigua vero ter plerisque in locis, et postea in ipso pabulo non minus emolumenti est quam e feno. armentorum ideo cura iumentorumque progeneratio suum cuique consilium dabit, opimo maxime quadrigarum quaestu.

solstitium peragi in octava parte cancri et viii kal. iul. diximus. magnus hic anni cardo, magna res mundi. in hoc usque a bruma crescunt dies creverunt sex mensibus, sol ipse ad aquilonem scandens ac per ardua enisus ab ea meta incipit flecti ac degredi ad austrum, aucturus noctes aliis sex mensibus ablaturusque diei mensuram. ex hoc deinde rapiendi convehendique fructus alios atque alios tempus, et praeparandi se contra saevam feramque hiemem, decebatque hoc discrimen indubitatis notis signasse naturam. quam ob rem eas manibus ipsis agricolarum ingessit vertique iussit ipsa die folia et esse confecti sideris signum, nec silvestrium arborum remotarumque, ut in saltus devios montesque eundum esset quaerentibus signa, non rursus urbanarum quaeque topiario tantum coluntur, quamquam his et in villa visendis. vertit oleae ante pedes satae, vertit tiliae ad mille usus petendae, vertit populi albae etiam vitibus nuptae. adhuc parum est. 'ulmum, inquit, vite dotatam habes: et huius vertam. pabulo folia eius stringis aut deputas: aspice et tenes sidus. alia parte caelum respiciunt quam qua spectavere pridie. salice omnia alligas, humillima arborum, ipse toto capite altior: et huius

circumagam. quid te rusticum quereris non stat per me, quo minus caelum intellegas et caelestia scias. dabo et auribus signum: palumbium utique exaudi gemitus. transisse solstitium caveto putes, nisi cum incubantem videris palumbem.' ab solstitio ad fidiculae occasum vi kal. iul. caesari orion exoritur, zona autem eius iiii non. assyriae, aegypto vero procyon matutino aestuosus, quod sidus apud romanos non habet nomen, nisi caniculam hanc volumus intellegi, hoc est minorem canem, ut in astris pingitur, ad aestum magno opere pertinens, sicut paulo mox docebimus. iiii non. chaldaeis corona occidit matutino, atticae orion totus eo die exoritur. prid. id. iul. aegyptiis orion desinit exoriri, xvi kal. aug. assyriae procyon exoritur, dein post triduum fere ubique confessum inter omnes sidus ingens, quod canis ortum vocamus, sole partem primam leonis ingresso. hoc fit post solstitium xxiii die. sentiunt id maria et terrae, multae vero et ferae, ut suis locis diximus. neque est minor ei veneratio quam discriptis in deos stellis, accenditque solem et magnam aestus obtinet causam. xiii kal. aegypto aquila occidit matutino etesiarumque prodromi flatus incipiunt, quod caesar x kal. sentire italiam existimavit. aquila atticae matutino occidit, iii kal. regia in pectore leonis stella matutino caesari emergit. viii id. aug. arcturus medius occidit, iii id. fidicula occasu suo autumnum inchoat, ut is adnotavit, sed vera ratio id fieri invenit vi id. easdem.

in hoc temporis intervallo res summa vitium agitur decretorio uvis sidere illo, quod caniculam appellavimus, unde carbunculare dicuntur ut quodam uredinis carbone exustae. non conparantur huic malo grandines, procellae quaeque umquam annonae intulere caritatem. agrorum quippe mala sunt illa, carbunculus autem regionum late patentium, non difficili remedio, nisi calumniari naturam rerum homines quam sibi prodesse mallent. ferunt democritum, qui primus intellexit ostenditque caeli cum terris societatem, spernentibus hanc curam eius opulentissimis civium, praevisa olei caritate futura ex vergiliarum ortu qua diximus ratione ostendemusque iam planius, magna tum vilitate propter spem olivae coemisse in toto tractu omne oleum, mirantibus qui paupertatem quietemque doctrinarum ei sciebant in primis cordi esse, atque ut apparuit causa et ingens divitiarum cursus, restituisse mercedem anxiae et avidae dominorum poenitentiae, contentum probavisse opes sibi in facili, cum vellet,

fore. hoc postea sextius e romanis sapientiae adsectatoribus athenis fecit eadem ratione. tanta litterarum occasio est. quas equidem miscebo agrestibus negotiis quam potero dilucide atque perspicue.

plerique dixere rorem inustum sole acri frugibus robiginis causam esse et carbunculi vitibus, quod ex parte falsum arbitror omnemque uredinem frigore tantum constare sole innoxio. id manifestum fiet adtendentibus. nam primum omnium non hoc evenire nisi noctibus et ante solis ardorem deprehenditur totumque lunari ratione constat, quoniam talis iniuria non fit nisi interlunio plenave luna, hoc est praevalente. utroque enim habitu plena est, ut saepius diximus, sed interlunio omne lumen, quod a sole accepit, caelo regerens. differentia utriusque habitus magna, sed manifesta. namque interlunio aestate calidissima est, hieme gelida. e diverso in plenilunio aestate frigidas facit noctes, hieme tepidas. causa evidens, sed alia quam redditur a fabiano graecisque auctoribus. aestate enim interlunio necesse est cum sole proximo nobis circulo currat, igne eius comminus recepto candens, eadem interlunio absit hieme, quoniam abscedit et sol; item in plenilunio aestivo procul abeat adversa soli, hieme autem ad nos per aestivum circulum accedat. ergo per se roscida, quotiens alget, infinitum quantum illo tempore cadentes pruinas congelat.

ante omnia autem duo genera esse caelestis iniuriae meminisse debemus: unum quod tempestates vocamus, in quibus grandines, procellae ceteraque similia intelleguntur, quae cum acciderint, vis maior appellatur. haec ab horridis sideribus exeunt, ut saepius diximus, veluti arcturo, orione, haedis. alia sunt illa, quae silente caelo serenisque noctibus fiunt, nullo sentiente nisi cum facta sunt. publica haec et magnae differentiae a prioribus, aliis robiginem, aliis uredinem, aliis carbunculum appellantibus, omnibus vero sterilitatem. de his nunc dicemus a nullo ante nos prodita, priusque causas reddemus.

duae sunt praeter lunarem paucisque caeli locis constant. namque vergiliae privatim attinent ad fructus, ut quarum exortu aestas incipiat, occasu hiems, semestri spatio intra se messes vindemiasque et omnium maturitatem conplexae. est praeterea in caelo qui vocatur lacteus circulus, etiam visu facilis huius defluvio velut ex ubere aliquo sata cuncta lactescunt duorum siderum observatione, aquilae

in septentrionali parte et in austrina caniculae, cuius mentionem suo loco fecimus. ipse circulus fertur per sagittarium atque geminos, solis centro bis aequinoctialem circulum secans, commissuras eorum optinente hinc aquila illinc canicula. ideo effectus utriusque ad omnes frugiferas pertinent terras, quoniam in his tantum locis solis terraeque centra congruunt. igitur horum siderum diebus si purus atque mitis ae+r genitalem illum lacteumque sucum transmisit in terras, laeta adulescunt sata; si luna qua dictum est ratione roscidum frigus aspersit, admixta amaritudo ut in lacte puerperium necat. modus in terris huius iniuriae, quem fecit in quacumque convexitate comitatus utriusque causae, et ideo non pariter in toto orbe sentitur, ut nec dies. aquilam diximus in italia exoriri a. d. xiii kal. ian., nec patitur ratio naturae quicquam in satis ante eum diem spei esse certae. si vero interlunium incidat, omnes hibernos fructus et praecoces laedi necesse est.

rudis fuit priscorum vita atque sine litteris. non minus tamen ingeniosam fuisse in illis observationem apparebit quam nunc esse rationem. tria namque tempora fructibus metuebant, propter quod instituerunt ferias diesque festos, robigalia, floralia, vinalia. robigalia numa constituit anno regni sui xi, quae nunc aguntur a. d. vii kal. mai., quoniam tunc fere segetes robigo occupat. hoc tempus Varro determinavit sole tauri partem x obtinente, sicut tunc ferebat ratio. sed vera causa est, quod post dies undeviginti ab aequinoctio verno per id quadriduum varia gentium observatione in iiii kal. mai. canis occidit, sidus et per se vehemens et cui praeoccidere caniculam necesse sit. itaque iidem floralia iiii kal. easdem instituerunt urbis anno dxvi ex oraculis sibyllae, ut omnia bene deflorescerent. hunc diem Varro determinat sole tauri partem xiiii obtinente. ergo si in hoc quadriduum inciderit plenilunium, fruges et omnia, quae florebunt, laedi necesse erit. vinalia priora, quae ante hos dies sunt viiii kal. mai. degustandis vinis instituta, nihil ad fructus attinent, nec quae adhuc diximus ad vites oleasque, quoniam earum conceptus exortu vergiliarum incipit a. d. vi id. mai., ut docuimus. aliud hoc quadriduum est, quo neque rore sordidas velim - exurit enim frigidum sidus arcturi postridie occidens - , et multo minus plenilunium incidere. iiii non. iun. iterum aquila exoritur vesperi, decretorio die florentibus oleis vitibusque, si plenilunium in eum

incidat. equidem et solstitium viii kal. iul. in simili causa duxerim et canis ortum post dies a solstitio xxiii, sed interlunio accidente, quoniam vapore constat culpa acinique praecocuntur in callum. rursus plenilunium nocet a. d. iiii non. iul., cum aegypto canicula exoritur, vel certe xvi kal. aug., cum italiae, item xiii kal. aug., cum aquila occidit, usque in x kal. easdem. extra has causas sunt vinalia altera, quae aguntur a. d. xiiii kal. sept. Varro ea fidicula incipiente occidere mane determinat, quod vult initium autumni esse et hunc diem festum tempestatibus leniendis institutum. nunc fidiculam occidere a. d. vi id. aug. servatur.

intra haec constat caelestis sterilitas, neque negaverim posse ea permutari algentium locorum et aestuantium natura. set a nobis rationem demonstratam esse satis est; reliqua observatione cuiusque constabunt. alterutrum quidem fore in causa, hoc est plenilunium aut interlunium, non erit dubium. et in hoc mirari benignitatem naturae succurrit: iam primum hanc iniuriam omnibus annis accidere non posse propter statos siderum cursus, nec nisi paucis noctibus anni, idque quando sit futurum facile nosci ac, ne per omnes menses timeretur, earum quoque lege divisum: aestate interlunia praeterquam biduo secura esse, hieme plenilunia, nec nisi aestivis brevissimisque noctibus metui, diebus non idem valere; praeterea tam facile intellegi, ut formica, minimum animal, interlunio quiescat, plenilunio operetur etiam noctibus; avem parram oriente sirio ipso die non apparere et donec occidat, e diverso chlorionem prodire ipso die solstitii; neutrum vero lunae statum noxium esse, ne noctibus quidem nisi serenis et omni aura quiescente, quoniam neque in nube neque in flatu cadunt rores, sic quoque non sine remedio. sarmenta aut palearum acervos et evulsas herbas fruticesque per vineas camposque, cum timebis, incendito: fumus medebitur hic; e paleis et contra nebulas auxiliatur, ubi nebulae nocent. quidam tres cancros vivos cremari iubent in arbustis, ut carbunculus ne noceat; alii siluri carnem leniter uri a vento, ut per totam vineam fumus dispergatur. Varro auctor est, si fidiculae occasu, quod est initium autumni, uva picta consecretur inter vites, minus nocere tempestates. archibius ad antiochum syriae regem scripsit, si fictili novo obruatur rubeta rana in media segete, non esse noxias tempestates.

opera rustica huius intervalli: terram iterare, arbores circumfodere

aut, ubi aestuosa regio poscat, adcumulare - germinantia nisi in solo luxurioso fodienda non sunt - , seminaria purgare sarculo, messem hordeaciam facere, aream messi praeparare, catonis sententia amurca temperatam, creta vergili operosius. maiore ex parte aequant tantum et fimo bubulo dilutiore inlinunt. id satis ad pulveris remedium videtur.

messis ipsius ratio varia. galliarum latifundis valli praegrandes, dentibus in margine insertis, duabus rotis per segetem inpelluntur, iumento in contrarium iuncto; ita dereptae in vallum cadunt spicae. stipulae alibi mediae falce praeciduntur, atque inter duas mergites spica destringitur. alibi ab radice caeduntur, alibi cum radice velluntur, quique id faciunt, proscindi ab se obiter agrum interpretantur, cum extrahant sucum. differentia haec: ubi stipula domos contegunt, quam longissimam servant; ubi feni inopia, e stramento paleam quaerunt. panici culmo non tegunt, milii culmum fere inurunt, hordei stipulam bubus gratissimam servant. panicum et milium singillatim pectine manuali legunt galliae.

messis ipsa alibi tribulis in area, alibi equarum gressibus exteritur, alibi perticis flagellatur. triticum quo serius metitur, copiosius invenitur; quo celerius vero, hoc speciosius ac robustius. lex aptissima: “antequam granum indurescat et cum iam traxerit colorem;” oraculum vero: “biduo celerius messem facere potius quam biduo serius.” siliginis et tritici eadem ratio in area horreoque. far, quia difficulter excutitur, convenit cum palea sua condi, et stipula tantum et aristis liberatur. palea plures gentium pro feno utuntur. melior ea, quo tenuior minutiorque et pulveri propior; ideo optima e milio, proxima ex hordeo, pessima ex tritico, praeterquam iumentis opere laborantibus. culmum saxosis locis, cum inaruit, baculo frangunt substraturi animalibus. si palea defecit, et culmus teritur. ratio haec: maturius desectus, muria dura sparsus, dein siccatus in manipulos convolvitur atque ita pro feno bubus datur. sunt qui accendant in arvo et stipulas, magno vergili praeconio. summa autem eius ratio, ut herbarum semen exurant. ritus diversos magnitudo facit messium et caritas operarum.

conexa est ratio frumenti servandi. horrea operose tripedali crassitudine parietis laterici exaedificari iubent aliqui, praeterea superne impleri nec adflatus admittere aut fenestras habere ullas; alii

ab exortu tantum aestivo aut septentrione, eaque sine calce construi, quoniam sit frumento inimicissima; nam quae de amurca praeciperentur indicavimus. alibi contra suspendunt granaria lignea columnis et perflari undique malunt, atque etiam a fundo. alii omnino pendente tabulato extenuari granum arbitrantur et, si tegulis subiaceat, confervescere. multi ventilare quoque vetant; curculionem enim non descendere infra quattuor digitos, nec amplius periclitari. columella et favonium ventum confecto frumento praedicit, quod miror equidem, siccissimum alioqui. sunt qui rubeta rana in limine horrei pede e longioribus suspensa invehere iubeant. nobis referre plurimum tempestivitas condendi videbitur. nam si parum tostum atque robustum collectum sit aut calidum conditum, vitia innasci necesse est.

diuturnitatis causae plures: aut in ipsius grani corio, cum est numerosius, ut milio, aut suci pinguedine, qui pro umore sufficiat tantum, ut sesimae, aut amaritudine, ut lupino et cicerculis. in tritico maxime nascuntur animalia, quoniam spissitate sua concalescit et furfure crasso vestitur. tenuior hordeo palea, exilis et legumini; ideo non generant. faba crassioribus tunicis operitur; ob hoc effervescit. quidam ipsum triticum diuturnitatis gratia adspergunt amurca, mille modios quadrantali, alii chalcidica aut carica creta aut etiam absinthio. est et olynthi ac cerinthi euboeae terra, quae corrumpi non sinat. nec fere condita in spica laeduntur, utilissime tamen servantur in scrobibus, quos siros vocant, ut in cappadocia ac threcia et hispania, africa, et ante omnia ut sicco solo fiant curatur, mox ut palea substernantur; praeterea cum spica sua conduntur ita frumenta. si nullus spiritus penetret, certum est nihil maleficum nasci. Varro auctor est, sic conditum triticum durare annis l, milium vero c, fabam et legumina in oleariis cadis oblita cinere longo tempore servari. idem fabam a pyrrhi regis aetate in quodam specu ambraciae usque ad piraticum pompei magni bellum durasse annis circiter ccxx. ciceri tantum nullae bestiolae in horreis innascuntur. sunt qui urceis cinere substratis et inlitis, acetum habentibus, leguminum acervos superingerant, ita non nasci maleficia credentes, alii qui in salsamentariis cadis gypso inlinant, alii qui lentem aceto laserpiciato respergant siccatamque oleo unguant. sed brevissima observatio, quod vitiis carere velis, interlunio legere. quare plurimum refert,

condere quis malit an vendere. crescente enim luna frumenta grandescunt.

sequitur ex divisione temporum autumnus a fidiculae occasu ad aequinoctium ac deinde vergiliarum occasum initiumque hiemis. in his intervallis significant prid. id. aug. atticae equus oriens vespera, aegypto et caesari delphinus occidens. xi kal. sept. caesari et assyriae stella, quae vindemitor appellatur, exoriri mane incipit vindemiae maturitatem promittens. eius argumentum erunt acini colore mutati. assyriae v kal. et sagitta occidit et etesiae desinunt. vindemitor aegypto nonis exoritur, atticae arcturus matutino, et sagitta occidit mane. v id. sept. caesari capella oritur vesperi, arcturus vero medius prid. id. vehementissimo significatu terra marique per dies quinque. ratio eius haec traditur: si delphino occidente imbres fuerint, non futuros per arcturum. signum orientis eius sideris servetur hirundinum abitus; namque deprehensae intereunt. xvi kal. oct. aegypto spica, quam tenet virgo, exoritur matutino etesiaeque desinunt. hoc idem caesari xiiii kal., xiii assyriae significant, et xi kal. caesari commissura piscium occidens ipsumque aequinocti sidus viii kal. oct. dein consentiunt, quod est rarum, philippus, callippus, dositheus, parmeniscus, conon, criton, democritus, eudoxus iv kal. oct. capellam matutino exoriri et iii kal. haedos. vi non. oct. atticae corona exoritur mane, asiae et caesari v heniochus occidit matutino. iv caesari corona exoriri incipit, et postridie occidunt haedi vespere. viii id. oct. caesari fulgens in corona stella exoritur, et vi id. vergiliae vesperi, idibus corona tota. xvii kal. nov. suculae vesperi exoriuntur. prid. kal. caesari arcturus occidit et suculae exoriuntur cum sole. iiii non. arcturus occidit vesperi. v id. nov. gladius orionis occidere incipit. dein iii id. vergiliae occidunt.

in his temporum intervallis opera rustica: rapa, napos serere quibus diximus diebus. vulgus agreste rapa post ciconiae discessum male seri putat, nos omnino post vulcanalia, et praecocia cum panico, a fidiculae autem occasu viciam, passiolos, pabulum. hoc silente luna seri iubent. et frondis praeparandae tempus hoc est. unus frondator quattuor frondarias fiscinas complere in die iustum habet. si decrescente luna praeparetur, non putrescit. aridam colligi non oportet.

vindemiam antiqui numquam existimavere maturam ante

aequinoctium; iam passim rapi cerno. quamobrem et huius tempora notis argumentisque signentur. leges ita se habent: uvam caldam ne legito, hoc est nimia siccitate ac nisi imber intervenerit. uvam rorulentam ne legito, hoc est si ros nocturnus fuerit nec prius quam sole discutiatur. vindemiare incipito, cum ad palmitem pampinus procumbere coeperit aut cum exempto acino ex densitate intervallum non conpleri apparuerit ac iam non augeri acinos. plurimum refert, si contingat crescente luna vindemiare. pressura una culleos xx implere debet. hic est pes iustus. ad totidem culleos et lacus xx iugeribus unum sufficit torculum. premunt aliqui singulis, utilius binis, licet magna sit vastitas singulis. longitudo in his refert, non crassitudo. spatiosa melius premunt. antiqui funibus vittisque loreis ea detrahebant et vectibus. intra c annos inventa graecanica, mali rugis per cocleam ambulantibus, ab aliis adfixa arboris stella, aliis arcas lapidum adtollente secum arbore, quod maxime probatur. intra xxii hos annos inventum parvis prelis et minore torculario aedificio, breviore malo in media derecto, tympana inposita vinaceis superne toto pondere urguere et super prela construere congeriem. hoc et poma colligendi tempus, observato cum aliquod maturitate, non tempestate, deciderit; hoc et faeces exprimendi, hoc et defrutum coquendi silente luna noctu aut, si interdiu, plena, ceteris diebus aut ante exortum lunae aut post occasum, nec de novella vite aut palustri, nec nisi e matura uva. si ligno contingatur vas, adustum et fumosum fieri putant. iustum vindemiae tempus ab aequinoctio ad vergiliarum occasum dies xliiii. ab eo die oraculum occurrit frigidum picari pro nihilo ducentium. sed iam et kal. ian. defectu vasorum vindemiantes vidi piscinisque musta condi aut vina effundi priora, ut dubia reciperentur. hoc non tam saepe proventu nimio evenit quam segnitia aut avaritia insidiantium caritati. civilis, aequi patrisfamilias modus est annona cuiusque anni uti. id peraeque etiam lucrosissimum. reliqua de vinis adfatim dicta sunt, item vindemia facta olivam esse rapiendam et quae ad oleum pertinent quaeque a vergiliarum occasu agi debent.

his quae sunt necessaria adicientur de luna ventisque et praesagiis, ut sit tota sideralis ratio perfecta. namque vergilius etiam in numeros lunae digerenda quaedam putavit democriti secutus ostentationem; nos legum utilitas, quae in toto opere, in hac quoque movet parte.

omnia, quae caeduntur, carpuntur, tondentur, innocentius decrescente luna quam crescente fiunt. stercus nisi decrescente luna ne tangito, maxime autem intermenstrua dimidiaque stercorato. verres, iuvencos, arietes, haedos decrescente luna castrato. ova luna nova supponito. scrobes luna plena noctu facito. arborum radices luna plena operito. umidis locis interlunio serito et circa interlunium quadriduo. ventilari quoque frumenta ac legumina et condi circa extremam lunam iubent, seminaria, cum luna supra terram sit, fieri, calcari musta, cum luna sub terra, item materias caedi quaeque alia suis locis diximus. neque est facilior observatio ac iam dicta nobis secundo volumine, sed quod intellegere vel rustici possint: quotiens ab occidente sole cernetur prioribusque horis noctis lucebit, crescens erit et oculis dimidiata iudicabitur; cum vero occidente sole orietur ex adverso, ita ut pariter aspiciantur, tum erit plenilunium. quotiens ab ortu solis orietur prioribusque noctis horis detrahet lumen et in diurnas extendet, decrescens erit iterumque dimidia; in coitu vero, quod interlunium vocant, cum apparere desierit. supra terras autem erit, quamdiu et sol, interlunio et prima toto die, secunda horae noctis unius dextante sicilico, ac deinde tertia et usque xv multiplicatis horarum isdem portionibus. xv tota supra terras nocte erit eademque sub terris toto die. xvi ad primae horae nocturnae dextantem sicilicum sub terra aget easdemque portiones horarum per singulos dies adiciet usque ad interlunium, et quantum primis partibus noctis detraxerit, quod sub terris aget, tantundem novissimis ex die adiciet supra terram. alternis autem mensibus xxx implebit numeros, alternis vero detrahet singulos. haec erit ratio lunaris; ventorum paulo scrupulosior.

observato solis ortu quocumque die libeat stantibus hora diei sexta sic, ut ortum eum a sinistro umero habeant, contra mediam faciem meridies et a vertice septentrio erit. qui ita limes per agrum curret, cardo appellabitur. circumagi deinde melius est, ut umbram suam quisque cernat; alioquin post hominem erit. ergo permutatis lateribus, ut ortus illius diei ab dextro umero fiat, occasus a sinistro, tunc erit hora sexta, cum minima umbra contra medium fiet hominem. per huius mediam longitudinem duci sarculo sulcum vel cultro liniam verbi gratia pedum xx conveniat mediamque mensuram, hoc est in decimo pede, circumscribi circulo parvo, qui vocetur umbilicus. quae

pars fuerit a vertice umbrae, haec erit venti septentrionis. illo tibi, putator, arborum plagae ne spectent, neve arbusta vineaeve nisi in africa, cyrenis, aegypto. illinc flante ne arato, quaeque alia praecipiemus. quae pars liniae fuerit a pedibus umbrae meridiem spectans, haec ventum austrum dabit, quem a graecis notum diximus vocari. illinc flatu veniente materiam vinumque, agricola, ne tractes. umidus aut aestuosus italiae est, africae quidem incendia cum serenitate adfert. in hunc italiae palmites spectent, sed non plagae arborum vitiumve. hic oleae timeatur vergiliarum quadriduo, hunc caveat insitor calamis gemmisque inoculator. de ipsa regionis eius hora praemonuisse conveniat. frondem medio die, arborator, ne caedito. cum meridiem adesse senties, pastor, aestate contrahente se umbra, pecudes a sole in opaca cogito. cum aestate pasces, in occidentem spectent ante meridiem, post meridiem in orientem; aliter noxium, sicut hieme et vere in rorulentum educere: nec contra septentrionem paveris supra dictum cluduntur ita lippiuntque ab adflatu et alvo cita pereunt. qui feminas concipi voles, in hunc ventum spectantes iniri cogito.

diximus ut in media linia designaretur umbilicus. per hunc medium transversa currat alia. haec erit ab exortu aequinoctiali ad occasum aequinoctialem, et limes, qui ita secabit agrum, decumanus vocabitur. ducantur deinde aliae duae liniae in decussis obliquae, ita ut ab septentrionis dextra laevaque ad austri dextram ac laevam descendant. omnes per eundem currant umbilicum, omnes inter se pares sint, omnium intervalla paria. quae ratio semel in quoque agro ineunda erit vel, si saepius libeat uti, e ligno facienda, regulis paribus in tympanum exiguum, sed circinatum adactis. ratione, qua doceo occurrendum ingeniis quoque inperitorum esse, meridiem excuti placet, quoniam semper idem est, sol autem cotidie ex alio caeli momento quam pridie oritur, ne quis forte ad exortum capiendam putet liniam.

ita caeli exacta parte quod fuerit liniae caput septentrioni proximum a parte exortiva, solstitialem habebit exortum, hoc est longissimi diei, ventumque aquilonem, borean graecis dictum. in hunc ponito arbores vitesque. sed hoc flante ne arato, frugem ne serito, semen ne iacito. praestringit animam atque praegelat hic radicibus arborum, quas positurus adferes. praedoctus esto: alia

robustis prosunt, alia infantibus. - (nec sum oblitus in hac parte ventum graecis poni, quem caecian vocant. sed idem aristoteles, vir inmensae subtilitatis, qui id ipsum fecit, rationem convexitatis mundi reddit, qua contrarius aquilo africo flat). - nec tamen eum toto anno in praedictis timeto agricola. mollitur sidere aestate media mutatque nomen - etesias vocatur - ; ergo cum frigidum senties, caveto, ad quaecumque aquilo praedicetur: tanto perniciosior septentrione est. in hunc asiae, graeciae, hispaniae, maritimae italiae, campaniae, apuliae arbusta vineaeque spectent. qui mares concipi voles, in hunc pascito, ut sic ineuntem ineat. ex adverso aquilonis ab occasu brumali africus flabit, quem graeci liba vocant. in hunc ad coitum cum se pecus circumegerit, feminas conceptas esse scito.

tertia a septentrione linia, quam per latitudinem umbrae duximus et decumanam vocavimus, exortum habebit aequinoctialem ventumque subsolanum, graecis aphelioten dictum. in hunc salubribus locis villae vineaeque spectent. ipse leniter pluvius tamen est, siccior favonius, ex adverso eius ab aequinoctiali occasu, zephyrus graecis nominatus. in hunc spectare oliveta cato iussit. hic ver inchoat aperitque terras tenui frigore saluber, hic vites putandi frugesque curandi, arbores serendi, poma inserendi, oleas tractandi ius dabit adflatuque nutricium exercebit. quarta a septentrione linia, eadem austro ab exortiva parte proxima, brumalem habebit exortum ventumque volturnum, eurum graecis dictum, sicciorem et ipsum tepidioremque. in hunc apiaria et vineae italiae galliarumque spectare debent. ex adverso volturni flabit corus, ab occasu solstitiali et occasu lateris septentrionis, graecis dictus argestes, ex frigidissimis et ipse, sicut omnes qui a septentrionis parte spirant. hic et grandines infert, cavendus et ipse non secus ac septentrio. volturnus si a serena caeli parte coeperit flare, non durabit in noctem, at subsolanus in maiorem partem noctis extenditur. quisquis erit ventus, si fervidus sentietur, pluribus diebus permanebit. aquilonem praenuntiat terra siccescens repente, austrum umescens rore occulto.

etenim praedicta ventorum ratione, ne saepius eadem dicantur, transire convenit ad reliqua tempestatum praesagia, quoniam et hoc placuisse vergilio magno opere video, siquidem in ipsa messe saepe concurrere proelia ventorum damnosa imperitis refert. tradunt eundem democritum metente fratre eius damaso ardentissimo aestu

orasse, ut reliquae segeti parceret raperetque desecta sub tectum, paucis mox horis saevo imbre vaticinatione adprobata. quin immo et harundinem non nisi inpendente pluvia seri iubent et fruges insecuturo imbre. quamobrem et haec breviter attingemus, scrutati maxime pertinentia, primumque a sole capiemus praesagia.

purus oriens atque non fervens serenum diem nuntiat, at hibernam pallidus grandinem. si et occidit pridie serenus et oritur, tanto certior fides serenitatis. concavus oriens pluvias praedicit; idem ventos, cum ante exorientem eum nubes rubescunt; quod si et nigrae rubentibus intervenerint, et pluvias; cum occidentis aut orientis radii videntur coire, pluvias. si circa occidentem rubescent nubes, serenitatem et futuri diei spondent. si in exortu spargentur partim ad austrum, partim ad aquilonem, pura circa eum serenitas sit licet, pluviam tamen ventosque significabunt; si in ortu aut in occasu contracti cernentur radii, imbrem. si in occasu eius pluet aut radii nubem in se trahent, asperam in proximum diem tempestatem significabunt. cum oriente radii non inlustres eminebunt, quamvis circumdatae nubes non sint, pluviam portendent. si ante exortum nubes globabuntur, hiemem asperam denuntiabunt; si ab ortu repellentur et ad occasum abibunt, serenitatem. si nubes solem circumcludent, quanto minus luminis relinquent, tanto turbidior tempestas erit; si vero etiam duplex orbis fuerit, eo atrocior. quod si in exortu aut in occasu fiet, ita ut rubescant nubes, maxima ostendetur tempestas. si non ambibunt, sed incumbent, a quocumque vento fuerint, eum portendent; si a meridie, et imbrem. si oriens cingetur orbe, ex qua parte is se ruperit, expectetur ventus. si totus defluxerit aequaliter, serenitatem dabit. si in exortu longe radios per nubes porriget et medius erit inanis, pluviam significabit; si ante ortum radii se ostendent, aquam et ventum; si circa occidentem candidus circulus erit, noctis lenem tempestatem; si nebula, vehementiorem; si candente sole, ventum; si ater circulus fuerit, ex qua regione is ruperit se, ventum magnum.

proxima sint iure lunae praesagia. quartam eam maxime observat aegyptus. si splendens exorta puro nitore fulsit, serenitatem; si rubicunda, ventos; si nigra, pluvias portendere creditur in xv. cornua eius obtusa pluviam, erecta et infesta ventos semper significant, quarta tamen maxime. cornu superius acuminatum septentrionalem

atque rigidum illum praesagit ventum, inferius austrum, utraque erecta noctem ventosam. si quartam orbis rutilus cinget, et ventos et imbres praemonebit. apud Varronem ita est: “si quarto die luna erit directa, magnam tempestatem in mari praesagiet, nisi si coronam circa se habebit et eam sinceram, quoniam illo modo non ante plenam lunam hiematurum ostendit. si plenilunio per dimidium pura erit, dies serenos significabit; si rutila, ventos; nigrescens imbres. si caligo orbisve nubium incluserit, ventos, qua se ruperit; si gemini orbes cinxerint, maiorem tempestatem, et magis, si tres erunt aut nigri, interrupti atque distracti. nascens luna si cornu superiore obatrato surget, pluvias decrescens dabit; si inferiore, ante plenilunium; si in media nigritia illa fuerit, imbrem in plenilunio. si plena circa se habebit orbem, ex qua parte is maxime splendebit, ex ea ventum ostendet; si in ortu cornua crassiora fuerint, horridam tempestatem. si ante quartam non apparuerit vento favonio flante, hiemalis toto mense erit. si xvi vehementius flammea apparuerit, asperas tempestates praesagiet.” sunt et ipsius lunae viii articuli, quotiens in angulos solis incidat, plerisque inter eos tantum observantibus praesagia eius, hoc est iii, vii, xi, xv, xviiii, xxiii, xxvii et interlunium.

tertio loco stellarum observationem esse oportet. discurrere hae videntur interdum, ventique protinus sequuntur, in quorum parte ita praesagiere. caelum cum aequaliter totum erit splendidum articulis temporum, quos proposuimus, autumnum serenum praestabit et frigidum. si ver et aestas non sine refrigerio aliquo transierint, autumnum serenum ac densum minusque ventosum facient. autumni serenitas ventosam hiemem facit. cum repente stellarum fulgor obscuratur et id neque nubilo nec caligine, pluvia aut graves denuntiantur tempestates. si volitare plures stellae videbuntur, quo ferentur albescentes, ventos ex is partibus nuntiabunt aut. si coruscabunt, certos, si id in pluribus partibus fiet, inconstantes ventos et undique. si stellarum errantium aliquam orbis incluserit, imbrem. sunt in signo cancri duae stellae parvae aselli appellatae, exiguum inter illas spatium obtinente nubecula, quam praesepia appellant. haec cum caelo sereno apparere desiit, atrox hiems sequitur. si vero alteram earum, aquiloniam, caligo abstulit, auster saevit; si austrinam, aquilo. arcus cum sunt duplices, pluvias nuntiant, a

pluviis serenitatem non perinde certam; circulus nubis circa sidera aliqua pluviam.

cum aestate vehementius tonuit quam fulsit, ventos ex ea parte denuntiat, contra si minus tonuit, imbrem. cum sereno caelo fulgetrae erunt et tonitrua, hiemabit, atrocissime autem, cum ex omnibus quattuor partibus caeli fulgurabit; cum ab aquilone tantum, in posterum diem aquam portendet; cum a septentrione, ventum eum. cum ab austro vel coro aut favonio nocte serena fulgurabit, ventum et imbrem ex isdem regionibus demonstrabit. tonitrua matutina ventum significant, imbrem meridiana.

nubes cum sereno in caelum ferentur, ex quacumque parte id fiet, venti expectentur. si eodem loco globabuntur adpropinquanteque sole discutientur et hoc ab aquilone fiet, ventos; si ab austro, imbres portendent. sole occidente si ex utraque parte eius caelum petent, tempestatem significabunt. vehementius atrae ab oriente in noctem aquam minantur, ab occidente in posterum diem. si nubes ut vellera lanae spargentur multae ab oriente, aquam in triduum praesagient. cum in cacuminibus montium nubes consident, hiemabit. si cacumina pura fient, disserenabit. nube gravida candicante, quod vocant tempestatem albam, grando imminebit. caelo quamvis sereno nubecula quamvis parva flatum procellosum dabit.

nebulae montibus descendentes aut caelo cadentes vel in vallibus sidentes serenitatem promittent.

ab his terreni ignes proxime significant. pallidi namque murmurantesque tempestatum nuntii sentiuntur, pluviae etiam, si in lucernis fungi, si flexuose volitet flamma. ventum nuntiant lumina, cum ex sese flammas elidunt aut vix accenduntur; item cum in ae+no pendente scintillae coacervantur, vel cum tollentibus ollas carbo adhaerescit, aut cum contectus ignis e se favillam discutit scintillamve emittit, vel cum cinis in foco concrescit et cum carbo vehementer perlucet.

est et aquarum significatio: mare si tranquillum in portu cursitabit murmurabitve intra se, ventum praedicet; si id hieme, et imbrem; litora ripaeque si resonabunt tranquillo, asperam tempestatem, item maris ipsius tranquillo sonitus spumaeve dispersae aut aquae bullantes. pulmones marini in pelago plurium dierum hiemem portendunt. saepe et silentio intumescit inflatumque altius solito iam

intra se esse ventos fatetur.

et quidam et montium sonitus nemorumque mugitus praedicunt et sine aura, quae sentiatur, folia ludentia, lanugo populi aut spinae volitans aquisque plumae innatantes, atque etiam in campanis venturam tempestatem praecedens suus fragor. caeli quidem murmur non dubiam significationem habet.

praesagiunt et animalia: delphini tranquillo mari lascivientes flatum, ex qua venient parte, item spargentes aquam, iidem turbato tranquillitatem. lolligo volitans, conchae adhaerescentes, echini adfigentes sese aut harena saburrantes tempestatis signa sunt. ranae quoque ultra solitum vocales et fulicae matutino clangore, item mergi anatesque pinnas rostro purgantes ventum, ceteraeque aquaticae aves concursantes, grues in mediterranea festinantes, mergi, gaviae maria aut stagna fugientes. grues silentio per sublime volantes serenitatem, sicut noctua in imbre garrula - at sereno tempestatem - , corvique singultu quodam latrantes seque concutientes, si continuabunt, serenum diem; si vero carptim vocem resorbebunt, ventosum imbrem. graculi sero a pabulo recedentes hiemem, et albae aves cum congregabuntur et cum terrestres volucres contra aquam clangores dabunt perfundentque sese, sed maxime cornix, hirundo tam iuxta aquam volitans, ut pinna saepe percutiat, quaeque in arboribus habitant, fugitantes in nidos suos, et anseres continuo clangore intempestivi, ardea in mediis harenis tristis.

nec mirum aquaticas aut in totum volucres praesagia ae+ris sentire: pecora exultantia et indecora lascivia ludentia easdem significationes habent, et boves caelum olfactantes seque lambentes contra pilum, turpesque porci alienos sibi manipulos faeni lacerantes, et apes operantes segniter vel contra industriam suam absconditae, vel formicae concursantes aut ova progerentes, item vermes terreni erumpentes.

trifolium quoque inhorrescere et folia contra tempestatem subrigere certum est. nec non et in cibis mensisque nostris vasa, quibus esculentum additur, sudorem repositoriis relinquentia diras tempestates praenuntiant.

LIBER XIX

siderum quoque tempestatumque ratio vel imperitis facili atque indubitato modo demonstrata est, vereque intellegentibus non minus conferunt rura deprehendendo caelo quam sideralis scientia agro colendo. proximam multi hortorum curam fecere; nobis non protinus transire ad ista tempestivum videtur, miramurque aliquos scientiae gratiam eruditionisve gloriam ex his petentes tam multa praeterisse, nulla mentione habita tot rerum sponte curave provenientium, praesertim cum plerisque earum pretio usuque vitae maior etiam quam frugibus perhibeatur auctoritas. atque, ut a confessis ordiamur utilitatibus quaeque non solum terras omnes, verum etiam maria replevere, seritur ac dici neque inter fruges neque inter hortensia potest linum, sed in qua non occurrit vitae parte quodve miraculum maius, herbam esse quae admoveat aegyptum italiae in tantum, ut galerius a freto siciliae alexandriam septimo die pervenerit, balbillus sexto, ambo praefecti, aestate vero post xv annos valerius marianus ex praetoriis senatoribus a puteolis nono die lenissumo flatu herbam esse quae gadis ab herculis columnis septimo die ostiam adferat et citeriorem hispaniam quarto, provinciam narbonensem tertio, africam altero, quod etiam mollissimo flatu contigit c. flavio legato vibi crispi procos.? audax vita, scelerum plena! aliquid seri, ut ventos procellasque capiat, et parum esse fluctibus solis vehi, iam vero nec vela satis esse maiora navigiis, sed, quamvis amplitudini antemnarum singulae arbores sufficiant, super eas tamen addi velorum alia vela, praeterque in proris et alia in puppibus pandi, ac tot modis provocari mortem, denique tam parvo semine nasci quod orbem terrarum ultro citro portet, tam gracili avena, tam non alte a tellure tolli, neque id viribus suis necti, sed fractum tunsumque et in mollitiem lanae coactum iniuria, ac summa audacia pervehi mare! nulla exsecratio sufficit contra inventorem (dictum suo loco nobis), cui satis non fuit hominem in terra mori, nisi periret et insepultus. ac nos priore libro imbres et flatus cavendos frugum causa victusque praemonebamus: ecce seritur hominis manu, metitur eiusdem hominis ingenio, quod ventos in mari optet. propterea, ut sciamus favisse poenas, nihil gignitur facilius; ut sentiamus nolente seri

natura, urit agrum deterioremque etiam terram facit.

seritur sabulosis maxime unoque sulco, nec magis festinat aliud. vere satum aestate vellitur, et hanc quoque terrae iniuriam facit. ignoscat tamen aliquis aegypto serenti, ut arabiae indiaeque merces inportet. itane et galliae censentur hoc reditu montesque mari oppositos esse non est satis et a latere oceani obstare ipsum, quod vocant inane cadurci, caleti, ruteni, bituriges ultimique hominum existimati morini, immo vero galliae universae vela texunt, iam quidem et transrhenani hostes, nec pulchriorem aliam vestem eorum feminae novere. qua admonitione succurrit quod M. Varro tradit, in serranorum familia gentilicium esse feminas lintea veste non uti. in germania autem defossae atque sub terra id opus agunt. similiter etiam in italiae regione aliana inter padum ticinumque amnes, ubi a saetabi tertia in europa lino palma; secundam enim in vicino alianis capessunt retovina et in aemilia via faventina. candore alianis semper crudis faventina praeferuntur; retovinis tenuitas summa densitasque, candor qui faventinis, sed lanugo nulla, quod apud alios gratiam, apud alios offensionem habet. nervositas filo aequalior paene quam araneis tinnitusque, cum dente libeat experiri. ideo duplex quam ceteris pretium. et ab his hispania citerior habet splendorem lini praecipuum torrentis, in quo politur, natura, qui adluit tarraconem. et tenuitas mira ibi primum carbasis repertis. non dudum ex eadem hispania zoelicum venit in italiam plagis utilissimum; civitas ea gallaeciae et oceano propinqua. est sua gloria et cumano in campania ad piscium et alitum capturas. eadem et plagis materia - neque enim minores cunctis animalibus insidias quam nobismet ipsis lino tendimus - , sed cumanae plagae concidunt apro saetas et vel ferri aciem vincunt, vidimusque iam tantae tenuitatis, ut anulum hominis cum epidromis transirent uno portante multitudinem, qua saltus cingerentur. nec id maxime mirum, singula earum stamina centeno quinquageno filo constare, sicut paulo ante iulio lupo, qui in praefectura aegypti obiit. mirentur hoc ignorantes in aegypti quondam regis, quem amasim vocant, thorace in rhodiorum insula lindi in templo minervae ccclxv filis singula fila constare, quod se expertum nuperrime prodidit mucianus ter cos. parvasque iam reliquias eius superesse hac experientium iniuria. italia et paelignis etiamnum linis honorem habet, sed fullonum tantum in usu. nullum

est candidius lanaeve similius, sicut in culcitis praecipuam gloriam cadurci obtinent. galliarum hoc et tomenta pariter inventum. italiae quidem mos etiam nunc durat in appellatione stramenti. aegyptio lino minimum firmitatis, plurimum lucri. quattuor ibi genera: taniticum, pelusiacum, buticum, tentyriticum regionum nominibus, in quibus nascuntur. superior pars aegypti in arabiam vergens gignit fruticem, quem aliqui gossypion vocant, plures xylon et ideo lina inde facta xylina. parvus est similemque barbatae nucis fructum defert, cuius ex interiore bombyce lanugo netur. nec ulla sunt cum candore molliora pexiorave. vestes inde sacerdotibus aegypti gratissimae. quartum genus et othoninum appellant. fit e palustri velut harundine, dumtaxat panicula eius. asia e genista facit lina ad retia praecipue in piscando durantia, frutice madefacto x diebus, aethiopes indique e malis, arabes e curcurbitis in arboribus, ut diximus, genitis.

apud nos maturitas eius duobus argumentis intellegitur, intumescente semine aut colore flavescente. tum evolsum et in fasciculos manuales colligatum siccatur in sole pendens conversis superne radicibus uno die, mox v aliis contrariis in se fascium cacuminibus, ut semen in medium cadat. inter medicamina huic vis, et in quodam rustico ac praedulci italiae transpadanae cibo, sed iam pridem sacrorum tantum, gratia. deinde post messem triticiam virgae ipsae merguntur in aquam solibus tepefactam, pondere aliquo depressae; nulli enim levitas maior. maceratas indicio est membrana laxatior, iterumque inversae, ut prius, sole siccantur, mox arefactae in saxo tunduntur stuppario malleo. quod proximum cortici fuit, stuppa appellatur, deterioris lini, lucernarum fere luminibus aptior; et ipsa tamen pectitur ferreis aculeis, donec omnis membrana decorticetur, corticesque decussi clibanis et furnis praebent usum. medullae numerosior distinctio candore, mollitia. linumque nere et viris decorum. est ars depectendi digerendique: iustum e quinquagenis fascium libris quinas denas carminari. iterum deinde in filo politur, inlisum crebro silici ex aqua, textumque rursus tunditur clavis, semper iniuria melius.

inventum iam est etiam quod ignibus non absumeretur. vivum id vocant, ardentesque in focis conviviorum ex eo vidimus mappas sordibus exustis splendescentes igni magis quam possent aquis. regum inde funebres tunicae corporis favillam ab reliquo separant

cinere. nascitur in desertis adustisque sole indiae, ubi non cadunt imbres, inter diras serpentes, adsuescitque vivere ardendo, rarum inventu, difficile textu propter brevitatem. rufus de cetero colos splendescit igni. cum inventum est, aequat pretia excellentium margaritarum. vocatur autem a graecis ἀσβέστινον ex argumento naturae. anaxilaus auctor est linteo eo circumdatam arborem surdis ictibus et qui non exaudiantur caedi. ergo huic lino principatus in toto orbe. proximus byssino, mulierum maxime deliciis circa elim in achaia genito; quaternis denariis scripula eius permutata quondam ut auri reperio. linteorum lanugo, e velis navium maritimarum maxime, in magno usu medicinae est, et cinis spodii vim habet. est et inter papavera genus quoddam, quo candorem lintea praecipuum trahunt.

temptatum est tingui linum quoque, ut vestium insaniam acciperet, in alexandri magni primum classibus indo amne navigantis, cum duces eius ac praefecti certamine quodam variassent insignia navium, stupueruntque litora flatu versicoloria pellente vela. purpureo ad actium cum m. antonio cleopatra venit eodemque fugit. hoc fuit imperatoriae navis insigne.

postea in theatris tantum umbram fecere, quod primus omnium invenit q. catulus, cum capitolium dedicaret. carbasina deinde vela primus in theatro duxisse traditur lentulus spinther apollinaribus ludis. mox caesar dictator totum forum romanum intexit viamque sacram ab domo sua et clivum usque in capitolium, quod munere ipso gladiatorio mirabilius visum tradunt. deinde et sine ludis marcellus octavia Augusti sorore genitus in aedilitate sua, avunculi xi consulatu, a kal. aug. velis forum inumbravit, ut salubrius litigantes consisterent, quantum mutati a moribus catonis censorii, qui sternendum quoque forum muricibus censuerat! vela nuper et colore caeli, stellata, per rudentes iere etiam in amphitheatris principis neronis. rubent in cavis aedium et muscum ab sole defendunt. cetero mansit candori pertinax gratia. honor ei iam et troiano bello. cur enim non et proeliis intersit ut naufragiis thoracibus lineis paucos tamen pugnasse testis est homerus. hinc fuisse et navium armamenta apud eundem interpretantur eruditiores, quoniam, cum σπαρτὰ dixit, significaverit sata.

sparti quidem usus multa post saecula coeptus est, nec ante poenorum arma, quae primum hispaniae intulerunt. herba et haec,

sponte nascens et quae non queat seri, iuncusque proprie aridi soli, uni terrae data vitio. namque id malum telluris est, nec aliud ibi seri aut nasci potest. in africa exiguum et inutile gignitur. carthaginiensis hispaniae citerioris portio, nec haec tota, sed quatenus parit, montes quoque sparto operit. hinc strata rusticis eorum, hinc ignes facesque, hinc calceamina et pastorum vestes. animalibus noxium praeterquam cacuminum teneritate. ad reliquos usus laboriose evellitur ocreatis cruribus manuque textis manicis convoluta, osseis iligneisve conamentis, nunc iam in hiemem iuxta, facillime tamen ab idibus mais in iunias. hoc maturitatis tempus.

volsum fascibus in acervo alligatum biduo, tertio resolutum spargitur in sole siccaturque et rursus in fascibus redit sub tecta. postea maceratur, aqua marina optime, sed et dulci, si marina desit, siccatumque sole iterum rigatur. si repente urgueat desiderium, perfusum calida in solio ac siccatum stans conpendium operae fatetur. hoc autem tunditur, ut fiat utile, praecipue in aquis marique invictum. in sicco praeferunt e cannabi funes, set spartum alitur etiam demersum, veluti natalium sitim pensans. est quidem eius natura interpolis, rursusque quam libeat vetustum novo miscetur. verumtamen complectatur animo qui volet miraculum aestimare, quanto sit in usu omnibus terris navium armamentis, machinis aedificationum aliisque desideriis vitae. ad hos omnes usus quae sufficiant, minus [xxx] passuum in latitudinem a litore carthaginis novae minusque [c] in longitudinem esse reperientur. longius vehi impendia prohibent.

iunco graecos ad funes usos nomini credamus, quo herbam eam appellant, postea palmarum foliis philuraque manifestum est. inde translatum a poenis sparti usum perquam simile veri est.

theophrastus auctor est esse bulbi genus circa ripas amnium nascens, cuius inter summum corticem eamque partem, qua vescuntur, esse laneam naturam, ex qua inpilia vestesque quaedam conficiantur. sed neque regionem, in qua id fiat, nec quicquam diligentius praeterquam eriophoron id appellari in exemplaribus, quae equidem invenerim, tradit, neque omnino ullam mentionem habet sparti cuncta magna cura persecutus cccxc annis ante nos, ut iam et alio loco diximus, quo apparet post id temporis spatium in usum venisse spartum.

et quoniam a miraculis rerum coepimus, sequemur eorum ordinem, in quibus vel maximum est aliquid nasci ac vivere sine ulla radice. tubera haec vocantur undique terra circumdata nullisque fibris nixa aut saltem capillamentis, nec utique extuberante loco, in quo gignuntur, aut rimas sentiente. neque ipsa terrae cohaerent, cortice etiam includuntur, ut plane nec terram esse possimus dicere neque aliud quam terrae callum. siccis haec fere et sabulosis locis frutectosisque nascuntur. excedunt saepe magnitudinem mali cotonei, etiam librali pondere. duo eorum genera: harenosa dentibus inimica, in altero sincera. distinguntur et colore, rufo nigroque et intus candido, laudatissima africae. crescant anne vitium id terrae - neque enim aliud intellegi potest - ea protinus globetur magnitudine, qua futurum est, et vivat necne, non facile arbitror intellegi posse. putrescendi enim ratio communis est cum ligno. lartio licinio praetorio viro iura reddenti in hispania carthagine paucis his annis scimus accidisse mordenti tuber, ut deprehensus intus denarius primos dentes inflecteret, quo manifestum erit terrae naturam in se globari. quod certum est, ex his erunt, quae nascantur et seri non possint.

simile est et quod in cyrenaica provincia vocant misy, praecipuum suavitate odoris ac saporis, sed carnosius, et quod in threcia iton et quod in graecia geranion.

de tuberibus haec traduntur peculiariter: cum fuerint imbres autumnales ac tonitrua crebra, tunc nasci et maxime tonitribus, nec ultra annum durare, tenerrima autem verno esse. quibusdam locis accepta tantum riguis feruntur, sicut mytilenis negant nasci nisi exundatione fluminum invecto semine ab tiaris. est autem is locus, in quo plurima nascuntur. asiae nobilissima circa lampsacum et alopeconnesum, graeciae vero circa elim.

sunt et in fungorum genere graecis dicti pezicae, qui sine radice aut pediculo nascuntur.

ab his proximum dicetur auctoritate clarissimum laserpicium, quod graeci silphion vocant, in cyrenaica provincia repertum, cuius sucus laser vocatur, magnificum in usu medicamentisque et ad pondus argentei denarii repensum. multis iam annis in ea terra non invenitur, quoniam publicani, qui pascua conducunt, maius ita lucrum sentientes depopulantur pecorum pabulo. unus omnino caulis

nostra memoria repertus neroni principi missus est. si quando incidit pecus in spem nascentis, hoc deprehenditur signo: ove, cum comederit, dormiente protinus, capra sternuente crebrius. diuque iam non aliud ad nos invehitur laser, quam quod in perside aut media et armenia nascitur large, sed multo infra cyrenaicum, id quoque adulteratum cummi aut sacopenio aut faba fracta; quo minus omittendum videtur c. valerio m. herennio cos. cyrenis advecta romam publice laserpicii pondo xxx, caesarem vero dictatorem initio belli civilis inter aurum argentumque protulisse ex aerario laserpicii pondo md.

id apud auctores graeciae certissimos invenimus natum imbre piceo repente madefacta tellure circa hesperidum hortos syrtimque maiorem septem annis ante oppidum cyrenarum, quod conditum est urbis nostrae anno cxliii, vim autem illam per [iiii] stadium africae valuisse. in ea laserpicium gigni solitum, rem feram ac contumacem et, si coleretur, in deserta fugientem, radice multa crassaque, caule ferulaceo ac simili crassitudine. huius folia maspetum vocabant, apio maxime similia. semen erat foliaceum, folium ipsum vere deciduum. vesci pecora solita primoque purgari, mox pinguescere, carne mirabilem in modum iucunda. post folia amissa caule ipso et homines vescebantur modis omnibus decocto, elixo assoque, eorum quoque corpora xl primis diebus purgante. sucus duobus modis capiebatur, e radice atque caule, et haec duo erant nomina, rhizias atque caulias, vilior illo ac putrescens. radici cortex niger. ad mercis adulteria sucum ipsum in vasa coiectum admixto furfure subinde concutiendo ad maturitatem perducebant, ni ita fecissent, putrescentem. argumentum erat maturitatis colos siccitasque sudore finito. alii tradunt laserpicii radicem fuisse maiorem cubitali, tuberque in ea supra terram. hoc inciso profluere solitum sucum ceu lactis, supernato caule, quem magydarim vocarunt. folia aurei coloris pro semine fuisse, cadentia a canis ortu austro flante. ex his laserpicium nasci solitum, annuo spatio et radice et caule consummantibus sese. hi et circumfodi solitum prodidere, nec purgari pecora, sed aegra sanari aut protinus mori, quod in paucis accidere. persico silphio prior opinio congruit.

alterum genus eius est, quod magydaris vocatur, tenerius et minus vehemens, sine suco, quod circa syriam nascitur, non proveniens in

cyrenaica regione. gignitur et in parnaso monte copiosum, quibusdam laserpicium vocantibus. per quae omnia adulteratur rei saluberrimae utilissimaeque auctoritas. probatio sinceri prima in colore modice rufo et, cum frangatur, intus candido, mox tralucente gutta quaeque saliva celerrime liquescat. usus in multis medicaminibus.

sunt etiamnum duo genera non nisi sordido nota volgo, cum quaestu multum polleant, in primis rubia, tinguendis lanis et coriis necessaria. laudatissima italica et maxime suburbana, et omnes paene provinciae scatent ea. sponte provenit seriturque, similitudine erviliae, verum spinosis foliis et caule. geniculatus hic est quinis circa articulos in orbe foliis. semen eius rubrum, postremo nigrum, radix rubra est. quos in medicina usus habeat dicemus suo loco.

at quae vocatur radicula lavandis demum lanis sucum habet, mirum quantum conferens candori mollitiaeque. nascitur sativa ubique, sed sponte praecipua in asia syriaque, saxosis et asperis locis, trans euphraten tamen laudatissima, caule ferulaceo, tenui et ipso, cibis indigenarum expetito et unguentis, quicquid sit cum quo decoquatur, folio oleae. struthion graeci vocant. floret aestate, grata aspectu, verum sine odore, spinosae caule lanuginis. semen ei nullum, radix magna, quae conciditur ad quem dictum est usum.

ab his superest reverti ad hortorum curam et suapte natura memorandam et quoniam antiquitas nihil prius mirata est, quam hesperidum hortos ac regum adonidis et alcinoi itemque pensiles, sive illos semiramis sive assyriae rex syrus fecit, de quorum opere alio volumine dicemus. romani quidem reges ipsi coluere; quippe etiam superbus nuntium illum saevum atque sanguinarium filio remisit ex horto. in xii tabulis legum nostrarum nusquam nominatur villa, semper in significatione ea hortus, in horti vero heredium; quam ob rem comitata est et religio quaedam, hortoque et foro tantum contra invidentium effascinationes dicari videmus in remedio saturica signa, quamquam hortos tutelae veneris adsignante plauto. iam quidem hortorum nomine in ipsa urbe delicias agros villasque possident. primus hoc instituit athenis epicurus otii magister; usque ad eum moris non fuerat in oppidis habitari rura.

romae quidem per se hortus ager pauperis erat. ex horto plebei macellum, quanto innocentiore victu! mergi enim, credo, in profunda

satius est et ostrearum genera naufragio exquiri, aves ultra phasim amnem peti ne fabuloso quidem terrore tutas, immo sic pretiosiores, alias in numidiam atque aethiopiae sepulchra, aut pugnare cum feris mandique capientem quod mandat alius. at, hercules, quam vilia haec, quam parata voluptati satietatique, nisi eadem, quae ubique, indignatio occurreret! ferendum sane fuerit exquisita nasci poma, alia sapore, alia magnitudine, alia monstro pauperibus interdicta, inveterari vina saccisque castrari, nec cuiquam adeo longam esse vitam, ut non ante se genita potet, e frugibus quoque quondam alicam sibi excogitasse luxuriam ac medulla tantum earum superque pistrinarum operibus et caelaturis vivere, alio pane procerum, alio volgi, tot generibus usque ad infimam plebem descendente annona. etiamne in herbis discrimen inventum esse, opesque differentiam facere in cibo etiam uno asse venali in his quoque aliqua sibi nasci tribus negant, caule in tantum saginato, ut pauperis mensa non capiat. silvestres fecerat natura corrudas, ut passim quisque demeteret. ecce altiles spectantur asparagi, et ravenna ternos libris rependit. heu prodigia ventris! mirum esset non licere pecori carduis vesci: non licet plebei! aquae quoque separantur, et ipsa naturae elementa vi pecuniae discreta sunt. hi nives, illi glaciem potant poenasque montium in voluptatem gulae vertunt. servatur rigor aestibus, excogitaturque ut alienis mensibus nix algeat. decocunt alii aquas, mox et illas hiemant. nihil utique homini sic, quomodo rerum naturae, placet. etiamne herba aliqua diviti tantum pascitur nemo sacros aventinosque montes et iratae plebis secessus circumspexerit macellum certe aequabit quos pecunia separaverit. itaque, hercules, nullum macelli vectigali maius fuit romae clamore plebis incusantis apud omnes principes, donec remissum est portorium mercis huius, conpertumque non aliter quaestuosius censum haberi aut tutius ac minore fortunae iure: cum credatur pensio ea pauperrumis, in solo sponsor est et sub die reditus superficiesque caelo quocumque gaudens.

hortorum cato praedicat caules. hinc primum agricolae aestimabant prisci et sic statim faciebant iudicium, nequam esse in domo matrem familias - etenim haec cura feminae dicebatur - , ubi indiligens esset hortus, quippe e carnario aut macello vivendum esse. nec caules, ut nunc maxime, probabant, damnantes pulmentaria quae

egerent alio pulmentario: id erat oleo parcere, nam gari desideria etiam in exprobratione erant. horti maxime placebant quae non egerent igni parcerentque ligno, expedita res et parata semper, unde et acetaria appellantur, facilia concoqui nec oneratura sensus cibo et quae minime accenderent desiderium panis. pars eorum ad condimenta pertinens fatetur domi versuram fieri solitam atque non indicum piper quaesitum quaeque trans maria petimus. iam in fenestris suis plebs urbana imagine hortorum cotidiana oculis rura praebebant, antequam praefigi prospectus omnes coegit multitudinis innumerae saeva latrocinatio. quamobrem sit aliquis et his honos, neve auctoritatem rebus vilitas adimat, cum praesertim etiam cognomina procerum inde nata videamus lactucinosque in valeria familia non puduisse appellari, et contingat aliqua gratia operae curaeque nostrae vergilio quoque confesso, quam sit difficile verborum honorem tam parvis perhibere.

hortos villae iungendos non est dubium riguosque maxime habendos, si contingat, praefluo amne, si minus, e puteo rota organisve pneumaticis vel tollenonum haustu rigatos. solum proscindendum a favonio in autumnum praeparantibus post xiiii dies iterandumque ante brumam. viii iugerum operis palari iustum est, fimum iii pedes alte cum terra misceri, areis distingui easque resupinis pulvinorum toris, ambiri singulas tramitum sulcis, qua detur accessus homini scatebrisque decursus.

in hortis nascentium alia bulbo commendantur, alia capite, alia caule, alia folio, alia utroque, alia semine, alia cartilagine, alia carne aut utroque, alia cortice aut cute et cartilagine, alia tunicis carnosis.

aliorum fructus in terra est, aliorum et extra, aliorum non nisi extra. quaedam iacent crescuntque, ut cucurbitae et cucumis; eadem pendent, quamquam graviora multo etiam iis, quae in arboribus gignuntur. sed cucumis cartilagine et carne constat, cucurbita cortice et cartilagine; cortex huic uni maturitate transit in lignum. terra conduntur raphani napique et rapa, atque alio modo inulae, siser, pastinacae. quaedam vocabimus ferulacea, ut anetum, malvas. namque tradunt auctores in arabia malvas septimo mense arborescere baculorumque usum praebere. exemplo est arbor malvae in mauretania lixi oppidi aestuario, ubi hesperidum horti fuisse produntur, cc passibus ab oceano iuxta delubrum herculis antiquius

gaditano, ut ferunt. ipsa altitudinis pedum xx, crassitudinis quam circumplecti nemo possit. in simili genere habebitur et cannabis. nec non et carnosa aliqua appellabimus, ut spongeas in umore pratorum enascentes. fungorum enim callum in ligni arborumque natura diximus et alio genere tuberum paulo ante.

cartilaginum generis extraque terram est cucumis, mira voluptate tiberio principi expetitus. nullo quippe non die contigit ei, pensiles eorum hortos promoventibus in solem rotis olitoribus rursusque hibernis diebus intra specularium munimenta revocantibus. quin et lacte mulso semine eorum biduo macerato apud antiquos graeciae auctores scriptum est seri oportere, ut dulciores fiant. crescunt qua coguntur forma. in italia virides et quam minimi, in provinciis quam maximi et cerini aut nigri placent. copiosissimi africae, grandissimi moesiae. cum magnitudine excessere, pepones vocantur. vivunt hausti in stomacho in posterum diem nec perfici queunt in cibis, non insalubres tamen plurimum. natura oleum odere mire nec minus aquas diligunt, desecti quoque. ad eas modice distantes adrepunt, contra oleum refugiunt aut, si quid obstet vel si pendeant, curvantur intorquenturque. id vel una nocte deprehenditur, si vas cum aqua subiciatur, a quattuor digitorum intervallo descendentibus ante posterum diem, at si oleum eodem modo sit, in hamos curvatis. iidem in fistulam flore demisso mira longitudine crescunt. ecce cum maxime nova forma eorum in campania provenit mali cotonei effigie. forte primo natum ita audio unum, mox semine ex illo genus factum, melopeponas vocant. non pendent hi, sed humi rotundantur, colore aureo. mirum in his praeter figuram coloremque et odorem, quod maturitatem adepti, quamquam non pendentes, statim a pediculo recedunt. columella suum tradit commentum, ut toto anno contingant, fruticem rubi quam vastissimum in apricum locum transferre et recidere duum digitorum relicta stirpe circa vernum aequinoctium. ita in medulla rubi semine cucumeris insito terra minuta fimoque circumaggeratas resistere frigori radices. cucumerum graeci tria genera fecere, laconicum, scytalicum, boeotium; ex his tantum laconicum aqua gaudere. sunt qui herba, nomine quae vocatur culix, trita semen eorum maceratum seri iubeant, ut sine semine nascantur.

similis et cucurbitis natura, dumtaxat in nascendo. aeque hiemem

odere, amant rigua ac fimum. seruntur ambo semine in terra sesquipedali fossura, inter aequinoctium vernum et solstitium, parilibus tamen aptissime; aliqui malunt ex kal. mart. cucurbitas et nonis, cucumis et per quinquatrus serere. simili modo reptantibus flagellis scandentis parietum aspera in tectum usque natura sublimitatis avida. vires sine adminiculo standi non sunt, velocitas pernix, levi umbra camaras ac pergulas operiens. inde haec prima duo genera, camararium et plebeium, quod humi crescit; in priore mire tenui pediculo libratur pondus immobile aurae. cucurbita quoque omni modo fastigatur, vaginis maxime vitilibus, coniecta in eas postquam defloruit, crescitque qua cogitur forma, plerumque et draconis intorti figura. libertate vero pensili concessa iam visa est viiii pedum longitudinis. particulatim cucumis floret, sibi ipse superflorescens, et sicciores locos patitur, candida lanugine obductus magisque, dum crescit.

cucurbitarum numerosior usus. et primus caulis in cibo, atque ex eo in totum natura diversa. nuper in balnearum usum venere urceorum vice, iam pridem vero etiam cadorum ad vina condenda. cortex viridi tener, deraditur nihilominus in cibis. cibus saluber ac lenis pluribus modis, ex his tamen, qui perfici humano ventre non queant, sed non intumescant. semina, quae proxima collo fuerunt, proceras pariunt, item ab imis, sed non comparandas supra dictis; quae in medio, rotundas; quae in lateribus, crassas brevioresque. siccantur in umbra et, cum libeat serere, in aqua macerantur. cibis quo longiores tenuioresque, eo gratiores, et ob id salubriores quae pendendo crevere, minimumque seminis tales habent, duritia eius in cibis gratiam terminante. eas, quae semini serventur, ante hiemem praecidi non est mos, postea fumo siccantur condendis hortensiorum seminibus, rusticae supellectili. inventa est ratio, qua cibis quoque servarentur - eodemque modo cucumis - usque ad alios paene proventus; et id quidem muria fit. sed et scrobe opaco in loco harena substrato fenoque sicco operto ac deinde terra virides servari tradunt. sunt et silvestres in utroque genere et omnibus fere hortensiis. sed et his medica tantum natura est, quam ob rem differentur in sua volumina.

reliqua cartilaginum naturae terra occultantur omnia. in quibus de rapis abunde dixisse poteramus videri, nisi medici masculini sexus

facerent in his rotunda, latiora vero et concava feminini, praestantiora suavitate et ad condiendum faciliora; saepius sata transeunt in marem. iidem naporum quinque genera fecere, corinthium, cleonaeum, liothasium, boeotium et quod per se viride dixerunt. ex his in amplitudinem adolescit corinthium, nuda fere radice. solum enim hoc genus superne tendit, non, ut cetera, in terram. liothasium quidam thracium appellant, frigorum patientissimum. ab eo boeotium dulce est, rotunditate etiam brevi notabile, neque, ut cleonaeum, praelongum. in totum quidem quorum levia folia, ipsi quoque dulciores; quorum scabra et angulosa et horrida, amariores. est praeterea genus silvestre, cuius folia sunt erucae similia. palma romae amiterninis datur, dein nursinis, tertia nostratibus. cetera de satu eorum in rapis dicta sunt.

cortice et cartilagine constant raphani, multisque eorum cortex crassior etiam quam quibusdam arborum. amaritudo plurima illis est pro crassitudine corticis - cetera quoque aliquando lignosa - et vis mira colligendi spiritum laxandique ructum. ob id cibus inliberalis, utique si proxime olus mandatur; si vero ipse cum olivis druppis, rarior ructus fit minusque faetidus. aegypto mire celebratur olei propter fertilitatem, quod e semine eius faciunt. hoc maxime cupiunt serere, si liceat, quoniam et quaestus plus quam e frumento et minus tributi est nullumque ibi copiosius oleum. genera raphani graeci fecere tria foliorum differentia: crispi atque levis et tertium silvestre. atque huic levia quidem, sed breviora ac rotunda copiosaque ac fruticosa, sapor autem asper et medicamenti instar ad eliciendas alvos. et in prioribus tamen differentia semine, quoniam aliqua peius, aliqua admodum exiguum ferunt. haec vitia non cadunt nisi in crispa folia. nostri alia fecere genera: algidense a loco, longum atque tralucidum, alterum rapi figura, quod vocant syriacum, suavissimum fere ac tenerrimum hiemisque patiens praecipue. verum tamen e syria non pridem advectum apparet, quoniam apud auctores non reperitur; id autem tota hieme durat. etiamnum unum silvestre graeci cerain vocant, pontici armon, alii leucen, nostri armoraciam, fronde copiosius quam corpore. in omnibus autem probandis maxime spectantur caules, inmitium enim rotundiores crassioresque ac longis canalibus; folia ipsa tristiora et angulis horrida.

seri vult raphanus terra soluta, umida. fimum odit palea contentus.

frigore adeo gaudet, ut in germania infantium puerorum magnitudinem aequet. seritur post id. feb., ut vernus sit, iterumque circa vulcanalia, quae satio melior. multi et martio et aprili serunt et septembri. incipiente incremento confert alterna folia circumobruere, ipsos vero adcumulare, nam qui extra terram emersit, durus fit atque fungosus. aristomachus detrahi folia per hiemem iubet et, ne lacunae stagnent, accumulari; ita in aestatem grandescere. quidam prodidere, si palo adacto caverna palea insternatur sex digitorum altitudine, deinde in semen fimumque et terra congeratur, ad magnitudinem scrobis crescere. praecipue tamen salsis aluntur; itaque etiam talibus aquis rigantur et in aegypto nitro sparguntur, ubi sunt suavitate praecipui. in totum quoque salsugine amaritudo eorum eximitur, fiuntque coctis similes. namque et cocti dulcescunt et in naporum vicem transeunt. crudos medici suadent ad colligenda acria viscerum cum sale ieiunis esse, atque ita vomitionibus praeparant meatum. tradunt et praecordiis necessarium hunc sucum, quando φθειρίασιν cordi intus inhaerentem non alio potuisse depelli conpertum sit in aegypto, regibus corpora mortuorum ad scrutandos morbos insecantibus. atque, ut est graeca vanitas, fertur in templo apollinis delphis adeo ceteris cibis praelatus raphanus, ut ex auro dicaretur, beta ex argento, rapum e plumbo. scires non ibi genitum m'. curium imperatorem, quem hospitum legatis aurum repudiaturo adferentibus rapum torrentem in foco inventum annales nostri prodidere. scripsit et moschion graecus unum de raphano volumen. utilissimi in cibis hiberno tempore existimantur, iidemque dentibus semper inimici, quoniam adterant; ebora certe poliunt. odium is cum vite maximum, refugitque iuxta satos.

lignosiora sunt reliqua in cartilaginum genere a nobis posita, mirumque omnibus vehementiam saporis esse. ex his pastinacae unum genus agreste sponte provenit, alterum graeciae seritur radice vel semine vere primo vel autumno, ut hygino placet, februario, augusto, septembri, octobri, solo quam altissime refosso. annicula utilis esse incipit, bima utilior, gratior autumno patinisque maxime, et sic quoque virus intractabile illi est. hibiscum a pastinaca gracilitate distat, damnatum in cibis, sed medicinae utile. est et quartum genus in eadem similitudine pastinacae, quam nostri gallicam vocant, graeci vero daucon, cuius genera etiam quattuor

fecere, inter medicamenta dicendum.

siser et ipsum tiberius princeps nobilitavit flagitans omnibus annis e germania. gelduba appellatur castellum rheno inpositum, ubi generositas praecipua, ex quo apparet frigidis locis convenire. inest longitudine nervus, qui decoctis extrahitur, amaritudinis tamen magna parte relicta, quae mulso in cibis temperata etiam in gratiam vertitur. nervus idem et pastinacae maiori, dumtaxat anniculae. siseris satus mensibus februario, martio, aprili, augusto, septembri, octobri.

brevior his est et torosior amariorque inula per se stomacho inimicissima, eadem dulcibus mixtis saluberrima. pluribus modis austeritate victa gratiam invenit. namque et in pollinem tunditur arida liquidoque dulci temperatur, et decocta posca aut adservata vel macerata pluribus modis et tunc mixta defruto aut subacta melle uvisve passis aut pinguibus caryotis. alio rursus modo cotoneis malis vel sorbis aut prunis, aliquando pipere aut thymo variata defectus praecipue stomachi excitat, inlustrata maxime iuliae augustae cotidiano cibo. supervacuum eius semen, quoniam oculis ex radice ex radice excisis, ut harundo, seritur, et haec autem et siser et pastinaca utroque tempore, vere et autumno, magnis seminum intervallis, inula ne minus quam ternorum pedum, quoniam spatiose fruticat. siser transferre melius.

proxima hinc est bulborum natura, quos cato in primis serendos praecipit celebrans megaricos. verum nobilissima est scilla, quamquam medicamini nata exacuendoque aceto. nec ulli amplitudo maior, sicuti nec vis asperior. duo genera medicae, masculae albis foliis, feminae nigris. set tertium genus est cibis gratum, epimenidu vocatur, angustius folio ac minus asperum. seminis plurimum omnibus; celerius tamen proveniunt satae bulbis circa latera natis et, ut crescant, folia, quae sunt his ampla, deflexa circa obruuntur; ita sucum omnem in se trahunt capita. sponte nascuntur copiosissimae in baliaribus ebusoque insulis ac per hispanias. unum de eis volumen condidit pythagoras philosophus, colligens medicas vires, quas proximo reddemus libro. reliqua genera bulborum differunt colore, magnitudine, suavitate, quippe cum quidam crudi mandantur, ut in cherroneso taurica. post hos in africa nati maxime laudantur, mox apuli. genera graeci haec fecere: bolbinen, setanion, opitiona, cyica,

aegilopa, sisyrinchion. in hoc mirum imas eius radices crescere hieme, verno autem, cum apparuerit viola, minui ac contrahi, tunc deinde bulbum pinguescere. est inter genera et quod in aegypto aron vocant, scillae proximum amplitudine, foliis lapathi, caule recto duum cubitorum, baculi crassitudine, radice mollioris naturae, quae estur et cruda. effodiuntur bulbi ante ver aut deteriores illico fiunt. signum maturitatis est folia inarescentia ab imo, vetustioresque improbant, item longos ac parvos; contra rubicundis rotundioribusque laus et grandissimis. amaritudo plerisque in vertice est, media eorum dulcia. bulbos non nasci nisi e semine priores tradiderunt, sed in praenestinis campis sponte nascuntur ac sine modo etiam in remorum arvis.

hortensiis omnibus fere singulae radices, ut raphano, betae, apio, malvae, amplissima autem lapatho, ut quae descendat ad tria cubita - silvestri minor - , et umida effossa quoque diu vivit. quibusdam tamen capillatae, ut apio, malvae, quibusdam surculosae, ut ocimo, aliis carnosae, ut betae, ut magis etiamnum croco; aliquis ex cortice et carne constant, ut raphano, rapis; quorundam geniculatae sunt, ut graminis. quae rectam non habent radicem, statim plurimis nituntur capillamentis, ut atriplex et blitum. scilla autem et bulbi et cepae et alium non nisi in rectum radicantur. sponte nascentium quaedam numerosiora sunt radice quam folio, ut spalax, perdicium, crocum. florent confertim serpullum, habrotonum, napi, raphani, menta, ruta, et cetera quidem, cum coepere, deflorescunt, ocimum autem particulatim et ab imo incipit, qua de causa diutissime floret. hoc et in heliotropio herba evenit. flos aliis candidus, aliis luteus, aliis purpureus. folia cadunt a cacuminibus origano, inulae et aliquando rutae iniuria laesae. maxime concava sunt cepae, getio.

alium cepasque inter deos in iureiurando habet aegyptus. cepae genera apud graecos sarda, samothracia, alsidena, setania, schista, ascalonia, ab oppido iudaeae nominata. omnibus etiam odor lacrimosus et praecipue cypriis, minime cnidiis. omnibus corpus totum pingui tunicarum cartilagine. e cunctis setania minima, excepta tusculana, sed dulcis. schista autem et ascalonia condiuntur. schistam hieme cum coma sua relincunt, vere folia detrahunt, et alia subnascuntur iisdem divisuris, unde et nomen. hoc exemplo reliquis quoque generibus detrahi iubent, ut in capita crescant potius quam in

semen. ascaloniarum propria natura. etenim velut steriles sunt ab radice, et ob id semine seri illas, non deponi iussere graeci, praeterea serius circa ver, at cum germinent, transferri, ita crassescere et properare cum praeteriti temporis pensitatione. festinandum autem in iis est, quoniam maturae celeriter putrescunt. si deponantur, caulem emittunt et semen ipsaeque evanescunt. est et colorum differentia; in isso enim et sardibus candidissimae proveniunt. sunt in honore et creticae, de quibus dubitant, an eaedem sint quae ascaloniae, quoniam satis capita crassescunt, depositis caulis et semen. distant sapore tantum dulci. apud nos duo prima genera: unum condimentariae, quam illi getion, nostri pallacanam vocant, seritur mensibus martio, aprili, maio, alterum capitatae, quae ab aequinoctio autumni vel a favonio. genera eius austeritatis ordine: africana, gallica, tusculana, ascalonia, amiternina, optima autem quae rotundissima. item rufa acrior quam candida, et sicca quam viridis, et cruda quam cocta sicut quam condita. seritur amiternina frigidis et umidis locis, et sola alii modo capite, reliquae semine proximaque aestate nullum semen emittunt, sed caput tantum, quod increscit. sequenti autem anno permutata ratione semen gignitur, caput ipsum corrumpitur. ergo omnibus annis separatim semen cepae causa seritur, separatim cepa seminis. servantur autem optime in paleis. getium paene sine capite est, cervicis tantum longae et ideo totum in fronde, saepiusque resecatur, ut porrum. ideo et illud serunt, non deponunt. cetero cepas ter fosso seri iubent extirpatis radicibus herbarum, in iugera denas libras, intermisceri satureiam, quoniam melius proveniat, runcari praeterea et sariri, si non saepius, quater. ascaloniam mense februario serunt nostri. semen ceparum nigrescere incipiens, antequam inarescat, metunt.

et de porro in hac cognatione dici conveniat, praesertim cum sectivo auctoritatem nuper fecerit princeps nero vocis gratia ex oleo statis mensum omnium diebus nihilque aliud ac ne pane quidem vescendo. seritur semine ab aequinoctio autumno, si sectivum facere libuit, densius. in eadem area secatur, donec deficiat, stercoraturque semper, si nutriatur in capita, antequam secetur. cum increvit, in aliam aream transfertur, summis foliis leviter recisis ante medullam et capitibus retractis tunicisve extremis. antiqui silice vel testa subiecta capita dilatabant - hoc item in bulbis - , nunc sarculo leviter

convelluntur radices, ut delumbatae alant neque distrahant. insigne quod, cum fimo laetoque solo gaudeat, rigua odit. et tamen proprietate quaedam soli constant: laudatissimum aegypto, mox ostiae atque ariciae. sectivi duo genera: herbaceum folio, incisuris eius evidentibus, quo utuntur medicamentarii, alterum genus flavidioris folii rotundiorisque, levioribus incisuris. fama est melam equestris ordinis, reum ex procuratione a tiberio principe accersitum, in summa desperatione suco porri ad trium denariorum argenteorum pondus hausto confestim expirasse sine cruciatu. ampliorem modum negant noxium esse.

alium ad multa ruris praecipue medicamenta prodesse creditur. tenuissimis et quae spernantur universum velatur membranis, mox pluribus coagmentatur nucleis, et his separatim vestitis, asperi saporis; quo plures nuclei fuere, hoc est asperius. taedium huic quoque halitu, ut cepis, nullum tamen coctis. generum differentia in tempore - praecox maturescit lx diebus - , tum in magnitudine. ulpicum quoque in hoc genere graeci appellavere alium cyprium, alii ἀντισκόροδον, praecipue africae celebratum inter pulmentaria ruris, grandius alio. tritum in oleo et aceto mirum quantum increscit spuma. quidam ulpicum et alium in plano seri vetant, castellatimque grumulis inponi distantibus inter se pedes ternos. inter grana digiti iiii interesse debent, simul atque tria folia eruperunt, sariri. grandescunt, quo saepius sariuntur. maturescentium caules depressi in terram obruuntur; ita cavetur, ne in frondem luxurient. in frigidis utilius vere seri quam autumno. cetero ut odore careant, omnia haec iubentur seri, cum luna sub terra sit, colligi, cum in coitu. sine his menander e graecis auctor est alium edentibus, si radicem betae in pruna tostam superederint, odorem extingui. sunt qui et alium et ulpicum inter compitalia ac saturnalia seri aptissime putent. alium et semine provenit, sed tarde. primo enim anno porri crassitudinem capite efficit, sequenti dividitur, tertio consummatur, pulchriusque tale existimant quidam. in semen exire non debet, sed intorqueri caulis satus gratia, ut caput validius fiat. quod si diutius alium cepamque inveterare libeat, aqua salsa tepida capita unguenda sunt; ita diuturniora fient melioraque usui et in satu sterilia. alii contenti sunt primo super prunas suspendisse abundeque ita profici arbitrantur, ne germinent, quod facere alium cepamque extra terram

quoque certum est et cauliculo acto evanescere. aliqui et alium palea servari optime putant. alium est et in arvis sponte nascens - alum vocant - , quod adversus improbitatem alitum depascentium semina coctum, ne renasci possit, abicitur, statimque quae devoravere aves stupentes manu capiuntur et, si paulum commorere, sopitae. est et silvestre, quod ursinum vocant, odore simili, capite praetenui, foliis grandibus.

in horto satorum celerrime nascuntur ocimum, blitum, napus, eruca. tertio enim die erumpunt, anetum quarto, lactuca quinto, raphanus sexto, cucumis, cucurbita septimo - prior cucumis - , nasturtium, sinapi quinto, beta aestate sexto, hieme decimo, atriplex octavo, cepae xviiii aut xx, gethyum x aut duodecimo, contumacius coriandrum, cunila quidem et origanum post xxx diem, omnium autem difficillime apium. xl enim die cum celerrime, l maiore ex parte emergit. aliquid et seminum aetas confert, quoniam recentia maturius gignunt in porro, gethyo, cucumi, cucurbita, ex vetere autem celerius proveniunt apium, beta, cardamum, cunila, origanum, coriandrum. mirum in betae semine: non enim totum eodem anno gignit, sed aliquid sequenti, aliquid et tertio; itaque ex copia seminis modice nascitur. quaedam anno tantum suo pariunt, quaedam saepius, sicut apium, porrum, gethyum; haec enim semel sata pluribus annis restibili fertilitate proveniunt.

semina plurimis rotunda, aliquis oblonga, paucis foliacia et lata, ut atriplici, quibusdam angusta et canaliculata, ut cumino. differunt et colore nigro, candidiore, item duritia surculacea. in folliculo sunt raphanis, sinapi, rapo. nudum semen est coriandri, aneti, feniculi, cumini, cortice obductum bliti, betae, atriplicis, ocimi, at lactucis in lanugine. nihil ocimo fecundius. cum maledictis ac probris serendum praecipiunt, ut laetius proveniat; sato pavitur terra. et cuminum qui serunt, precantur ne exeat. quae in cortice sunt, difficillime inarescunt maximeque ocimum, et ideo siccantur omnia ac sunt fecunda. utique meliora nascuntur acervatim sato semine quam sparso. ita certe porrum et apium serunt in laciniis colligatum, apium etiam paxillo caverna facta ac fimo ingesto. nascuntur autem omnia aut semine aut avolsione, quaedam semine et surculo, ut ruta, origanum, ocimum - praecidunt enim et hoc, cum pervenit ad palmum altitudinis - , quaedam et semine et radice, ut cepa, alium, bulbi et si quorum

radices anniferorum relinquuntur. eorum vero, quae a radice nascuntur, radix diuturna et fruticosa est, ut bulbi, gethyi, scillae. fruticant alia et non capitata, ut apium et beta. caule reciso fere quidem omnia regerminant exceptis quae non scabrum caulem habent, et in usum vero ocimum, raphanus, lactuca; hanc etiam suaviorem putant a regerminatione. raphanus utique iucundior detractis foliis, antequam decaulescat. hoc et in rapis. nam et eadem dereptis foliis cooperta terra crescunt durantque in aestatem.

singula genera sunt ocimo, lapatho, blito, nasturtio, erucae, atriplici, coriandro, aneto. haec enim ubique eadem sunt, neque aliud alio melius usquam. rutam furtivam tantum provenire fertilius putant, sicut apes furtivas pessime. nascuntur autem etiam non sata mentastrum, nepete, intubum, puleium. contra plura genera sunt eorum, quae diximus dicemusque, et in primis apio. id enim, quod sponte in umidis nascitur, helioselinum vocatur, uno folio nec hirsutum, rursus in siccis hipposelinum, pluribus foliis, simile helioselino. tertium est oreoselinum, cicutae foliis, radice tenui, semine aneti, minutiore tantum. et sativi autem differentiae in folio denso, crispo aut rariore et leviore, item caule tenuiore aut crassiore, et caulis aliorum candidus est, aliorum purpureus, aliorum varius.

lactucae graeci tria fecere genera: unum lati caulis, adeo ut ostiola olitoria ex iis factitari prodiderint - folium his paulo maius herbaceo et angustissimum, ut alibi consumpto incremento - , alterum rotundi caulis, tertium sessile, quod laconicum vocant. alii colore et tempore satus genera discrevere; esse enim nigras, quarum semen mense ianuario seratur, albas, quarum martio, rubentes, quarum aprili, et omnium earum plantas post binos menses differri. diligentiores plura genera faciunt: purpureas, crispas, cappadocias, graecas, longioris has folii caulisque lati, praeterea longi et angusti, intubis similis. pessimum autem genus cum exprobratione amaritudinis appellavere πικρίδα. est etiamnum alia distinctio albae, quae μηκωνὶς vocatur a copia lactis soporiferi, quamquam omnes somnum parere creduntur. apud antiquos italiae hoc solum genus earum fuit, et ideo lactucis nomen a lacte. purpuream maximae radicis caecilianam vocant, rotundam vero ac minima radice, latis foliis ἀστυτίδα quidamque εὐνουχεῖον, quoniam haec maxime refragetur veneri. est quidem natura omnibus refrigeratrix et ideo aestate gratia. stomacho

fastidium auferunt cibique adpetentiam faciunt. divus certe augustus lactuca conservatus in aegritudine fertur prudentia musae medici, cum prioris c. aemili religio nimia eam negaret, in tantum recepta commendatione, ut servari etiam in alienos menses eas oxymeli tum repertum sit. sanguinem quoque augere creduntur. est etiamnum quae vocatur caprina lactuca, de qua dicemus inter medicas, et ecce cum maxime coepit inrepere sativis admodum probata quae cilicia vocatur, folio cappadociae, ni crispum latiusque esset.

neque ex eodem genere possint dici neque ex alio intubi, hiemis hi patientiores virusque praeferentes, sed caule non minus grati. seruntur ab aequinoctio verno, plantae eorum ultimo vere transferuntur. est et erraticum intubum, quod in aegypto cichorium vocant, de quo plura alias.

inventum omnes thyrsos vel folia lactucarum prorogare urceis conditos et recentes in patinis coquere. seruntur lactucae anno toto laetis et irriguis stercoratisque, binis mensibus inter semen plantamque et maturitatem. legitimum tamen a bruma semen iacere, plantam favonio transferre aut semen favonio, plantam aequinoctio verno. albae maxime hiemem tolerant. umore omnia hortensia gaudent et stercore, praecipue lactucae et magis intubi. seri etiam radices inlitas fimo interest et repleri ablaqueatas humo. quidam et aliter amplitudinem augent, recisis, cum ad semipedem excreverint, fimoque suillo recenti inlitis. candorem vero putant contingere his dumtaxat, quae sint seminis albi, si harena de litore a primo incremento congeratur in medias atque increscentia folia contra ipsa religentur.

beta hortensiorum levissima est. eius quoque a colore duo genera graeci faciunt, nigrum et candidius, quod praeferunt - parcissimi seminis - appellantque siculum, candoris sane discrimine praeferentes et lactucam. nostri betae genera vernum et autumnale faciunt a temporibus satus. quamquam et iunio seritur; transfertur autumno planta. hae quoque et oblini fimo radices suas locumque similiter madidum amant. usus his et cum lenti ac faba idemque qui oleris, et praecipuus, ut lenitas excitetur acrimonia sinapis. medici nocentiorem quam olus esse iudicavere, quamobrem adpositas non nemini degustare etiam religio est, ut validis potius in cibo sint. gemina iis natura, et oleris et capite ipso exilientis bulbi, species

summa in latitudine. ea contingit, ut in lactucis, cum coeperint colorem trahere inposito levi pondere. neque alii hortensiorum latitudo maior; in binos pedes aliquando se pandunt, multum et soli natura conferente, siquidem in circeiensi agro amplissimae proveniunt. sunt qui betas punico malo florente optime seri existiment, transferri autem, cum v foliorum esse coeperint. mira differentia, si vera est, candidis alvum elici, nigris inhiberi, et cum brassica corrumpatur in dolio vini sapor, eodem betae foliis demersis restitui.

olus caulesque, quibus nunc principatus hortorum, apud graecos in honore fuisse non reperio, sed cato brassicae miras canit laudes, quas in medendi loco reddemus. genera eius facit: extentis foliis, caule magno, alteram crispo folio, quam apiacam vocant, tertiam minutis caulibus, lenem, teneram minimeque probat. brassica toto anno seritur, quoniam et toto secatur, utilissime tamen ab aequinoctio autumni, transferturque, cum v foliorum est. cymam a prima satione praestat proximo vere. hic est quidam ipsorum caulium delicatior teneriorque cauliculus, apici luxuriae et per eum druso caesari fastiditus, non sine castigatione tiberi patris. post cymam ex eadem brassica contingunt aestivi autumnalesque cauliculi, mox hiberni, iterumque cymae, nullo aeque genere multifero, donec fertilitate sua consumatur. altera satio ab aequinoctio verno est, cuius planta extremo vere plantatur, ne prius cyma quam caule pariat. tertia circa solstitium, ex qua, si umidior locus sit, aestate, si siccior, autumno plantatur. umor fimumque si defuere, maior saporis gratia est; si abundavere, laetior fertilitas. fimum asininum maxime convenit.

est haec quoque res inter opera ganeae, quapropter non pigebit verbosius persequi. praecipuus fit caulis sapore ac magnitudine, primum omnium si in repastinato seras, dein si terram fugientes cauliculos sequare terra adtollentesque se proceritate luxuriosa exaggerando aliam accumules ita, ne plus quam cacumen emineat. tritanum hoc genus vocatur bis conputabili inpendio taedioque. cetera genera complura sunt: cumanum sessile folio, capite patulum; aricinum altitudine non excelsius, folio numerosius quam tenerius; hoc utilissimum existimatur, quia sub omnibus paene foliis fruticat cauliculis peculiaribus. pompeianum procerius, caule ab radice tenui, intra folia crassescit; rariora haec angustioraque, sed teneritas in dote

est. frigora non tolerat, quibus etiam aluntur bruttiani praegrandes foliis, caule tenues, sapore acuti. sabellico usque in admirationem crispa sunt folia, quorum crassitudo caulem ipsum extenuet, sed dulcissimi perhibentur ex omnibus. nuper subiere lacuturnenses ex convalle aricina, capite praegrandes, folio innumeri, alii in orbem conlecti, alii in latitudinem torosi; nec plus ullis capitis post tritianum, cui pedale aliquando conspicitur, et cyma nullis serior. cuicumque autem generi pruinae plurimum suavitatis conferunt, at nisi obliquo vulnere defendatur medulla, plurimum nocent. semini destinati non secantur. est etiam sua gratia numquam plantae habitum excedentibus; ἁλμυρίδια vocant, quoniam nisi in maritumis non proveniunt. aiunt navigatione quoque longinqua virides adservari, si statim desecti ita, ne humum adtingant, in cados olei quam proxime siccatos opturatosque condantur omni spiritu excluso. sunt qui plantam in transferendo alga subdita pediculo nitrive triti quod tribus digitis capiatur celeriorem ad maturitatem fieri putent. sunt qui semen trifolii nitrumque simul tritum adspergant foliis. nitrum in coquendo etiam viriditatem custodit, ut et apiciana coctura, oleo ac sale, priusquam coquantur, maceratis. est inter herbas genus inserendi praecisis germinibus caulis et in medullam semine ex aliis addito. hoc et in cucumere silvestri. nec non olus quoque silvestre est, triumpho divi iuli carminibus praecipue iocisque militaribus celebratum; alternis quippe versibus exprobravere lapsana se vixisse aput dyrrachium, praemiorum parsimoniam cavillantes. est autem id cyma silvestris.

omnium in hortis rerum lautissima cura asparagis. de origine eorum e silvestribus corrudis abunde dictum et quomodo eas iuberet cato in harundinetis seri. est et aliud genus incultius asparago, mitius corruda, passim etiam in montibus nascens, refertis superioris germaniae campis, non inficeto ti. caesaris dicto, herbam ibi quandam nasci simillimam asparago. nam quod in neside campaniae insula sponte nascitur, longe optimum existimatur. hortensium seritur spongeis. est enim plurimae radicis altissimeque germinat. viret thyrso primum emicante, qui caulem educens tempore ipso fastigatur in toros striatos. potest et semine seri.

nihil diligentius comprehendit cato, novissimumque libri est, ut appareat rem repentem ac noviciam fuisse. locum subigi iubet

umidum aut crassum, semipedali undique intervallo seri, ne calcetur, praeterea ad lineam grana bina aut terna paxillo demitti - videlicet semine tum tantum serebantur - , id fieri secundum aequinoctium vernum, stercore satiari, crebro purgari, caveri ne cum herbis evellatur asparagus; primo anno stramento ab hieme protegi, vere aperiri, sariri, runcari, tertio incendi verno. quo maturius incensus est, hoc melius provenit. itaque harundinetis maxime convenit, quae festinant incendi. sariri iubet idem non antequam asparagus natus fuerit, ne in sariendo radices vexentur. ex eo velli asparagum ab radice, nam si defringatur, stirpescere et intermori; velli, donec in semen eat - id autem maturescere ad ver - , incendique ac rursus, cum apparuerit asparagus, sariri ac stercorari. ac post annos viiii, cum iam vetus sit, digeri subacto stercoratoque, tum spongeis seri singulorum pedum intervallo. quin et ovillo fimo nominatim uti, quoniam aliud herbas creet. nec quicquam postea temptatum utilius apparuit, nisi quod circa id. feb. defosso semine acervatim parvulis scrobibus serunt, plurimum maceratum fimo. biennio dein nexis inter se radicibus spongeas factas post aequinoctium autumni disponunt pedalibus intervallis, fertilitate in denos annos durante. nullum gratius his solum quam ravennatium hortorum indicavimus. corrudam - hunc enim intellego silvestrem asparagum, quem graeci Ὄρμινον aut μυάκανθον vocant aliisque nominibus - invenio nasci et arietis cornibus tunsis atque defossis.

poterant videri dicta omnia, quae in pretio sunt, ni restaret res maximi quaestus non sine pudore dicenda. certum est quippe carduos apud carthaginem magnam cordubamque praecipue sestertium sena milia e parvis reddere areis, quoniam portenta quoque terrarum in ganeam vertimus serimusque etiam ea, quae refugiunt cunctae quadripedes. carduos ergo duobus modis, autumno planta et semine ante nonas martias, plantaeque ex eo disponuntur ante id. novemb. aut in locis frigidis circa favonium. stercorantur etiam, si dis placet, laetiusque proveniunt. condiuntur quoque aceto melle diluto addita laseris radice et cumino, ne quis dies sine carduo sit.

cetera in transcursu dici possunt. ocimum parilibus optime seri ferunt, quidam et autumno iubentque, cum in hiemem seratur, aceto semen perfundi. eruca quoque et nasturtium vel aestate vel hieme facillime nascuntur. eruca praecipue frigorum contemptrix diversae

est quam lactuca naturae concitatrixque veneris. idcirco iungitur illi fere in cibis, ut nimio frigori par fervor inmixtus temperamentum aequet. nasturtium nomen accepit a narium tormento, et inde vigoris significatio proverbio usurpavit id vocabulum veluti torporem excitantis. in arabia mirae amplitudinis dicitur gigni.

ruta quoque seritur favonio et ab aequinoctio autumni. odit hiemem et umorem ac fimum, apricis gaudet ac siccis terraque quam maxime lateraria, cinere vult nutriri. hic et semini miscetur, ut careat urucis. auctoritas ei peculiaris apud antiquos fuit. invenio mulsum rutatum populo datum a cornelio cethego, in consulatu collega quinti flaminini, comitiis peractis. amicitia ei cum fico tanta, ut nusquam laetior proveniat quam sub hac arbore. seritur et surculo, melius in perforatam fabam indito, quae suco nutrit conprehendendo surculum. serit et se ipsa, namque incurvato cacumine alicuius rami cum attigit terram, statim radicatur. eadem et ocimo natura, nisi quod difficilius arescit semen. ruta runcatur non sine difficultate, pruritivis ulceribus, ni munitis manibus id fiat oleove defensis. condiuntur autem et eius folia servanturque fasciculis.

ab aequinoctio verno seritur apium semine paulum in pila pulsato. crispius sic putant fieri aut si satum calcetur cylindro pedibusve. proprium ei, quod colorem mutat. honos in achaia coronare victores sacri certaminis nemeae.

eodem tempore seritur menta planta vel, si nondum germinet, spongea. non minus haec umido gaudet. aestate viret, hieme flavescit. genus eius silvestre mentastrum; ex hoc propagatur ut vitis vel si inversi rami serantur. mentae nomen suavitas odoris apud graecos mutavit, cum alioqui mintha vocaretur, unde veteres nostri nomen declinaverunt; nunc autem coepit dici ἡδύοσμον. grata tomento mensas odore percurrit in rusticis dapibus. semel sata diutina aetate durat. congruit puleio, cuius natura in carnariis reflorescens saepius dicta est. haec quoque servantur simili genere, mentam dico puleiumque et nepetam. condimentorum tamen omnium, quae fastidiis ... , cuminum amicissimum. nascitur in summa tellure vix haerens et in sublime tendens in putribus et calidis maxime locis, medio serendum vere. alterum eius genus silvestre, quod rusticum vocant, alii thebaicum, si tritum ex aqua potetur, in dolore stomachi prodest. in carpetania nostri orbis maxime laudatur,

alioqui aethiopico africoque palma est; quidam in hoc aegyptium praeferunt.

sed praecipue olusatrum mirae naturae est. hipposelinum graeci vocant, alii zmyrnium. e lacrima caulis sui nascitur. seritur et radice. sucum eius qui colligunt, murrae saporem habere dicunt, auctorque est theophrastus murra sata natum. hipposelinum veteres praeceperunt in locis incultis, lapidosis iuxta maceriam seri - nunc et repastinato seritur et a favonio post aequinoctium autumnum - , quippe cum capparis quoque seratur sic, siccis maxime, area ideo fossa inclusa ripisque undique circumstructis lapide; alias evagatur per agros et cogit solum sterilescere. floret aestate, viret usque ad vergiliarum occasum, sabulosis familiarissimum. vitia eius, quod trans maria nascitur, diximus inter peregrinos frutices.

peregrinum et careum gentis suae nomine appellatum, culinis principale. in quacumque terra seri vult ratione eadem, qua olusatrum, laudatissimum tamen in caria, proximum phrygia.

ligusticum silvestre est in liguriae suae montibus; seritur etiam ubique. suavius sativum, sed sine viribus. panacem aliqui vocant. crateuas apud graecos cunilam bubulam eo nomine appellat, ceteri vero conyzam, id est cunilaginem, thymbram vero quae sit cunila. haec aput nos habet vocabulum et aliud, satureia dicta in condimentario genere. seritur mense februario. origano aemulo nusquam utrumque additur, quippe similis effectus. sed cunilae aegyptium origanum tantum praefertur.

peregrinum fuit et lepidium. seritur a favonio, dein, cum fruticavit, iuxta terram praeciditur, tunc runcatur stercoraturque. per biennium hoc postea, iisdem fruticibus, utuntur, si non saevitia hiemis ingruat, quando inpatientissimum est frigorum. exit et in cubitalem altitudinem, foliis lauri, sed mollius. usus eius non sine lacte.

git pistrinis, anesum et anetum culinis et medicis nascuntur; sacopenium, quo laser adulteratur, et ipsum in hortis quidem, sed medicinae tantum.

sunt quaedam comitantia aliorum satus; papaver namque cum brassica seritur ac porcillaca, et eruca cum lactuca. papaveris sativi tria genera: candidum, cuius semen tostum in secunda mensa cum melle apud antiquos dabatur; hoc et panis rustici crustae inspergitur,

adfuso ovo inhaerens, ubi inferiorem crustam apium gitque cereali sapore condiunt. alterum genus est papaveris nigrum, cuius scapo inciso lacteus sucus excipitur. tertium genus rhoean vocant graeci, id nostri erraticum; sponte quidem, sed in arvis cum hordeo maxime nascitur, erucae simile, cubitali altitudine, flore rufo et protinus deciduo, unde et nomen a graecis accepit. de reliquis generibus papaveris sponte nascentis dicemus in medicinae loco. fuisse autem in honore apud romanos semper indicio est tarquinius superbus, qui legatis a filio missis decutiendo papavera in horto altissima sanguinarium illud responsum hac facti ambage reddidit.

rursus alio comitatu aequinoctio autumni seruntur coriandrum, anetum, atriplex, malva, lapathum, caerefolium, quod paederota graeci vocant, et acerrimum sapore igneique effectus ac saluberrimum corpori sinapi, nulla cultura, melius tamen planta tralata. quin e diverso vix est sato semel eo liberare locum, quoniam semen cadens protinus viret. usus eius etiam pro pulmentario in patellis decocto, citra intellectum acrimoniae. cocuntur et folia, sicut reliquorum olerum. sunt autem trium generum: unum gracile, alterum simile rapi foliis, tertium erucae. semen optimum aegyptium. athenienses napy appellaverunt, alii thlaspi, alii saurion.

serpyllo et sisymbrio montes plerique scatent, sicut threciae. itaque deferunt ex his avulsos ramos seruntque, item sicyone ex suis montibus et athenis ex hymetto. simili modo et sisymbrium serunt. laetissimum nascitur in puteorum parietibus et circa piscinas ac stagna.

reliqua sunt ferulacei generis, ceu feniculum anguibus, ut diximus, gratissimum, ad condienda plurima, cum inaruit, eique perquam similis thapsia, de qua diximus inter externos frutices; deinde utilissima funibus cannabis. seritur a favonio; quo densior est, eo tenerior. semen eius, cum est maturum, ab aequinoctio autumni destringitur et sole aut vento aut fumo siccatur. ipsa cannabis vellitur post vindemiam ac lucubrationibus decorticata purgatur. optima alabandica, plagarum praecipue usibus. tria eius ibi genera: inprobatur cortici proximum aut medullae; laudatissima est e medio quae mesa vocatur. secunda mylasea. quod ad proceritatem quidem attinet, rosea agri sabini arborum altitudinem aequat. ferulae duo genera in peregrinis fruticibus diximus. semen eius in italia cibus est;

conditur quippe duratque in urceis vel anni spatio. duo ex ea genera, caules et racemi. corymbian hanc vocant corymbosque quos condiunt.

morbos hortensia quoque sentiunt sicut reliqua terra sata. namque et ocimum senectute degenerat in serpyllum, et sisymbrium in zmintham, et ex semine brassicae vetere rapa fiunt, atque invicem. et necatur cuminum αἱμοδώρῳ, nisi repurgetur; est autem unicaule, radice bulbo simili, non nisi in gracili solo nascens. alius privatim cumini morbus scabies. et ocimum sub canis ortu pallescit. omnia vero accessu mulieris menstrualis flavescunt. bestiolarum quoque genera innascuntur, napis pulices, raphano urucae et vermiculi, item lactucis et oleri, utrisque hoc amplius limaces et cocleae, porro vero privata animalia, quae facillime stercore iniecto capiuntur condentia in id se. ferro quoque non expedire tangi rutam, cunilam, mentam, ocimum auctor est sabinus tiro in libro κηπουρικῶν, quem maecenati dicavit.

idem contra formicas, non minimum hortorum exitium, si non sint rigui, remedium monstravit limum marinum aut cinerem obturandis earum foraminibus. sed efficacissime heliotropio herba necantur. quidam et aquam diluto latere crudo inimicam his putant. naporum medicina ervi aliquid una seri, sicut olerum cicer; arcet enim urucas. quo si omisso enatae sint, remedio est absinthi sucus decocti inspersus vel sedi; genus hoc herbae, quam alii ἀεἰζωον vocant, diximus. semen olerum si suco eius madefactum seratur, olera nulli animalium obnoxia futura tradunt; in totum vero necari urucas, si palo inponantur in hortis ossa capitis ex equino genere, feminae dumtaxat. adversus urucas et cancrum fluviatilem in medio horto suspensum auxiliari narrant. sunt qui sanguineis virgis tangant ea, quae nolint iis obnoxia esse. infestant et culices riguos hortos, praecipue si sint arbusculae aliquae. hi galbano accenso fugantur.

nam quod ad permutationem seminum attinet, quibusdam ex his firmitas maior est, ut coriandro, betae, porro, nasturtio, sinapi, erucae, cunilae et fere acribus; infirmiora autem sunt atriplici, ocimo, cucurbitae, cucumi, et aestiva omnia hibernis magis; minime autem durat gethyum. sed ex his, quae sunt fortissima, nullum ultra quadrimatum utile est, dumtaxat serendo, culinis et ultra tempestiva sunt.

peculiaris medicina raphano, betae, rutae, cunilae in salsis aquis, quae et alioqui plurimum suavitati et fertilitati conferunt. ceteris dulcium aquarum rigua prosunt. utilissimae ex his quae frigidissimae et quae potu suavissimae. minus utiles e stagno et quas elices inducunt, quoniam herbarum semina invehunt. praecipue tamen imbres alunt, nam et bestiolae innascentes necantur.

his horae rigandi matutino atque vespera, ne infervescat aqua sole, ocimo tantum et meridie; nam etiam satum celerrime erumpere putant inter initia ferventi aqua aspersum. omnia autem tralata meliora grandioraque fiunt, maxime porri napique. in tralatione et medicina est, desinuntque sentire iniurias, ut gethyum, porrum, raphani, apium, lactucae, rapa, cucumis. omnia autem fere silvestria sunt et foliis minora et caulibus, suco acriora, sicut cunila, origanum, ruta. solum vero ex omnibus lapathum silvestre melius. hoc in sativis rumix vocatur, omnium, quae seruntur nascunturque, fortissimum; tradunt certe semel satum durare nec vinci umquam a terra, maxime iuxta aquas. usus eius cum tisana tantum in cibis; leniorem gratioremque saporem praestat. silvestre ad multa medicamina utile est. - (adeoque nihil omisit cura, ut carmine quoque comprehensum reperiam, fabis caprini fimi singulis cavatis, si porri, erucae, lactucae, apii, intubi, nasturtii semina inclusa serantur, mire provenire. - quae sunt et silvestria, eadem sativis sicciora intelleguntur et acriora.) -

namque et sucorum saporumque dicenda differentia est, vel maior in his quam in pomis. sunt autem acres cunilae, origani, nasturti, sinapis, amari absinthi, centaurei; aquatiles cucumeris, cucurbitae, lactucae; acuti thymi, cunilae; acuti et odorati apii, aneti, feniculi. salsus tantum e saporibus non nascitur; aliquando extra insidit pulveris modo, et cicerculis tantum.

atque ut intellegatur vana ceu plerumque vitae persuasio, panax piperis saporem reddit et magis etiam siliquastrum, ob id piperitidis nomine accepto, libanotis odorem turis, zmyrnium murrae. de panace abunde dictum est. libanotis locis putribus et macris ac roscidis seritur semine. radicem habet olusatri, nihil ture differentem. usus eius post annum stomacho saluberrimus. quidam eam nomine alio rosmarinum appellant. zmyrnium olus seritur iisdem locis murramque radice resipit. eadem et siliquastro satio. reliqua a ceteris et odore et sapore differunt, ut anetum, tantaque est diversitas atque

vis, ut non solum aliud alio mutetur, sed etiam in totum auferatur. apio eximunt coqui obsoniis acetum, eodem cellarii in saccis odorem vino gravem.

et hactenus hortensia dicta sint, ciborum gratia dumtaxat. maximum quidem opus in iisdem naturae restat, quoniam proventus tantum adhuc summasque quasdam tractavimus, vera autem cuiusque natura non nisi medico effectu pernosci potest, opus ingens occultumque divinitatis et quo nullum reperiri possit maius. ne singulis id rebus contexeremus, iusta fecit ratio, cum ad alios medendi desideria pertinerent, longis utriusque dilationibus futuris, si miscuissemus. nunc suis quaeque partibus constabunt poteruntque a volentibus iungi.

LIBER XX

maximum hinc opus naturae ordiemur et cibos suos homini narrabimus faterique cogemus ignota esse per quae vivat. nemo id parvum ac modicum existimaverit, nominum vilitate deceptus. pax secum in his aut bellum naturae dicetur, odia amicitiaeque rerum surdarum ac sensu carentium et, quo magis miremur, omnia ea hominum causa. quod graeci sympathiam et antipathiam appellavere, quibus cuncta constant, ignes aquis restinguentibus, aquas sole devorante, luna pariente, altero alterius iniuria deficiente sidere atque, ut a sublimioribus recedamus, ferrum ad se trahente magnete lapide et alio rursus abigente a sese, adamanta, rarum opum gaudium, infragilem omni cetera vi et invictum, sanguine hircino rumpente, quaeque alia in suis locis dicemus paria vel maiora miracula. tantum venia sit a minimis, sed a salutaribus ordienti primumque ab hortensiis.

cucumin silvestrem esse diximus, multo infra magnitudinem sativi. ex eo fit medicamentum, quod vocatur elaterium, suco expresso semini, cuius causa nisi maturius incidatur, semen exilit oculorum etiam periculo. servatur autem decerptus una nocte, postero die inciditur harundine, semenque cinere conditur ad coercendam suci abundantiam, qui expressus suscipitur aqua caelesti atque subsidit, deinde sole cogitur in pastillos ad magnos mortalium usus, obscuritates et vitia oculorum, genarum ulcera. tradunt hoc suco tactis radicibus vitium non attingi uvas ab avibus. radix autem ex aceto cocta podagris inlinitur sucoque dentium dolori medetur, arida cum resina inpetiginem et scabiem quaeque psoram et lichenas vocant, parotidas, panos sanat et cicatricibus colorem reddit, et foliorum sucus auribus surdis cum aceto instillatur.

elaterio tempestivus est autumno, nec ullum ex medicamentis longiore aevo durat. incipit a trimatu. si quis recentiore uti velit, pastillos in novo fictili igni lento in aceto domet. melius quo vetustius, fuitque iam cc annis servatum, ut auctor est theophrastus, et usque ad quinquagesimum lucernarum lumina extinguit. hoc enim veri experimentum est, si admotum, priusquam extinguat, scintillare sursum ac deorsum cogat. pallidum ac leve herbaceo ac scabro

melius ac leniter amarum.

putant conceptus adiuvari adalligato semine, si terram non adtigerit, partus vero, si in arietis lana alligatum inscientis lumbis fuerit, ita ut protinus ab enixu rapiatur extra domum. ipsum cucumin qui magnificant, nasci praecipuum in arabia, mox in arcadia; cyrenis alii tradunt similem heliotropio cucumin inter folia et ramos provenire magnitudine nucis iuglandis, semen autem esse ad speciem scorpionum caudae reflexum, sed candidum. aliqui etiam ab scorpione cucumim vocant, efficacissimo contra scorpionum ictus et semine et elaterio. est ad purgandam utrimque alvum modus pro portione virium ab dimidio obolo ad solidum; copiosius necat. sic et contra phthiriasim bibitur et hydropicis. inlitum anginas et arterias cum melle aut oleo vetere sanat.

multi hunc esse aput nos, qui anguinus vocetur, ab aliis erraticus, arbitrantur, quo decocto sparsa mures non adtingunt. iidem podagris eum et articulariis morbis decoctum in aceto inlinunt praesentaneo remedio, lumborum vero dolores semine sole siccato, dein trito, #1108 xx pondere in hemina aquae dato sanant, tumores subitos inlito cum lacte mulierum. purgat eas elaterium, sed gravidis abortum facit. suspiriosis prodest, morbo vero regio in nares coniectum. lentigines ac maculas e facie tollit in sole inlitum.

multi eadem omnia sativis adtribuunt, magni etiam sine is momenti. namque et eorum semen quantum tres digiti adprehenderint cum cumino tritum potumque in vino tussientibus auxiliatur, et phreneticis in lacte mulieris, et dysintericis acetabuli mensura, purulenta autem expuentibus cum cumino pari pondere, et iocineris vitiis in aqua mulsa. urinam movet ex vino dulci, et in renium dolore clysteribus simul cum cumino infunditur.

ei, qui pepones vocantur, refrigerant maxime in cibo et emolliunt alvum. caro eorum epiphoris oculorum aut doloribus inponitur. radix sanat ulcera concreta in modum favi, quae ceria vocant. eadem concitat vomitiones; siccatur, in farinam tunsa datur quattuor obolis in aqua mulsa, ita ut qui biberit quingentos passus postea ambulet. haec farina et in smegmata adicitur. cortex quoque vomitionem movet, faciem purgat. hoc et folia cuiuscumque sativi inlita. eadem cum melle et epinyctidas sanant, cum vino canis morsus, item multipedae; sepa graeci vocant, oblongam, pilosis pedibus, pecori

praecipue nocivam; morsum tumor insequitur et putrescit locus. ipse cucumis odore defectum animi refovet. - (coctos deraso cortice ex oleo et aceto ac melle iucundiores esse certum est.) -

cucurbita quoque silvestris invenitur, σομφὸς a graecis appellata, intus inanis, unde et nomen, digitali crassitudine, non nisi in saxosis nascens. huius conmanducatae sucus stomacho admodum prodest.

colocynthis vocatur alia, ipsa plena semine, sed minor quam sativa. utilior pallida quam herbacea. arefacta per se inanit alvum. infusa quoque clysteribus intestinorum omnibus vitiis medetur et renium et lumborum et paralysi. eiecto semine aqua mulsa in ea decoquitur ad dimidias; sic tutissimo infunduntur oboli quattuor. prodest stomacho et farinae aridae pilulis cum decocto melle sumptis. in morbo regio semina eius vii sumuntur et protinus aqua mulsa. carnes eius cum absinthio ac sale dentium dolorem tollunt, sucus vero cum aceto calefactus mobiles sistit. item spinae et lumborum ac coxendicum dolores, cum oleo si infricetur. praeterea, mirum dictu, semina eius, si fuerint pari numero, in linteo adalligata febribus liberare dicuntur, quas graeci periodicas vocant. sativae quoque derasae sucus tepefactus auribus medetur; caro eius interior sine semine clavis pedum et suppurationibus, quae graeci vocant ἀποστήματα. decoctae autem universae sucus dentium motus stabilit et dolores inhibet; vinum cum ea fervefactum oculorum etiam impetus. folia eius cum recentibus cupressi contusa et inposita, ipsa quoque tosta in argilla ac trita cum adipe anseris vulneribus medetur. nec non ramentis corticis recentis podagras refrigerat et ardores capitis, infantium maxime, et ignes sacros vel iisdem strigmentis inpositis vel seminibus. sucus ex strigmentis inlitus cum rosaceo et aceto febrium ardores refrigerat. aridae cinis inpositus mire combusta sanat. chrysippus medicus damnabat eas in cibis, sed omnium consensu stomacho utilissimae iudicantur et interaneorum vesicarumque exulcerationibus.

est et rapo vis medica. perniones fervens inpositum sanat, item frigus pellit e pedibus. aqua decocti eius fervens podagris etiam frigidis medetur, et crudum tusum cum sale cuicumque vitio pedum. semen inlitum et potum in vino contra serpentes et toxica salutare esse proditur, a multis vero antidoti vim habere in vino et oleo. democritus in totum ea abdicavit in cibis propter inflationes, diocles

magnis laudibus tulit, etiam venerem stimulari ab iis professus, item dionysius, magisque si eruca condirentur; tosta quoque articulorum dolori cum adipe prodesse.

silvestre rapum in arvis maxime nascitur, fruticosum, semine candido, duplo maiore quam papaver. hoc ad levigandam cutem in facie totoque corpore utuntur mixta farina pari mensura ervi, hordei et tritici et lupini. radix ad omnia inutilis.

naporum duas differentias et in medicina graeci servant. angulosis foliorum caulibus, flore aneti, quod bunion vocant, purgationibus feminarum et vesicae et urinae utile decoctum, potum ex aqua mulsa vel suci drachma; semen dysintericis tostum tritumque in aquae calidae cyathis quattuor. sed urinam inhibet, si non lini semen una bibatur. alterum genus buniada appellant, et raphano et rapo simile, seminis praeclari contra venena. ob id et in antidotis utuntur illo.

raphanum et silvestrem esse diximus. laudatissimus in arcadia, quamquam et alibi nascitur, utilior urinae dumtaxat ciendae, cetero aestuosus. in italia et armoraciam vocant.

et sativi vero praeter ea, quae circa eos dicta sunt, stomachum purgant, pituitam extenuant, urinam concitant, bilem detrahunt. praeterea cortices in vino decocti mane poti ad ternos cyathos conminuunt et eiciunt calculos. iidem in posca decocti contra serpentium morsus inlinuntur. ad tussim etiam mane ieiunis raphanos prodest esse cum melle, semen eorum tostum ipsumque conmanducatum, adligato raphano aquam foliis eius decoctis bibere vel sucum ipsius cyathis binis contra phthiriases, phlegmoni ipsos inlinere tusos, livori vero recenti corticem cum melle, veternosis autem quam acerrimos mandere, semenque tostum, dein contritum cum melle suspiriosis. iidem et contra venena prosunt, cerastis et scorpionibus adversantur - vel ipso vel semine infectis manibus inpune tractaveris, inpositoque raphano scorpiones moriuntur - , salutares et contra fungorum aut hyoscyami venena atque, ut nicander tradit, et contra sanguinem tauri. contra viscum quoque dari apollodori duo iubent, sed citieus semen ex aqua tritum, tarentinus sucum. lienem item extenuant, iocineri prosunt et lumborum doloribus, hydropicis quoque ex aceto aut sinapi sumpti et lethargicis et comitialibus et melancholicis. praxagoras et iliosis dandos censet, plistonicus et coeliacis. intestinorum etiam ulcera sanant ac purulenta

praecordiorum, si cum melle edantur. quidam ad haec coquere eos luto inlitos malunt; sic et feminas purgari. ex aceto et melle sumpti intestinorum animalia detrahunt, iidem ad tertias decocto eorum poto cum vino enterocelicis prosunt; sanguinem quoque inutilem sic extrahunt. medius ad haec et sanguinem excreantibus coctos dari iubet, et puerperis ad lactis copiam augendam, hippocrates capitis mulierum defluvia perfricari raphanis, et super umbilicum inponi contra tormenta volvae. reducunt et cicatrices ad colorem. semen quoque ex aqua inpositum sistit ulcera, quae phagedaenas vocant. democritus venerem hoc cibo stimulari putat, ob id fortassis voci nocere aliqui tradiderunt. folia, quae in oblongis dumtaxat nascuntur, excitare oculorum aciem dicuntur. ubi vero acrior raphani medicina admota sit, hysopum dari protinus imperant; haec antipathia est. et aurium gravitati sucum raphani instillant. nam vomituris summo cibo esse eos utilissimum est.

pastinacae simile hibiscum, quod molochen agrian vocant et aliqui πλειστολοχείαν, ulceribus, cartilagini et ossibus fractis medetur. folia eius ex aqua pota alvum solvunt; serpentes abigunt, apium, vesparum, crabronum ictibus inlita medentur. radicem eius ante solis ortum erutam involvunt lana coloris, quem nativum vocant, praeterea ovis, quae feminam peperit, strumisque vel suppuratis alligant. quidam ad hunc usum auro effodiendam censent cavendumque, ne terram adtingat. celsus et podagris, quae sine tumore sint, radicem eius in vino decoctam inponi iubet.

alterum genus est staphylinus, quod pastinacam erraticam vocant. eius semen contritum et in vino potum tumentem alvum et suffocationes mulierum doloresque lenit in tantum, ut vulvas corrigat. inlitum quoque e passo ventri earum prosit; et viris vero prosit cum panis portione aequa tritum ex vino potum contra ventris dolores. pellit et urinam, et phagedaenas ulcerum sistit recens cum melle inpositum vel arida farina inspersa. radicem eius dieuches contra iocineris aut lienis ac lumborum et renium vitia ex aqua mulsa dari iubet, cleophantus et dysintericis veteribus. philistio in lacte coquit et ad stranguriam dat radicis uncias quattuor, ex aqua hydropicis, similiter et opisthotonicis et pleuriticis et comitialibus. habentes eam feriri a serpentibus negantur aut, qui ante gustaverint, non laedi; percussis inponitur cum axungia. folia contra cruditates

manduntur. orpheus amatorium inesse staphylino dixit, fortassis quoniam venerem stimulari hoc cibo certum est. ideo conceptus adiuvari aliqui prodiderunt. ad reliqua et sativa pollet, efficacior tamen silvestris magisque in petrosis nata. semen sativae quoque contra scorpionum ictus ex vino aut posca salutare est. radice eius circumscalpti dentes dolore liberantur.

syria, in hortis operosissima - utique in proverbio graecis “multa syrorum olera - ,” simillimam staphylino herbam serit, quam alii gingidion vocant, tenuius tantum et amarius eiusdemque effectus. estur coctum crudumque stomachi magna utilitate; siccat enim ex alto omnes eius umores.

siser erraticum sativo simile est et effectu: stomachum excitat, fastidium absterget ex aceto laserpiciato sumptum aut ex pipere et mulso vel ex garo. urinam ciet, ut ophion credit, et venerem. in eadem sententia est et diocles; praeterea cordi convenire convalescentium aut post multas vomitiones perquam utile. heraclides contra argentum vivum dedit et venerem subinde offensantem aegrisque se recolligentibus. hicesius ideo stomacho inutile videri dixit, quoniam nemo tres siseres edendo continuaret, esse tamen utile convalescentibus ad vinum transeuntibus. sativi privatim sucus cum lacte caprino potus sistit alvum.

et quoniam plerosque similitudo nominum graecorum confundit, conteximus et de sili sed hoc est vulgatae notitiae. optimum massiliense, lato enim grano et fulvo est, secundum aethiopicum nigrius, creticum odoratissimum omnium. radix iucundi odoris est. semen esse et vultures dicuntur. prodest homini ad tussim veterem, rupta, convulsa in vino albo potum, item opisthotonicis et iocinerum vitiis et torminibus et stranguriae duarum aut trium lingularum mensura. sunt et folia utilia, ut quae partus adiuvent etiam quadripedum; hoc maxime pasci dicuntur cervae pariturae. inlinuntur et igni sacro. multumque in summo cibo concoctionibus confert vel folio vel semine. quadripedum quoque alvum sistit sive tritum potui infusum sive mandendo commendatum sale. boum morbis sic tritum infunditur.

inula quoque a ieiunis commanducata dentes confirmat. si, ut eruta est, terram non adtingat, condita tussim emendat; radicis vero decoctae sucus taenias pellit, siccatae autem in umbra farina tussi et

convulsis et inflationibus et arteriis medetur. venenatorum morsus abigit. folia ex vino lumborum dolori inlinuntur.

cepae silvestres non sunt. sativae olfactu ipso et delacrimatione caligini medentur, magis vero suci inunctione. somnum etiam facere traduntur et ulcera oris sanare commanducatae cum pane, et canis morsus virides ex aceto inlitae aut siccae cum melle ... et vino, ita ut post diem tertium solvantur. sic et attrita sanant. coctam in cinere et epiphoris multi inposuere cum farina hordeacia et genitalium ulceribus. suco et cicatrices oculorum et albugines et argema inunxere et serpentium morsus et omnia vulnera cum melle; item auricularum ... cum lacte mulierum et in iisdem sonitum aut gravitatem emendantes cum adipe anserino aut cum melle stillavere. et ex aqua bibendum dederunt repente obmutescentibus. in dolore quoque ad dentes conluendos instillavere et plagis bestiarum omnium, privatim scorpionum. alopecias fricuere et psoras tusis cepis. coctas dysintericis vescendas dedere et contra lumborum dolores, purgamenta quoque earum cremata in cinerem inlinentes ex aceto serpentium morsibus, ipsasque multipedae ex aceto. reliqua inter medicos mira diversitas. proximi inutiles esse praecordiis et concoctioni inflationemque et sitim facere dixerunt. asclepiadis schola ad colorem quoque validum profici hoc cibo et, si ieiuni cotidie edant, firmitatem valetudinis custodiri, stomacho utiles esse, spiritus agitatione ventrem mollire, haemorrhoidas aperire subditas pro balanis; sucum cum suco feniculi contra incipientes hydropises mire proficere, item contra anginas cum rutae et melle; excitari eodem lethargicos. (Varro quae sale et aceto pista est arefactaque, vermiculis non infestari auctor est). -

porrum sectivum profluvia sanguinis sistit naribus contrito eo obturatis vel gallae mixto aut mentae, item ex abortu profluvia poto suco. cum lacte mulieris tussi etiam veteri et pectoris ac pulmonis vitiis medetur. inlitis foliis sanantur vari et ambusta et epinyctides - ita vocatur ulcus, quae et syce, in angulo oculi perpetuo umore manans; quidam eodem nomine appellant pusulas liventes ac noctibus inquietantes - et alia ulcera cum melle tritis, vel bestiarum morsus ex aceto, item serpentium aliorumque venenatorum, aurium vero vitia cum felle caprino vel pari mensura mulsi, stridores cum lacte mulieris, capitis dolores, si in nares fundatur dormituris vel in

aures duobus suci coclearibus, uno mellis. sucus et ad serpentium scorpionumque ictus bibitur cum mero et ad lumborum dolores cum vini hemina potus. sanguinem vero excreantibus et phthisicis et destillationibus longis vel sucus vel ex ipso cibus prodest, item morbo regio vel hydropicis et ad renum dolores, cum tisanae suco acetabuli mensura. idem modus cum melle vulvas purgat. estur vero et contra fungorum venena, inponitur et vulneribus, venerem stimulat, sitim sedat, ebrietates discutit, sed oculorum aciem hebetare traditur, inflationes quoque facere, quae tamen stomacho non noceant ventremque molliant. voci splendorem adfert.

capitato maiores ad eadem effectus. sanguinem reicientibus sucus eius cum galla aut turis farina vel acacia datur. hippocrates et sine alia mixtura dari iubet vulvasque contractas aperire se putat, fecunditatem etiam feminarum hoc cibo augeri. contritum ex melle ulcera purgat. tussim et destillationes thoracis, pulmonis et arteriae vitia sanat, datum in sorbitione tisanae vel crudum praeter capita sine pane, ita ut alternis diebus sumatur, vel si pura excreentur. sic et voci et veneri somnoque multum confert. capita bis aqua mutata cocta alvum emolliunt ... sistit fluctiones veteres; cortex decoctus inlitusque inficit canos.

alio magna vis, magnae utilitates contra aquarum et locorum mutationes. serpentes abigit et scorpiones odore atque, ut aliqui tradidere, bestias omnes. ictibus medetur potu vel cibo vel inlitu, privatim contra haemorrhoidas cum vino redditum vomitu. ac, ne contra araneos mures venenati morsus valere miremur, aconitum, quod alio nomine pardalianches vocatur, debellat, item hyoscyamum, canum morsus, in quae vulnera cum melle inponitur. ad serpentium quidem ictus tostum cum restibus suis efficacissime ex oleo inlinitur, adtritisque corporum partibus, vel si in vesicas intumuerint. quin et suffito eo evocari secundas partus existimat hippocrates, cinere eius cum oleo capitis ulcera manantia sanitati restituens. suspiriosis coctum, aliqui crudum id dedere; diocles hydropicis cum centaurio aut in fico duplici ad evacuandam alvum, quod efficacius praestat viride cum coriandro in mero potum; suspiriosis aliqui et tritum in lacte dederunt. praxagoras et contra morbum regium vino miscuit et contra ileum in oleo et pulte, sic inlinens strumis quoque. antiqui et insanientibus dabant crudum, diocles phreneticis elixum. contra

anginas tritum in posca gargarizari prodest. dentium dolorem tribus capitibus in aceto tritis inminuit, vel si decocti aqua conluantur addaturque ipsum in cava dentium. auribus etiam instillatur sucus cum adipe anserino. phthiriases et porrigines potum, item infusum cum aceto et nitro conpescit, destillationes cum lacte coctum vel tritum permixtumve caseo molli, quo genere et raucitatem extenuat vel in pisi aut fabae sorbitione. in totum autem coctum utilius est crudo elixumque tosto; sic et voci plus confert. taenias et reliqua animalia interaneorum pellit in aceto mulso coctum; tenesmo in pulte medetur; temporum doloribus inlinitur elixum et pusulis coctum, dein cum melle tritum; tussi cum adipe vetusto decoctum vel cum lacte aut, si sanguis etiam excreetur vel pura, sub pruna tostum et cum mellis pari modo sumptum; convulsis, ruptis cum sale et oleo. item cum adipe tumores suspectos sanat. extrahit fistulis vitia cum sulpure et resina, etiam harundines cum pice; lepras, lichenas, lentigines exulcerat sanatque cum origano, vel cinis eius ex oleo et garo inlitus; sic et sacros ignes; suggillata aut liventia ad colorem reducit conbustum ex melle. credunt et comitialem morbum sanari, si quis eo in cibis utatur ac potione; quartanas quoque excutere potum caput unum cum laserpici obolo in vino austero, - (tussim et alio modo ac pectorum suppurationes quantaslibet sanat fractae incoctum fabae atque ita in cibo sumptum, donec sanitatem restituat. facit et somnos, atque in totum rubicundiora corpora) - venerem quoque stimulare cum coriandro viridi tritum potumque e mero. vitia eius sunt quod oculos hebetat, inflationes facit, stomachum laedit copiosius sumptum, sitim gignit. cetero contra pituitam et gallinaceis prodest mixtum farre in cibo. iumenta urinam reddere atque non torqueri tradunt, si trito natura tangatur.

lactucae sponte nascentis primum genus est eius, quam caprinam vocant, qua pisces in mare deiecta protinus necantur, qui sunt in proximo. huius lac spissatum mox in aceto pondere obolorum duum adiecto aquae uno cyatho hydropicis datur. caule et foliis contusis, asperso sale, nervi incisi sanantur. eadem trita ex aceto conluta matutinis bis mense dentium dolorem prohibent. alterum est genus quod graeci caesapon vocant. huius folia trita et cum polenta inlita ulceribus medentur. haec in arvis nascuntur; tertium genus in silvis nascens ἰσάτιν vocant. huius folia trita cum polenta vulneribus

prosunt. quarto infectores lanarum utuntur. simile id erat lapatho silvestri foliis, nisi plura haberet et nigriora. sanguinem sistit, phagedaenas et putrescentia ulcera aut quae serpunt sanat, item tumores ante suppurationem, ignem sacrum radice vel foliis. prodest vel ad lienes potu. haec propria singulis.

communia autem sponte nascentibus candor, caulis interdum cubitali longitudine, in thyrso et foliis scabritia. ex iis rotunda folia et brevia habentem sunt qui hieracion vocent, quoniam accipitres scalpendo eam sucoque oculos tinguendo obscuritatem, cum sensere, discutiant. sucus omnibus candidus, viribus quoque papaveri similis; carpitur per messes inciso caule, conditur fictili novo, ad multa praeclarus. sanat omnia oculorum vitia cum lacte mulierum, argema, nubiculas, cicatrices adustionesque omnes, praecipue caligines. inponitur etiam oculis in lana contra epiphoras. idem sucus alvum purgat in posca potus ad duos obolos. serpentium ictibus medetur in vino potus. et folia thyrsique triti ex aceto bibuntur, vulneri inlinuntur, maxime contra scorpionum ictus, contra vero phalangia commixto vino et aceto. aliis quoque venenis resistunt, exceptis quae strangulando necant aut his quae vesicae nocent, item psimithio excepto. inponuntur et ventri ex melle atque aceto ad detrahenda vitia alvi. urinae difficultates sucus emendat. crateuas eum et hydropicis obolis duobus in aceto et cyatho vini dari iubet. quidam et e sativis colligunt sucum minus efficacem. peculiares earum effectus - praeter iam dictos somnum faciendi veneremque inhibendi, aestum refrigerandi, stomachum purgandi, sanguinem augendi - non pauci restant, quoniam et inflationes discutiunt ructusque lenes faciunt, concoctiones adiuvant, cruditates ipsae numquam faciunt. nec ulla res in cibis magis aviditatem incitat inhibetque eadem. in causa alterutraque modus est: sic et alvum copiosiores solvunt, modicae sistunt. lentitiam pituitae digerunt atque, ut aliqui tradiderunt, sensus purgant, stomachis dissolutis utilissimae. adiuvantur in eos usus et oxypori obolis, asperitatem addito dulci ad intinctum aceti temperantes, si crassior pituita sit, scillite aut vino absinthite, si et tussis sentiatur, hysopite admixto. dantur coeliacis cum intubo erratico et ad duritiam praecordiorum. dantur et melancholicis candidae copiosiores et ad vesicae vitia. praxagoras et dysintericis dedit. ambustis quoque prosunt recentibus, priusquam pusulae fiant,

cum sale inlitae. ulcera etiam, quae serpunt, coercent, initio cum aphronitro, mox in vino. tritae igni sacro inlinuntur. convulsa et luxata caulibus tritis cum polenta ex aqua frigida leniunt, eruptiones papularum ex vino et polenta. in cholera quoque coctas patinis dederunt, ad quod utilissimae quam maximi caulis et amarae. quidam et lacte infundunt. defervefacti hi caules et stomacho utilissimi traduntur, sicut somno aestiva maxime lactuca et amara lactensque, quam meconidem vocavimus. hoc lacte et oculorum claritati cum muliebri lacte utilissimum esse praecipitur, dum tempestivo capite inunguantur oculi, et ad vitia, quae frigore in his facta sint. miras et alias invenio laudes: thoracis vitiis prodesse non secus quam habrotonum cum melle attico; purgari et feminas hoc cibo; semen sativarum contra scorpiones dari; semine trito ex vino poto et libidinum imaginationes in somno conpesci; temptantes aquas non nocere lactucam edentibus. quidam tamen frequentiores in cibo officere claritati oculorum tradiderunt.

nec beta sine remediis est utraque: sive candidae sive nigrae radix recens et madefacta suspensa funiculo contra serpentium morsus efficax esse dicitur; candida beta cocta et cum alio crudo sumpta contra taenias; nigrae radices in aqua coctae porriginem tollunt, atque in totum efficacior esse traditur nigra. sucus eius capitis dolores veteres et vertigines, item sonitum aurium sedat infusus iis. ciet urinam, medetur dysintericis iniecta et morbo regio, dolores quoque dentium sedat. inlitus sucus et contra serpentium ictus valet, sed hoc radici dumtaxat expressus. ipsa vero decocta pernionibus occurrit. alba epiphoras sedat fronti inlita, aluminis parvo admixto ignem sacrum sine oleo trita. sic et adustis medetur. et contra eruptiones papularum, coctaque eadem contra ulcera, quae serpunt, inlinitur, et alopeciis cruda et ulceribus, quae in capite manant. sucus eius cum melle naribus inditus caput purgat. coquitur et cum lenticula addito aceto, ut ventrem molliat. validius cocta fluctiones stomachi et ventris sistit.

est et beta silvestris quam limonium vocant, alii neuroidem, multum minoribus foliis tenuioribusque ac densioribus; undecim saepe cauli uni. huius folia ambustis utilia gustantium os adstringunt. semen acetabuli mensura dysintericis prodest. aqua betae radice decocta maculas vestium elui dicunt, item membranarum.

intubi quoque non extra remedia sunt. sucus eorum cum rosaceo et aceto capitis dolores lenit idemque cum vino potus iocineris et vesicae; et epiphoris inponitur. erraticum apud nos quidam ambubaiam appellavere. in aegypto cichorium vocant quod silvestre est, sativum autem serim, quod est minus et venosius.

cichorium refrigerat in cibo sumptum vel inlitum collectiones; sucus decocti ventrem solvit, iocineri et renibus et stomacho prodest. item, si in aceto decoquatur, urinae tormina discutit, item morbum regium e mulso, si sine febri sit. vesicam adiuvat. mulierum quidem purgationibus decoctum in aqua adeo prodest, ut emortuos partus trahat. adiciunt magi suco totius cum oleo perunctos favorabiliores fieri et quae velint facilius impetrare. quamquam idem propter singularem salubritatem aliqui chreston appellant, alii pancration.

est et silvestre genus alterum - hedypnoida vocant - , latioris folii. stomachum dissolutum adstringit cocta, crudaque sistit alvum. et dysintericis prodest, magis cum lente. rupta et convulsa utroque genere iuvantur, item genitura quibus valetudinis morbo effluat.

seris et ipsa, lactucae simillima, duorum generum est silvestris: melior nigra et aestiva, deterior hiberna et candidior. utraque amara, stomacho utilissima; praecipue quem umor vexet cum aceto in cibo refrigerant vel inlitae, discutiuntque et alios quam stomachi. cum polenta silvestrium radices stomachi causa sorbentur, et cardiacis inlinuntur super sinistram mammam et ex aceto. omnes hae et podagricis utiles et sanguinem reicientibus, item quibus genitura effluat, alterno dierum potu. petronius diodotus, qui ἀνθολογούμενα scripsit, in totum damnavit serim multis modis arguens, sed aliorum omnium opinio resistit.

brassicae laudes longum est exsequi, cum et chrysippus medicus privatim volumen ei dicaverit per singula membra hominis digestum et dieuches, ante omnes autem pythagoras, et cato non parcius celebraverit, cuius sententiam vel eo diligentius persequi par est, ut noscatur, qua medicina usus sit annis dc populus romanus. in tres species divisere eam graeci antiquissimi: crispam, quam selinada vocaverunt a similitudine apii foliorum, stomacho utilem, alvum modice mollientem; alteram heliam, latis foliis e caule exeuntibus, unde caulodem quidam vocavere, nullius in medicina momenti. tertia est proprie appellata crambe, tenuioribus foliis et simplicibus

densissimisque, amarior, sed efficacissima. cato crispam maxime probat, dein levem grandibus foliis, caule magno. prodesse tradit capitis doloribus, oculorum caligini scintillationique, stomacho, praecordiis crudam ex aceto ac melle, coriandro, ruta, menta, laseris radicula sumptam acetabulis duobus matutino, tantamque esse vim, ut qui terat haec, validiorem fieri se sentiat. ergo vel cum his tritam sorbendam vel ex hoc intinctu sumendam, podagrae autem morbisque articulariis inlini cum ruta et coriandro et salis mica et hordei farina; aqua quoque eius decocta nervos articulosque mire iuvari, si foveantur. vulnera et recentia et vetera, etiam carcinomata, quae nullis aliis medicamentis sanari possint, foveri prius calida aqua iubet ac bis die tritam inponi. sic etiam fistulas et luxata et tumores, quos evocari quosque discuti opus sit. insomnia etiam vigiliasque tollere decoctam, si ieiuni edint quam plurimam ex oleo et sale; tormina, si decocta iterum decoquatur addito oleo, sale, cumino, polenta. si ita sumatur sine pane, magis profuturam. inter reliqua bilem detrahi per vinum nigrum pota. quin et urinam eius, qui brassicam esitaverit, adservari iubet, calefactamque nervis remedio esse. verba ipsius subiciam ad exprimendam sententiam: “pueros pusillos, si laves ea urina, numquam debiles fieri.” auribus quoque ex vino sucum brassicae tepidum instillari suadet idque etiam tarditati audientium prodesse adseverat, et inpetigines eadem sanari sine ulcere.

graecorum quoque opiniones iam et catonis causa poni convenit, in his dumtaxat, quae ille praetermiserit. biles trahere non percoctam putant, item alvum solvere eandemque bis coctam sistere. vino adversari ut inimicam vitibus, antecedente in cibis caveri ebrietatem, postea sumpta crapulam discuti. hunc cibum et oculorum claritati conferre multum, sucum vero crudae vel angulis tantum tactis cum attico melle plurimum. facillime concoqui, ciboque eo sensus purgari. erasistrati schola clamat nihil esse utilius stomacho nervisque, ideo paralyticis et tremulis dari iubet et sanguinem excreantibus. hippocrates coeliacis et dysintericis bis coctam cum sale, item ad tenesmum et renium causa, lactis quoque ubertatem puerperis hoc cibo fieri iudicans et purgationem feminis. crudus quidem caulis si mandatur, partus quoque emortuos pelli. apollodorus adversus fungorum venena semen aut sucum bibendum

censet, philistion opisthotonicis sucum ex lacte caprino cum sale et melle. invenio et podagra liberatos edendo eam decoctaeque ius bibendo, hoc et cardiacis datum et comitialibus morbis addito sale, item splenicis in vino albo per dies xl et ictericis nec non et phreneticis. raucis crudae sucum gargarizandum bibendumque demonstrat, contra vero singultus cum coriandro et aneto et melle ac pipere ex aceto. inlitam quoque prodesse inflationibus stomachi, item serpentium ictibus et sordidis ulceribus ac vetustis, vel aqua ipsa cum hordeacia farina, sucum ex aceto vel cum feno graeco. sic aliqui et articulis podagrisque inponunt. epinyctidas et, quidquid aliud serpit in corpore, inposita levat, item repentinas caligines, has et si mandatur ex aceto; suggillata vero et alios livores pura inlita, lepras et psoras cum alumine rotundo ex aceto. sic et fluentes capillos retinet. epicharmus testium et genitalium malis hanc utilissime inponi, efficacius eandem cum faba trita, item convolsis, cum ruta contra ardores febrium et stomachi vitia, cum rutae semine ad secundas et muris aranei morsus. foliorum aridorum farina alterutra parte exinanit.

ex omnibus brassicae generibus suavissima est cyma, at inutilis habetur, difficilis in coquendo et renibus contraria. illud quoque non est omittendum, aquam decoctae ad tot usus laudatam faetere humi effusam. stirpium brassicae aridorum cinis inter caustica intellegitur ad coxendicum dolores cum adipe vetusto, ac cum lasere et aceto inter psilotra: evulsis inlitus pilis nasci alios prohibet. bibitur et cum oleo subfervefactus vel per se elixus ad convolsa et rupta intus lapsoque ex alto. nulla ergo sunt crimina brassicae immo vero apud eosdem animae gravitatem facere, dentibus et gingivis nocere. et in aegypto propter amaritudinem non estur.

silvestris sive erraticae inmenso plus effectus laudat cato, adeo ut aridae quoque farinae in olfactorio collectae vel odore tantum naribus rapto vitia earum graveolentiamque sanari adfirmet. hanc alii petraeam vocant, inimicissimam vino, quam praecipue vitis fugiat aut, si non possit fugere, moriatur. folia habet tenuia, rotunda, parva, levia, plantis oleris similior, candidior sativa et hirsutior. hanc inflationibus mederi, melancholicis quoque ac vulneribus recentibus cum melle, ita ne solvatur ante diem septimum, strumis, fistulis in aqua contritam chrysippus auctor est. alii vero conpescere mala

corporis, quae serpant - nomas vocant - , item excrescentia absumere, cicatrices ad planum redigere, oris ulcera et tonsillas manducatam et coctam suco gargarizato cum melle tollere, item psoras et lepras veteres, ipsius tribus partibus cum duabus aluminis in aceto acri inlitis. epicharmus satis esse eam contra canis rabiosi morsum inponi; melius, si cum lasere et aceto acri; necari quoque canes ea, si detur ex carne. semen eius tostum auxiliatur contra serpentes, fungos, tauri sanguinem. folia cocta splenicis in cibo data et cruda inlita cum sulpure et nitro prosunt, item mammarum duritiae. radicum cinis uvae in faucibus tumenti tactu medetur et parotidas cum melle inlitus reprimit, serpentium morsus sanat. virium brassicae unum et magnum argumentum addemus ac mirabile: crustae occupent intus vasa omnia, in quis aquae fervent, ita ut non sit avellere eas; si brassica in his decoquatur, abscedunt.

inter silvestres brassicas et lapsana est, pedalis altitudine, hirsutis foliis, sinapi similis, nisi candidior esset flore. coquitur in cibo, alvum leniter mollit.

marina brassica vehementissime ex omnibus alvum ciet. coquitur propter acrimoniam cum pingui carne, stomacho inimicissima.

scillarum in medicina albae et feminae nigrae; quae candidissima fuerit, utilissima erit. huic aridis tunicis direptis quod relicum e vivo est, consectum suspenditur lino modicis intervallis. postea arida frusta in cadum aceti quam asperrimi pendentia inmerguntur, ita ne ulla parte vas contingant. gypso deinde oblitus cadus ponitur sub tegulis totius diei solem accipientibus. hoc fit ante solstitium, diebus xlviii. post eum numerum dierum tollitur vas, scilla eximitur, acetum transfunditur. hoc clariorem oculorum aciem facit, salutare est stomachi, laterum doloribus ieiunis sumptum. sed tanta vis est, ut avidius haustum exstinctae animae momento aliquo speciem praebeat. prodest et gingivis et dentibus vel per se commanducata. taenias et reliqua ventris animalia pellit ex aceto et melle sumpta. linguae quoque recens subiecta praestat, ne hydropici sitiant. coquitur pluribus modis: in olla, quae coiciatur in clibanum aut furnum, vel adipe aut luto inlita, vel frustatim in patinis. et cruda siccatur, deinde conciditur coquiturque in aceto, cum serpentium ictibus inponitur. tosta quoque purgatur et medium eius iterum in aqua coquitur. usus sic coctae ad hydropicos, ad urinam ciendam

tribus obolis cum melle et aceto potae, item splenicos et stomachicos, si non sentiant ulcus, quibus innatet cibus, ad tormina, regios morbos, tussim veterem cum suspirio. discutit et foliis strumas quadrinis diebus soluta, furfures capitis et ulcera manantia inlita ex oleo cocta. coquitur et in melle cibi gratia, maxime uti concoctionem faciat. sic et interiora purgat. rimas pedum sanat in oleo cocta et mixta resinae. semen eius lumborum dolori ex melle inponitur. pythagoras scillam in limine quoque ianuae suspensam contra malorum medicamentorum introitum pollere tradit.

ceteri bulbi ex aceto et sulpure ulceribus in facie medentur, per se vero triti nervorum contractioni et ex vino porrigini, cum melle canum morsibus; erasistrato placet cum pice. idem sanguinem sistere eos tradit inlitos cum melle. alii, si e naribus fluat, coriandrum et farinam adiciunt. theodorus et lichenas ex aceto bulbis curat, erumpentia in capite cum vino austero aut ovo. et bulbos epiphoris idem inlinit et siccae lippitudini media eorum. vitia, quae sunt in facie, rubentes maxime in sole inliti cum melle et nitro emendant, lentiginem cum vino aut cum aceto. vulneribus quoque mire prosunt per se aut, ut damion, ex mulso, si quinto die solvantur. iisdem et auriculas fractas curat et testium pituitas; in articulorum doloribus miscet et farinam. in vino cocti inliti ventri duritiam praecordiorum emolliunt. dysintericis in vino ex aqua caelesti temperato dantur, ad convulsa intus cum silphio pilulis fabae magnitudine. ad sudorem tusi inlinuntur. nervis utiles, ideo et paralyticis dantur. luxata in pedibus, qui sunt rufi ex iis, citissime sanant cum melle et sale. venerem maxime megarici stimulant, hortensii partum cum sapa aut passo sumpti, silvestres interaneorum plagas et vitia cum silphio pilulis devoratis sedant. illorum semen contra phalangia bibitur in vino. ipsi ex aceto inlinuntur contra serpentium ictus. semen antiqui bibendum insanientibus dabant. flos bulborum tritus crurum maculas varietatesque igni factas emendat. diocles hebetari oculos ab his putat. elixos assis minus utiles esse adicit et difficile concoqui ex vi uniuscuiusque naturae.

bolbinen graeci vocant herbam porraceis foliis, rubicundo bulbo. haec traditur vulneribus mire utilis, dumtaxat recentibus. bulbus, quem vomitorium vocant ab effectu, folia habet nigra, ceteris longiora.

inter utilissimos stomacho cibos asparagi traduntur. cumino quidem addito inflationes stomachi colique discutiunt, iidem oculis claritatem adferunt, ventrem leniter molliunt, pectoris et spinae doloribus intestinorumque vitiis prosunt, vino, cum coquuntur, addito. ad lumborum et renium dolores semen obolorum trium pondere, pari cumini bibitur. venerem stimulant, urinam cient utilissime, praeterquam vesica exulcerata, radice quoque plurimorum praedicatione. trita et in vino albo pota calculos quoque exturbat, lumborum et renium dolores sedat. quidam et ad vulvae dolorem radicem cum vino dulci propinant. eadem in aceto decocta contra elephantiasim proficit. asparago trito ex oleo perunctum pungi ab apibus negant.

silvestrem asparagum aliqui libycum vocant, attici orminum. huius ad supra dicta omnia efficacior vis, et candidiori maior. morbum regium extenuant. veneris causa aquam eorum decoctam bibi iubent ad heminam. idem et semen valet cum aneto ternis utriusque obolis. datur et ad serpentium ictus sucus decoctus; radix miscetur radici marathri inter efficacissima auxilia. si sanguis per urinam reddatur, semen et asparagi et apii et cumini ternis obolis in vini cyathis duobus chrysippus dari iubet. set id hydropicis contrarium esse, quamvis urinam moveat, docet, item veneri, vesicae quoque nisi decoctum; quae aqua si canibus detur, occidi eos. in vino decoctae radicis sucum, si ore contineatur, dentibus mederi.

apio gratia in volgo est. namque rami lactis potionibus per rura innatant et in condimentis peculiarem gratiam habent. praeterea oculis inlitum cum melle, ita ut subinde foveantur ferventi suco decocti, aliisque membrorum epiphoris per se tritum aut cum pane vel polenta inpositum mire auxiliatur. pisces quoque, si aegrotent in piscinis, apio viridi recreantur. verum apud eruditos non aliud erutum terra in maiore sententiarum varietate est. distinguitur sexu. chrysippus feminam esse dicit crispioribus foliis et duris, crasso caule, sapore acri et fervido; dionysius ... nigriorem, brevem, radicis ... , vermiculos gignentem; ambo neutrum ad cibos admittendum, immo omnino nefas, namque id defunctorum epulis feralibus dicatum esse - visus quoque claritati inimicum - caule feminae vermiculos gigni ideoque eos, qui ederint, sterilescere, mares feminasve; in puerperiis vero ab eo cibo comitiales fieri qui ubera

hauriant; innocentiorem tamen esse marem. eaque causa est, ne inter nefastos frutex damnetur. mammarum duritiam inpositis foliis emollit. suaviores aquas potui incoctum praestat. suco maxime radicis cum vino lumborum dolores mitigat, eodem iure instillato gravitatem aurium. semine urinam ciet, menstrua ac secundas partus et si foveantur semine decocto. suggillata reddit colori cum ovi albo inlitum. at ex aqua coctum potumque renibus medetur, in frigida tritum oris ulceribus. semen cum vino vel radix cum vetere vino vesicae calculos frangunt. semen datur et arquatis ex vino albo.

apiastrum hyginus quidem melissophyllum appellat, sed in confessa damnatione est venenatum in sardinia. contexenda enim sunt omnia ex eodem nomine apud graecos pendentia.

olusatrum, quod hipposelinum vocant, adversatur scorpionibus. poto semine torminibus et interaneis medetur; item difficultatibus urinae semen eius decoctum ex mulso potum. radix in vino decocta calculos pellit et lumborum ac lateris dolores. canis rabiosi morsibus potum et inlitum medetur. sucus eius algentes calefacit potus. quartum genus ex eodem aliqui faciunt oreoselinum, palmum alto frutice recto, semine cumino simili, urinae et menstruis efficax. heleoselino vis privata contra araneos; eo et oreoselino feminae purgantur e vino.

alio genere petroselinum quidam appellant in saxis natum, praecipuum ad vomicas, coclearibus binis suci additis in cyathum marrubii suci atque ita calidae aquae tribus cyathis. adiecere quidam buselinum, differens brevitate caulis a sativo et radicis colore rufo, eiusdem effectus, praevalere contra serpentes potu et inlitu.

ocimum quoque chrysippus graviter increpuit inutile stomacho, urinae, oculorum quoque claritati, praeterea insaniam facere et lethargos et iocineris vitia, ideoque capras id aspernari, hominibus quoque fugiendum censens. addunt quidam tritum, si operiatur lapide, scorpionem gignere, commanducatum et in sole positum vermes; afri vero, si eo die feriatur quispiam a scorpione, quo ederit ocimum, non posse servari. quin immo tradunt aliqui, manipulo ocimi cum cancris x marinis vel fluviatilibus trito convenire ad id scorpiones ex proximo omnes. diodorus in empiricis etiam pediculos facere ocimi cibum. secuta aetas acriter defendit, nam id esse capras, nec cuiquam mentem motam, et scorpionum terrestrium ictibus

marinorumque venenis mederi ex vino addito aceti exiguo. usu quoque conpertum deficientibus ex aceto odoratu salutare esse, item lethargicis et inflammatis refrigeratione, inlitum capitis doloribus cum rosaceo aut myrteo et aceto, item oculorum epiphoris inpositum ex vino. stomacho quoque utile, inflationes ructu dissolvere ex aceto sumptum, alvum sistere inpositum, urinam ciere; sic et morbo regio et hydropicis prodesse, etiam in choleris destillationes stomachi inhiberi. ergo etiam coeliacis philistio dedit et coctum dysintericis, et contra ... plistonicus, aliqui et in tenesmo et sanguinem excreantibus in vino, duritia quoque praecordiorum. inlinitur mammis exinanitque lactis proventum. auribus utilissimum infantium, praecipue cum adipe anserino. semen tritum et haustum naribus sternumenta compescit et destillationes quoque capitis inlitum, vulvas purgat in cibo ex aceto. verrucas mixto atramento sutorio tollit. venerem stimulat, ideo etiam equis asinisque admissurae tempore ingeritur.

silvestri ocimo vis efficacior ad eadem omnia, peculiaris ad vitia, quae vomitionibus crebris contrahuntur, vomicasque volvae, contra bestiarum morsus e vino radice efficacissima.

erucae semen scorpionum venenis et muris aranei medetur, bestiolas omnes innascentes corpori arcet, vitia cutis in facie cum melle inlitum, lentigines ex aceto, cicatrices nigras reducit ad candorem cum felle bubulo. aiunt verbera subituris potum ex vino duritiam quandam contra ea sensus induere. in condiendis opsoniis tanta est suavitas, ut graeci euzomon appellaverint. putant, subtrita eruca si foveantur oculi, claritatem restitui, ... tussim infantium sedari. radix eius in aqua decocta fracta ossa extrahit ... . - nam de venere stimulanda diximus - tria folia silvestris erucae sinistra manu decerpta et trita in aqua mulsa si bibantur.

e contrario nasturtium venerem inhibet, animum exacuit, ut diximus. duo eius genera. alvum purgat, detrahit bilem potum #1108 pondere in aquae vii, strumis cum lomento inlitum opertumque brassica praeclare medetur. alterum est nigrius, quod capitis vitia purgat visum compurgat, commotas mentes sedat ex aceto sumptum, lienem ex vino potum vel cum fico sumptum, tussim, ex melle si cotidie ieiuni sumant. semen ex vino omnia intestinorum animalia pellit, efficacius addito mentastro. prodest et contra suspiria et tussim cum origano et vino dulci, pectoris doloribus decoctum in lacte

caprino. panos discutit cum pice extrahitque corpori aculeos et maculas inlitum ex aceto; contra carcinomata adicitur ovorum album. et lienibus inlinitur ex aceto, infantibus vero e melle utilissime. sextius adicit ustum serpentes fugare, scorpionibus resistere, capitis dolores contrito, alopecias emendari addito sinapi, gravitatem aurium trito inposito auribus cum fico, dentium dolores infuso in aures suco, porriginem et ulcera capitis cum adipe anserino. furunculos concoquit cum fermento. carbunculos ad suppurationem perducit et rumpit, phagedaenas ulcerum expurgat cum melle. coxendicibus et lumbis cum polenta ex aceto inlinitur, item licheni, unguibus scabris, quippe natura eius caustica est. optimum autem babylonium; silvestri ad omnia ea effectus maior.

in praecipuis autem medicaminibus ruta est. latiora sativae folia, rami fruticosiores; silvestris horrida ad effectum est et ad omnia acrior. sucus exprimitur tunsae aspersa modice aqua et in pyxide cypria adservatur. hic copiosior datus veneni noxiam obtinet, in macedonia maxime iuxta flumen aliacmonem; mirumque, cicutae suco extinguitur: adeo etiam venenorum venena sunt. cicutae sucus prodest et manibus colligentium rutam. cetero inter prima miscetur antidotis, praecipueque galatica; quaecumque autem ruta et per se pro antidoto valet foliis tritis ex vino sumptis, contra aconitum maxime et viscum, item fungos, sive in potu detur sive in cibo; simili modo contra serpentium ictus, utpote cum mustelae dimicaturae cum his rutam prius edendo muniant se. valent et contra scorpionum et contra araneorum, apium, crabronum, vesparum aculeos et cantharidas ac salamandras canisve rabiosi morsus. acetabuli mensura sucus e vino bibitur, et folia trita vel commanducata inponuntur cum melle ac sale vel cum aceto et pice decocta. suco perunctos, etiam habentes negant feriri ab his maleficis, serpentesque, si uratur ruta, nidorem fugere. efficacissima tamen est silvestris radix cum vino sumpta; eandem adiciunt efficaciorem esse sub diu potam.

pythagoras et in hac marem minoribus herbaceique coloris foliis a femina discrevit, et eam laetioribus foliis et colore. idem oculis noxiam putavit; falsum, quoniam scalptores et pictores hoc cibo utuntur oculorum causa cum pane vel nasturtio, caprae quoque silvestres propter visum, ut aiunt. multi suco eius cum melle attico

inuncti discusserunt caligines vel cum lacte mulieris puerum enixae vel puro suco angulis oculorum tactis. epiphoras cum polenta inposita lenit; item capitis dolores pota cum vino aut cum aceto et rosaceo inlita, si vero sit cephalaea, cum farina hordeacia et aceto. eadem cruditates discutit, mox et inflationes, dolores stomachi veteres. vulvas aperit corrigitque conversas inlita in melle toto ventre et pectore; hydropicis cum fico et decocta ad dimidias partes potaque ex vino. sic bibitur et ad pectoris dolores laterumque et lumborum, tusses, suspiria, pulmonum, iocinerum, renium vitia, horrores frigidos, crapulae gravedines. decocuntur folia poturis; et in cibo vel cruda vel decocta aut condita prodest; item torminibus in hysopo decocta et cum vino pota. sic et sanguinem sistit interiorem et narium indita iis; sic et conlutis dentibus prodest. auribus quoque in dolore sucus infunditur, custodito, ut diximus, modo in silvestri, contra tarditatem vero sonitusque cum rosaceo vel cum laureo oleo aut cum vino et melle. sucus et phreneticis ex aceto tritae instillatur in tempora et cerebrum. adiecerunt aliqui et serpyllum et laurum, inlinentes capita et colla. dederunt et lethargicis ex aceto olfaciendum et comitialibus bibendum decoctae sucum in cyathis iiii; ante accessiones, quarum frigus intolerabile est, alsiosisque et crudam in cibo. urinam quoque vel cruentam pellit, feminarum etiam purgationes secundasque et iam emortuos partus, ut hippocrati videtur, ex vino dulci nigro pota. itaque inlitam et vulvarum causa et suffire iubet. diocles et cardiacis inponit ex aceto et melle cum farina hordeacia et contra ileum decocta farina in oleo velleribus collecta. multi vero et contra purulentas excreationes siccae drachmas duas, sulpuris unam et dimidiam sumi censent, et contra cruentas ramos iii decoctos in vino. datur et dysintericis cum caseo in vino contrita. dederunt et cum bitumine infriatam potioni propter anhelitum, ex alto lapsis seminis iii uncias olei libra vinique sextario. inlinitur cum oleo coctis foliis partibus, quas frigus adusserit. si urinam movet, ut hippocrati videtur, mirum est, quosdam dare velut inhibentem potui contra incontinentiam urinae. psoras et lepras cum melle et alumine inlita emendat, item vitiligines, verrucas, strumas et similia cum trychno et adipe suillo ac taurino sebo, ignem sacrum ex aceto et oleo vel psimithio, carbunculum ex aceto; nonnulli laserpicium una inlini iubent, sine quo epinyctidas pusulas curant. inponunt et mammis

turgentibus decoctam et pituitae eruptionibus cum cera, testium vero epiphoris cum ramis lauri teneris, adeo peculiari in visceribus his effectu, ut silvestri ruta cum axungia vetere inlitos ramices sanari prodant, fracta quoque membra semine trito cum cera inposito. radix rutae sanguinem oculis suffusum et toto corpore cicatrices aut maculas inlita emendat. ex reliquis, quae traduntur, mirum est, cum ferventem rutae naturam esse conveniat, fasciculum eius in rosaceo decoctum addita aloes uncia perunctis sudorem reprimere, itemque generationem inpediri hoc cibo. ideo in profluvio genitali datur et venerem crebro per somnia imaginantibus. praecavendum est gravidis abstineant hoc cibo, necari enim partus invenio. eadem ex omnibus satis quadripedum quoque morbis in maximo usu est, sive difficile spirantibus sive contra maleficorum animalium ictus, infusa per nares ex vino aut, si sanguisugam hauserint, ex aceto et quocumque in simili morborum genere, ut in homine, temperata.

mentastrum silvestris menta est, differens specie foliorum, quae sunt figura ocimi, pulei odore, propter quod quidam silvestre puleium vocant. his commanducatis et inpositis sanari elephantiasin magni pompei aetate fortuito cuiusdam experimento, propter pudorem facie inlita, conpertum est. eadem inlinuntur bibunturque adversus serpentium ictus drachmis duabus in vini cyathis duobus, adversus scorpionum cum sale, oleo, aceto, item adversus scolopendras ius decocti. adversus omnia venena servantur folia arida ad farinae modum. substratum vel accensum fugat etiam scorpiones. potum feminas purgat, sed partus necat. ruptis, convulsis, orthopnoicis, torminibus, choleris efficacissimum, item lumbis, podagris inpositum. sucus auribus verminosis instillatur. in regio morbo bibitur, strumis inlinitur, somnia veneris inhibet, taenias pellit ex aceto potum, contra porriginem ex aceto infunditur capiti in sole.

mentae ipsius odor animum excitat et sapor aviditatem in cibis, ideo embammatum mixturae familiaris. ipsa acescere aut coire densarique lac non patitur; quare lactis potionibus additur, et his, qui coagulati potu strangulentur, data in aqua aut mulso. eadem vi resistere et generationi creditur cohibendo genitalia densari. aeque maribus ac feminis sistit sanguinem et purgationes feminarum inhibet, cum amylo ex aqua pota coeliacorum impetus. exulcerationem et vomicas vulvae curant illita, iocinerum vitia ternis

obolis ex mulso datis, item sanguinem excreantibus in sorbitione. ulcera in capite infantium mire sanat, arterias umidas siccat, siccas adstringit, pituitas corruptas purgat in mulso et aqua. voci suco utilis, sub certamine dumtaxat, qui et gargarizatur uva tumente adiecta ruta et coriandro ex lacte; utilis et contra tonsillas cum alumine, linguae asperae cum melle et convulsis intus per se vitiisque pulmonis. singultus et vomitiones sistit cum suco granati, ut democritus monstrat. recentis sucus narium vitia spiritu subductus emendat; ipsa trita choleras, in aceto quidem pota, sanguinis fluctiones intus, ileum etiam inposita cum polenta et si mammae tendantur. inlinitur et temporibus in capitis dolore, sumitur et contra scolopendras et scorpiones marinos et ad serpentes. epiphoris inlinitur et omnibus in capite eruptionibus, item sedis vitiis. intertrigines quoque, vel si teneatur tantum, prohibet. auribus instillatur cum mulso. aiunt et lieni mederi eam in horto gustatam ita, ne vellatur, si is, qui mordeat, dicat se lieni mederi, per dies viiii; aridae quoque farinam tribus digitis adprehensam et stomachi dolorem sedare in aqua et similiter aspersa potione ventris animalia expellere.

magna societas cum hac ad recreandos defectos animo puleio, cum surculis suis in ampullas vitreas aceti utrisque deiectis. qua de causa dignior e puleio corona Varroni quam e rosa cubiculis nostris pronuntiata est; nam et capitis dolores inposita dicitur levare, quin et olfactu capita tueri contra frigorum aestusque iniuriam et ab siti traditur, neque aestuare eos, qui duos e puleio surculos inpositos auribus in sole habeant. inlinitur etiam in doloribus cum polenta et aceto, femina efficacius. est autem haec flore purpureo, mas candidum habet. item nausias cum sale et polenta in frigida aqua pota inhibet; sic et pectoris dolorem, stomachi autem ex aqua. item rosiones sistit et vomitiones cum aceto et polenta, alvum solvit ex sale et aceto et polenta. intestinorum vitia melle decocta et nitro sanat, urinam pellit ex vino et, si ammineum sit, et calculos et interiores omnes dolores. ex melle et aceto sedat menstrua et secundas, vulvas conversas corrigit, defunctos partus eicit. semen obmutescentibus olfactu admovetur. comitialibus in aceto cyathi mensura datur. si aquae insalubres bibendae sint, tritum aspergitur. lassitudines corporis, si omnino tractetur, minuit, nervorum causa et in contractione cum sale et aceto, e melle infricatur in opisthotono.

bibitur ad serpentium ictus decoctum, ad scorpionum in vino tritum, maxime quod in siccis nascitur. ad oris exulcerationes, ad tussim efficax habetur. flos recentis incensus pulices necat odore. xenocrates pulei ramum lana involutum in tertianis ante accessionem olfactandum dari aut stragulis subici et ita collocari aegrum inter remedia tradit.

silvestri ad eadem vis efficacior. simile est origano, minoribus foliis quam sativum, et a quibusdam dictamnos vocatur. gustatum a pecore caprisque balatum concitat, unde quidam graeci littera mutata blechonem vocaverunt. natura tam fervens est, ut inlitas partes exulceret. tuso in perfrictione fricari ante balinea convenit et ante accessionum horrorem. convolsis et torminibus, podagris mire prodest, spasticis cum melle et sale bibendum datur, pulmonum vitia excreabilia facit. ad lienem cum sale utile est et vesicae et suspiriis et inflationibus; decoctum suco aequaliter et vulvas corrigit et contra scolopendram terrestrem vel marinam, item scorpiones valet privatimque contra hominis morsum. radix contra increscentia ulcera recens potentissima, arida vero cicatricibus decorem adfert.

item puleio est nepetaeque societas. decocta in aqua ad tertias discutiunt frigora mulierumque menstruis prodest et aestate sedant calores. nepeta quoque vires contra serpentes habet; fumum ex ea nidoremque fugiunt, quin et substernere in metu eo dormituris utile est. tusa aegilopis inponitur et capitis doloribus recens cum tertia parte panis temperata aceto inlinitur. sucus eius instillatus naribus supinis profluvium sanguinis sistit; item radix, quae cum myrti semine in passo tepido gargarizata anginis medetur.

cuminum est et silvestre, praetenue, quaternis aut quinis foliis veluti serratis, sed ut sativo magnus usus, in stomachi praecipue remediis. discutit pituitas, inflationes tritum et cum pane sumptum vel potum ex aqua vinoque, tormina quoque et intestinorum dolores. verumtamen omne pallorem gignit bibentibus. ita certe ferunt porci latronis, clari inter magistros dicendi, adsectatores similitudinem coloris studiis contracti imitatos, et paulo ante iulium vindicem, adsertorem illum a nerone libertatis, captationi testamenti sic lenocinatum. narium sanguinem pastillis inditum vel ex aceto recens sistit, et oculorum epiphoris per se inpositum, tumentibus cum melle prodest. infantibus inponi in ventre satis est. morbo regio in vino

albo a balineis datur; ... is aethiopicum maxime in posca et in ecligmate cum melle. africano privatim urinae incontinentiam cohiberi putant. sativum datur ad iocineris vitia tostum tritum in aceto, item ad vertiginem, iis vero, quos acrior urina mordeat, in dulci tritum, ad vulvarum vitia in vino praeterque inpositis vellere foliis, testium tumoribus tostum tritumque cum melle aut cum rosaceo et cera. silvestre ad omnia eadem efficacius, praeterea ad serpentes cum oleo, ad scorpiones, scolopendras. sistit et vomitionem nausiasque ex vino quantum adprehenderint tres digiti. propter colum quoque bibitur inliniturque in penicillo fervens, adprimitur fasciis. strangulationes vulvae potum in vino aperit tribus drachmis in tribus cyathis vini. auribus instillatur ad sonitus atque tinnitus cum sebo vitulino vel melle. suggillatis inlinitur cum melle et uva passa et aceto, lentigini nigrae ex aceto.

est cumino simillimum quod graeci vocant ami. quidam vero aethiopicum cuminum id esse existimant. hippocrates regium appellavit, videlicet quia efficacius aegyptio iudicavit. plerique alterius naturae in totum putant, quoniam sit exilius et candidius. similis autem et huic usus. namque et panibus alexandrinis subditur et condimentis interponitur. inflationes et tormina discutit, urinas et menstrua ciet, suggillata oculorum, epiphoras mitigat, cum lini semine scorpionum ictus in vino potum drachmis duabus privatimque cerastarum cum pari portione myrrae. colorem quoque bibentium similiter mutat in pallorem. suffitum cum uva passa aut resina vulvam purgat. tradunt facilius concipere eas, quae odorentur id per coitum.

de cappari satis diximus inter peregrinos frutices. non utendum transmarino, innocentius est italicum. ferunt eos, qui cotidie id edint, paralysi non periclitari nec lienis doloribus. radix eius vitiligines albas tollit, si trita in sole fricentur. splenicis prodest in vino potus radicis cortex duabus drachmis, dempto balinearum usu, feruntque xxxv diebus per urinam et alvum totum lienem emitti. bibitur in lumborum doloribus ac paralysi. dentium dolores sedat tritum ex aceto vel semen decoctum vel manducata radix. infunditur et aurium dolori decoctum oleo. ulcera, quae phagedaenas vocant, folia et radix recens cum melle sanant. sic et strumas discutit radix, parotidas vermiculosque cocta in aqua. iocineris doloribus tusa cum farina

hordeacia inponitur. vesicae quoque malis medetur. dant et ad taenias in aceto et melle. oris exulcerationes in aceto decocta tollit. stomacho inutile esse inter auctores convenit.

ligusticum - aliqui panaces vocant - stomacho utile est, item convolsionibus, inflationibus. sunt qui et cunilam bubulam appellaverint, uti diximus, falso.

cunilae praeter sativam plura sunt in medicina genera. quae bubula appellatur, semen pulei habet, utile ad vulnera commanducatum inpositum, ut quinto post die solvatur. et contra serpentes in vino bibitur ac tritum plagae inponitur. vulnera ab his facta perfricant, item testudines cum serpentibus pugnaturae; quidamque in hoc usu panaceam vocant. sedat et tumores et virilium mala sicca vel foliis tritis, in omni usu mire congruens vino.

est alia cunila, gallinacea appellata nostris, graecis origanum heracleoticum. prodest oculis trita addito sale; tussim quoque emendat et iocinerum vitia, laterum dolores cum farina, oleo et aceto sorbitione temperata, praecipue vero serpentium morsus.

tertium genus est eius, quae a graecis mascula, a nostris cunilago vocatur, odoris foedi, radicis lignosae, folio aspero. vires eius vehementissimas in omnibus generibus earum tradunt; manipulo quoque eius abiecto omnes e tota domo blattas convenire ad eam, privatim adversus scorpiones ex posca pollere, foliis tribus ex oleo peruncto homine fugari serpentes.

e contrario quae mollis vocatur, pilosioribus ramis et aculeatis, trita mellis odorem habet, digitis tactu eius cohaerescentibus, altera turis, quam libanotida appellavimus. medetur utraque contra serpentes ex vino vel aceto, pulices etiam contritae cum aqua sparsae necant.

sativa quoque suos usus habet. sucus eius cum rosaceo auriculas iuvat, ipsa ad ictus bibitur. fit ex ea montana, serpyllo similis, efficax contra serpentes. urinam movet, purgat a partu mulieres. concoctionem mire adiuvat et aviditatem ad cibos utraque vel in cruditate ieiunis in potione aspersa; luxatis quoque utilis, contra vesparum et similes ictus ex farina hordeacia et posca utilissima. libanotidis alia genera suis locis dicentur.

piperitis, quam et siliquastrum appellavimus, contra morbos comitiales bibitur. castor et aliter demonstrabat: caule rubro et longo,

densis geniculis, foliis lauri, semine albo, tenui, gustu piperis, utilem gingivis, dentibus, oris suavitati et ructibus.

origanum, quod vi saporem cunilae aemulatur, ut diximus, plura genera in medicina habet. onitin alii prasion appellant, non dissimile hysopo. privatim eius usus contra rosiones stomachi in tepida aqua et contra cruditates, araneos scorpionesque in vino albo, luxata et incussa in aceto et oleo et lana.

tragoriganum similius est serpyllo silvestri. urinam ciet, tumores discutit, contra viscum potum viperaeque ictum efficacissimum, stomacho acida ructanti et praecordiis. tussientibus quoque cum melle datur et pleuriticis et peripneumonicis.

heraclium quoque tria genera habet: nigrius latioribus foliis, glutinosum, alterum exilioribus, mollius, sampsucho non dissimile, quod aliqui prasion vocare malunt. tertium est inter haec medium, set minus quam cetera efficax. optimum autem creticum, nam et iucunde olet, proximum zmyrnaeum durius, heracleoticum ad potum utilius, quod onitin vocant. communis autem usus serpentes fugare, percussis esui dari et decoctum potui, urinam ciere, ruptis, convolsis mederi cum panacis radice, hydropicis cum fico aut cum hysopo acetabuli mensuris decoctum ad sextam; item ad scabiem, pruriginem, psoras in descensione balinearum. sucus auribus infunditur cum lacte mulieris. tonsillis quoque et uvis medetur, capitis ulceribus. venena opii et gypsi extinguit decoctum, si cum cinere e vino bibatur. alvum mollit acetabuli mensura, suggillatis inlinitur, item dentium dolori, quibus et candorem facit, cum melle et nitro. sanguinem narium sistit. ad parotidas decoquitur cum hordeacia farina, ad arterias asperas cum galla et melle teritur, ad lienem folia cum melle et sale. crassiores pituitas et nigras extenuat coctum cum aceto et sale sumptum paulatim. regio morbo tritum cum oleo in nares infunditur. lassi perunguuntur ex eo ita, ne venter attingatur. epinyctidas cum pice sanat, furunculos aperit cum fico tosta, strumas cum oleo et aceto et farina hordeacia, lateris dolores cum fico inlitum, fluctiones sanguinis in genitalibus tusum ex aceto inlitum, reliquias purgationum a partu.

lepidium inter urentia intellegitur. sic et in facie cutem emendat exulcerando, ut tamen cera et rosaceo facile sanetur. sic et lepras et psoras tollit semper facile et cicatricum ulcera. tradunt in dolore

dentium adalligatum bracchio, qua doleat, convertere dolorem.

git ex graecis alii melanthium, alii melaspermon vocant. optimum quam excitatissimi odoris et quam nigerrimum. medetur serpentium plagis et scorpionum; inlini ex aceto ac melle reperio incensoque serpentes fugari. bibitur drachma una et contra araneos. destillationem narium discutit tusum in linteolo olefactum, capitis dolores inlitum ex aceto, et infusum naribus cum irino oculorum epiphoras et tumores, dentium dolores coctum cum aceto, ulcera oris tritum aut commanducatum; item lepras et lentigines ex aceto, difficultates spirandi addito nitro potum, duritias tumoresque veteres et suppurationes inlitum. lacte mulierum auget aliquot continuis diebus sumptum. colligitur sucus eius ut hyoscyami similiterque largior venenum est, quod miremur, cum semen gratissime panes etiam condiat. oculos quoque purgat, urinam et menses ciet. quin immo linteolo deligatis tantum granis xxx secundas trahi reperio. aiunt et clavis in pedibus mederi tritum in urina, culices suffitu necare, item muscas.

et anesum adversus scorpiones ex vino habetur, pythagorae inter pauca laudatum sive crudum sive decoctum; item viride aridumve omnibus, quae condiuntur quaeque intinguntur, desideratum, panis etiam crustis inferioribus subditum. saccis quoque additum cum amaris nucibus vina commendat. quin ipsum oris halitum iucundiorem facit faetoremque tollit manducatum matutinis cum zmyrnio et melle exiguo, mox vino collutum. vultum iuniorem praestat. insomnia levat suspensum in pulvino, ut dormientes olefaciant. adpetentiam ciborum praestat, quando id quoque inter artificia deliciae fecere, ex quo labor desiit cibos poscere. ob has causas quidam anicetum id vocavere.

laudatissimum est creticum, proximum aegyptium. hoc ligustici vicem praestat in condimentis. dolores capitis levat suffitum naribus. epiphoris oculorum euenor radicem eius tusam inponit, iollas ipsum cum croco pari modo et vino, et per se cum polenta ad magnas fluctiones extrahendisque si qua in oculos inciderint. narium quoque carcinodes consumit inlitum ex aqua. sedat anginas cum hysopo ac melle ex aceto gargarizatum, auribus infunditur cum rosaceo, thoracis pituitas purgat tostum cum melle sumptum. melius cum acetabulo anesi nuces amaras l purgatas terere in melle ad tussim;

facillime vero anesi drachmae tres, papaveris duae miscentur melle ad fabae magnitudinem et ternae diebus sumuntur. praecipuum autem est ad ructus; ideo stomachi inflationibus et intestinorum torminibus et coeliacis medetur. singultus et olfactum potumque decoctum inhibet. foliis decoctis digerit cruditates. sucus decocti cum apio olfactus sternumenta inhibet. potum somnos conciliat, calculos pellit, vomitiones cohibet et praecordiorum tumores, et pectorum vitiis, nervis quoque, quibus succinctum est corpus, utilissimum. prodest et capitis doloribus instillari sucum cum oleo decocti. non aliud utilius ventri et intestinis putant; ideo dysintericis et in tenesmo datur tostum. aliqui addunt et opium, pilulis in die ternis lupini magnitudine in vini cyatho dilutis. dieuches et ad lumborum dolores suco usus est, semen hydropicis et coeliacis dedit tritum cum menta, euenor radicem et ad renes. dalion herbarius parturientibus ex eo cataplasma inposuit cum apio, item vulvarum dolori deditque bibendum cum aneto parturientibus. phreneticis quoque inlinunt vel recens cum polenta; sic et infantibus comitiale vitium aut contractiones sentientibus. pythagoras quidem negat corripi vitio comitiali in manu habentes, ideo quam plurimum domi serendum; parere quoque facilius olfactantes, et statim a partu dandum potui polenta aspersa. sosimenes contra omnes duritias ex aceto usus est eo et contra lassitudines in oleo decoquens addito nitro. semine eius poto lassitudinis auxilium viatoribus spopondit. heraclides ad inflationes stomachi semen tribus digitis cum castorei obolis duobus ex mulso dedit, similiter ad ventris aut intestinorum inflationes et orthopnoicis quod ternis digitis prenderet seminis, tantundem hyoscyami cum lacte asinino. multi vomituris acetabula eius et folia lauri decem trita in aqua bibenda inter cenam suadent. strangulatus vulvae, si manducetur et linatur calidum vel si bibatur cum castoreo in aceto et melle, sedat; vertigines a partu cum semine cucumeris et lini pari mensura ternum digitorum, vini albi tribus cyathis discutit. tlepolemus ad quartanas ternis digitis seminis anesi et feniculi usus est in aceto et mellis cyatho uno. lenit articularios morbos cum amaris nucibus inlitum. sunt qui et aspidum venenis adversari naturam eius putent. urinam ciet, sitim cohibet, venerem stimulat, cum vino sudorem leniter praestat, vestes quoque a tineis defendit. efficacius semper recens et quo nigrius, stomacho tamen inutile est

praeterquam inflato.

anetum quoque ructus movet et tormina sedat, alvum sistit. epiphoris radices inlinuntur ex aqua vel vino. singultus cohibet semen fervens olfactu; sumptum ex aqua sedat cruditates. cinis eius uvam in faucibus levat, oculos et genituram hebetat.

sacopenium, quod apud nos gignitur, in totum transmarino alienatur. illud enim hammoniaci lacrimae simile sagapenon vocatur. prodest laterum et pectoris doloribus, convolsis, tussibus vetustis excreationibusque, praecordiorum tumoribus. sanat et vertigines, tremulos, opisthotonicos, lienes, lumbos, perfrictiones. datur olfactandum ex aceto in strangulatu vulvae; ceteris et potui datur et cum oleo infricatur. prodest et contra mala medicamenta.

papaveris sativi tria diximus genera, et sponte nascentis alia promisimus. e sativis albi calix ipse teritur et e vino bibitur somni causa. semen elephantiasi medetur. e nigro papavere sopor gignitur scapo inciso, ut diagoras suadet, cum turgescit, ut iollas, cum deflorescit, hora sereni diei tertia, hoc est cum ros in eo exaruerit. incidi iubent sub capite et calice, nec in alio genere ipsum inciditur caput. sucus et hic et herbae cuiuscumque lana excipitur aut, si exiguus sit, ungue pollicis, ut lactucis, et postero die magis, quod inaruit, papaveris vero largus densatus et in pastillos tritus in umbra siccatur, non vi soporifera modo, verum, si copiosior hauriatur, etiam mortifera per somnos. opium vocant. sic scimus interemptum p. licini caecinae praetorii viri patrem in hispania bavili, cum valetudo inpetibilis odium vitae fecisset; item plerosque alios. qua de causa magna concertatio extitit. diagoras, erasistratus in totum damnavere ut mortiferum, infundi vetantes praeterea, quoniam visui noceret. addidit andreas, ideo non protinus excaecari eo, quoniam adulteraretur alexandriae. sed postea usus eius non inprobatus est medicamento nobili, quod διὰ κωδυῶν vocant. semine quoque eius trito in pastillos e lacte utuntur ad somnum, item ad capitis dolores cum rosaceo; cum hoc et aurium dolori instillatur. podagris inlinitur cum lacte mulierum - sic et foliis ipsis utuntur - , item ad ignes sacros et vulnera ex aceto. ego tamen damnaverim collyriis addi, multoque magis quas vocant ληξιπυρέτους quasque pepticas et coeliacas. nigrum tamen coeliacis in vino datur. sativum omne maius. rotunda ei capita, at silvestri longa ac pusilla, sed ad omnes

effectus valentiora. decoquitur et bibitur contra vigilias, eademque aqua fovent ora. optimum in siccis et ubi raro pluat. cum capita ipsa et folia decocuntur, sucus meconium vocatur, multum opio ignavior. experimentum opii est primum in odore - sincerum enim perpeti non est - , mox in lucernis, ut pura luceat flamma et ut extinctum demum oleat, quae in fucato non eveniunt. accenditur quoque difficilius et crebro extinguitur. est sinceri experimentum et in aqua, quoniam ut nubecula innatat, fictum in pusulas coit. sed maxime mirum est aestivo sole deprehendi; sincerum enim sudat et se diluit, donec suco recenti simile fiat. mnesides optime servari putat hyoscyami semine adiecto, alii in faba.

inter sativa et silvestria medium genus, quoniam in arvis, sed sponte nasceretur, rhoeam vocavimus et erraticum. quidam id decerptum protinus cum toto calice mandunt. alvum exinanit. capita quinque decocta in vini tribus heminis pota et somnum faciunt.

silvestrium unum genus ceratitim vocant, nigrum, cubitali altitudine, radice crassa et corticosa, calyculo inflexo ut corniculo. folia minora et tenuiora quam ceteris silvestribus. semen exile tempestivum est messibus; alvum purgat dimidio acetabulo in mulso. folia trita cum oleo argema iumentorum sanant. radix acetabuli mensura cocta in duobus sextariis ad dimidias datur ad lumborum vitia et iocineris. carbunculis medentur ex melle folia. quidam hoc genus glaucion vocant, alii paralium. nascitur enim in adflatu maris aut nitroso loco.

alterum e silvestribus genus heraclium vocatur, ab aliis aphrodes, foliis, si procul intuearis, speciem passerum praebentibus, radice in summa terrae cute, semine spumeo. ex hoc lina splendorem trahunt. aestate tunditur in pila. comitialibus morbis acetabulo seminis in vino albo - vomitionem enim facit - , item medicamento, quod διὰ κωδυῶν et arteriace vocatur, utilissimum. fit autem huius papaveris aut cuiuscumque silvestris capitibus cxx in aquae caelestis sextariis tribus biduo maceratis in eademque discoctis, deinde suco siccato iterumque cum melle decocto ad dimidias partes vapore tenui. addidere postea drachmas senas croci, hypocisthidis, turis, acaciae et passi cretici sextarium. haec ostentatione, simplex quidem et antiqua illa salubritas papavere et melle constat.

tertium genus est tithymalon - mecona vocant, alii paralion - folio

lini, flore albo, capite magnitudinis fabae. colligitur uva florente, siccatur in umbra. semen potum purgat alvum dimidio acetabulo in mulso. cuiuscumque autem papaveris caput viride vel siccum inlitum epiphoras oculorum lenit. opium ex vino meraculo si protinus detur, scorpionum ictibus resistit. aliqui hoc tantum nigro tribuunt, si capita eius vel folia terantur.

est et porcillaca, quam peplin vocant, non multum sativa efficacior, cuius memorabiles usus traduntur: sagittarum venena et serpentium haemorrhoidum et presterum restingui pro cibo sumpta et plagis inposita extrahi, item hyoscyami pota e passo expresso suco. cum ipsa non est, semen eius simili effectu prodest. resistit et aquarum vitiis, capitis dolori ulceribusque in vino tusa et inposita, reliqua ulcera commanducata cum melle sanat. sic et infantium cerebro inponitur umbilicoque prociduo, in epiphoris vero omnium fronti temporibusque cum polenta, sed ipsis oculis e lacte et melle; eadem, si procidant oculi, foliis tritis cum corticibus fabae, pusulis cum polenta et sale et aceto. ulcera oris tumoremque gingivarum commanducata cruda sedat, item dentium dolores, tonsillarum ulcera sucus decoctae; quidam adiecere paulum murrae. nam mobiles dentes stabilit conmanducata cruda sedat vocemque firmat et sitim arcet. cervicis dolores cum galla et lini semine et melle pari mensura sedat, mammarum vitia cum melle aut cimolia creta, salutaris et suspiriosis semine cum melle hausto. stomachum in acetariis sumpta corroborat. ardenti febribus inponitur cum polenta, et alias manducata refrigerat etiam intestina. vomitiones sistit. dysinteriae et vomicis estur ex aceto vel bibitur cum cumino, tenesmis autem cocta. comitialibus cibo vel potu prodest, purgationibus mulierum acetabuli mensura in sapa, podagris calidis cum sale inlita et sacro igni. sucus eius potus renes iuvat ac vesicas, ventris animalia pellit. ad vulnerum dolores ex oleo cum polenta inponitur. nervorum duritias emollit. metrodorus, qui ἐπιτομὴν ῥιζοτομουμένων scripsit, purgationibus a partu dandam censuit. venerem inhibet venerisque somnia. praetorii viri pater est, hispaniae princeps, quem scio propter inpetibiles uvae morbos radicem eius filo suspensam e collo gerere praeterquam in balineis, ita liberatum incommodo omni. quin etiam inveni apud auctores caput inlitum ea destillationem anno toto non sentire. oculos tamen hebetare putatur.

coriandrum inter silvestria non invenitur. praecipuum esse constat aegyptium. valet contra serpentium genus unum, quod amphisbaenas vocant, potum inpositumque. sanat et alia vulnera, epinyctidas pusulas tritum; sic et omnes tumores collectionesque cum melle aut uva passa, panos vero ex aceto tritum. seminis grana tria in tertianis devorari iubent aliqui ante accessionem vel plura inlini fronti. sunt qui et ante solis ortum cervicalibus subici efficaciter putent. vis magna ad refrigerandos ardores viridi. ulcera quoque, quae serpunt, sanat cum melle vel uva passa, item testes, ambusta, carbunculos, aures, cum lacte mulieris epiphoras oculorum, ventris et intestinorum fluctiones semen ex aqua potum. bibitur et in choleris cum ruta. pellit animalia interaneorum cum mali punici suco et oleo semen potum. xenocrates tradit rem miram, si vera est, menstrua contineri uno die, si unum granum biberint feminae, biduo, si duo, et totidem diebus quot grana sumpserint, M. Varro coriandro subtrito et cumino acetoque carnem omnem incorruptam aestate servari putat.

atriplex et silvestre est, accusatum pythagorae, tamquam faceret hydropicos morbosque regios et pallorem, concoqueretur difficillime; ac ne in hortis quidem iuxta id nasci quicquam nisi languidum culpavit. addidere dionysius et diocles plurimos gigni ex eo morbos, nec nisi mutata saepe aqua coquendum, stomacho contrarium esse, lentigines et papulas gignere. miror quare difficulter in italia nasci tradiderit id solo smyrnaeus. hippocrates vulvarum vitiis infundit id cum beta. lycus neapolitanus contra cantharidas bibendum dedit, panos, furunculos incipientes, duritias omnes vel cocto vel crudo utiliter inlini putavit, item ignem sacrum cum melle, aceto, nitro, similiter podagras. ungues scabros detrahere dicitur sine ulcere. sunt qui et morbo regio dent semen eius cum melle, arterias et tonsillas nitro addito perfricent, alvum moveant cocto vel per se vel cum malva aut lenticula. concitant et vomitiones. silvestri capillos tingunt et ad supra scripta utuntur.

e. contrario in magnis laudibus malva est utraque et sativa et silvestris. duo genera earum amplitudine folii discernuntur. maiorem graeci malopem vocant in sativis, alteram ab emolliendo ventre dictam putant malachen. at e silvestribus, cui grande folium et radices albae, althaea vocatur, ab excellentia effectus a quibusdam plistolochia. omne solum, in quo seruntur, pinguius faciunt. contra

omnes aculeatos ictus efficaces, praecipue scorpionum, vesparum similiumque et muris aranei. quin et trita cum oleo qualibet earum peruncti ante vel habentes eas non feriuntur. folium inpositum scorpionibus torporem adfert. valent et contra psimithi venena. aculeos omnes extrahunt inlitae crudae cum aphronitro, potae vero decoctae cum radice sua leporis marini venenum restingunt, ut quidam dicunt, si vomatur. de iisdem mira et alia traduntur, sed maxime, si quis cotidie suci ex qualibet earum sorbeat cyathum dimidium, omnibus morbis cariturum. ulcera manantia in capite sanant in urina putrefactae, lichenas et ulcera oris cum melle; radix decocta furfures capitis et dentium mobilitates. eius, quae unum caulem habet, radice circa dentem, qui doleat, pungunt, donec desinat dolor; eadem strumas et parotidas, panos addita hominis saliva purgat citra vulnus. semen in vino nigro potum pituita et nauseis liberat. radix mammarum vitiis occurrit adalligata in lana nigra, tussim in lacte cocta et sorbitionis modo sumpta quinis diebus emendat. stomacho inutiles sextius niger dicit, olympias thebana abortivas esse cum adipe anseris, aliqui purgari feminas foliis earum manus plenae mensura in oleo et vino sumptis. utique constat parturientes foliis substratis celerius solvi; protinus a partu revocanda, ne vulva sequatur. dant et sucum bibendum parturientibus ieiunis in vino decoctae hemina. quin et semen adalligant bracchio genitale non continentium, adeoque veneri nascuntur, ut semen unicaulis adspersum curationi feminarum aviditates augere ad infinitum xenocrates tradat itemque tres radices iuxta adalligatas. tenesmo, dysintericis utilissime infundi, item sedis vitiis, vel si foveantur. melancholicis quoque sucus datur cyathis ternis tepidus et insanientibus quaternis, decoctae comitialibus heminae suci. hic et calculosis et inflatione et torminibus aut opisthotonico laborantibus tepidus inlinitur. et sacris ignibus et ambustis decocta in oleo folia inponuntur, et ad vulnerum impetus cruda cum pane. sucus decoctae nervis prodest et vesicae et intestinorum rosionibus, vulvas et cibo et infusione emollit. alvo sucus decoctae permeatus suaves facit.

althaeae in omnibus supra dictis efficacior radix, praecipue convulsis ruptisque. cocta in aqua alvum sistit, ex vino albo strumas et parotidas et mammarum inflammationes; et panos in vino folia decocta et inlita tollunt; eadem arida in lacte decocta quamlibet

perniciosae tussi citissime medentur. hippocrates vulneratis sitientibusque defectu sanguinis radicis decoctae sucum bibendum dedit et ipsam vulneribus cum melle et resina, item contusis, luxatis, tumentibus; et musculis, nervis, articulis inposuit ut supra; spasticis, dysintericis in vino bibendam dedit. mirum aquam radice ea addita addensari sub diu atque glaciescere. efficacior autem quo recentior.

nec lapathum dissimiles effectus habet. est autem et silvestre. quod alii oxalida appellant, nostri vero rumicem, alii lapathum canterinum, sapore sativo proximum, foliis acutis, colore betae candidae, radice minima, ad strumas cum axungia efficacissimum est; et alterum genus fere oxylapathum vocant, sativo item similius et acutiore folio ac rubriore, non nisi in palustribus nascens. sunt qui et hydrolapathum tradant, in aqua natum, et aliud hippolapathum, maius sativo candidiusque ac spissius. silvestria scorpionum ictibus medentur et feriri prohibent habentes. radix aceto decocta, si colluatur sucus, dentibus auxiliatur, si vero bibatur, morbo regio. semen stomachi inextricabilia vitia sanat. hippolapathi radix et privatim ungues scabros detrahit; dysintericos semen duabus drachmis in vino potum liberat. oxylapathi semen lotum in aqua caelesti sanguinem reicientibus adiecta acacia lentis magnitudine prodest. praestantissimos pastillos faciunt ex foliis et radice addito nitro et ture exiguo. in usu aceto diluunt.

sed sativum in epiphoris oculorum inlinunt frontibus. radice lichenas et lepras curant, in vino vero decocta strumas et parotidas, set calculos pota e vino et lienes inlita, coeliacos aeque et dysintericos et tenesmos; ex eademque ad omnia efficacius ius lapathi et ructus facit et urinam ciet et caliginem oculorum discutit, item pruritum corporis in solia balinearum additum aut prius ipsum inlitum sine oleo. firmat et commanducata radix dentes; eadem decocta cum vino sistit alvum, folia solvunt. adiecit solo, ne quid omittamus, bulapathum, radicis tantum altitudine differens et egregio ad dysintericos effectu potae ex vino.

sinapi, cuius in sativis tria genera diximus, pythagoras principatum habere ex his, quorum in sublime vis feratur, iudicavit, quoniam non aliud magis in nares et cerebrum penetret. ad serpentium ictus et scorpionum tritum cum aceto inlinitur; fungorum venena discutit. contra pituitam tenetur in ore, donec liquescat, aut

gargarizatur cum aqua mulsa. ad dentium dolores manditur, ad uvam gargarizatur cum aceto et melle, stomacho utilissimum contra omnia vitia, pulmonibus excreationes faciles facit in cibo sumptum; et suspiriosis datur, item comitialibus ter die cum suco cucumerum. sensus atque sternutamentis caput purgat, alvum mollit, menstrua et urinam ciet. et hydropicis inponitur cum fico et cumino tusum ternis partibus. comitiali morbo aut vulvarum conversione suffocatas excitat odore aceto mixto; item lethargicos: adicitur tordylon - est autem hoc semen ex seseli - et, si vehementior lethargus premat, cruribus aut etiam capiti inlinitur cum fico ex aceto. veteres dolores thoracis, lumborum, coxendicum, umerorum et in quacumque parte ex alto corporis vitia extrahenda sint inlitum caustica vi emendat pusulas faciendo, at in magna duritia sine fico inpositum aut, si vehementior ustio timeatur, per duplices pannos. utuntur eo ad alopecias cum rubrica, psoras, lepras, phthiriases, tetanicos, opisthotonicos. inungunt quoque scabras genas aut caligantes oculos suco cum melle, sucusque tribus modis exprimitur in fictili calescitque in eo sole modice. exit et e cauliculo sucus lacteus; eius gutta, cum induruit, dentium dolori medetur. semen ac radix, cum inmaduere musto, conteruntur manusque plenae mensura sorbentur ad confirmandas fauces, stomachum, oculos, caput sensusque omnes, mulierum etiam lassitudines, saluberrimo genere medicinae. calculos quoque discutit potum in aceto. inlinitur et livoribus suggillatisque cum melle et adipe anserino aut cera cypria. fit et oleum ex eo semine madefacto in oleo expressoque, quo utuntur ad nervorum rigores lumborumque et coxendicum et perfrictiones.

sinapis naturae esse effectusque eosdem habere traditur adarca inter silvestria dicta, in cortice calamorum sub ipsa coma nascens.

marrubium plerique inter primas herbas commendavere, quod graeci prasion vocant, alii linostrophon, nonnulli philopaeda aut philochares, notius quam ut indicandum sit. huius folia semenque contrita prosunt contra serpentes, pectorum et lateris dolores, tussim veterem. et iis, qui sanguinem reiecerint, eximie utile, scopis eius cum panico aqua decoctis, ut asperitas suci mitigetur. inponitur strumis cum adipe. sunt qui viride semen, quantum duobus digitis capiant, cum farris pugillo decoctum addito exiguo olei et salis sorberi ieiunis ad tussim iubeant. alii nihil conparant in eadem causa

marrubii et feniculi sucis ad sextarios ternos expressis decoctisque ad sextarios duos, tum addito mellis sextario, rursus decocto ad sextarios duos, si coclearii mensura in die sorbeatur in aquae cyatho. virilium vitiis tusum cum melle mire prodest. lichenas purgat ex aceto, ruptis, convulsis, spasticis, nervis salutare. potum alvum solvit cum sale et aceto, item menstrua et secundas mulierum. arida farina cum melle ad tussim siccam efficacissima est, item ad gangraenas et pterygia. sucus vero auriculis, ex naribus et morbo regio minuendaeque bili cum melle prodest, item contra venena inter pauca potens. ipsa herba stomachum et excreationes pectoris purgat cum iride et melle, urinam ciet, cavenda tamen exulceratae vesicae et renium vitiis. dicitur sucus et claritatem oculorum adiuvare. castor marrubii duo genera tradit, nigrum et, quod magis probat, candidum. in ovum inane sucum addit is ipsumque ovum infundit cum melle aequis portionibus, tepefactum vomicas rumpere, purgare, persanare promittens. inlinit etiam vulneribus a cane factis tusum cum axungia vetere.

serpyllum a serpendo putant dictum, quod in silvestri evenit, in petris maxime; nam sativum non serpit, sed ad palmum altitudine increscit. pinguius voluntarium et candidioribus foliis ramisque. adversus serpentes efficax, maxime cenchrim et scolopendras terrestres ac marinas et scorpiones, decoctis ex vino ramis foliisque. fugat et odore omnes, si uratur, et contra marinorum venena praecipue valet. capitis doloribus decoctum in aceto inlinitur temporibus ac fronti cum rosaceo, item phreneticis, lethargicis. contra tormina et urinae difficultates, anginas, vomitiones drachmis quattuor ex aqua bibitur; ad iocinerum desideria folia obolis quattuor dantur, ad lienem ex aceto. ad cruentas excreationes teritur in cyathis duobus aceti et mellis.

sisymbrium silvestre, quibusdam thymbraeum appellatum, pedali non amplius altitudine. quod in riguis nascitur, simile nasturtio est, tritumque efficax adversus aculeata animalia, ut crabrones et similia; quod in sicco, odoratum est et inseritur coronis, angustiore folio. sedant utraque capitis dolorem, item epiphoras, ut philinus tradit. alii panem addunt, alii per se decocunt in vino. sanat et epinyctidas cutisque vitia in facie mulierum intra quartum diem noctibus inpositum diebusque detractum. vomitiones, singultus, tormina,

stomachi dissolutiones cohibet, sive in cibo sumptum sive suco poto. non edendum gravidis nisi mortuo conceptu, quippe etiam inpositum eicit. movet urinas cum vino potum, silvestre vero et calculos. quos vigilare opus sit, excitat infusum capiti cum aceto.

lini semen cum aliis quidem in usu est, sed et per se mulierum cutis vitia emendat in facie, oculorum aciem suco adiuvat. epiphoras cum ture et aqua aut cum murra ac vino sedat, parotidas cum melle aut adipe aut cera, stomachi solutiones inspersum polentae modo, anginas in aqua et oleo decoctum et cum aneso inlitum. torretur, ut alvum sistat. coeliacis et dysintericis inponitur ex aceto. ad iocineris dolores estur cum uva passa; ad phthisim utilissime e semine fiunt ecligmata. musculorum, nervorum, articulorum, cervicium duritias, cerebri membranas mitigat farina seminis nitro aut sale aut cinere additis. eadem cum fico ... etidem concoquit ac maturat; cum radice vero cucumeris silvestris extrahit quaecumque corpori inhaereant; sic et fracta ossa. serpere ulcus in vino decocta prohibet, eruptiones pituitae cum melle. emendat ungues scabros cum pari modo nasturtii, testium vitia et ramices cum resina et murra et gangraenas ex aqua, stomachi dolores cum feno graeco sextariis utriusque decoctis in aqua mulsa, intestinorum, thoracis perniciosa vitia clystere in oleo aut melle.

blitum iners videtur ac sine sapore aut acrimonia ulla, unde convicium feminis apud menandrum faciunt mariti. stomacho inutile est. ventrem adeo turbat, ut choleram faciat aliquis. dicitur tamen adversus scorpiones potum e vino prodesse, clavis pedum inlini, item lienibus et temporum dolori ex oleo. hippocrates menstrua sisti eo cibo putat.

meum in italia non nisi a medicis seritur et his admodum paucis. duo genera eius: nobilius athamanticum vel athamanicum vocant, illi tamquam ab athamante inventum, hi quoniam laudatissimum in athamania reperiatur, foliis aneto simile et caule, aliquando bipedale, radicibus multis obliquis nigris, quibusdam et altis, minus rufum quam illud alterum. urinam ciet in aqua pota radice trita vel decocta, inflationes stomachi mire discutit, item tormina et vesicae vitia vulvarumque. articulis cum melle ... infantibus cum apio inlitum imo ventri urinas movet.

feniculum nobilitavere serpentes gustatu, ut diximus, senectam

exuendo oculorumque aciem suco eius reficiendo, unde intellectum, hominum quoque caliginem praecipue eo levari. colligitur hic caule turgescente et in sole siccatur inunguiturque ex melle. ubique hoc est laudatissimus in hiberia lacrimis fit. et e semine recenti fit et e radicibus prima germinatione incisis.

est in hoc genere et silvestre, quod hippomarathum, alii myrsineum vocant, foliis maioribus, gustu acriore, procerius, baculi crassitudine, radice candida. nascitur in calidis et saxosis. diocles et aliud hippomarathi genus tradidit, longo et angusto folio, semine coriandri.

medicinae in sativo ad scorpionum ictus et serpentium semine in vino poto. sucus et auribus instillatur vermiculosque in his necat. ipsum condimentis prope omnibus inseritur, oxyporis etiam aptissime. quin et panis crustis subditur. semen stomachum dissolutum adstringit vel in febribus sumptum, nausiam ex aqua tritum sedat, pulmonibus et iocineribus laudatissimum. ventrem sistit, cum modice sumitur, urinam ciet et ad tormina potu. decoctum in lactis defectu potum mammas replet. radix cum tisana sumpta renes purgat sive decoctae suco ex vino sumpto. prodest et hydropicis radix ex vino pota, item convulsis. inlinuntur folia tumoribus ardentibus ex aceto, calculos vesicae pellunt, venerem stimulant. geniturae abundantiam quoquo modo haustum facit, verendis amicissimum sive ad fovendum radice cum vino decocta sive contrita in oleo inlita. multi et suggillatis cum cera inlinunt et radicem. seminis suco vel radice cum melle contra canis morsum utuntur et contra multipedam ex vino.

hippomarathum ad omnia vehementius calculos praecipue pellit, prodest vesicae cum vino leni et feminarum menstruis haerentibus. efficacius in eo semen quam radix. modus in utroque quod duobus digitis tritum addatur in potionem. petrichus, qui ophiaca scripsit, et micion, qui rhizotomumena, adversus serpentes nihil efficacius hippomaratho putavere; sane et nicander non in novissimis posuit.

cannabis in silvis primum nata est, nigrior foliis et asperior. semen eius extinguere genituram virorum dicitur. sucus ex eo vermiculos aurium et quodcumque animal intraverit eicit, sed cum dolore capitis, tantaque vis ei est, ut aquae infusus coagulare eam dicatur; et ideo iumentorum alvo succurrit potus in aqua. radix articulos contractos

emollit in aqua cocta, item podagras et similes impetus. ambustis cruda inlinitur, sed saepius mutatur, priusquam arescat.

ferula semen aneto simile habet. quae ab uno caule dividitur in cacumine, femina putatur. caules eduntur decocti commendanturque muria ac melle, stomacho utiles. sin plures sumpti, capitis dolorem faciunt. radix denarii pondere in vini cyathis duobus bibitur adversus serpentes, et ipsa radix inponitur. sic et torminibus medetur, ex oleo autem et aceto contra sudores inmodicos vel in febribus proficit. sucus ferulae alvum solvit fabae magnitudine devoratus. e viridi medulla vulvis utilis et ad omnia ea vitia. ad sanguinem sistendum decem grana seminis bibuntur in vino trita vel medulla. sunt qui comitialibus dandum putent luna iiii usque vii lingulae mensura. natura ferularum murenis infestissima est, tactae siquidem ea moriuntur. castor radicis sucum et oculorum claritati conferre multum putavit.

et de carduorum satu inter hortensia diximus, quapropter et medicinam ex his non differamus. silvestrium genera sunt duo, unum fruticosius a terra statim, alterum unicaule crassius. utrique folia pauca, spinosa, muricatis cacuminibus, sed alter florem purpureum emittit inter medios aculeos celeriter canescentem et abeuntem cum aura; σκόλυμον graeci vocant. hic, antequam floreat, contusus atque expressus inlito suco alopecias replet. radix cuiuscumque ex aqua decocta potoribus sitim facere narratur. stomachum corroborat et vulvis ... si credimus, etiam conferre aliquid traditur, ut mares gignantur. ita certe glaucias scripsit, qui circa carduos diligentissimus videtur. mastiche e carduis odorem commendat oris.

et discessuri ab hortensiis unam conpositionem ex his clarissimam subteximus adversus venenata animalia incisam in lapide versibus coi in aede aesculapi: serpylli duum denariorum pondus, opopanacis et mei tantundem singulorum, trifolii seminis pondus denarii, anesi et feniculi seminis et ammi et apii denarium senum e singulis generibus, ervi farinae denarium xii. haec tusa cribrataque vino quam possit excellenti digeruntur in pastillos victoriati ponderum. ex his singuli dantur ex vini mixti cyathis ternis. hac theriace magnus antiochus rex adversus omnia venenata usus traditur aspide excepta.

in hortis seri et coronamenta iussit cato, inenarrabili florum maxime subtilitate, quando nulli potest facilius esse loqui quam rerum naturae pingere, lascivienti praesertim et in magno gaudio fertilitatis tam varie ludenti. quippe reliqua usus alimentique gratia genuit, ideoque saecula annosque tribuit iis, flores vero odoresque in diem gignit, magna, ut palam est, admonitione hominum, quae spectatissime floreant, celerrime marcescere. sed ne pictura quidem sufficiet imagini colorum reddendae mixturarumque varietati, sive alterni atque multiplices inter se nectantur, sive privatis generum funiculis in orbem, in oblicum, in ambitum quaedam coronae per coronas currant.

tenuioribus utebantur antiqui, stroppos appellantes, unde nata strophiola. quin et vocabulum ipsum tarde communicatum est, inter sacra tantum et bellicos honores coronis suum nomen vindicantibus. cum vero e floribus fierent, serta a serendo serieve appellabantur, quod apud graecos quoque non adeo antiquitus placuit.

arborum enim ramis coronari in sacris certaminibus erat primum. postea variari coeptum mixtura versicolori florum, quae invicem odores coloresque accenderet, sicyone ingenio pausiae pictoris atque glycerae coronariae dilectae admodum illi, cum opera eius pictura imitaretur, illa provocans variaret, essetque certamen artis ac naturae, quales etiam nunc extant artificis illius tabellae atque in primis appellata stephaneplocos, qua pinxit ipsam. idque factum est post olympiada c. sic coronis e floribus receptis paulo mox subiere, quae vocantur aegyptiae, ac deinde hibernae, cum terra flores negat, ramento e cornibus tincto. paulatimque et romae subrepsit appellatio corollis inter initia propter gracilitatem nominatis, mox et corollariis, postquam e lamina tenui aerea inaurata aut inargentata dabantur.

Crassus dives primus argento auroque folia imitatus ludis suis coronas dedit, accesseruntque et lemnisci, quos adici ipsarum coronarum honor erat, propter etruscas, quibus iungi nisi aurei non debebant. puri diu fuere hi; caelare eos primus instituit p. claudius pulcher bratteasque etiam philyrae dedit.

semper tamen auctoritas vel ludicro quaesitarum fuit. namque ad

certamina in circum per ludos et ipsi descendebant et servos suos equosque mittebant. inde illa xii tabularum lex: “qui coronam parit ipse pecuniave eius, virtutis suae ergo duitor ei.” quam servi equive meruissent, pecunia partam lege dici nemo dubitavit. quis ergo honos ut ipsi mortuo parentibusque eius, dum intus positus esset forisve ferretur, sine fraude esset inposita. alias in usu promiscuo ne ludicrae quidem erant, ingensque et hinc severitas. l. fulvius argentarius bello punico secundo cum corona rosacea interdiu e pergula sua in forum prospexisse dictus ex auctoritate senatus in carcerem abductus non ante finem belli emissus est. p. munatius cum demptam marsuae coronam e floribus capiti suo inposuisset, atque ob id duci eum in vincula triumviri iussissent, appellavit tribunos plebei, nec intercessere illi, aliter quam athenis, ubi comissabundi iuvenes ante meridiem conventus sapientium quoque doctrinae frequentabant. apud nos exemplum licentiae huius non est aliud quam filia Divi Augusti, cuius luxuria noctibus coronatum marsuam litterae illius dei gemunt.

florum quidem populus romanus honorem scipioni tantum habuit. serapio cognominabatur propter similitudinem suarii cuiusdam negotiatoris. obierat in tribunatu plebei admodum gratus dignusque africanorum familia, nec erat in bonis funeris inpensa. asses ergo contulit populus ac funus elocavit, quaque praeferebatur, flores e prospectu omni sparsit.

et iam tunc coronae deorum honos erant et larum publicorum privatorumque ac sepulchrorum et manium, summaque auctoritas pactili coronae, ut in saliorum sacris invenimus sollemnes cenae. transiere deinde ad rosaria, eoque luxuria processit, ut non esset gratia nisi mero folio sutilibus, mox petitis ab india aut ultra indos. lautissimum quippe habetur e nardi folio eas dari aut veste serica versicolori, unguentis madida. hunc habet novissime exitum luxuria feminarum.

et apud graecos quidem de coronis privatim scripserunt mnesitheus atque callimachus medici, quae nocerent capiti, quoniam et in hoc est aliqua valitudinis portio, in potu atque hilaritate praecipue odorum vi subrepente fallaciter. scelerata cleopatrae sollertia. namque in apparatu belli actiaci gratificationem ipsius reginae antonio timente nec nisi praegustatos cibos sumente fertur

pavore eius lusisse extremis coronae floribus veneno inlitis ipsaque capiti inposita; mox procedente hilaritate invitavit antonium, ut coronas biberent. quis ita timeret insidias ergo concerptam in scyphum incipienti haurire opposita manu: “en ego sum,” inquit illa, “marce antoni, quam tu nova praegustantium diligentia caves; adeo mihi, si possim sine te vivere, occasio aut ratio deest!” inductam custodiam bibere iussit ilico expirantem.

de floribus ... supra dictis scripsit theophrastus apud graecos; ex nostris autem inscripsere aliqui libros anthologicon, flores vero persecutus est nemo, quod equidem inveniam. nec nos nunc scilicet coronas nectemus - id enim frivolum est - , sed de floribus quae videbuntur digna memorabimus.

paucissima nostri genera coronamentorum inter hortensia novere, ac paene violas rosasque tantum. rosa nascitur spina verius quam frutice, in rubo quoque proveniens, illic etiam iucundi odoris, quamvis angusti. germinat omnis primo inclusa granoso cortice, quo mox intumescente et in virides alabastros fastigato paulatim rubescens dehiscit ac sese pandit, in calice medio staminis conplexa luteos apices. usus eius in coronis prope minimus est. oleo maceratur, idque iam a troianis temporibus homero teste. praeterea in unguenta transit, ut diximus. medicas per se artes praebet. emplastris atque collyriis inseritur mordaci subtilitate, mensarum etiam deliciis perunguendis, minime noxia carie.

genera eius nostri fecere celeberrima praenestinam et campanam; addidere alii milesiam, cuius ardentissimus colos, non excedentis duodena folia, proximam et trachiniam minus rubentem, mox alabandicam viliorem, albicantibus foliis, vilissimam vero plurimis, sed minutissimis, spiniolam. differunt enim multitudine foliorum, asperitate, levore, colore, odore. paucissima quina folia, ac deinde numerosiora, cum sit genus eius, quam centifoliam vocant, quae est in campania italiae, graeciae vero circa philippos, sed ibi non suae terrae proventu: pangaeus mons in vicino fert numerosis foliis ac parvis; accolae transferentes conserunt, ipsaque plantatione proficiunt. non autem talis odoratissima nec cui latissimum maximumve folium, breviterque indicium est odoris scabritia corticis. caepio tiberii caesaris principatu negavit centifoliam in coronas addi, praeterquam extremas velut ad cardines, nec odore nec

specie probabilem. est et quae graeca appellatur a nostris, a graecis lychnis, non nisi in umidis locis proveniens nec umquam excedens quina folia violaeque magnitudine, odore nullo. est et alia graecula appellata, convolutis foliorum paniculis nec dehiscens nisi manu coacta semperque nascenti similis, latissimis foliis; alia funditur e caule malvaceo folia oleae habente - mucetum vocant - , atque inter has media magnitudine autumnalis, quam coroniolam appellant, omnes sine odore praeter coroniolam et in rubo natam. tot modis adulteratur.

et alias vera quoque plurimum solo praevalet. cyrenis odoratissima est, ideoque ibi unguentum pulcherrimum, carthagine hispaniae hieme tota praecox. refert et caeli temperies, quibusdam enim annis minus odorata provenit, praeterea omnis siccis quam umidis odoratior. seri neque pinguibus vult neque argillosis locis nec riguis, contenta roribus, proprieque ruderatum agrum amat. praecox campana est, sera milesia, novissima tamen desinit praenestina. fodiuntur altius quam fruges, levius quam vites. tardissime proveniunt semine, quod in ipso cortice est, sub ipso flore, opertum lanugine. ob id potius caule conciso inseruntur. et ocellis radicis, ut harundo, unum genus inseritur pallidae, spinosae, longissimis virgis, quinquefoliae, quae graecis altera est. omnis autem recisione atque ustione proficit; tralatione quoque, ut vites, optime ocissimeque provenit surculis quaternum digitorum longitudine aut ampliore post vergiliarum occasum sata, dein per favonium translata pedalibus intervallis crebroque circumfossa. qui praecocem faciunt, pedali circa radicem scrobe aquam calidam infundunt germinare incipiente calice.

lilium rosae nobilitate proximum est et quadam cognatione unguenti oleique, quod lilinum appellatur. interpositum etiam maxime rosas decet, medio proventu earum incipiens. nec ulli florum excelsitas maior, interdum cubitorum trium, languido semper collo et non sufficiente capitis oneri. candor eius eximius foris striati et ab angustiis in latitudinem paulatim sese laxantis effigie calathi, resupinis per ambitum labris tenuique pilo et staminis stantibus in medio crocis. ita odor colorque duplex, et alius calicis, alius staminis, differentia angusta. in unguenti vero oleique usu et folia non spernuntur. est flos non dissimilis illi in herba, quam convolvolum

vocant, nascens per frutecta, nullo odore nec crocis intus, candorem tantum referens ac veluti naturae rudimentum lilia facere condiscentis. alba lilia iisdem omnibus modis seruntur, quibus rosa, et hoc amplius lacrima sua, ut hipposelinum, nihilque est fecundius una radice quinquagenos saepe emittente bulbos. est et rubens lilium, quod graeci crinon vocant, alii florem eius cynorrhodon. laudatissimum in antiochia ac laudicea syriae, mox in phaselide. quartum locum optinet in italia nascens.

sunt et purpurea lilia, aliquando gemino caule, carnosiore tantum radice maiorisque bulbi, sed unius; narcissum vocant. huius alterum genus flore candido, calice purpureo. differentia a liliis et haec, quod narcissis in radice folia sunt, probatissimis in lyciae montibus. tertio generi cetera eadem, calix herbaceus. omnes serotini, post arcturum enim florent ac per aequinoctium autumnum.

inventa est in his et ratio inserendi monstrificis hominum ingeniis. colligantur namque mense iulio scapi arescentis lilii atque suspenduntur in fumo; dein nudantibus se nodulis in faece nigri vini vel graeci mense martio macerantur, ut colorem percipiant, atque ita in scrobiculis seruntur heminis faecis circumfusis. sic fiunt purpurea lilia, mirumque tingui aliquid, ut nascatur infectum.

violis honos proximus, earumque plura genera, purpureae, luteae, albae, plantis omnes, ut olus, satae. ex his vero, quae sponte apricis et macris locis proveniunt, purpureae latiore folio, statim ab radice exeunti, carnoso solaeque graeco nomine a ceteris discernuntur, appellatae ia et ab his ianthina vestis. e sativis maxima auctoritas luteis; genera autem tusculana et quae marina appellatur, folio aliquanto latiore, sed minus odorata; in totum vero sine odore minutoque folio calatina, munus autumni, ceterae veris.

proxima ei caltha est et concolori ... amplitudine. vincit numero foliorum marinam quina non excedentem; eadem odore superatur. est enim gravi caltha, non leviore quam scopam regiam appellant, quamquam folia eius olent, non flores.

baccar quoque radicis tantum odoratae est, a quibusdam nardum rusticum appellatum. unguenta ex ea radice fieri solita apud antiquos aristophanes, priscae comoediae poeta, testis est; unde quidam errore falso barbaricam eam appellabant. odor est cinnamomo proximus. gracili solo nec umido provenit. simillimum ei combretum

appellatur, foliorum exilitate usque in fila adtenuata et procerius quam baccar. haec sutilia tantum. eorum quoque error corrigendus est, qui baccar rusticum nardum appellavere. est enim alia herba sic cognominata, quam graeci asaron vocant, cuius speciem figuramque diximus in nardi generibus. quin immo asaron invenio vocitari, quoniam in coronas non addatur.

crocum silvestre optimum. serere in italia minime expedit, ad scripula usque singula areis decoquentibus. seritur radicis bulbo. sativum latius maiusque et nitidius, sed multo lenius, degenerans ubique nec fecundum etiam cyrenis, ubi semper flores laudatissimi. prima nobilitas cilicio et ibi in coryco monte, dein lycio e monte olympo, mox centuripino siciliae. aliqui theraeo secundum locum dedere. adulteratur nihil aeque. probatio sinceri, si inposita manu crepitet veluti fragile; umidum enim, quod evenit adulteratione, sentit. altera probatio, si manu relata ad ora leniter faciem oculosque mordeat. est per se genus sativi blandissimum volgo, cum sit mediocre, dialeucon vocant. contra cyrenaico vitium, quod omni croco nigrius est et celerrime marcescit. optimum ubicumque quod pinguissimum et brevis capilli, pessimum vero quod situm redolet. mucianus auctor est, in lycia anno septimo aut octavo transferri in locum subactum atque ita degenerans renovari. usus eius in coronis nusquam; herba enim est folio angusto paene in capillamenti modum. sed vino mire congruit, praecipue dulci, tritum ad theatra replenda. floret vergiliarum occasu paucis diebus folioque florem expellit. viret bruma et colligitur; siccatur umbra, melius etiam hiberna. carnosa et illi radix vivaciorque quam ceteris. gaudet calcari et atteri pereundoque melius provenit; ideo iuxta semitas ac fontes laetissimum. troianis temporibus iam erat honos ei; hos certe flores homerus tris laudat loton, crocum, hyacinthum.

omnium autem odoramentorum atque adeo herbarum differentia est in colore et odore et suco. odorato sapor raro ulli non amarus, e contrario dulcia raro odorata; itaque et vina mustis odoratiora et silvestria magis omnia sativis. quorundam odor suavior e longinquo, propius admotus hebetatur, ut violae. rosa recens a longinquo olet, sicca propius. omnis autem verno tempore acrior et matutinis; quidquid ad meridianas horas dies vergit, hebetatur. novella quoque vetustis minus odorata; acerrimus tamen odor omnium aetate media.

rosa et crocum odoratiora, cum serenis diebus leguntur, et omnia in calidis quam in frigidis; in aegypto tamen minime odorati flores, quia nebulosus et roscidus aer est a multo flumine. quorundam suavitati gravitas inest. quaedam, dum virent, non olent propter umorem nimium, ut buceras, quod est fenum graecum. aquatis odor non omnino sine suco est, ut violae, rosae, croco; quae vero ex aquatis carent suco, eorum omnium odor gravis, ut in lilio utriusque generis. habrotonum et amaracum acres habent odores. quorundam flos tantum iucundus, reliquae partes ignavae, ut violae ac rosae. hortensium odoratissima quae sicca, ut ruta, menta, apium, et quae in siccis nascantur. quaedam vetustate odoratiora, ut cotonea, eademque decerpta quam in suis radicibus. quaedam non nisi defracta aut ex adtritu olent, alia non nisi detracto cortice, quaedam vero non nisi usta, sicut tura murraeque. flores triti omnes amariores quam intacti. aliqua arida diutius odorem continent, ut melilotos. quaedam locum ipsum odoratiorem faciunt, ut iris, quin et arborem totam, cuiuscumque radices adtingat. hesperis noctu magis olet, inde nomine invento. animalium nullum odoratum, nisi si de pantheris quod dictum est credimus.

illa quoque non omittenda differentia est, et odoratorum multa nihil adtinere ad coronamenta, ut irim atque saliuncam, quamquam nobilissimi odoris utramque. sed iris radice tantum commendatur, unguentis nascens et medicinae. laudatissima in illyrico, et ibi quoque non in maritimis, sed in silvestribus drinonis et naronae, proxima in macedonia, longissima haec et candicans et exilis. tertium locum habet africana, amplissima inter omnes gustuque amarissima. illyrica quoque duorum generum est: raphanitis a similitudine, quae et melior, rhizotomos. subrufa optima, quae sternumenta tractatu movet. caulem habet cubitalem, erectum; floret versicolori specie, sicut arcus caelestis, unde et nomen. non inprobatur et pisidica. effossuri tribus ante mensibus mulsa aqua circumfusa hoc veluti placamento terrae blandiuntur, circumscriptam mucrone gladii orbe triplici cum legerunt, protinus in caelum adtollunt. natura est fervens, tractataque pusulas ambusti modo facit. praecipitur ante omnia, ut casti legant. teredines non sicca modo, verum et in terra celerrime sentit. - optimum antea irinum leucade et elide ferebatur - iam pridem enim et seritur - , nunc e pamphylia, sed cilicium maxime

laudatur atque e septentrionalibus. -

saliunca folio quidem subbrevi et quod necti non possit, radici numerosae cohaeret, herba verius quam flos, densa veluti manu pressa breviterque caespes sui generis. pannonia hanc gignit et norici alpiumque aprica, urbium eporedia, tantae suavitatis, ut metallum esse coeperit. vestibus interponi eam gratissimum, sicut apud graecos polium herbam, inclutam musaei et hesiodi laudibus ad omnia utilem praedicantium superque cetera ad famam etiam ac dignitates, prorsusque miram, si modo, ut tradunt, folia eius mane candida, meridie purpurea, sole occidente caerulea aspiciuntur. duo genera eius: campestre maius; silvestre, quod minus est, quidam teuthrion vocant. folia canis hominis similia, a radice protinus, numquam palmo altiora.

et de odoratis floribus satis dictum. in quibus unguento vicisse naturam gaudens luxuria vestibus quoque provocavit eos flores, qui colore commendantur. hos animadverto tris esse principales: rubentem in cocco, qui a rosae nigrantis gratia nitido trahitur suspectu et in purpuras tyrias dibaphasque ac laconicas; amethystinum, qui a viola et ipse in purpureum, quemque ianthinum appellavimus. genera enim tractamus in species multas sese spargentia. tertius est, qui proprie conchylii intellegitur, multis modis: unus in heliotropio et in aliquo exilis, plerumque saturatior; alius in malva ad purpuram inclinans; alius in viola serotina conchyliorum vegetissimus. paria nunc componuntur, et natura atque luxuria depugnant. lutei video honorem antiquissimum, in nuptialibus flammeis totum feminis concessum, et fortassis ideo non numerari inter principales, hoc est communes maribus ac feminis, quoniam societas principatum dedit.

amaranto non dubie vincimur. est autem spica purpurea verius quam flos aliquis, et ipse sine odore. mirum in eo gaudere decerpi et laetius renasci. provenit augusto mense, durat in autumnum. alexandrino palma, qui decerptus adservatur; mireque, postquam defecere cuncti flores, madefactus aqua revivescit et hibernas coronas facit. summa natura eius in nomine est, appellati, quoniam non marcescat. in nomine et cyani colos, item holochrysi.

omnes autem hi flores non fuere in usu alexandri magni aetate, quoniam proximi a morte eius auctores siluere de illis; quo

manifestum est postea placuisse. a graecis tamen repertos quis dubitet, non aliter italia usurpante nomina illorum at, hercules, petellio ipsa nomen inposuit, autumnali circaque vepres nascenti. ei tantum color est commendatus, qui est rosae silvestris, folia parva, quina; mirumque in eo flore inflecti cacumen et e nodis intorta folia nasci parvolo calice ac versicolori luteum semen includentia. luteo et bellio, pastillicantibus quinquagenis quinis barbulis. coronant pratenses hi flore; at sine usu plerique et ideo sine nominibus, quin et his ipsis alia alii vocabula inponunt. chrysocome sive chrysitis non habet latinam appellationem. palmi altitudine est, comantibus fulgore auri corymbis, radice nigra, ex austero dulci, in petrosis opacisque nascens.

et fere peractis colorum quoque celeberrimis, transit ratio ad eas coronas, quae varietate sola placent. duo earum genera, quando aliae flore constant, aliae folio. florem esse dixerim genistas, namque et his decerpitur luteus; item rhododendron, item zizipha, quae cappadocia vocantur; his odoratus similisque olearum floribus. in vepribus nascitur cyclaminum, de quo plura alias. flos eius colossinus in coronas admittitur.

folio coronantium milaces et hederae corymbique earum optinent principatum, de quibus in fruticum loco abunde diximus. sunt et alia genera nominibus graecis indicanda, quia nostris maiore ex parte huius nomenclaturae defuit cura; et pleraque eorum in exteris terris nascuntur, nobis tamen consectanda, quoniam de natura sermo, non de italia est.

ergo in coronamenta folio venere melotrum, spiraea, origanum, cneorum, quod casiam hyginus vocat, et, quod cunilaginem, conyza, melissophyllum, quod apiastrum, melilotum, quod sertulam campanam vocamus. est enim in campania italiae laudatissima, graecis in sunio, mox chalcidica et cretica, ubicumque vero asperis et silvestribus nata. coronas ex ea antiquitus factitatas indicio est nomen sertulae, quod occupavit. odor est croco vicinus et flos, ipsa cana; placet maxime foliis brevissimis atque pinguissimis.

folio coronat et trifolium. tria eius genera: minyanthes vocant graeci, alii asphaltion, maiore folio, quo utuntur coronarii; alterum acuto oxytriphyllon; tertium ex omnibus minutissimum. inter haec nervosi cauliculi quibusdam, ut maratho, hippomaratho, myophono;

utuntur et ferulis, corymbis hederae et flore purpureo et in alio genere earum silvestribus rosis simili. sed in his quoque colos tantum delectat, odor autem abest. et cneori duo genera, nigri atque candidi; hoc et odoratum, ramosa ambo. florent post aequinoctium autumnum. totidem et origani in coronamentis species, alterius enim nullum semen; id, cui odor est, creticum vocatur.

totidem et thymi, candidum ac nigricans. floret autem circa solstitia; tum et apes decerpunt, ut augurium mellis sit; proventum enim sperant apiarii large florescente eo. laeditur imbribus amittitque florem. semen thymi non potest deprehendi, cum origani, perquam minutum, non tamen fallat. sed quid interest occultasse id naturam in flore ipso intellegitur satoque eo nascitur. quid non temptavere homines mellis attici in toto orbe summa laus existimatur; ergo translatum est ex attica thymum et vix flore, uti docemur, satum. sed alia ratio naturae obstitit, non durante attico thymo nisi in adflatu maris. erat quidem haec opinio antiqua in omni thymo, ideoque non nasci in arcadia, cum oleam non putarent gigni nisi intra ccc stadia a mari. thymo quidem nunc etiam lapideos campos in provincia narbonensi refertos scimus, hoc paene solo reditu, e longinquis regionibus pecudum milibus convenientibus, ut thymo vescantur.

et conyzae duo genera in coronamentis, mas ac femina. differentia in folio: tenuius feminae et constrictius angustiusque, imbricatum. mas et ramosior. flos quoque magis splendet eius, serotinus utrique post arcturum. mas odore gravior, femina acutior et ideo contra bestiarum morsus aptior. folia feminae mellis odorem habent, masculae radix a quibusdam libanotis appellatur, de qua diximus.

etiamnum folio coronant iovis flos, amaracum, hemerocalles, habrotonum, helenium, sisymbrium, serpullum, omnia surculosa rosae modo. colore tantum placet iovis flos, odor abest, sicut et illi, qui graece phlox vocatur. et ramis autem et folio odorata sunt excepto serpullo. helenium e lacrimis helenae dicitur natum, et ideo in helene insula laudatissimum; est autem frutex humi se spargens dodrantalibus ramulis, serpullo simili folio.

habrotonum odore iucunde gravi floret aestate; flos est aurei coloris. vacuum sponte provenit, cacumine suo se propagat. seritur autem semine melius quam radice aut surculo, semine quoque non sine negotio; plantaria transferuntur - sic et adonium - , utrumque

aestate. alsiosa enim admodum sunt, ut sole tamen nimio laedantur. sed ubi convaluere, rutae vice fruticant. habrotono simile odore leucanthemum est, flore albo, foliosum.

amaracum diocles medicus et sicula gens appellavere, quod aegyptus et syria sampsucum. seritur utroque genere, et semine et ramo, vivacius supra dictis et odore mollius. copiosum amaraco aeque quam habrotono semen, sed habrotono radix una et alte descendens, ceteris in summa terra leviter haerens. reliquorum satio autumno fere incipiente, nec non et vere quibusdam locis, umbraque gaudent et aqua ac fimo.

nyctegreton inter pauca miratus est democritus, coloris hysgini, folio spinae, nec a terra se adtollentem, praecipuam in gedrosia. narrat erui post aequinoctium vernum radicitus siccarique ad lunam xxx diebus, ita lucere noctibus; magos parthorumque reges hac herba uti ad vota suscipienda. eandem vocari chenamychen, quoniam anseres a primo conspectu eius expavescant, ab aliis nyctalopa, quoniam e longinquo noctibus fulgeat.

melilotos ubique nascitur, laudatissima tamen in attica; ubicumque vero recens, nec candicans et croco quam simillima, quamquam in italia odoratior candida.

florum prima ver nuntiat viola alba, tepidioribus vero locis etiam hieme emicat; post ea, quae ion appellatur et purpurea, proxime flammeum, quod phlox vocatur, silvestre dumtaxat. cyclaminum bis anno, vere et autumno; aestates hiemesque fugit. seriores supra dictis aliquanto narcissus et lilium trans maria, in italia quidem, ut diximus, post rosam. verum in graecia tardius etiamnum anemone; est autem haec silvestrium bulborum flos, alia quam quae dicetur in medicis. sequitur oenanthe ac melanium et ex silvestribus heliochrysos, deinde alterum genus anemones, quae limonia vocatur, post hanc gladiolus comitatus hyacintho. novissima rosa, eademque prima deficit excepta sativa; e ceteris hyacinthus maxime durat et viola alba et oenanthe, sed haec ita, si devolsa crebro prohibeatur in semen ire. nascitur locis tepidis; odor idem ei, qui germinantibus uvis, atque inde nomen. hyacinthum comitatur fabula duplex, luctum praeferentis eius, quem apollo dilexerat, aut ex aiacis cruore editi, ita discurrentibus venis, ut graecarum litterarum figura AI legatur inscriptum. heliochrysus florem habet auro similem, folium tenue,

cauliculum quoque gracilem, sed durum. hoc coronare se magi, si et unguenta sumantur ex auro, quod apyron vocant, ad gratiam quoque vitae gloriamque pertinere arbitrantur.

et verni quidem flores hi sunt; succedunt illis aestivi, lychnis et iovis flos et alterum genus lilii, item tiphyon et amaracus, quem phrygium cognominant. sed maxime spectabilis pothos. duo genera huius: unum, cui flos hyacinthi est, alter candidus, qui fere nascitur tumulis, quoniam fortius durat. et iris aestate floret. abeunt et hi marcescuntque. alii rursus subeunt autumno: tertium genus lilii et crocum et orsini utraque genera, unum hebes, alterum odoratum, primis omnia imbribus emicantia. coronarii quidem et spinae flore utuntur, quippe cum spinae albae cauliculi inter oblectamenta quoque gulae condiantur. hic est trans maria ordo florum. in italia violis succedit rosa, huic intervenit lilium, rosam cyanus excipit, cyanum amarantus. nam vicapervica semper viret, in modum liniae foliis geniculatim circumdata, topiaria herba, inopiam tamen florum aliquando supplet. haec a graecis chamaedaphne vocatur.

vita longissima violae albae trimatu. ab eo tempore degenerat. rosa et quinquennium perfert non recisa nec adusta. illo enim modo iuvenescit. diximus et terram referre plurimum. nam in aegypto sine odore haec omnia, tantumque myrtis odor praecipuus; alioqui etiam binis mensibus antecedit germinatio omnium. rosaria a favonio fossa oportet esse iterumque solstitio, et id agendum, ut intra id tempus purgata ac pura sint.

verum hortis coronamentisque maxime alvaria et apes conveniunt, res praecipui quaestus conpendiique, cum favet. harum ergo causa oportet serere thymum, apiastrum, rosam, violas, lilium, cytisum, fabam, erviliam, cunilam, papaver, conyzam, casiam, melilotum, melissophyllum, cerinthen. ea est autem folio candido, incurvo, cubitalis, capite concavo mellis sucum habente. horum floris avidissimae sunt atque etiam sinapis, quod miremur, cum olivae florem ab his non attingi constet; ideo hanc arborem procul esse melius sit, cum aliquas quam proxime seri conveniat, quae et evolantium examina invitent nec longius abire patiantur.

cornum quoque arborem caveri oporteat. flore eius degustato alvo cita moriuntur. remedium sorba contusa e melle praebere his vel urinam hominis vel boum aut grana punici mali ammineo vino

conspersa. at genistas circumseri alvariis gratissimum.

mirum est dignumque memoratu de alimentis quod conperi. hostilia vicus adluitur pado. huius inquilini pabulo circa deficiente inponunt navibus alvos noctibusque ad quina milia passuum contrario amne subvehunt. egressae luce apes pastaeque ad naves cotidie remeant mutantes locum, donec pondere ipso pressis navibus plenae alvi intellegantur revectisque eximantur mella. et in hispania mulis provehunt simili de causa. tantumque pabulum refert, ut mella quoque venenata fiant. heracliae in ponto quibusdam annis perniciosissima existunt ab iisdem apibus facta, nec dixere auctores, e quibus floribus ea fierent! nos trademus quae conperimus. herba est ab exitio et iumentorum quidem, sed praecipue caprarum appellata aegolethron. huius flore concipiunt noxium virus aquoso vere marcescentis. ita fit, ut non omnibus annis sentiatur malum. venenati signa sunt, quod omnino non densatur, quod color magis rutilus est, odor alienus, sternumenta protinus movens, quod ponderosius innoxio. qui edere, abiciunt se humi refrigerationem quaerentes, nam et sudore diffluunt. remedia sunt multa, quae suis locis dicemus; sed quoniam statim repraesentari aliqua in tantis insidiis oportet, mulsum vetus e melle optimo et ruta, salsamenta etiam, si reiciantur, sumpta crebro. certumque est id malum per excrementa ad canes etiam pervenire similiterque torqueri eos. mulsum tamen ex eo inveteratum innocuum esse constat, et feminarum cutem nullo melius emendari cum costo, suggillata cum aloe.

aliud genus in eodem ponti situ, gente sannorum, mellis, quod ab insania, quam gignit, maenomenon vocant. id existimatur contrahi flore rhododendri, quo scatent silvae. gensque ea, cum ceram in tributa romanis praestet, mel, quoniam exitiale est, non vendit. et in perside et in mauretaniae caesariensis gaetulia, contermina massaesylis, venenati favi gignuntur, quidamque a parte, quo nihil esse fallacius potest, nisi quod livore deprehenduntur. quid sibi voluisse naturam his arbitremur insidiis, ut ab iisdem apibus nec omnibus annis fierent aut non totis favis parum enim erat genuisse rem, in qua venenum facillime daretur etiamne hoc ipsa in melle tot animalibus dedit quid sibi voluit, nisi ut cautiorem minusque avidum faceret hominem non enim et ipsis apibus iam cuspides dederat et quidem venenatas, remedio adversus has utique non differendo ergo

malvae suco aut foliorum hederae perungui salutare est vel percussos eas bibere. mirum tamen est venena portantes ore fingentesque ipsas non mori, nisi quod illa domina rerum omnium hanc dedit repugnantiam apibus, sicut contra serpentes psyllis marsisque inter homines.

aliud in creta miraculum mellis: mons est carina [viiii] passuum ambitu, intra quod spatium muscae non reperiuntur, natumque ibi mel nusquam attingunt. hoc experimento singulare medicamentis eligitur.

alvaria orientem aequinoctialem spectare convenit. aquilonem evitent, nec favonium minus. alvus optima e cortice, secunda ferula, tertia vimine; multi et e speculari lapide fecere, ut operantes intus spectarent. circumlini alvos fimo bubulo utilissimum, operculum a tergo esse ambulatorium, ut proferatur intus, si magna sit alvus aut sterilis operatio, ne desperatione curam abiciant; id paulatim reduci fallente operis incremento. alvos hieme stramento operiri, crebro suffiri, maxime fimo bubulo. cognatum hoc iis innascentes bestiolas necat, araneos, papiliones, teredines, apesque ipsas excitat. et araneorum quidem exitium facilius est; papilio, pestis maior, lucernis tollitur vere, cum maturescat malva, noctu interlunio caelo sereno accensis ante alvos. in eam flammam sese ingerunt.

si cibus sentiatur deesse apibus, uvas passas siccasve ficos tusas ad fores earum posuisse conveniat, item lanas tractas madentes passo aut defruto aut aqua mulsa, gallinarum etiam crudas carnes. quibusdam et aestatibus iidem cibi praestandi, cum siccitas continua florum alimentum abstulit. alvorum, cum mel eximatur, inlini oportet exitus melissophyllo aut genista tritis, aut medias alba vite praecingi, ne apes diffugiant. vasa mellaria et favos lavari aqua praecipiunt, hac decocta fieri saluberrimum acetum.

cera fit expressis favis, sed ante purificatis aqua ac triduo in tenebris siccatis, quarto die liquatis igni in novo fictili, aqua favos tegente, tunc sporta colatis. rursus in eadem olla coquitur cera cum eadem aqua excipiturque alia frigida, vasis melle circumlitis. optima quae punica vocatur, proxima quam maxime fulva odorisque mellei, pura, natione autem pontica, quod constare equidem miror inter venenata mella, dein cretica, plurimum enim ex propoli habet, de qua diximus in natura apium. post has corsica, quoniam ex buxo fit,

habere quandam vim medicaminis putatur. punica fit hoc modo: ventilatur sub diu saepius cera fulva, dein fervet in aqua marina ex alto petita addito nitro. inde lingulis hauriunt florem, id est candidissima quaeque, transfunduntque in vas, quod exiguum frigidae habeat, et rursus marina decocunt separatim, dein vas ipsum aut aquam refrigerant. et cum hoc ter fecere, iuncea crate sub diu siccant sole lunaque. haec enim candorem facit, sol siccat, et, ne liquefaciat, protegunt tenui linteo. candidissima vero fit post insolationem etiamnum recocta. punica medicinis utilissima. nigrescit cera addito chartarum cinere, sicut anchusa admixta rubet, variosque in colores pigmentis trahitur ad reddendas similitudines et innumeros mortalium usus parietumque etiam et armorum tutelam. cetera de melle apibusque in natura earum dicta sunt.

et hortorum quidem omnis fere peracta ratio est; secuntur herbae sponte nascentes, quibus pleraeque gentium utuntur in cibis maximeque aegyptus, frugum quidem fertilissima, sed ut prope sola iis carere possit. tanta est ciborum ex herbis abundantia. in italia paucissimas novimus, fraga, tamnum, ruscum, batim marinam, batim hortensiam, quas aliqui asparagum gallicum vocant, praeter has pastinacam pratensem, lupum salictarium, eaque verius oblectamenta quam cibos.

in aegypto nobilissima est colocasia, quam cyamon aliqui vocant. hanc e nilo metunt, caule, cum coctus est, araneoso in mandendo, thyrso autem, qui inter folia emicat, spectabili, foliis latissimis, etiam si arboreis conparentur, ad similitudinem eorum, quae personata in nostris amnibus vocamus, adeoque nili sui dotibus gaudent, ut inplexis colocasiae foliis in variam speciem vasorum potare gratissimum habeant. seritur iam haec in italia.

in aegypto proxima auctoritas cichorio est, quod diximus intubum erraticum. nascitur post vergilias, floret particulatim. radix ei lenta, quare etiam ad vincula utuntur illa. anthalium longius a flumine nascitur, mespili magnitudine et rotunditate, sine nucleo, sine cortice, folio cyperi. mandunt igni comparatum. mandunt et oetum, cui pauca folia minimaque, verum radix magna. arachidne quidem et aracos, cum habeant radices ramosas ac multiplices, nec folium nec herbam ullam aut quicquam aliud supra terram habent. reliqua volgarium in cibis apud eos herbarum nomina: chondrylla, hypochoeris, caucalis,

enthryscum, scandix, come, quae ab aliis tragopogon vocatur, foliis croco simillimis, parthenium, trychnum, corchorus et ab aequinoctio nascentes aphace, achynops. epipetron vocant quae numquam floret. at e contrario aphace subinde marcescente flore emittit alium tota hieme totoque vere usque in aestatem.

multas praeterea ignobiles habent, sed maxime celebrant cnecon italiae ignotam, ipsis autem oleo, non cibo gratam. hoc faciunt e semine eius. differentia prima: silvestris et mitior. silvestrium duae species. una mitiori similis, caule tamen rigido; itaque et colu antiquae utebantur exili, quare quidam atractylida vocant. semen eius candidum et grande, amarum. altera hirsutior, torosiore caule et qui paene humi serpat, minuto semine. aculeatarum generis haec est, quoniam distinguenda sunt et genera.

ergo quaedam herbarum spinosae sunt, quaedam sine spinis. spinosarum multae species. in totum spina est asparagus, scorpio, nullum enim folium habent. quaedam spinosa foliata sunt, ut carduus, erynge, glycyrrhiza, urtica; his enim omnibus foliis inest aculeata mordacitas. aliqua et secundum spinam habent folium, ut tribulus et anonis. quaedam in folio non habent et in caule habent, ut pheos, quod aliqui stoeben appellavere. hippophaes spinis geniculatum. tribulo proprietas, quod et fructum spinosum habet.

ex omnibus his generibus urtica maxime noscitur acetabulis in flore purpuream lanuginem fundentibus, saepe altior binis cubitis. plures eius differentiae: silvestris, quam et feminam vocant, mitiorque; et silvestri quae dicitur canina acrior, caule quoque mordaci, fimbriatis foliis; quae vero etiam odorem fundit herculanea vocatur. semen omnibus copiosum, nigrum. mirum sine ullis spinarum aculeis lanuginem ipsam esse noxiam et tactu tantum levi pruritum pusulasque confestim adusto similes existere. notum est et remedium olei. sed mordacitas non protinus cum ipsa herba gignitur, nec nisi solibus roborata. incipiens quidem ipsa nasci vere non ingrato, multis etiam religioso in cibo est ad pellendos totius anni morbos. silvestrium quoque radix omnem carnem teneriorem facit simul cocta. quae innoxia est, morsu carens, lamium vocatur. de scorpione dicemus inter medicas.

carduus et folia et caules spinosae lanuginis habet, item acorna, leucacanthos, chalceos, cnecos, polyacanthos, onopyxos, helxine,

scolymos. chamaeleon in foliis non habet aculeos. est et illa differentia, quod quaedam in his multicaulia ramosaque sunt, ut carduus, uno autem caule nec ramosum cnecos. quaedam cacumine tantum spinosa sunt, ut erynge. quaedam aestate florent, ut tetralix et helxine. scolymos quoque sero floret et diu. acorna a cneco colore tantum rufo distinguitur et pinguiore suco. idem erat atractylis quoque, nisi candidior esset et nisi sanguineum sucum funderet, qua de causa phonos vocatur a quibusdam, odore etiam gravis, sero maturescente semine nec ante autumnum, quamquam id de omnibus spinosis dici potest. verum omnia haec et semine et radice nasci possunt. scolymus carduorum generis ab his distat, quod radix eius vescendo est decocta. mirum, quod sine intervallo tota aestate aliud floret in eo genere, aliud concipit, aliud parturit. aculei arescente folio desinunt pungere. helxine rara visu est neque in omnibus terris, a radice foliosa, ex qua media veluti malum extuberat contectum sua fronde. huius vertex summus lacrimam continet iucundi saporis, acanthicen mastichen appellatam.

et cactos quoque in sicilia tantum nascitur, suae proprietatis et ipse. in terra serpunt caules a radice emissi, lato folio et spinoso. caules vocant cactos, nec fastidiunt in cibis inveteratos quoque. unum autem caulem rectum habet, quem vocant pternica, eiusdem suavitatis, sed vetustatis inpatientem. semen ei lanuginis, quam pappum vocant, quo detracto et cortice teneritas similis cerebro palmae est. vocant ascalian.

tribulus non nisi in palustribus nascitur. dura res alibi, iuxta nilum et strymonem amnes recipitur in cibos, inclinatus in vadum, folio lato atque effigie ulmi, pediculo longo. at in reliquo orbe genera ii, uni cicerculae folia, alteri aculeata. hic et serius floret magisque saepta obsidet villarum. semen ei rotundius, nigrum, in siliqua, alteri harenaceum. spinosorum etiamnum aliud genus anonis. in ramis enim spinas habet adposito folio rutae simili, toto caule foliato in modum coronae. sequitur arata, frugibus inimica vivaxque praecipue.

aculeatarum caules aliquarum per terram serpunt, ut eius, quam coronopum vocant. e diverso stat anchusa inficiendo ligno cerisque radicis aptae, stant e mitioribus anthemis et phyllanthes et anemone et aphace. caule foliato est crepis et lotos.

differentia foliorum et hic quae in arboribus, brevitate pediculi ac

longitudine, angustiis ipsius folii, amplitudine, iam vero angulis, incisuris, odore, flore. diuturnior hic quibusdam per partes florentibus, ut ocimo, heliotropio, aphacae, onochili. multis inter haec aeterna folia, sicut quibusdam arborum, inprimisque heliotropio, adianto, polio.

aliud rursus spicatarum genus, ex quo est achynops, alopecuros, stelephuros, - quam quidam ortygem vocant, alii plantaginem, de qua plura dicemus inter medicas - , thryallis. ex his alopecuros spicam habet mollem et lanuginem densam, non dissimilem vulpium caudis, unde et nomen. proxima ei est et stelephuros, nisi quod illa particulatim floret. cichorion et similia circa terram folia habent; germinant ab radice post vergilias.

perdicium et aliae gentes quam aegyptii edunt. nomen dedit avis id maxime eruens. crassas plurimasque habet radices. item ornithogale caule tenero, candido, semipedali molli, tribus aut quattuor agnatis, radice bulbosa; coquitur in pulte.

mirum loton herbam et aegilopa non nisi post annum e semine suo nasci. mira et anthemidis natura, quod a summo florere incipit, cum ceterae omnes, quae particulatim florent, ab ima sui parte incipiant.

notabile et in lappa, quae adhaerescit, quod in ipsa flos nascitur non evidens, sed intus occultus, et intra se germinat velut animalia, quae in se pariunt. circa opuntem est herba etiam homini dulcis, mirumque e folio eius radicem fieri ac sic eam nasci.

iasine unum folium habet, sed ita implicatum, ut plura videantur. chondrylla amara est et acris in radice suci. amara et aphace et quae picris nominatur, et ipsa toto anno florens; nomen ei amaritudo inposuit.

notabilis et scillae crocique natura, quod, cum omnes herbae folium primum emittant, mox in caulem rotundentur, in his caulis prior intellegitur quam folium. et in croco quidem flos inpellitur caule, in scilla vero caulis exit, deinde ex eo flos emergit, eademque ter floret, ut diximus, tria tempora arationum ostendens.

bulborum generi quidam adnumerant et cypiri, hoc est gladioli, radicem. dulcis ea est et quae decocta panem etiam gratiorem faciat ponderosioremque simul subacta. non dissimilis est et quae thesium vocatur, gustu aspera.

ceterae eiusdem generis folio differunt: asphodelus oblongum et

angustum habet, scilla latum et tractabile, gladiolus simile nomini. asphodelus manditur et semine tosto et bulbo, set hoc in cinere tosto, dein sale et oleo addito, praeterea tuso cum ficis, praecipua voluptate, ut videtur hesiodo. tradunt et ante portas villarum satum remedio esse contra veneficiorum noxiam. asphodeli mentionem et homerus fecit. radix eius napis modicis similis est, neque alia numerosior lxxx simul acervatis saepe bulbis. theophrastus et fere graeci princepsque pythagoras caulem eius cubitalem et saepe duum cubitorum, foliis porri silvestris, anthericum vocavere, radicem vero, id est bulbos, asphodelum. nostri illud albucum vocant et asphodelum hastulam regiam, caulis acinosi, ac duo genera faciunt. albuco scapus cubitalis, amplus, purus levisque, de quo mago praecipit exitu mensis marti et initio aprilis, cum floruerit, nondum semine eius intumescente, demetendum findendosque scapos et quarto die in solem proferendos, ita siccati manipulos faciendos. idem oiston adicit a graecis vocari, quam inter ulvas sagittam appellamus. hanc ab idibus maiis usque in finem octobris mensis decorticari atque leni sole siccari iubet; idem et gladiolum alterum, quem cypiron vocant, et ipsum palustrem, iulio mense toto secari iubet ad radicem tertioque die in sole siccari, donec candidus fiat, cotidie autem ante solem occidentem in tectum referri, quoniam palustribus desectis nocturni rores noceant.

similia praecipit et de iunco, quem mariscum appellant, ad texendas tegetes et ipsum iunio mense eximi ad iulium medium praecipiens, cetera de siccando eadem, quae de ulva suo loco diximus. alterum genus iuncorum facit, quod marinum et a graecis oxyschoenon vocari invenio. tria genera eius: acuti, sterilis, quem marem et oxyn graeci vocant; reliqua feminini, ferentis semen nigrum: quem melancranim appellant, crassior hic et fruticosior, magisque etiamnum tertius, qui vocatur holoschoenus. ex his melancranis sine aliis generibus nascitur, oxys autem et holoschoenus eodem caespite. utilissimus ad vitilia holoschoenus, quia mollis et carnosus est; fert fructum ovorum cohaerentium modo. nascitur autem et is, quem marem appellavimus, ex semetipso, cacumine in terram defixo, melancranis autem suo semine. alioqui omnium radices omnibus annis intermoriuntur. usus ad nassas marinas, vitilium elegantiam, lucernarum lumina, praecipua medulla,

amplitudine iuxta maritimas alpes tanta, ut inciso ventre inpleant paene unciarum latitudinem, in aegypto vero cubitorum longitudinem non aliis utiliorem. quidam etiamnum unum genus faciunt iunci trianguli - cyperon vocant - , multi vero non discernunt a cypiro vicinitate nominis. nos distinguemus utrumque.

cypirus est gladiolus, ut diximus, radice bulbosa, laudatissimus in insulis creta, dein naxo et postea in phoenice. cretico candor odorque vicinus nardo, naxio acrior, phoenicio exiguum spirans, nullus aegyptio, nam et ibi nascitur. discutit duritias corporum; iam remedia enim dicemus, quoniam et florum odorumque generi est magnus usus in medicina. quod ad cypiron attinet, apollodorum quidem sequar, qui negat bibendum, quamquam professus efficacissimum esse adversus calculos. os eo fovet. feminis quidem abortus facere non dubitat; mirumque, tradit barbaros suffitum huius herbae excipientes ore lienes consumere et non egredi domibus nisi ab hoc suffitu, vegetiores enim firmioresque sic etiam in die fieri; intertriginum et alarum vitiis perfrictionibusque cum oleo inlitum non dubie mederi.

cyperos iuncus est, qualiter diximus, angulosus, iuxta terram candidus, cacumine niger pinguisque. folia ima porraceis exiliora, in cacumine minuta, inter quae semen est. radix olivae nigrae similis, quam, cum oblonga est, cyperida vocant, magni in medicina usus. laus cypero prima hammoniaco, secunda rhodio, tertia theraeo, novissima aegyptio. qui et confudit intellectum, quoniam et cypiros ibi nascitur. sed cypiros radice durissima vixque spirans, cyperis odor et ipsis nardum imitans. est et per se indica herba, quae cypira vocatur, zingiberis effigie; commanducata croci vim reddit. cypero vis in medicina psilotri. inlinitur pterygiis ulceribusque genitalium et quae in umore sunt omnibus, sicut oris ulceribus. radix adversus serpentium ictus et scorpionum praesentis remedii est. vulvas aperit pota; largiori tanta vis, ut et expellat eas. urinam ciet et calculos, ob id utilissima hydropicis. inlinitur et ulceribus, quae serpunt, sed his praecipua, quae in stomacho sunt, e vino vel aceto inlita.

iunci radix in tribus heminis aquae decocta ad tertias tussi medetur. semen tostum et in aqua potum sistit alvum et feminarum menses. capitis dolores facit. qui vocatur holoschoenus ... quae proxima sunt radici, commanducantur adversus araneorum morsus. invenio etiamnum unum iunci genus quod euripicen vocant; huius

semine somnum allici, set modum servandum, ne sopor fiat.

obiter et odorati iunci medicinae dicentur, quoniam et in ... syria coele, ut suo loco rettulimus, nascitur. laudatissimus ex nabataea cognomine teuchitis, proximus babylonius, pessimus ex africa ac sine odore. est autem rotundus, vinosae mordacitatis ad linguam; sincerus in confricando odorem rosae emittit rubentibus fragmentis. discutit inflationes, ob id stomacho utilis bilemque reicientibus. singultus sedat, ructus movet, urinam ciet, vesicae medetur. ad muliebres usus decoquitur. opisthotonicis cum resina arida inponitur excalfactoria vi.

rosa adstringit, refrigerat. usus eius dividitur in folia et flores, capita. foliorum partes, quae sunt candidae, ungues vocantur. in flore aliud est semen, aliud capillus, in capite aliud cortex, aliud calix. folium siccatur aut tribus modis exprimitur: per se, cum ungues non detrahuntur - ibi enim umoris plurimum - , aut cum detractis unguibus reliqua pars aut oleo aut vino maceratur in sole vasis vitreis. quidam et salem admiscent, nonnulli et anchusam aut aspalathum aut iuncum odoratum, quia talis maxime prodest vulvae ac dysintericis. exprimuntur eadem folia detractis unguibus trita per linteum spissum in aereum vas, lenique igni sucus coquitur, donec fiat crassitudo mellis. ad haec eligi oportet odoratissima quaeque folia. vinum quomodo fieret e rosa, diximus inter genera vini. usus suci ad aures, oris ulcera, gingivas, tonsillas gargarizati, stomachum, vulvas, sedis vitia, capitis dolores - in febri per se vel cum aceto - , somnos, nausias. folia uruntur in calliblepharum, et siccis femina adsperguntur. epiphoras quoque arida leniunt. flos somnum facit, inhibet fluctiones mulierum, maxime albas, in posca potus et sanguinis excreationes, stomachi quoque dolores, quantum ... in vini cyathis tribus. seminis optimum crocinum nec anniculo vetustius et in umbra siccatum; nigrum inutile. dentium dolori inlinitur, urinam ciet, stomacho inponitur, item igni sacro non veteri. naribus subductum caput purgat. capita pota ventrem et sanguinem sistunt. ungues rosae epiphoris salubres sunt; ulcera enim oculorum rosa sordescunt, praeterquam initiis epiphorae ita, ut arida cum pane inponatur. folia quidem intus stomachi rosionibus et intus ventris aut intestinorum utilissima et praecordiis, vel inlita. cibo quoque lapathi modo condiuntur. cavendus in his situs celeriter insidens. et aridis aut

expressis aliquis usus. diapasmata inde fiunt ad sudores coercendos ita, ut a balineis inarescant corpori, dein frigida abluantur. silvestris pilulae cum adipe ursino alopecias emendant.

lilii radices multis modis florem suum nobilitant, contra serpentium ictus ex vino potae et contra fungorum venena. propter clavos pedum in vino decoquuntur triduoque non solvuntur. cum adipe aut oleo decoctae pilos quoque adustis reddunt. e mulso potae inutilem sanguinem cum alvo trahunt, lienique et ruptis, vulsis prosunt et mensibus feminarum, in vino vero decoctae inpositaeque cum melle nervis praecisis. medentur contra lichenas et lepras, et furfures in facie emendant, erugant corpora, cutem. folia in aceto cocta vulneribus inponuntur, si testium, melius cum hyoscyamo et farina tritici. semen inlinitur igni sacro, flos et folia ulcerum vetustati, sucus qui flore expressus est - ab aliis mel vocatur, ab aliis syrium - ad emolliendas vulvas sudoresque faciendos et suppurationes concoquendas.

narcissi duo genera in usum medici recipiunt, purpureo flore et alterum herbaceum, hunc stomacho inutilem et ideo vomitorium alvosque solventem, nervis inimicum, caput gravantem et a narce narcissum dictum, non a fabuloso puero. utriusque radix mulsei saporis est. ambustis prodest exiguo e melle, sic et vulneribus et luxatis; panis vero cum melle et aerina farina, sic et infixa corpori extrahit. in polenta tritus oleoque contusis medetur et lapide percussis. purgat vulnera permixtus farinae, nigras vitiligines emaculat. ex hoc flore fit narcissinum oleum ad emolliendas duritias, calfacienda quae alserint, auribus utilissimum, sed et capitis dolores facit.

violae silvestres et sativae. purpureae refrigerant. contra inflammationes inlinuntur stomacho, ardenti inponuntur et capiti in fronte, oculorum privatim epiphoris et sede procidente volvave et contra suppurationes. crapulam et gravedines capitis inpositis coronis olfactuque discutiunt, anginas ex aqua potae. id, quod purpureum est ex his, comitialibus medetur, maxime pueris, in aqua potum. semen violae scorpionibus adversatur. contra flos albae suppurata aperit, ipsa discutit. et alba autem et lutea extenuat menses, urinam ciet. minor vis est recentibus, ideoque aridis post annum utendum. lutea dimidio cyatho in aquae tribus menses trahit. radices eius cum aceto

inlitae sedant lienem, item podagram, oculorum autem inflammationes cum murra et croco. folia cum melle purgant capitis ulcera, cum cerato rimas sedis et quae in umidis sunt, ex aceto vero collectiones sanant.

baccar in medicinae usu aliqui ex nostris perpressam vocant. auxiliatur contra serpentes, capitis dolores fervoresque, item epiphoras. inponitur mammis tumentibus a partu et aegilopiis incipientibus ignibusque sacris. odor somnum gignit. radicem decoctam bibere spasticis, eversis, convulsis, suspiriosis salutare est et in tussi vetere. rami eius tres quattuorve decocuntur ad tertias partes; haec potio mulieres ex abortu purgat. laterum punctiones tollit et vesicae calculos. tunditur et utiliter in diapasmata. vestibus odoris gratia inseritur. combretum, quod simile ei diximus, tritum cum axungia vulnera mire sanat.

asarum iocinerum vitiis salutare esse traditur uncia sumpta in hemina mulsi mixti. alvum purgat ellebori modo, hydropicis prodest et praecordiis vulvisque ac morbo regio. in mustum si addatur, facit vinum urinis ciendis. effoditur cum folia mittit, siccatur et conditur. in umbra situm celerrime sentit.

et quoniam quidam, ut diximus, nardum rusticum nominavere radicem baccaris, contexemus et gallici nardi remedia, in hunc locum dilata in peregrinis arboribus. ergo adversus serpentes duabus drachmis in vino succurrit, inflationibus coli vel ex aqua vel ex vino, item iocineris et renium suffusisque felle et hydropicis, per se vel cum absinthio. sistit purgationum mulierum impetus.

eius vero, quod phun eodem loco appellavimus, radix datur potui trita vel decocta ad strangulatus vel pectoris dolores vel laterum quoque. menses ciet. bibitur cum vino.

crocum melle non solvitur nulloque dulci, facillime autem vino aut aqua. utilissimum in medicina, adservatur cornea pyxide. discutit inflammationes omnes quidem, sed oculorum maxime ex ovo; item vulvarum quoque strangulatus, stomachi exulcerationes, pectoris et renium, iocinerum, pulmonum vesicarumque, peculiariter inflammationi earum vehementer utile, item tussi et pleuriticis. tollit et pruritus, urinas ciet. qui crocum prius biberint, crapulam non sentient, ebrietati resistent. coronae quoque ex eo mulcent ebrietatem. somnum facit, caput leniter movet, venerem stimulat. flos

eius igni sacro inlinitur cum creta cimolia. ipsum plurumis medicaminibus miscetur, collyrio uni etiam nomen dedit. faex quoque expressi unguento crocino, quod crocomagma appellant, habet suas utilitates contra suffusiones oculorum, urinas. magis excalfacit quam crocum ipsum. optimum quod gustatu salivam dentesque maxime inficit.

iris rufa melior quam candida. infantibus eam circumligari salutare est, dentientibus praecipue et tussientibus taeniarumve vitio laborantibus instillari. ceteri effectus eius non multum a melle differunt. ulcera purgat capitis, praecipue suppurationes veteres. alvum solvit duabus drachmis cum melle, tussim, tormina, inflationes pota, lienes ex aceto. contra serpentium et araneorum morsus ex posca valet; contra scorpiones duarum drachmarum pondere in pane vel aqua sumitur; contra canum morsus ex oleo inponitur et contra perfrictiones. sic et nervorum doloribus, lumbis vero et coxendicibus cum resina inlinitur. vis ei concalfactoria. naribus subducta sternumenta movet caputque purgat. dolori capitis cum cotoneis malis aut strutheis inlinitur. crapulas quoque et orthopnoeas discutit. vomitiones ciet duobus obolis sumpta. ossa fracta extrahit inposita cum melle. ad paronychia farina eius utuntur, in vino ad clavos et verrucas, triduoque non solvitur. halitus oris commanducata abolet alarumque vitia. suco duritias omnes emollit, somnum conciliat, sed genituram consumit. sedis rimas et condylomata omniaque in corpore excrescentia sanat. sunt qui silvestrem xyrim vocent. strumas haec vel panos vel inguina discutit. praecipitur, ut sinistra manu ad hos usus eruatur colligentesque dicant, cuius hominis vitiique causa eximant. scelus herbariorum aperietur et in hac mentione: partem eius servant et quarundam aliarum herbarum, sicuti plantaginis, et si parum mercedis tulisse se arbitrantur rursusque opus quaerunt, partem eam, quam servavere, eodem loco infodiunt, credo, ut vitia, quae sanaverint, faciant rebellare. saliuncae radix in vino decocta sistit vomitiones, conroborat stomachum.

polio musaeus et hesiodus perungui iubent dignationis gloriaeque avidos, polium tractari ... coli, polium contra venena haberi, contra serpentes substerni, uri, in vino decoqui recens vel aridum inlinique vel potari. medici splenicis propinant ex aceto, morbo regio in vino, et hydropicis incipientibus in vino decoctum; vulneribus quoque sic

inlinunt. secundas mulierum partusque emortuos pellit, item dolores corporis. vesicas inanit, epiphoris inlinitur. nec magis alia herba convenit medicamento, quod alexipharmacon vocant. stomacho tamen inutile esse caputque eo inpleri et abortum fieri puto. aliqui negant et religionem addunt, ubi inventum sit, protinus adalligandum contra oculorum suffusiones cavendumque, ne terram attingat. hi et folia eius thymo similia tradunt, nisi quod molliora sunt et lanatiore canitie. cum ruta silvestri et si teratur ex aqua caelesti, aspidas mitigare dicitur, et non secus atque cytinus adstringit et cohibet vulnera prohibetque serpere.

holochrysos medetur stranguriae in vino, et oculorum epiphoris inlitu, cum faece vero vini cremata et polenta lichenas emendat. chrysocomes radix calfacit et adstringit. datur potui ad iocinerum vitia, item pulmonum, vulvae dolores in aqua mulsa decocta. ciet menstrua et, si cruda detur, hydropicorum aquam.

melissophyllo sive melittaena si perunguantur alvi, non fugient apes; nullo enim magis flore gaudent. scopis eius examina facillime continentur. idem praesentissimum est contra ictus earum vesparumque et similium, sicut araneorum, item scorpionum, item contra volvarum strangulationes addito nitro, contra tormina e vino. folia eius strumis inlinuntur et sedis vitiis cum sale. decoctae sucus feminas purgat et inflammationes discutit et ulcera sanat. articularios morbos sedat canisque morsus. prodest dysintericis veteribus et coeliacis, orthopnoicis, lienibus, ulceribus thoracis. caligines oculorum suco cum melle inungui eximium habetur.

melilotos quoque oculis medetur cum luteo ovi aut lini semine. maxillarum quoque dolores lenit et capitis cum rosaceo, item aurium e passo quaeque in manibus intumescant vel erumpant, stomachi dolores in vino decocta vel cruda tritaque. idem effectus et ad vulvas, ad testes vero et sedem prociduam quaeque et alia ibi sint vitia ... recentem ex aqua decoctam vel ex passo. adiecto rosaceo inlinitur ad carcinomata. defervescit in vino dulci. peculiariter et contra meliceridas efficax.

trifolium scio credi praevalere contra serpentium et scorpionum ictus ex vino aut posca, seminis granis xx potis vel foliis et tota herba decocta, serpentesque numquam in trifolio aspici; praeterea a celebratis auctoribus contra omnia venena pro antidoto sufficere xxv

grana eius, quod minyanthes ex eo appellavimus, tradi, multa alia praeterea in remediis eius adscribi. sed me contra sententias eorum gravissimi viri auctoritas movet, sophocles enim poeta venenatum id dicit, simos quoque ex medicis, decocti aut contriti sucum infusum corpori easdem uredines facere, quas si percussis a serpente inponatur. ergo non aliter utendum eo quam contra venena censuerim. fortassis enim et his venenis inter se contraria sit natura, sicut multis aliis. item animadverto semen eius, cuius minima sint folia, utile esse ad custodiendam mulierum cutis gratiam in facie inlitum.

thymum colligi oportet in flore et in umbra siccari. duo autem sunt genera eius: candidum, radice lignosa, in collibus nascens, quod et praefertur; alterum nigrius florisque nigri. utraque oculorum claritati multum conferre existimantur et in cibo et in medicamentis; item diutinae tussi ecligmate faciles excreationes facere cum aceto et sale, sanguinem concrescere non pati e melle, longas faucium destillationes extra inlita cum sinapi extenuare, item stomachi et ventris vitia. modicis tamen utendum est, quoniam excalfaciunt; qua vi sistunt alvum, quae si exulcerata sit, denarii pondus in sextarium aceti et mellis addi oporteat, item si lateris dolor sit, aut inter scapulas aut in thorace. praecordiis medentur ex aceto cum melle, quae potio datur et in alienatione mentis ac melancholicis. datur et comitialibus, quos correptos olfactu excitat thymum. aiunt et dormire eos oportere in molli thymo. prodest et orthopnoicis et anhelatoribus mulierumque mensibus retardatis vel si emortui sint in utero partus, decoctum in aqua ad tertias, et viris vero contra inflationes cum melle et aceto et si venter turgueat testesve aut si vesicae dolor exigat. e vino tumores et impetus inpositum tollit, item cum aceto callum et verrucas. coxendicibus inponitur cum vino, articulariis morbis et luxatis tritum ac lanae inspersum ex oleo, ambustis cum adipe suillo. dant et potioni in articulariis morbis trium obolorum pondere in tribus cyathis aceti et mellis, in fastidio tritum cum sale.

hemerocalles pallidum e viridi et molle folium habet, grandi radice odorataque, bulbosa. cum melle inposita ventri aquas pellit et sanguinem etiam inutilem. folia epiphoris oculorum mammarumque post partum inlinuntur.

helenium ab helena, ut diximus, natum favere creditur formae,

cutem mulierum in facie reliquoque corpore nutrire incorruptam. praeterea putant usu eius quandam vitae gratiam his veneremque conciliari. adtribuunt et hilaritatis effectum eidem potae in vino eumque, quem habuerit nepenthes illud praedicatum ab homero, quod tristitia omnis aboleretur. est autem suci praedulcis. prodest et orthopnoicis radix eius in aqua ieiunis pota. est autem candida intus et dulcis. bibitur et contra serpentium ictus ex vino. mures quoque contrita dicitur necare.

habrotonum duorum traditur generum, campestre ac montanum. hoc feminam, illud marem intellegi volunt. amaritudo absinthii in utroque. siculum laudatissimum, dein galaticum. usus et foliis, sed maior semini ad excalfaciendum, ideo nervis utile, tussi, orthopnoeae, ruptis, convulsis, lumbis, urinae angustiis. datur bibendum manualibus fasciculis decoctis ad tertias partes; ex his quaternis cyathis bibitur. datur et semen tusum in aqua drachmae pondere. prodest et vulvae. concoquit panos cum farina hordeacia et oculorum inflammationi inlinitur cotoneo malo cocto. serpentes fugat; contra ictus earum bibitur cum vino inliniturque, efficacissimum contra ea, quorum veneno tremores et frigus accidunt, ut scorpionum et phalangiorum; et contra venena alia pota prodest et quoquo modo algentibus. vis ei et extrahendi ea, quae inhaereant corporibus. pellit et interaneorum mala. ramo eius, si subiciatur pulvino, venerem stimulari aiunt, efficacissimamque esse herbam contra omnia veneficia, quibus coitus inhibeatur.

leucanthemum suspiriosis medetur duabus partibus aceti permixtum. sampsuchum sive amaracum in cypro laudatissimum et odoratissimum scorpionibus adversatur ex aceto ac sale inlitum. menstruis quoque multum confert inpositum. minor eidem poto vis. cohibet et oculorum epiphoras cum polenta. sucus decocti tormina discutit. et urinis et hydropicis utile. movet aridum sternumenta. fit ex eo et oleum, quod sampsuchinum vocatur aut amaracinum, ad excalfaciendos molliendosque nervos; et vulvas calfacit. folia suggillatis cum melle et luxatis cum cera prosunt.

anemonas coronarias tantum diximus, nunc reddemus et medicas. sunt qui phrenion vocent. duo eius genera: prima silvestris, altera cultis nascens, utraque sabulosis. huius plures species: aut enim phoenicium florem habet, quae et copiosissima est, aut purpureum

aut lacteum. harum trium folia apio similia sunt nec temere semipedem altitudine excedunt, cacumine asparagi. flos numquam se aperit nisi vento spirante, unde et nomen accepere. silvestri amplitudo maior, latioribus durioribusque foliis, flore phoenicio. hanc errore ducti argemonen putant multi, alii rursus papaver, quod rhoean vocavimus. sed distinctio magna, quod utraque haec postea florent, nec aut sucum illarum anemonae reddunt aut calyces habent nec nisi asparagi cacumen. prosunt anemonae capitis doloribus et inflammationibus, vulvis mulierum. lacte quoque et menstrua cient cum tisana sumptae aut vellere adpositae. radix commanducata pituitam trahit, dentes sanat, decocta oculorum epiphoras et cicatrices. magi occultum quiddam iis tribuere, quae primum aspiciatur eo anno tolli iubentes dicique colligi eam tertianis et quartanis remedio, postea adligari florem panno russeo et in umbra adservari, ita, cum opus sit, adalligari. quae ex his phoenicium florem habet, radice contrita cuicumque animalium inposita ulcus facit styptica vi; et ideo expurgandis ulceribus adhibetur.

oenanthe herba nascitur in petris, folio pastinacae, radice magna, numerosa. caulis eius et folia cum melle ac vino nigro pota facilitatem pariendi praestant secundasque purgant, tussim e melle tollunt, urinam cient. radix et vesicae vitiis medetur.

heliochrysum alii chrysanthemon vocant, ramulos habet candidos, folia subalbida, habrotono similia, ad solis repercussum aureae lucis in orbem veluti corymbis dependentibus, qui numquam marcescunt; qua de causa deos coronant illo, quod diligentissime servavit ptolemaeus aegypti rex. nascitur in frutectis. ciet urinas e vino pota et menses. duritias et inflammationes discutit, ambustis cum melle inponitur. contra serpentium ictus et lumborum vitia bibitur. sanguinem concretum ventris aut vesicae absumit cum mulso. folia eius trita trium obolorum pondere sistunt profluvia mulierum in vino albo. vestes tuetur odore non ineleganti.

hyacinthus in gallia maxime provenit. hoc ibi fuco hysginum tingunt. radix est bulbacea, mangonicis venaliciis pulchre nota, quae e vino dulci inlita pubertatem coercet et non patitur erumpere. torminibus et araneorum morsibus resistit. urinam impellit. contra serpentes et scorpiones morbumque regium semen eius cum habrotono datur.

lychnis quoque flammea illa adversus serpentes et scorpiones et crabrones similiaque bibitur e vino semine trito. silvestris eadem stomacho inutilis. alvum solvit, ad detrahendam bilem efficacissima duabus drachmis, scorpionibus tam contraria, ut omnino visa ea torpescant. radicem eius asiani boliten vocant, qua adalligata oculo albugines tolli dicuntur.

et vicapervica sive chamaedaphne arida tusa hydropicis datur in aqua cochlearii mensura, celerrimeque reddunt aquam. eadem decocta in cinere sparsa vino tumores siccat. auribus suco medetur. alvi vitiis inposita plurimum prodesse dicitur.

rusci radix decocta bibitur alternis diebus in calculorum valitudine et tortuosiore urina vel cruenta. radicem pridie erui oportet, postero mane decoqui, ex eo sextario vini cyathis duobus misceri. sunt qui et crudam radicem tritam ex aqua bibant, et in totum ad virilia cauliculis eius ex aceto tritis nihil utilius putant.

batis quoque alvum mollit. inlinitur podagricis cruda et contunsa. acinon et coronarum causa et ciborum aegyptii serunt, eademque erat quae ocimum, nisi hirsutior ramis ac foliis esset et admodum odorata. ciet et menses et urinas.

colocasia glaucias acria corporis leniri putavit et stomachum iuvari.

anthalii, quod aegyptii edunt, nullum alium reperi usum. sed est herba anthyllium, quam alii anthyllum vocant, duorum generum: foliis et ramis lenticulae similis, palmi altitudine, sabulosis, apricis nascens, subsalsa gustanti; altera chamaepityi similis, brevior et hirsutior, purpurei floris, odore gravis, in saxosis nascens. prior vulvis aptissima, ex rosaceo ac lacte inposita, et vulneribus. bibitur in stranguria reniumque harenis tribus drachmis. altera bibitur in duritia vulvarum et in torminibus et in comitiali morbo cum melle et aceto quattuor drachmis.

parthenium alii leucanthes, alii amaracum vocant, celsus apud nos perdicium et muralem. nascitur in hortorum saepibus, flore albo, odore mali, sapore amaro. ad insidendum decoctae in duritia vulvarum et inflammationibus ... , sicca cum melle et aceto inposita detrahit bilem atram; ob hoc contra vertigines utilis et calculosis. inlinitur et sacro igni, item strumis cum axungia inveterata. magi contra tertianas sinistra manu evelli eam iubent dicique, cuius causa

vellatur, nec respicere, dein eius folium aegri linguae subicere, ut mox in cyatho aquae devoretur.

trychno, quam quidam strychnon scripsere, utinam nec coronarii in aegypto uterentur, quos invitat hederae foliorum similitudo in duobus eius generibus, quorum alterum, cui acini coccini, granosi in folliculis, halicacabon vocant, alii callion, nostri autem vesicariam, quoniam vesicae et calculis prosit. frutex est surculosus verius quam herba, folliculis magnis latisque et turbinatis grandi intus acino, qui maturescit novembri mense. tertio folia sunt ocimi, minime diligenter demonstrando remedia, non venena, tractantibus, quippe insaniam facit parvo quoque suco. quamquam et graeci auctores in iocum vertere. drachmae enim pondere lusum furoris gigni dixerunt, species vanas imaginesque conspicuas obversari demonstrantes; duplicatum hunc modum legitimam insaniam facere; quidquid vero adiciatur ponderi, repraesentari mortem. hoc est venenum, quod innocentissimi auctores simpliciter dorycnion appellavere ab eo, quod cuspides in proeliis tinguerentur illo passim nascente. qui parcius insectabantur, manicon nominavere; qui nequiter occultabant, erythron aut neurada aut, ut nonnulli, perisson, ne cavendi quidem causa curiosius dicendum. quin et alterum genus, quod halicacabon vocant, soporiferum est atque etiam opio velocius ad mortem, ab aliis morion, ab aliis moly appellatum, laudatum vero a diocle et euenore, a timaristo quidem etiam carmine. mira oblivione innocentiae - quippe praesentaneum remedium ad dentium mobiles firmandos, si colluerentur halicacabo in vino - exceptionem addidere, ne diutius id fieret; delirationem enim gigni. non demonstranda remedia, quorum medicina maioris mali periculum adferat: commendetur ergo in cibis tertium genus licet ac praeferatur hortensiis saporibus et nil sit corporis malorum, cui non salutares trychnos xenocrates praedicet; non tamen auxilia earum tanti sunt, ut ideo plura nos de iis commemorare fas putem, praesertim tanta copia innoxiorum medicaminum. halicacabi radicem bibunt qui vaticinari gallantesque vere ad confirmandas superstitiones aspici se volunt. remedio est - id enim libentius rettulerim - aqua copiosa mulsa calida potu. nec illud praeteribo, aspidum naturae halicacabum in tantum adversam, ut radice eius propius admota soporetur illa sopore enecans vis earum. ergo trita ex oleo percussis auxiliatur.

corchorum alexandrini cibi herba est convolutis foliis ad similitudinem mori, praecordiis, ut ferunt, utilis alopeciisque et lentigini. boum quoque scabiem celerrime sanari ea invenio apud nicandrum quidem et serpentium morsus, antequam floreat.

nec de cneco sive atractylide verbosius dici par esset, aegyptia herba, ni magnum contra venenata animalia praeberet auxilium, item adversus fungos. constat a scorpione percussos, quamdiu teneant eam herbam, non sentire cruciatum.

et pesolutam aegyptus in hortis serit, coronarum gratia. duo genera eius: femina ac mas; utraque subdita venerem inhiberi, virorum maxime, tradunt.

et quoniam in mensuris quoque ac ponderibus crebro graecis nominibus utendum est, interpretationem eorum semel hoc in loco ponemus: drachma attica - fere enim attica observatione medici utuntur - denarii argentei habet pondus, eademque vi obolos pondere efficit, obolus x chalcos. cyathus pendet per se drachmas x; cum acetabuli mensura dicitur, significat heminae quartam, id est drachmas xv. mna, quam nostri minam vocant, pendet drachmas atticas c.

implesse poterant miraculum sui natura atque tellus reputantium vel prioris tantum voluminis dotes totque genera herbarum utilitatibus hominum aut voluptatibus genita. sed quanto plura restant quantoque mirabiliora inventu! illa enim maiore in parte cibi aut odoris decorisve commendatio ad numerosa experimenta duxit; reliquarum potentia adprobat, nihil ab rerum natura sine aliqua occultiore causa gigni.

equidem et formae gratia ritusque perpetui in corporibus suis aliquas exterarum gentium uti herbis quibusdam adverto animo. inlinunt certe aliis aliae faciem in populis barbarorum feminae; maresque etiam apud dacos et sarmatas corpora sua inscribunt. simili plantagini - glastum in gallia vocatur - britannorum coniuges nurusque toto corpore oblitae quibusdam in sacris nudae incedunt, aethiopum colorem imitantes. iam vero infici vestes scimus admirabili fuco, atque, ut sileamus galatiae, africae, lusitaniae grani coccum imperatoriis dicatum paludamentis, transalpina gallia herbis tyria atque conchylia tinguit et omnes alios colores. nec quaerit in profundis murices seque obiciendo escam, dum praeripit, beluis marinis intacta etiam ancoris scrutatur vada, ut inveniat per quod facilius matrona adultero placeat, corruptor insidietur nuptae: stans et in sicco carpit, quo frugem modo. sed culpant ablui usu; alioqui fulgentius instrui poterat luxuria, certe innocentius.

non est nunc propositum ista consectari, nec committemus, ut subiciendo viliora luxuriam utilitate circumscribamus, dicturi et alias herbis tingui parietes nec pingi lapide. nec tinguendi tamen rationem omisissemus, si umquam ea liberalium artium fuisset. interim fortius agetur, auctoritasque, quanta debet, etiam surdis, hoc est ignobilibus, herbis perhibebitur, siquidem auctores imperii romani conditoresque immensum quiddam et hinc sumpsere, quoniam non aliunde sagmina in remediis publicis fuere et in sacris legationibusque verbenae. certe utroque nomine idem significatur, hoc est gramen ex arce cum sua terra evolsum, ac semper e legatis, cum ad hostes clarigatumque mitterentur, id est res raptas clare repetitum, unus utique verbenarius vocabatur.

corona quidem nulla fuit graminea nobilior in maiestate populi terrarum principis praemiisque gloriae. gemmatae et aureae, vallares, murales, rostratae, civicae, triumphales post hanc fuere suntque cunctae magno intervallo magnaque differentia. ceteras omnes singuli, et duces ipsi imperatoresque, militibus aut aliquando collegis dedere, decrevit in triumphis senatus cura belli solutus et populus otiosus, graminea numquam nisi in desperatione suprema contigit, nulli nisi ab universo exercitu servato decreta. ceteras imperatores dedere, hanc solam miles imperatori. eadem vocatur obsidionalis liberatis obsidione abominandoque exitu totis castris. quod si civicae honos uno aliquo ac vel humillimo cive servato praeclarus sacerque habetur, quid tandem existimari debet unius virtute servatus universus exercitus dabatur haec viridi e gramine decerpto inde, ubi obsessos servasset aliquis. namque summum apud antiquos signum victoriae erat herbam porrigere victos, hoc est terra et altrice ipsa humo et humatione etiam cedere, quem morem etiam nunc durare apud germanos scio.

donatus est ea l. siccius dentatus semel, cum civicas quattuordecim meruisset depugnassetque centiens viciens semper victor. tanto rarius est servatorem unum a servatis donari. quidam imperatores et saepius donati sunt, veluti p. decius mus tribunus militum ab exercitu, altera ab his, qui in praesidio obsessi fuerant, quanta esset eius honoris auctoritas, confessus religione, siquidem donatus bovem album marti inmolavit et centum fulvos, qui ei virtutis causa dati fuerant simul ab obsessis. hic decius postea se consul imperioso conlega pro victoria devovit. data est et a senatu populoque romano, qua claritate nihil equidem in rebus humanis sublimius duco, fabio illi, qui rem omnem romanam restituit non pugnando; nec data, cum magistrum equitum exercitumque eius servasset, - tunc satius fuit nomine novo coronari appellatum patrem ab his, quos servaverat, - sed quo dictum est consensu honoratus est Hannibale italia pulso, quae corona adhuc sola ipsius imperii manibus inposita est et, quod peculiare ei est, sola a tota italia data.

praeter hos contigit eius coronae honos m. calpurnio flammae tribuno militum in sicilia, centurioni vero uni ad hoc tempus cn. petreio atinati cimbrico bello. primum pilum is capessens sub catulo exclusam ab hoste legionem suam hortatus tribunum suum

dubitantem per castra hostium erumpere interfecit legionemque eduxit. invenio apud auctores eundem praeter hunc honorem adstantibus mario et catulo cos. praetextatum immolasse ad tibicinem foculo posito. scripsit et sulla dictator ab exercitu se quoque donatum apud nolam legatum bello marsico, idque etiam in villa sua tusculana, quae fuit postea ciceronis, pinxit. quod si verum est, hoc exsecrabiliorem eum dixerim, quandoquidem eam capiti suo proscriptione sua ipse detraxit, tanto paucioribus civium servatis quam postea occisis. addat etiamnum huic gloriae superbum cognomen felicem, ipse tamen obsessis in toto orbe proscriptis hac corona sertorio cessit. aemilianum quoque scipionem Varro auctor est donatum obsidionali in africa manilio consule, iii cohortibus servatis totidemque ad servandas eas eductis, quod et statuae eius in foro suo Divus Augustus inscripsit. ipsum Augustum m. cicerone filio consule idibus septembribus senatus obsidionali donavit; adeo civica non satis videbatur. nec praeterea quemquam invenimus donatum.

nullae ergo herbae fuere certae in hoc honore, sed quaecumque fuerant in periculi sede, quamvis ignobiles ignotaeque, honorem nobilem faciebant, quod latere apud nos minus quidem miror cernens neglegi ea quoque, quae ad valitudinem conservandam cruciatusque corporis propulsandos et mortem arcendam pertinent. sed quis non mores iure castiget addidere vivendi pretia deliciae luxusque; numquam fuit vitae cupido maior nec minor cura. aliorum hanc operae esse credimus ac ne mandato quidem nostro alios id agere, medicisque provisum esse pro morbis. ipsi fruimur voluptatibus et, quo nihil equidem probrosius duco, vivimus aliena fiducia. immo vero plerisque ultro etiam inrisui sumus ista commentantes atque frivoli operis arguimur, magno quamquam inmensi laboris solatio, sperni cum rerum natura, quam certe non defuisse nobis docebimus et invisis quoque herbis inseruisse remedia, quippe cum medicinas dederit etiam aculeatis. haec enim proxime restant ex iis, quas priore libro nominavimus, in quibus ipsis providentiam naturae satis mirari amplectique non est. dederat quas diximus molles cibisque gratas, pinxerat remedia in floribus visuque ipso animos invitaverat etiam deliciis auxilia permiscens: en, excogitavit aliquas aspectu hispidas, tactu truces, ut tantum non vocem ipsius fingentis illas rationemque

reddentis exaudire videamur, ne scilicet depascat avida quadripes, ne procaces manus rapiant, ne neglecta vestigia obterant, ne insidens ales infringat, iis muniendo aculeis telisque armando, remediis ut tuta ac salva sint. ita hoc quoque, quod in iis odimus, hominum causa excogitatum est.

clara in primis aculeatarum erynge est sive eryngion contra serpentes et venena omnia nascens. adversus ictus morsusque radix eius bibitur drachmae pondere in vino aut, si plerumque tales iniurias comitetur et febris, ex aqua. inlinitur plagis, peculiariter efficax contra chersydros ac ranas. omnibus vero contra toxica et aconita efficaciorem heraclides medicus in iure anseris decoctam arbitratur. apollodorus adversus toxica cum rana decoquit, ceteri in aqua. ipsa dura, fruticosa, spinosis foliis, caule geniculato, cubitali et maiore aliquando, alia albicans, alia nigra, radice odorata. et sativa quidem est et sponte nascitur in asperis, saxosis, set in litoribus maris durior nigriorque, folio apii.

ex his candidam nostri centum capita vocant. omnes eiusdem effectus, caule et radice in cibos graecorum receptis utroque modo, sive coquere libeat sive cruda vesci. portentosum est, quod de ea traditur, radicem eius alterutrius sexus similitudinem referre, raro invento, set si viris contigerit mas, amabiles fieri; ob hoc et phaonem lesbium dilectum a sappho, multa circa hoc non magorum solum vanitate, sed etiam pythagoricorum. sed in medico usu praeter supra dicta auxiliatur inflationibus, torminibus, cordis vitiis, stomacho, iocineri, praecordiis in aqua mulsa, lieni in posca, item ex mulsa renibus, stranguriae, opisthotonis, spasmis, lumbis, hydropicis, comitialibus, mulierum mensibus, sive subsidant sive abundent, vulvarumque omnibus vitiis. extrahit infixa corpori cum melle. strumas, parotidas, panos, recedentes ab ossibus carnes sanat cum axungia salsa et cerato, item fracturas. crapulam praesumpta arcet, alvum sistit. aliqui e nostris sub solstitio colligi eam iussere, ex aqua caelesti inponi omnibus cervicis vitiis. oculorum quoque albugines sanare adalligatam aliqui tradiderunt.

sunt qui et acanum eryngio adscribant, spinosam brevemque et latam herbam spinisque latioribus. hanc inpositam sanguinem mire sistere.

alii eryngen falso eandem putavere esse et glycyrrhizam, quare

subiungi eam protinus refert. et ipsa sine dubio inter aculeatas est, foliis echinatis, pinguibus tactuque cumminosis, fruticosa, binum cubitorum altitudine, flore hyacinthi, fructu pilularum platani magnitudinis. praestantissima in cilicia, secunda ponto, radice dulci et hac tantum in usu. capitur ea vergiliarum occasu, longa, sucosa ceu lycium, coloris buxei, melior quae nigra, quaeque lenta quam quae fragilis. usus in subditis decoctae ad tertias, cetero ad mellis crassitudinem, aliquando et tusae, quo genere et vulneribus inponitur et faucium vitiis omnibus, item voci utilissima suco sic, ut spissatus est, linguae subdito, item thoraci, iocineri. hac diximus sitim famemque sedari; ob id quidam adipson appellavere eam et hydropicis dedere, ne sitirent. ideo et conmanducata stomatice est ulceribus oris; inspersa saepe et pterygiis. sanat et vesicae scabiem, renium dolores, condylomata, ulcera genitalium. dedere eam quidam potui in quartanis drachmarum duarum pondere et piper ex hemina aquae. conmanducata sanguinem ex vulnere sistit. sunt qui et calculos ea pelli tradiderunt.

tribuli unum genus in hortis nascitur, alterum in fluminibus tantum. sucus ex iis colligitur ad oculorum medicinas; est enim refrigerantis naturae et ideo utilis contra inflammationes collectionesque. ulcera per se erumpentia et praecipue in ore cum melle sanat, item tonsillas. potus calculos frangit. thraces, qui ad strymona habitant, foliis tribuli equos saginant, ipsi nucleo vivunt panem facientes praedulcem et qui contrahat ventrem. radix caste pureque collecta discutit strumas, semen adalligatum varicum dolores sedat, tritum vero in aqua sparsum pulices necat.

stoebe, quam aliqui pheon vocant, decocta in vino praecipue auribus purulentis medetur, item oculis ictu cruentatis, haemorrhagiae quoque et dysinteriae infusa.

hippophaes in sabulosis maritimis, spinis albis, hederae modo racemosa est, candidis, ex parte rubentibus acinis. radix suco madet, qui aut per se conditur aut pastillis farinae ervi. bilem detrahit oboli pondere, saluberrime cum mulso. est altera hippophaes sine caule, sine flore, foliis tantum minutis. huius quoque sucus hydropicis mire prodest. debent adcommodatae esse et equorum naturae neque ex alia causa nomen accepisse. quippe quaedam animalium remediis nascuntur locupleti divinitate ad generanda praesidia, ut non sit

mirari satis ingenium eius disponentis auxilia in genera, in causas, in tempora, ut aliis prosit aliud horis diesque nullus prope sine praesidiis reperiatur.

urtica quid esse invisius potest at illa praeter oleum, quod in aegypto ex ea fieri diximus, vel plurimis scatet remediis. semen eius cicutae contrarium esse nicander adfirmat, item fungis vel argento vivo, apollodorus et salamandris cum iure coctae testudinis, item adversari hyoscyamo et serpentibus et scorpionibus. quin ipsa illa amaritudo mordax uvas in ore procidentesque vulvas et infantium sedes tactu resilire cogit, lethargicos expergisci tactis cruribus magisque fronte. eadem canis morsibus addito sale medetur, sanguinem trita naribus indita sistit et magis radice. carcinomata et sordida ulcera sale admixto, item luxata sanat et panos, parotidas carnesque ab ossibus recedentes. semen potum cum sapa vulvam strangulatis aperit. profluvia narium sistit inpositum. vomitiones in aqua mulsa sumptum a cena faciles praestat duobus obolis, uno autem in vino poto lassitudines recreat. vulvae vitiis tostum acetabuli mensura, potum in sapa resistit stomachi inflationibus. orthopnoicis prodest cum melle et thoracem purgat eodem ecligmate et lateri medetur cum semine lini. addunt hysopum et piperis aliquid. inlinitur lieni, difficilem ventrem tostum cibo emollit. hippocrates vulvam purgari poto eo pronuntiat, dolore levari tosto acetabuli mensura, dulci poto et inposito cum suco malvae, intestinorum animalia pelli cum hydromelite et sale, defluvia capitis semine inlito cohonestari. articulariis morbis et podagricis plurimi cum oleo vetere aut folia cum ursino adipe trita inponunt. ad eadem radix tusa cum aceto non minus utilis, item lieni, et cocta in vino discutit panos cum axungia vetere salsa. eadem psilotrum est sicca. condidit laudes eius phanias physicus, utilissimam cibis coctam conditamve professus arteriae, tussi, ventris destillationi, stomacho, panis, parotidibus, pernionibus, cum oleo sudorem, coctam cum conchyliis ciere alvum, cum tisana pectus purgare mulierumque menses, cum sale ulcera, quae serpant, cohibere. suco quoque in usu est. expressus inlitus fronti sanguinem narium sistit, potus urinam ciet, calculos rumpit, uvam gargarizatus reprimit. semen colligi messibus oportet. alexandrinum maxime laudatur. ad omnia haec et mitiores quidem teneraeque efficaces, sed praecipue silvestris illa, et hoc amplius lepras e facie tollit in vino

pota. si quadripes fetum non admittat, urtica naturam fricandam monstrant.

ea quoque, quam lamium inter genera earum appellavimus, mitissima et foliis non mordentibus, medetur cum mica salis contusis incussisque, ustis et strumis, tumoribus, podagris, vulneribus. album habet in medio folio, quod ignibus sacris medetur.

quidam e nostris tempore discrevere genera, et autumnalis urticae radicem adalligatam in tertianis ita, ut aegri nuncupentur, cum eruatur ea radix, dicaturque cui et quorum filio eximatur, liberare morbo tradiderunt; hoc idem et contra quartanas pollere. iidem urticae radice addito sale infixa corpori extrahi, foliis cum axungia strumas discuti vel, si suppuraverint, erodi, compleri.

ex argumento nomen accepit scorpio herba. semen enim habet ad similitudinem caudae scorpionis, folia pauca. valet adversus animal nominis sui. est et alia eiusdem nominis effectusque, sine foliis, asparagi caule, in cacumine aculeum habens et inde nomen.

leucacantham alii phyllon, alii ischada, alii polygonaton appellant, radice cypiri, quae commanducata dentium dolores sedat, item laterum et lumborum, ut hicesius tradit, semine poto drachmis octo aut suco. eadem ruptis, convulsis medetur.

helxinen aliqui perdicium vocant, quoniam perdices ea praecipue vescantur, alii sideritem, nonnulli parthenium. folia habet mixtae similitudinis plantagini et marruvio, cauliculos densos, leviter rubentes, semina in capitibus lappaceis adhaerescentia vestibus, unde et helxinen dictam volunt. sed nos qualis vera esset helxine diximus priore libro. haec autem inficit lanas, sanat ignes sacros et tumores collectionesque omnes et adusta, panos. sucus eius cum psimithio ignes sacros et guttura incipientia turgescere, item veterem tussim cyatho hausto et omnia vitia umida, sicut tonsillas et aures cum rosaceo. inponitur et podagris cum caprino sebo ceraque cypria.

perdicium sive parthenium sive etiam sideritis alia est; ab nostris herba urceolaris vocatur, ab aliis astercum; folio similis ocimo, nigrior tantum, nascens in tegulis parietinisque. medetur cum mica salis trita iisdem omnibus, quibus lamium, et eodem modo, item vomicae calfacto suco pota, sed contra vulsa, rupta lapsusque et praecipitia, ut vehiculorum eversiones, singularis. verna carus pericli atheniensium principi, cum is in arce templum aedificaret

repsissetque super altitudinem fastigii et inde cecidisset, hac herba dicitur sanatus, monstrata pericli somnio a minerva, quare parthenium vocari coepta est adsignaturque ei deae. hic est vernula, cuius effigies ex aere fusa est et nobilis ille splanchnoptes.

chamaeleonem aliqui ixian vocant. duo genera eius: candidior asperiora habet folia, serpit in terra echini modo spinas erigens, radice dulci, odore gravi. quibusdam in locis viscum gignit album sub alis foliorum, maxime circa canis ortum, quo modo tura nasci dicuntur, unde et ixia appellatur. hac mastiche utuntur mulieres. quare et chamaeleon vocetur, varietate foliorum evenit; mutat enim cum terra colores, hic niger, illic viridis, aliubi cyaneus, aliubi croceus atque aliis coloribus. ex his candidus hydropicos sanat suco radicis decoctae; bibitur drachma in passo. pellit et interaneorum animalia acetabuli mensura suci eiusdem in vino austero cum origani scopis. facit ad difficultatem urinae. hic sucus occidit et canes suesque in polenta addita aqua et oleo, contrahit in se mures ac necat, nisi protinus aquam sorbeant. radicem eius aliqui concisam servari iubent funiculis pendentem decoquereque in cibo contra fluctiones, quas graeci rheumatismos vocant. ex nigris aliqui marem dixere, cui flos purpureus esset, et feminam, cui violaceus; set una nascuntur caule cubitali, crassitudine digitali. radicibus eorum lichenes curantur cum sulpure et bitumine una coctis, conmanducatis vero dentes mobiles aut in aceto decoctis. suco scabiem et quadripedum sanant. et ricinos canum necat, iuvencos quoque anginae modo, quare a quibusdam ulophyton vocatur, set et cynozolon propter gravitatem odoris. ferunt et haec viscum ulceribus utilissimum. omnium autem generum eorum radices scorpionibus adversantur.

coronopus oblonga herba est cum fissuris. seritur interim, quoniam radix coeliacis praeclare facit in cinere tosta.

et anchusae radix in usu est, digitali crassitudine. finditur papyri modo manusque inficit sanguineo colore, praeparat lanas pretiosis coloribus. sanat ulcera in cerato, praecipue senum, item adusta. liquari non potest in aqua, oleo dissolvitur; idque sincerae experimentum est. datur et ad renium dolores drachma eius potui in vino aut, si febris sit, in decocto balani; item iocinerum vitiis et lienis et bile subfusis. lepris et lentigini inlinitur ex aceto. folia trita cum melle et farina luxatis inponuntur, et pota drachmis duabus in mulso

alvum sistunt. pulices necare radix in aqua decocta traditur.

est et alia similis pseudoanchusa ob id appellata, a quibusdam vero echis aut doris et multis aliis nominibus, lanuginosior et minus pinguis, tenuioribus foliis, languidioribus. radix in oleo non fundit rubentem sucum, et hoc ab anchusa discernitur. contra serpentes efficacissima potu foliorum vel seminis. folia ictibus inponuntur. virus serpentes fugat. bibitur et propter spinam. folium eius sinistra decerpi iubent magi et, cuius causa sumatur, dici tertianisque febribus adalligari.

est et alia herba proprio nomine onochilon, quam aliqui anchusam vocant, alii archebion, alii onochelim, aliqui rhexiam, multi enchrysam, parvo frutice, flore purpureo, asperis foliis et ramis, radice messibus sanguinea, cetero nigra, in sabulosis nascens, efficax contra serpentes maximeque viperas et radice et foliis, aeque cibo ac potu. vires habet messibus. folia trita odorem cucumeris reddunt. datur in cyathis tribus vulva procidente. pellit et taenias cum hysopo, et in dolore renium aut iocineris ex aqua mulsa, si febris sit, sin aliter, e vino bibitur. lentigini ac lepris radix inlinitur. habentes eam a serpentibus feriri negantur. est et alia huic similis flore rubro, minor, et ipsa ad eosdem usus, traduntque, conmanducata ea si inspuatur, mori serpentem.

anthemis magnis laudibus celebratur ab asclepiade. aliqui leucanthemida vocant, alii leucanthemum, alii eranthemida, quoniam vere floreat; alii chamaemelon, quoniam odorem mali habeat. nonnulli melanthion vocant. genera eius tria fronde tantum distant, palmum non excedentia, parvis foliis ... rutae candidis aut malinis aut purpureis. in macro solo aut iuxta semitas colligitur vere et in coronamenta reponitur. eodem tempore et medici folia tusa in pastillos digerunt, item florem et radicem. dantur omnia mixta drachmae unius pondere contra serpentium omnium ictus. pellunt mortuos partus, item menstrua in potu et urinam calculosque, inlita inflationes, iocinerum vitia, bilem subfusam, aegilopia, conmanducata ulcerum eruptiones manantes sanant. ex omnibus his generibus ad calculos efficacissima est quae florem purpureum habet, cuius et foliorum et fruticis amplitudo maiuscula est. hanc proprie quidam eranthemim vocant.

loton qui arborem putant tantum esse, vel homero auctore coargui

possunt. is enim inter herbas subnascentes deorum voluptati loton primam nominavit. folia eius cum melle oculorum cicatrices, argema, nubeculas discutiunt.

est et lotometra, quae fit ex loto sata, ex cuius semine simili milio putri fiunt panes in aegypto a pastoribus, maxime aqua vel lacte subacti. negatur quicquam illo pane salubrius esse aut levius, dum caleat. refrigeratus difficilius concoquitur fitque ponderosus. constat eos, qui illo vivant, nec dysinteria nec tenesmo neque aliis morbis ventris infestari. itaque inter remedia eorum habetur.

heliotropii miraculum saepius diximus cum sole sese circumagentis etiam nubilo die; tantus sideris amor est. noctu velut desiderio contrahit caeruleum florem. genera eius duo, tricoccum et helioscopium. hoc altius, quamquam utrumque semipedalem altitudinem non excedit, ab ima radice ramosum. semen in folliculo messibus colligitur. nascitur nonnisi in pingui solo cultoque maxime, tricoccum ubique. si decoquatur, invenio cibis placere et in lacte iucundius alvum molliri et, si decocti sucus bibatur, efficacissime exinaniri. maioris sucus excipitur aestate hora sexta, miscetur cum vino, sic firmior. capitis dolores sedat rosaceo admixto. verrucas cum sale tollit sucus e folio, unde nostri verrucariam herbam appellavere, aliis cognominari effectibus digniorem. namque et serpentibus et scorpionibus resistit ex vino aut aqua mulsa, ut apollophanes et apollodorus tradunt. folia infantium destillationibus, quod siriasim vocant, inlita medentur, item contractionibus, etiam si id comitialiter accidat. decocto quoque foveri os saluberrimum est. potum id pellit taenias et renium harenas. si cuminum adiciatur, calculos frangit. decoqui cum radice oportet, quae cum foliis et hircino sebo podagris inlinitur. alterum genus, quod tricoccum appellavimus et alio nomine scorpiuron vocatur, foliis non solum minoribus, sed etiam in terram vergentibus. semen ei est effigie scorpionis caudae, quare nomen. vis ad omnia venenata et phalangia, sed contra scorpiones praecipue inlita. non feriuntur habentes, et si terram surculo heliotropii circumscribat aliquis, negant scorpionem egredi, inposita vero herba aut uda omnino respersum protinus mori. seminis grana quattuor pota quartanis prodesse dicuntur, tria vero tertianis, vel si herba ipsa ter circumlata subiciatur capiti. semen et venerem stimulat, cum melle panos discutit. verrucas hoc utique heliotropium radicitus extrahit et

excrescentia in sedibus. spinae quoque ac lumborum sanguinem corruptum trahit inlitum semen et potum in iure gallinacei decoctum aut cum beta et lente. cortex seminis liventibus colorem reddit. magi heliotropium in quartanis quater, in tertianis ter adligari iubent ab ipso aegro precarique eum, soluturum se nodos liberatum, et iacere non exempta herba.

aliud adianto miraculum: aestate viret, bruma non marcescit, aquas respuit, perfusum mersumve sicco simile est - tanta dissociatio deprehenditur - , unde et nomen a graecis alioqui frutici topiario. quidam callitrichon vocant, alii polytrichon, utrumque ab effectu. tinguit enim capillum et ad hoc decoquitur in vino cum semine apii adiecto oleo copioso, ut crispum densumque faciat; et defluere autem prohibet. duo genera eius: candidius et nigrum breviusque. id, quod maius est, polytrichon, aliqui trichomanes vocant. utrique ramuli nigro colore nitent, foliis felicis, ex quibus inferiora aspera ac fusca sunt, omnia autem contrariis pediculis, densa ex adverso inter se, radix nulla. umbrosas petras parietumque aspergines ac fontium maxime specus sequitur et saxa manantia, quod miremur, cum aquas non sentiat. calculos e corpore mire pellit frangitque, utique nigrum, qua de causa potius quam quod in saxis nasceretur a nostris saxifragum appellatum crediderim. bibitur e vino quantum terni decerpsere digiti. urinam cient, serpentium et araneorum venenis resistunt, in vino decocti alvum sistunt. capitis dolores corona ex his sedat. contra scolopendrae morsus inlinuntur, crebro auferendi, ne perurant; hoc et in alopeciis. strumas discutiunt furfuresque in facie et capitis manantia ulcera. decoctum ex his prodest suspiriosis et iocineri et lieni et felle subfusis et hydropicis. stranguriae inlinuntur et renibus cum absinthio. secundas cient et menstrua. sanguinem sistunt ex aceto aut rubi suco poti. infantes quoque exulcerati perunguntur ex iis cum rosaceo et vino. - (virus folii in urina pueri inpubis tritum quidem cum aphronitro et inlitum ventri mulierum, ne rugosus fiat, praestare dicitur.) - perdices et gallinaceos pugnaciores fieri putant in cibum eorum additis, pecorique esse utilissimos.

picris ab insigni amaritudine cognominatur, ut diximus, folio rotundo. tollit eximie verrucas. thesium quoque non dissimili amaritudine est, sed purgat alvum, in quem usum teritur ex aqua.

asphodelum de clarissimis herbarum, ut quod heroion aliqui

appellaverint, hesiodus et in silvis nasci dixit, dionysius marem ac feminam esse. defectis corporibus et phthisicis constat bulbos eius cum tisana decoctos aptissime dari, panemque ex his cum farina subactis saluberrimum esse. nicander et contra serpentes ac scorpiones vel caulem, quem anthericum vocavimus, vel semen vel bulbos dedit in vino tribus drachmis substravitque somno contra hos metus. datur et contra venenata marina et contra scolopendras terrestres. cocleae mire in campania caulem eum persequuntur et sugendo arefaciunt. folia quoque inlinuntur venenatorum vulneribus ex vino. bulbi nervis articulisque cum polenta tunsi inlinuntur. prodest et concisis ex aceto lichenas fricare, item ulceribus putrescentibus ex aqua inponere, mammarum quoque et testium inflammationibus. decocti in faece vini oculorum epiphoris supposito linteolo medentur. fere in quocumque morbo magis decoctis utuntur, item ad tibiarum taetra ulcera rimasque corporum quacumque in parte farina arefactorum. autumno autem colliguntur, cum plurimum valent. sucus quoque ex tusis expressus aut decoctis utilis fit corporis dolori cum melle, idem odorem corporis iucundum affectantibus cum iri arida et salis exiguo. folia et supra dictis medentur et strumis, panis, ulceribus in facie decocta in vino. cinis e radice alopecias emendat et rimas pedum sedisque, decoctae radicis in oleo sucus perniones et ambusta et gravitatem aurium; infunditur a contraria aure in dolore dentium. prodest et urinae pota modice radix et menstruis et lateris doloribus, item ruptis, convulsis, tussibus, drachmae pondere in vino pota. eadem et vomitiones adiuvat commanducata. semine sumpto turbatur venter. chrysermus et parotidas in vino decocta radice curavit, item strumas admixta cachry ex vino. quidam aiunt, si inposita radice pars eius in fumo suspendatur quartoque die solvatur, una cum radice arescere strumam. diocles ad podagras utroque modo, cocta crudaque, usus est, ad perniones decocta ex oleo; dedit et suffusis felle in vino et hydropicis. venerem quoque concitari cum vino et melle perunctis aut bibentibus tradidere. xenocrates et lichenas, psoras, lepras radice in aceto decocta tolli dicit, item suco cum hyoscyamo et pice liquida alarum quoque et feminum vitia; et capillum crispiorem fieri, raso prius capite, si radice ea fricetur, simos lapides renium in vino decocta potaque eximi. hippocrates semine ad impetus lienis dari

censet. iumentorum quoque ulcera ac scabiem radix inlita aut decoctae sucus ad pilum reducit. mures eadem fugantur, caverna praeclusa moriuntur.

asphodelum ab hesiodo quidam halimon appellari existimavere, quod falsum arbitror; est enim suo nomine halimon, non parvi et ipsum erroris inter auctores. alii enim fruticem esse dicunt densum, candidum, sine spina, foliis oleae, sed mollioribus; coqui haec ciborum gratia, radice tormina discuti drachmae pondere in aqua mulsa pota, item rupta, convulsa. alii olus maritimum esse dixere salsum et inde nomen, foliis in rotunditatem longis, laudatum in cibis. duorum praeterea generum, silvestre et mitius, utrumque prodesse dysintericis etiam exulceratis cum pane, stomacho vero ex aceto. ulceribus vetustis inlini crudum et vulnerum recentium impetus lenire et luxatorum pedum ac vesicae dolores. silvestri tenuiora folia, sed in iisdem remediis effectus maiores et in sananda hominum ac pecorum scabie. praeterea nitorem corpori fieri dentibusque candorem, si fricentur radice ea, semine linguae subdito sitim non sentiri. hoc quoque mandi et utraque etiam condiri. crateuas tertium quoque genus tradidit longioribus foliis et hirsutioribus, odore cupressi, nasci sub hedera maxime, prodesse opisthotonis, contractionibus nervorum tribus obolis in sextarium aquae.

acanthi, topiariae et urbanae herbae lato longoque folio crepidines marginum adsurgentiumque pulvinorum toros vestientis, duo genera sunt: aculeatum et crispum, quod brevius, alterum leve, quod aliqui paederota vocant, alii melamphyllum. huius radices ustis luxatisque mire prosunt, item ruptis, convulsis, et phthisin metuentibus, id coctae cibo, maxime tisana. podagris quoque inlinuntur tritae et calefactae, e sale calidis.

bupleuron in sponte nascentium olerum numero graeci habent, caule cubitali, foliis multis longisque, capite aneti, laudatum in cibis ab hippocrate, in medicina glaucone et nicandro. semen contra serpentes valet. folia ad secundas feminarum vel sucum ex vino inlinunt, et strumis folia cum sale et vino. radix contra serpentes datur in vino et urinae ciendae.

buprestim magna inconstantia graeci in laudibus ciborum etiam habuere, iidemque remedia tamquam contra venenum prodiderunt. et

ipsum nomen indicio est boum certe venenum esse, quos dissilire degustata fatentur. quapropter nec de hac plura dicemus. est vero causa, quare venena monstremus inter gramineas coronas! nisi libidinis causa expetenda alicui videtur, quam non aliter magis accendi putant quam pota ea.

elaphoboscon ferulaceum est, geniculatum digiti crassitudine, semine corymbis dependentibus silis effigie, set non amaris, foliis olusatri. et hoc laudatum in cibis - quippe etiam conditum prorogatur - , ad urinam ciendam, lateris dolores sedandos, rupta, convulsa sananda, inflationes discutiendas colique tormenta, contra serpentium omniumque aculeatorum ictus, quippe fama est, hoc pabulo cervos resistere serpentibus. fistulas quoque radix nitro addito inlita sanat, siccanda autem in eo usu prius est, ne suco suo madeat, qui contra serpentium ictus non facit deteriorem eam.

scandix quoque in olere silvestri a graecis ponitur, ut ophion et erasistratus tradunt. item decocta alvum sistit, semine singultus confestim ex aceto sedat. inlinitur ambustis, urinas ciet. decoctae sucus prodest stomacho, iocineri, renibus, vesicae. haec est quam aristophanes euripidi poetae obicit ioculariter: matrem eius ne olus quidem legitimum venditasse, sed scandicem. eadem erat enthryscum, si teneriora folia et odoratiora haberet. peculiaris laus eius, quod fatigato venere corpori succurrit marcentesque iam senio coitus excitat. sistit profluvia alba feminarum.

et iasine olus silvestre habetur, in terra repens, cum lacte multo, florem fert candidum; conchylium vocant. et huius eadem commendatio ad stimulandos coitus. cruda ex aceto in cibis et mulieribus lactis ubertatem praestat. salutaris est phthisin sentientibus. infantium capiti inlita nutrit capillum tenacioremque eius cutem efficit.

estur et caucalis feniculo similis, brevi caule, flore candido, cordi utilis. sucus quoque eius bibitur, stomacho perquam commendatus et urinae calculisque et harenis pellendis et vesicae pruritibus. extenuat et lienis, iocineris reniumque pituitas. semen menses feminarum adiuvat bilemque a partu siccat. datur et contra profluvia geniturae viris. chrysippus et conceptionibus eam putat conferre multum. bibitur in vino ieiunis. inlinitur et contra venena marinorum, sicut petrichus in carmine suo significat.

his adnumerant et sium latius apio, in aqua nascens, pinguius nigriusque, copiosum semine, sapore nasturtii. prodest urinis, renibus, lienibus mulierumque mensibus, sive ipsum in cibo sumptum sive ius decocti sive semine in vino drachmis duabus. calculos rumpit aquisque, quae gignunt eos, resistit. dysintericis prodest infusum, item inlitum lentigini et mulierum vitiis in facie noctu inlitum, lomentoque cutem emendat et ramices lenit, equorum etiam scabiem.

sillybum chamaeleonti albo similem, aeque spinosam, ne in cilicia quidem aut syria aut phoenice, ubi nascitur, coquere tanti est. ita operosa eius culina traditur. in medicina nullum usum habet.

scolymum quoque in cibos recipit oriens et alio nomine limoniam appellat. frutex est numquam cubitali altior tristisque foliorum aculeis, radice nigra, sed dulci, eratostheni quoque laudata in pauperis cena. urinam ciere praecipue traditur, sanare lichenas et lepras ex aceto, venerem stimulare in vino hesiodo et alcaeo testibus, qui florente ea cicadas acerrimi cantus esse et mulieres libidinis avidissimas virosque in coitum pigerrimos scripsere, velut providentia naturae hoc adiumento tunc valentissimo. item graveolentiam alarum emendat radicis emedullatae uncia, in vini falerni heminis tribus decocta ad tertias et a balineo ieiuno itemque post cibum cyathis singulis pota. mirum est, quod xenocrates promittit experimento, vitium id ex alis per urinam effluere.

estur et soncos - ut quem theseo apud callimachum adponat hecale - uterque, albus et niger. lactucae similes ambo, nisi spinosi essent, caule cubitali, anguloso, intus cavo, sed qui fractus copioso lacte manet. albus, cui e lacte nitor, utilis orthopnoicis lactucarum modo ex embammate. erasistratus calculos per urinam pelli eo monstrat et oris graveolentiam commanducato corrigi. sucus trium cyathorum mensura in vino albo et oleo calefactus adiuvat partus ita, ut a potu ambulent gravidae. datur et in sorbitione. ipse caulis decoctus facit lactis abundantiam nutricibus coloremque meliorem infantium, utilissimus his, quae lac sibi coire sentiant. instillatur auribus sucus, calidusque in stranguria bibitur cyathi mensura et in stomachi rosionibus cum semine cucumeris nucleisque pineis. inlinitur et sedis collectionibus. bibitur contra serpentes scorpionesque, radix vero inlinitur. eadem decocta in oleo et punici mali calyce, aurium morbis

praesidium est. haec omnia ex albo. cleemporus nigro prohibet vesci ut morbos faciente, de albo consentiens. agathocles etiam contra sanguinem tauri demonstrat sucum eius, refrigeratoriam tamen vim esse convenit nigro et hac causa inponendum cum polenta. zenon radicem albi in stranguria suadet.

condrion sive condrille folia habet intubi, circumrosis similia, caulem minus pedalem, suco madentem amaro, radice fabae simili, aliquando numerosa. habet proximam terrae mastichen tuberculo fabae, quae adposita feminarum menses trahere dicitur. tusa cum radicibus tota dividitur in pastillos contra serpentes, argumento probabili, siquidem mures agrestes laesi ab his hanc esse dicuntur. sucus ex vino coctae alvum sistit. eadem palpebrarum pilos inordinatissimos pro cummi efficacissime regit. dorotheus stomacho et concoctionibus utilem carminibus suis pronuntiavit. alioqui feminis et oculis generationique virorum contrariam putavere.

inter ea, quae temere manduntur, et boletos merito posuerim, opimi quidem hos cibi, sed inmenso exemplo in crimen adductos, veneno tiberio claudio principi per hanc occasionem ab coniuge agrippina dato, quo facto illa terris venenum alterum sibique ante omnes neronem suum dedit. quorundam ex iis facile noscuntur venena diluto rubore, rancido aspectu, livido intus colore, rimosa stria, pallido per ambitum labro. non sunt haec in quibusdam, siccique et veris similes, veluti guttas in vertice albas ex tunica sua gerunt. vulvam enim terra ob hoc prius gignit, ipsum postea in vulva, ceu in ovo est luteum. nec tunicae minor gratia in cibo infantis boleti. rumpitur haec primo nascente, mox increscente in pediculi corpus absumitur, rarumque ut geminus ex uno pede. origo prima causaque e limo et acescente suco madentis terrae aut radicis fere glandiferae, initioque spuma lentior, dein corpus membranae simile, mox partus, ut diximus. illa pernicialia quot probandi alia aliis signa! si caligaris clavus ferrive aliqua robigo aut panni marcor adfuerit nascenti, omnem ilico sucum alienum saporemque in venenum concoqui deprehendisse qui nisi agrestes possunt atque qui colligunt ipsi alia vitia ne hi quidem, si serpentis caverna iuxta fuerit, si patescentem primo adhalaverit, capaci venenorum cognatione ad virus accipiendum. itaque caveri conveniat prius, quam se condant serpentes. signa erunt tot herbae, tot arbores fruticesque ab emersu

earum ad latebram usque vernantes et vel fraxini tantum folia nec postea nascentia nec ante decidentia. et boletis quidem ortus occasusque omnis intra dies septem est.

fungorum lentior natura et numerosa genera, sed origo non nisi ex pituita arborum. tutissimi qui rubent callo, minus diluto rubore quam boleti; mox candidi, velut apice flaminis insignibus pediculis; tertium genus suilli, venenis accommodatissimi. familias nuper interemere et tota convivia, annaeum serenum, praefectum neronis vigilum, et tribunos centurionesque. quae voluptas tam ancipitis cibi quidam discrevere arborum generibus, fico ferulave et cummim ferentibus, non item taxo aut robore, cupresso, ut diximus. sed ista quis spondet in venalibus omnium colos lividus; hic habebit veneni argumentum, quo similior fuerit arborum cortici. adversus haec diximus remedia dicemusque; interim sunt aliqua et in iis. glaucias stomacho utiles putat boletos. siccantur pendentes suilli, iunco transfixi, quales e bithynia veniunt. hi fluctionibus alvi, quas rheumatismos vocant, medentur excrescentibusque in sede carnibus; minuunt enim eas et tempore absumunt, item lentiginem et mulierum in facie vitia. lavantur etiam, ut plumbum, in oculorum medicamenta. sordidis ulceribus et capitis eruptionibus, canum morsibus ex aqua inlinuntur. libet et coquendi dare aliquas communes in omni eo genere observationes, quando ipsae suis manibus deliciae praeparant hunc cibum solum et cogitatione ante pascuntur sucinis novaculis aut argenteo apparatu comitante. noxii erunt fungi, qui in coquendo duriores fient; innocentiores, qui nitro addito coquentur, utique si percoquantur. tutiores fiunt cum carne cocti aut cum pediculo piri; prosunt et pira confestim sumpta. debellat eos et aceti natura contraria iis.

imbribus proveniunt omnia haec, imbre et silphium venit primo, ut dictum est. ex syria nunc hoc maxime inportatur, deterius parthico, sed medico melius, extincto omni cyrenaico, ut diximus. usus silphii in medicina foliorum ad purgandas vulvas pellendosque emortuos partus; decocuntur in vino albo et odorato, ut bibatur mensura acetabuli a balineis. radix prodest arteriis exasperatis, collectionibus sanguinis inlinitur. sed in cibis concoquitur aegre, inflationes facit et ructus. urinae quoque noxia est, suggillatis cum vino et oleo amicissima et cum cera strumis. verrucae sedis crebriore eius suffitu

cadunt.

laser e silphio profluens quo diximus modo inter eximia naturae dona numeratum plurimis compositionibus inseritur, per se autem algores excalfacit, potum nervorum vitia extenuat. feminis datur in vino et lanis mollibus admovetur vulvae ad menses ciendos. pedum clavos circumscariphatos ferro mixtum cerae extrahit. urinam ciet ciceris magnitudine dilutum. andreas spondet copiosius sumptum nec inflationes facere et concoctioni plurimum conferre senibus et feminis, item hieme quam aestate utilius, et tum aquam bibentibus. cavendum, ne qua sit exulceratio intus. ab aegritudine recreationi efficax in cibo; tempestive enim datum cauterii vim optinet, adsuetis etiam utilius quam expertibus. extera corporum indubitatas confessiones habent: venena telorum et serpentium extinguit potum; ex aqua vulneribus his circumlinitur, scorpionum tantum plagis ex oleo, ulceribus vero non maturescentibus cum farina hordeacia vel fico sicca, carbunculis cum ruta vel cum melle vel per se visco superlitum, ut haereat; sic et ad canis morsus; excrescentibus circa sedem cum tegmine punici mali ex aceto decoctum, clavis, qui volgo morticini appellantur, nitro mixto. alopecias nitro ante subactas replet cum vino et croco aut pipere ac murium fimo et aceto. perniones ex vino fovet et ex oleo coctum; inponitur sic et callo, clavis pedum superrasis; praecipuae utilitatis contra aquas malas, pestilentes tractus vel dies; in tussi, uva; fellis veteri suffusioni, hydropicis, raucitatibus; confestim enim purgat fauces vocemque reddit. podagras in spongea dilutum posca lenit. pleuriticis in sorbitione vinum poturis datur, contractionibus, opisthotonicis ciceris magnitudine cera circumlitum. in angina gargarizatur. anhelatoribus et in tussi vetusta cum porro ex aceto datur; at ex aceto his, qui coagulum lactis sorbuerint, praecordiorum vitiis syntecticis, comitialibus cum vino, in aqua mulsa linguae paralysi. coxendicibus et lumborum doloribus cum decocto melle inlinitur. non censuerim, quod auctores suadent, cavernis dentium in dolore inditum cera includi, magno experimento hominis, qui se ea de causa praecipitavit ex alto. quippe tauros inflammat naribus inlitis, serpentes avidissimas vini admixtum rumpit; ideo nec inungui suaserim, cum attico licet melle praecipiant. quas habeat utilitates admixtum aliis, inmensum est referre, et nos simplicia tractamus, quoniam in his naturam esse

apparet, in illis coniecturam saepius fallacem, nulli satis custodita in mixturis concordia naturae ac repugnantia. qua de re mox plura.

non esset mellis auctoritas in pretio minor quam laseris, ni ubique nasceretur. illud ipsa fabricata est natura, sed huic gignendo animal, ut diximus, innumeros ad usus, si quotiens misceatur aestimemus. prima propolis alvorum, de qua diximus, aculeos et omnia infixa corpori extrahit, tubera discutit, dura concoquit, dolores nervorum mulcet ulceraque iam desperantia cicatricem cludit. mellis quidem ipsius natura talis est, ut putrescere corpora non sinat. iucundo sapore atque non aspero, alia quam salis natura, faucibus, tonsillis, anginae omnibusque oris desideriis utilissimum arescentique in febribus linguae, iam vero peripneumonicis, pleuriticis decoctum, item vulneribus, a serpente percussis et contra venena, fungos, paralyticis in mulso, quamquam suae mulso dotes constant. mel auribus instillatur cum rosaceo, lendes et foeda capitis animalia necat. usus despumati semper aptior, stomachum tamen inflat, bilem auget, fastidium creat. et oculis per se inutile aliqui arbitrantur; rursus quidam angulos exulceratos melle tangi suadent. mellis causas atque differentias nationesque et indicationem in apium ac deinde florum natura diximus, cum ratio operis dividi cogeret miscenda rursus naturam rerum pernoscere volentibus.

in mellis operibus et aqua mulsa debet tractari. duo genera eius, subitae ac recentis, alterum inveteratae. repentina despumato melle praeclaram utilitatem habet in cibo aegrotantium levi, hoc est alica eluta, viribus recreandis, ore stomachoque mulcendo, ardores refrigerando. frigidam enim dari utilius ventri molliendo. invenio apud auctores, decoctum bibendum alsiosis, item animi humilis et praeparci, quos illi dixere micropsychos. ut est ratio subtilitatis inmensae a platone descendens, corpusculis rerum levibus scabris, angulosis rotundis, magis aut minus ad aliorum naturam accedentibus, ideo non eadem omnibus amara aut dulcia esse; sic et in lassitudine proniores esse ad iracundiam et in siti. ergo et haec animi asperitas, seu potius animae, dulciore suco mitigatur lenito transitu spiritus et molliore facto meatu, ne scindat euntem redeuntemque. experimenta in se cuique: nullius non ira luctusque, tristitia et omnis animi impetus cibo mollitur, ideoque observanda sunt quae non solum corporum medicinam, sed et morum habent.

aqua mulsa et tussientibus utilis traditur, calefacta invitat vomitiones, contra venenum psimithii salutaris addito oleo, item contra hyoscyami cum lacte maxime asinino, et contra halicacabi, ut diximus. infunditur et auribus et genitalium fistulae. vulvis inponitur cum pane molli, subitis tumoribus, luxatis leniendisque omnibus. inveteratae usum damnavere posteri, minus innocentem aqua minusque vino firmum; longa tamen vetustate transit in vinum, ut constat inter omnes, stomacho inutilissimum nervisque contrarium.

semper mulsum ex vetere vino utilissimum, facillimeque cum melle concorporatur, quod in dulci numquam evenit. ex austero factum non inflat stomachum, neque ex decocto melle, minusque implet, quod fere evenit; adpetendi quoque revocat aviditatem cibi. alvum mollit frigido potu, pluribus calido sistit, corpora auget. multi senectam longam mulsi tantum intrita toleravere, neque alio ullo cibo, celebri pollionis romili exemplo. centensimum annum excedentem eum Divus Augustus hospes interrogavit, quanam maxime ratione vigorem illum animi corporisque custodisset. at ille respondit: “intus mulso, foris oleo”. Varro regium cognominatum arquatorum morbum tradit, quoniam mulso curetur.

melitites quo fieret modo ex musto et melle, docuimus in ratione vini. saeculis iam fieri non arbitror hoc genus, inflationibus obnoxium. solebat tamen inveteratum alvi causa dari in febre, item articulario morbo et nervorum infirmitate laborantibus et mulieribus vini abstemiis.

mellis naturae adnexa cera est, de cuius origine, bonitate, nationibus suis locis diximus. omnis autem mollit, calefacit, explet corpora. recens melior. datur in sorbitione dysintericis, favique ipsi in pulte alicae prius tostae. adversatur lactis naturae, ac milii magnitudine decem grana cerae hausta non patiuntur coagulari lact in stomacho. si inguen tumeat, albam ceram in pube fixisse remedio est.

nec huius usus, quos mixta aliis praestat, enumerare possit medicina, sicuti nec ceterorum, quae cum aliis prosunt. ista, ut diximus, ingeniis constant. non fecit ceratum, malagmata, emplastra, collyria, antidota parens illa ac divina rerum artifex; officinarum haec, immo verius avaritiae commenta sunt. naturae quidem opera absoluta atque perfecta gignuntur, paucis ex causa, non ex coniectura rebus adsumptis, ut suco aliquo sicca temperentur ad meatus aut

corpore alio umentia ad nexus. scripulatim quidem colligere ac miscere vires non coniecturae humanae opus, sed inpudentiae est. nos nec indicarum arabicarumque mercium aut externi orbis adtingimus medicinas. non placent remediis tam longe nascentia, non nobis gignuntur, immo ne illis quidem; alioqui non venderent. odorum causa unguentorumque et deliciarum, si placet, etiam superstitionis gratia emantur, quoniam ture supplicamus et costo. salutem quidem sine istis posse constare, vel ob id probabimus, ut tanto magis sui delicias pudeat.

sed medicinas e floribus coronamentisque et hortensiis quaeque mandantur herbae persecuti quonam modo frugum omittimus nimirum et has indicare conveniat. in primis sapientissima animalium esse constat, quae fruge vescantur. siliginis grana combusta et trita in vino ammineo, oculis inlita epiphoras sedant, tritici vero ferro combusta iis, quae frigus usserit, praesentaneo sunt remedio. farina tritici ex aceto cocta nervorum contractionibus, cum rosaceo vero et fico sicca myxisque decoctis furfures tonsillis faucibusque gargarizatione prosunt. sex. pomponius, praetorii viri pater, hispaniae citerioris princeps, cum horreis suis ventilandis praesideret, correptus dolore podagrae mersit in triticum super genua sese, levatusque siccatis pedibus mirabilem in modum hoc postea remedio usus est. vis tanta est, ut cados plenos siccet. paleam quoque tritici vel hordei calidam inponi ramicum incommodis experti iubent, quaque decoctae sint aqua fovere. est in farre vermiculus teredini similis, quo cavis dentium cera incluso cadere vitiati dicuntur, etiam si fricentur. olyram arincam diximus vocari. hac decocta fit medicamentum, quod aegyptii atheram vocant, infantibus utilissimum, sed et adultos inlinunt eo.

farina ex hordeo et cruda et decocta collectiones impetusque discutit, lenit concoquitque. decoquitur alias in mulsa aqua aut fico sicca; at iocineris doloribus, cum pus concoqui opus est, in vino; cum inter coquendum discutiendumque cura est, tunc in aceto melius aut in faece aceti aut cotoneis pirisve decoctis; ad multipedae morsus cum melle, ad serpentium in aceto et contra suppurantia, ad extrahendas suppurationes ex posca addita resina gallica; ad concoctiones vero et ulcera vetera cum resina, ad duritias cum fimo columbarum aut fico sicca aut cinere, ad nervorum inflammationes

aut intestinorum vel laterum dolores cum papavere aut meliloto, et quotiens ab ossibus caro recedit, ad strumas cum pice et inpubis pueri urina, cum oleo. cum graeco feno contra praecordiorum tumores vel in febribus cum melle vel adipe vetusto. suppuratis triticea farina multo lenior. nervis cum hyoscyami suco inlinitur, ex aceto et melle lentigini. zeae, ex qua alicam fieri diximus, efficacior etiam hordeacea videtur, trimenstris mollior, ex vino rubro ad scorpionum ictus tepida et sanguinem excreantibus, item arteriae, tussi cum caprino sebo aut butyro. ex feno graeco, mollissima omnium, ulcera manantia sanat et furfures corporis, stomachi dolores, pedes et mammas cum vino et nitro cocta. aerina magis ceteris purgat ulcera vetera et gangraenas cum raphano et sale, ex aceto lichenas, lepras cum sulpure vivo, et capitis dolores cum adipe anserino inposita fronti. strumas et panos concoquit cum fimo columbino et lini semine decocta in vino.

de polentae generibus in frugum loco satis diximus. medicorum ratione a farina hordei distat eo, quod torretur, ob id stomacho utilis. alvum sistit impetusque rubicundi tumoris; et oculis inlinitur et capitis dolori cum menta aut alia refrigerante herba, item pernionibus et serpentium plagis, item ambustis ex vino, inhibetque pusulas.

farina in pollinem subacta vim extrahendi umoris habet adeo, ut cruore suffusis in fascias usque sanguinem perducat, efficacius in sapa. inponitur et pedum callo clavisque. nam cum oleo vetere ac pice decocto polline condylomata et alia omnia sedis vitia quam maxime calido mirabilem in modum curantur. pulte corpus augetur. farina, qua chartae glutinantur, sanguinem excreantibus datur tepida sorbenda efficaciter.

alica res romana est et non pridem excogitata; alioqui non tisanae potius laudes scripsissent graeci. nondum arbitror pompei magni aetate in usu fuisse, et ideo vix quicquam de ea scriptum ab asclepiadis schola. esse quidem eximie utilem nemo dubitat, sive eluta detur ex aqua mulsa sive in sorbitione decocta sive in pulte. eadem in alvo sistenda torretur, dein favorum cera coquitur, ut supra diximus. peculiariter tamen longo morbo ad tabitudinem redactis subvenit ternis eius cyathis in sextarium aquae sensim decoctis, donec omnis aqua consumatur, postea sextario lactis ovilli aut caprini addito per continuos dies ... , mox adiecto melle. tali genere

sorbitionis emendantur syntexis.

milio sistitur alvus, discutiuntur tormina, in quem usum torretur ante. nervorum doloribus et aliis fervens in sacco inponitur, neque aliud utilius, quoniam levissimum mollissimumque est et caloris capacissimum. itaque talis usus eius est ad omnia, quibus calor profuturus est. farina eius cum pice liquida serpentium et multipedae plagis inponitur.

panicum diocles medicus mel frugum appellavit. effectus habet quos milium. in vino potum prodest dysintericis. similiter his, quae vaporanda sunt, excalfactum inponitur. sistit alvum in lacte caprino decoctum et bis die haustum. sic prodest et ad tormina.

sesima trita in vino sumpta inhibet vomitiones. aurium inflammationi inlinitur et ambustis. eadem efficit et dum in herba est. hoc amplius oculis inponitur decocta in vino. stomacho inutilis in cibis et animae gravitatem facit. stellionum morsibus resistit, item ulceribus, quae cacoe+the vocant, et auribus oleum, quod ex ea fit, prodesse diximus. sesamoides a similitudine nomen accepit, grano amaro, folio minore. nascitur in glareosis. detrahit bilem in aqua potum semen, inlinitur igni sacro, discutit panos. est etiamnum aliud sesamoides, anticyrae nascens, quod ideo aliqui anticyricon vocant, cetera simile erigeronti herbae, de qua dicemus suo loco, grano sesamae. datur in vino dulci ad detractiones quantum tribus digitis capitur. miscent ibi et ellebori albi unum et dimidium obolum, purgationem eam adhibentes maxime insaniae melancholicae, comitialibus, podagris. et per se drachmae pondere exinanit.

hordeum optimum quod candidissimum. sucus decocti in aqua caelesti digeritur in pastillos, ut infundantur exulceratis interaneis et vulvis. cinis eius ambustis inlinitur et carnibus, quae recedunt ab ossibus, et eruptionibus pituitae, muris aranei morsibus. idem adsperso sale ac melle candorem dentibus, suavitatem oris facit. eos, qui pane hordeacio utuntur, morbo pedum temptari negant. novem granis furunculum si quis circumducat, singulis ter manu sinistra, et omnia in ignem abiciat, confestim sanari aiunt. est et herba phoenice appellata a graecis, nostris vero hordeum murinum; haec trita e vino pota praeclare ciet menses.

tisanae, quae ex hordeo fit, laudes uno volumine condidit hippocrates, quae nunc omnes in alicam transeunt. quanto

innocentior alica! hippocrates tamen sorbitionis gratia laudavit, quoniam lubrica ex facili hauriretur, quoniam sitim arceret, quoniam in alvo non intumesceret, quoniam facile redderetur et adsuetis hic cibus solus in febri bis die posset dari, tantum remotus ab istis, qui medicinam fame exercent. sorbitionem tamen dari totam vetuit aliudve quam sucum tisanae; item vetuit, quamdiu pedes frigidi essent, tunc quidem nec potionem dandam. fit et ex tritico glutinosior arteriaeque exulceratae utilior.

amylon hebetat oculos, et gulae inutile, contra quam creditur. item alvum sistit, epiphoras oculorum inhibet et ulcera sanat, item pusulas et fluctiones sanguinis. genas duras emollit. datur cum ovo iis, qui sanguinem reiecerint, in vesicae vero dolore semuncia amyli cum ovo et passi tribus ovis subfervefacta a balineo. quin et avenacea farina decocta in aceto naevos tollit.

panis hic ipse, quo vivitur, innumeras paene continet medicinas. ex aqua et oleo aut rosaceo mollit collectiones; ex aqua mulsa ad duritias valde mitigandas, ex vino ad discutienda aut quae praestringi opus sit et, si magis etiamnum, ex aceto, adversus acutas pituitae fluctiones, quas graeci rheumatismos vocant, item ad percussa, luxata, ad omnia autem fermentatus, qui vocatur autopyrus, utilior. inlinitur et paronychiis et callo pedum in aceto. vetus aut nauticus panis tusus atque iterum coctus sistit alvum. vocis studiosis et contra destillationes siccum esse primo cibo utilissimum est. sitanius, hoc est e trimestri, incussa in facie aut desquamata cum melle aptissime curat. candidus aegris aqua calida frigidave madefactus levissimum cibum praebet. oculorum tumori ex vino inponitur; sic et pusulis capitis aut adiecta arida myrto. tremulis panem ex aqua esse ieiunis statim a balineis demonstrant. quin et gravitatem odorum in cubiculis ustus emendat et vini in saccos additus.

et faba auxiliatur. namque solida fricta fervensque in acre acetum coniecta torminibus medetur. in cibo fresa et cum alio cocta contra deploratas tusses suppurationesque pectorum cotidiano cibo sumitur, et commanducata ieiuno ore et ad furunculos maturandos discutiendosve inponitur, et in vino decocta ad testium tumores, ad genitalia. lomento quoque ex aceto decocto tumores maturat atque aperit, item livoribus, combustis medetur. voci eam prodesse auctor est M. Varro. fabalium etiam siliquarumque cinis ad coxendices, ad

nervorum veteres dolores cum adipis suilli vetustate prodest. et per se cortices decocti ad tertias sistunt alvum.

lens optima quae facillime coquitur et ea, quae maxime aquam absorbet. aciem quidem oculorum obtundit et stomachum inflat, sed alvum sistit in cibo magisque caelesti aqua discocta; eadem solvit minus percocta. pusulas ulcerum rumpit; ea, quae intra os sunt, purgat et adstringit. collectiones omnes inposita sedat maximeque exulceratas et rimosas, oculorum autem epiphoras cum meliloto aut cotoneo. contra suppurantia cum polenta inponitur. decoctae sucus ad oris exulcerationes et genitalium adhibetur, ad sedem cum rosaceo aut cotoneo, in iis, quae acrius remedium exigant, cum putamine punici melle modico adiecto. ad id demum, ne celeriter inarescat, adiciunt et betae folia. inponitur et strumis, panis vel maturis vel maturescentibus ex aceto discocta, rimis ex aqua mulsa et gangraenis cum punici tegmine; item podagris cum polenta et vulvis et renibus, pernionibus, ulceribus difficile cicatricem trahentibus. propter dissolutionem stomachi xxx grana lentis devorantur. in choleris quoque et dysinteria efficacior est in tribus aquis cocta, in quo usu melius semper eam torrere ante et tundere, ut quam tenuissima detur vel per se vel cum cotoneo malo aut piris aut myrto aut intubo erratico aut beta nigra aut plantagine. pulmoni est inutilis et capitis dolori nervosisque omnibus et felli, nec somno facilis, at pusulis utilis ignique sacro et mammis in aqua marina decocta, in aceto autem duritias et strumas discutit. stomachi quidem causa polentae modo potionibus inspergitur. quae sint ambusta, aqua semicocta curant, postea trita et per cribrum effuso furfure, mox procedente curatione addito melle. ex posca coquitur ad guttura. est et palustris lens, per se nascens in aqua non profluenti, refrigeratoriae naturae, propter quod collectionibus inlinitur et maxime podagris et per se et cum polenta. glutinat et interanea procidentia.

est silvestris elelisphacos dicta a graecis, aliis sphacos dicta, sativa lente leviore et folio minore atque sicciore et odoratiore. est et alterum genus eius silvestrius, odore gravi; haec mitior folia habet cotonei mali effigie, set minora et candida, quae cum ramis decocuntur. menses ciet et urinas, et pastinacae marinae ictus sanat, torporem autem obducit percusso loco. bibitur cum absinthio et dysinteriae. cum vino eadem commorantes menses trahit, abundantes

sistit decocto eius poto. per se inposita herba vulnerum sanguinem cohibet. purgat et serpentium morsus et, si in vino decoquatur, pruritus testium sedat. nostri, qui nunc sunt, herbarii elelisphacum graece, salviam latine vocant, mentae similem, canam, odoratam. partus emortuos ea adposita extrahunt, item vermes ulcerum auriumque.

cicer et silvestre est, foliis simile, odore gravi. si largius sumatur, alvus solvitur et inflatio contrahitur et tormina. tostum salubrius habetur. cicercula etiamnum magis in alvo proficit. farina utriusque ulcera manantia capitis sanat, efficacius silvestris, item comitiales et iocinerum tumores et serpentium ictus. ciet menses et urinas, grano maxime. emendat et lichenas et testium inflammationes, regium morbum, hydropicos. laedunt omnia haec genera exulceratam vesicam et renes. gangraenis utiliora cum melle et his, quae cacoe +the vocantur. verrucarum in omni genere prima luna singulis granis singulas tangunt, eaque grana in linteolo deligata post se abiciunt, ita fugari vitium arbitrantes. nostri praecipiunt arietinum in aqua cum sale discoquere, ex eo bibere cyathos binos in difficultatibus urinae; sic et calculos pelli morbumque regium. eiusdem foliis sarmentisque decoctis aqua quam maxime calida morbos pedum lenit, et ipsum calidum tritumque inlitum. columbini decocti aqua horrorem tertianae et quartanae minuere creditur. nigrum autem cum gallae dimidio tritum oculorum ulceribus ex passo medetur.

de ervo quaedam in mentione eius diximus, nec potentiam ei minorem veteres quam brassicae tribuere contra serpentium ictus ex aceto, ad crocodilorum hominumque morsum. si quis ervum cotidie ieiunus edit, lienem eius absumi certissimi auctores adfirmant. farina eius varos, sed et maculas cutis toto corpore emendat. serpere ulcera non patitur, in mammis efficacissimum. carbunculos rumpit ex vino. urinae difficultates, inflationem, vitia iocineris, tenesmon et quae cibum non sentiant, atropha appellata, tostum et in nucis abellanae magnitudinem melle collectum devoratumque corrigit; item impetigines ex aceto coctum et quarto die solutum. panos in melle inpositum suppurare prohibet. aqua decocti perniones et pruritus sanat fovendo. quin et universo corpori, si quis cotidie ieiunus biberit, meliorem fieri colorem existumant. cibis idem hominis alienum. vomitiones movet, alvum turbat, capiti et stomacho

onerosum; genua quoque degravat. sed madefactum pluribus diebus mitescit, bubus iumentisque utilissimum. siliquae eius virides prius, quam indurescant, cum suo caule foliisque contritae capillos nigro colore inficiunt.

lupini quoque silvestres sunt, omni modo minores praeterquam amaritudine. ex omnibus, quae eduntur, sicco nulli minus ponderis est nec plus utilitatis. mitescunt cinere aut aqua calidis. colorem hominis frequentiores in cibo exhilarant, amari contra aspidas valent. ulcera atra aridi decorticatique triti supposito linteolo ad vivum corpus redigunt. strumas, parotidas in aceto cocti discutiunt. sucus decoctorum cum ruta et pipere vel in febri datur ad ventris animalia pellenda minoribus xxx annorum, pueris vero etiam inpositi in ventrem ieiunis prosunt, et alio genere tosti vel in defruto poti vel ex melle sumpti. iidem aviditatem cibi faciunt, fastidium detrahunt. farina eorum aceto subacta papulas pruritusque in balneis inlita cohibet et per se siccat ulcera. livores emendat, inflammationes cum polenta sedat. silvestrium efficacior vis contra coxendicum et lumborum debilitatem. ex iisdem decocta lentigines et cutem foventium corrigunt, si vero ad mellis crassitudinem decoquantur, vel sativi vitiligines nigras et lepras emendant. sativi quoque rumpunt carbunculos inpositi, panos, strumas minuunt aut maturant cocti ex aceto, cicatricibus candidum colorem reddunt; si vero caelesti aqua discoquantur, sucus ille zmegma fit, quo fovere gangraenas, eruptiones pituitae, ulcerum manantia expediat, ad lienem bibere et cum melle haerentibus menstruis. lieni crudi cum fico sicca triti ex aceto inponuntur. radix quoque in aqua decocta urinas pellit. medentur pecori cum chamaeleone herba decocti, aqua in potum colata. sanant et scabiem quadripedum omnium in amurca decocti vel utroque liquore postea mixto. fumus crematorum culices necat.

irionem inter fruges sesamae similem esse diximus et a graecis erysimon vocari, galli velam appellant. est autem fruticosum, foliis erucae, angustioribus paulo, semine nasturtii, utilissimum tussientibus cum melle et in thoracis purulentis excreationibus. datur et regio morbo et lumborum vitiis, pleuriticis, torminibus, coeliacis. inlinitur vero parotidum et carcinomatum malis, testium ardoribus ex aqua, alias cum melle, infantibus quoque utilissimum, item sedis vitiis et articulariis morbis cum melle et fico, contra venena etiam

efficax potu. medetur et suspiriosis, item fistulis cum axungia vetere ita, ne intus addatur.

horminum semine, ut diximus, cumino simile est, cetero porro, dodrantali altitudine, duorum generum: alteri semen nigrius et oblongum - hoc ad venerem stimulandam et ad oculorum argema, albugines - , alteri candidius semen et rotundius. utroque tuso extrahuntur aculei ex corpore per se inlito vel ex aqua, folia ex aceto inposita panos per se vel cum melle discutiunt, item furunculos, priusquam capita faciant, omnesque acrimonias.

quin et ipsae frugum pestes in aliquo sunt usu. infelix dictum est a vergilio lolium, hoc tamen molitum, ex aceto coctum inpositumque sanat inpetigines celerius, quo saepius mutatum est. medetur et podagrae aliisque doloribus cum oxymelite. ratio haec: aceti sextario uno diluuntur mellis unciae duae. iustum est ita temperatis sextariis tribus decoctae farinae lolii sextarios ... usque ad crassitudinem, calidumque inponi dolentibus membris. eadem farina extrahit ossa fracta.

miliaria appellatur herba, quae necat milium. haec trita et cornu cum vino infusa podagras iumentorum dicitur sanare.

bromos semen est spicam ferentis herbae. nascitur inter vitia segetis avenae genere, folio et stipula triticum imitatur; in cacuminibus dependentes parvolas veluti locustas habet. semen utile ad cataplasmata, ad quae hordeum et similia. prodest tussientibus sucus.

orobanchen appellavimus necantem ervum et legumina; alii cynomorion eam appellant a similitudine canini genitalis. cauliculus est sine foliis, pinguis, rubens. estur et per se et in patinis, cum tenera est, decocta.

et leguminibus innascuntur bestiolae venenatae, quae manus pungunt et periculum vitae adferunt, solipugarum generis. adversus has omnia eadem medentur, quae contra araneos et phalangia demonstrantur. et frugum quidem haec sunt in usu medico.

ex iisdem fiunt et potus, zythum in aegypto, caelia et cerea in hispania, cervesia et plura genera in gallia aliisque provinciis, quorum omnium spuma cutem feminarum in facie nutrit. nam quod ad potum ipsum attinet, praestat ad vini transire mentionem atque a vite ordiri medicinas arborum.

LIBER XXIII

peracta cerealium in medendo quoque natura est omniumque, quae ciborum aut florum odorumve gratia proveniunt supina tellure. non cessit iis pomona partesque medicas et pendentibus dedit, non contenta protegere arborumque umbra alere quae diximus, immo velut indignata plus auxili inesse his, quae longius a caelo abessent quaeque postea coepissent; primum enim homini cibum fuisse inde, et sic inducto caelum spectare, pascique et nunc ex se posse sine frugibus. ergo, hercule, artes in primis dedit vitibus, non contenta delicias etiam et odores atque unguenta omphacio et oenanthe ac massari, quae suis locis diximus, nobiliter instruxisse. ‘plurimum, inquit, homini voluptatis ex me est. ego sucum vini, liquorem olei gigno, ego palmas et poma totque varietates, neque, ut tellus, omnia per labores, aranda tauris, terenda areis, deinde saxis, ut quando quantove opere cibi fiant at ex me parata omnia nec cura laboranda, sed sese porrigentia ultro et, si pigeat attingere, etiam cadentia’. certavit ipsa secum plusque utilitatis causa genuit etiam quam voluptatis.

folia vitium et pampini capitis dolores inflammationesque corporum mitigant cum polenta, folia per se ardores stomachi ex aqua frigida, cum farina vero hordei articularios morbos. pampini triti et inpositi tumorem omnem siccant, sucus eorum dysintericis infusus medetur. lacrima vitium, quae veluti cummis est, lepras et lichenas et psoras nitro ante praeparatas sanat. eadem cum oleo saepius pilis inlitis psilotri effectum habet, maximeque quam virides accensae vites exudant, qua et verrucae tolluntur. pampini sanguinem excreantibus et mulierum a conceptu defectioni diluti potu prosunt. cortex vitium et folia arida vulnerum sanguinem sistunt ipsumque vulnus conglutinant. vitis albae, viridis tusae, suco inpetigines tolluntur. cinis sarmentorum vitium et vinaceorum condylomatis et sedis vitiis medetur ex aceto, item luxatis et ambustis et lienis tumori cum rosaceo et ruta et aceto. item igni sacro ex vino citra oleum aspergitur et intertrigini. et pilos absumit. dant et bibendum cinerem sarmentorum ad lienis remedia aceto conspersum ita, ut bini cyathi in tepida aqua bibantur utque qui biberit in lienem iaceat. claviculae

ipsae, quibus repunt vites, tritae ex aqua potae sistunt vomitionum consuetudinem. cinis vitium cum axungia vetere contra tumores proficit, fistulas purgat, mox et persanat, nervorum dolores frigore ortos contractionesque, contusas vero partes vel cum oleo, carnes excrescentes in ossibus cum aceto et nitro, scorpionum et canum plagas cum oleo. corticis per se cinis conbustis pilos reddit.

omphacium qua fieret ratione incipientis uvae pubertate, in unguentorum loco docuimus. nunc ad medicinam de eo pertinentia indicabimus. sanat ea quae in umore sint ulcera, ut oris, tonsillarum, genitalium. oculorum claritati plurimum confert, scabritiae genarum ulceribusque angulorum, nubeculis, ulceribus quacumque in parte manantibus, cicatricibus marcidis, ossibus purulente limosis. mitigatur vehementia eius melle aut passo. prodest et dysintericis, sanguinem excreantibus, anginis.

omphacio cohaeret oenanthe, quam vites silvestres ferunt, dicta nobis in unguenti ratione. laudatissima in syria, maxime circa antiochiae et laodiceae montes et ex alba vite. refrigerat, astringit, vulneribus inspergitur, stomacho inlinitur, utilis urinae, iocineris, capitis doloribus, dysintericis, coeliacis, cholericis, contra fastidia obolo ex aceto pota. siccat manantes capitis eruptiones, efficacissima ad vitia, quae sint in umidis, ideo et oris ulceribus et verendis ac sedi cum melle et croco. alvum sistit, genarum scabritiem emendat oculorumque lacrimationes, ex vino stomachi dissolutionem, ex aqua frigida pota sanguinis excreationes. cinis eius ad collyria et ad ulcera purganda et paronychia et pterygia probatur. uritur in furno, donec panis percoquatur. - massaris odoribus tantum gignitur, omniaque ea aviditas humani ingeni nobilitavit rapere festinando.

maturescentium autem uvae vehementiores nigrae - ideo vinum ex his minus iucundum - , suaviores albae, quoniam e tralucido facilius accipitur ae+r. recentes stomachum et spiritus inflatione alvum turbant. itaque in febri damnantur, utique largiores; gravedinem enim capiti morbumque lethargum faciunt. innocentiores quae decerptae diu pependere, qua ventilatione etiam utiles fiunt stomacho aegrisque, nam et refrigerant leviter et fastidium auferunt.

proximae a pensilibus in palea servatae; nam et in vinaceis servatae et caput et vesicam et stomachum infestant, sistunt tamen alvum, sanguinem excreantibus utilissimae. quae in vino aut in dulci

conditae fuere, caput temptant; quae vero in musto fuere, peiorem vim etiamnum habent quam quae in vinaceis. sapa quoque inutiles stomacho facit. saluberrimas putant medici in caelesti aqua servatas, etiamsi minime iucundas, sed voluptatem earum in stomachi ardore sentiri et in amaritudine iecoris fellisque vomitionibus et in choleris, hydropicis cum ardore febrium aegrotantibus. at in ollis servatae et os et stomachum et aviditatem excitant, paulo tamen graviores existimantur fieri vinaceorum halitu. - uvae florem in cibo si edere gallinacei, uvas non attingunt. -

sarmenta earum, in quibus acini fuere, adstringendi vim habent, efficaciora ex ollis.

nuclei acinorum eandem vim optinent. hi sunt qui in vino capiti dolorem faciant. tosti tritique stomacho utiles sunt. inspergitur farina eorum polentae modo potioni et dysintericis et coeliacis et dissoluto stomacho. decocto etiam eorum fovere psoras et pruritum utile est.

vinacei per se minus capiti aut vesicae nocent quam nuclei, mammarum inflammationi utiles cum sale triti. decoctum eorum veteres dysintericos et coeliacos iuvat et potione et fotu.

uva theriace, de qua suo loco diximus, contra serpentium ictus estur. pampinos quoque eius edendos censent inponendosque. et vinum et acetum ex his factum auxiliarem contra eadem vim habet.

uva passa, quam astaphida vocant, stomachum, ventrem et interanea temptaret, nisi pro remedio in ipsis acinis nuclei essent. iis exemptis vesicae utilis habetur et tussi - alba utilior - , utilis et arteriae et renibus, sicut ex his passum privatim e serpentibus contra haemorrhoida potens. testium inflammationi cum farina cumini aut coriandri inponuntur, item carbunculis, articulariis morbis sine nucleis tritae cum ruta. fovere ante vino ulcera oportet. sanant epinyctidas et ceria et dysinteriam cum suis nucleis. et in oleo coctae gangraenis inlinuntur cum cortice raphani et melle, podagris et unguium mobilibus cum panace. et per se ad purgandum os caputque cum pipere conmanducantur.

astaphis agria sive staphis, quam uvam taminiam aliqui vocant falso - suum enim genus habet - , cauliculis nigris, rectis, foliis labruscae, fert folliculos verius quam acinos, virides, similes ciceri, in his nucleum triangulum. maturescit cum vindemia nigrescitque, cum taminiae rubentes norimus acinos sciamusque illam in apricis

nasci, hanc non nisi in opacis. his nucleis ad purgationem uti non censuerim propter ancipitem strangulationem, neque ad pituitam oris siccandam, quia fauces laedunt. phthiriasi caput et reliquum corpus triti liberant, facilius admixta sandaraca, item pruritu et psoris. ad dentium dolores decocuntur in aceto, ad aurium vitia, rheumatismos cicatricum, ulcerum manantia. flos tritus in vino contra serpentes bibitur; semen enim abdicaverim propter nimiam vim ardoris. quidam eam pituitariam vocant. plagis serpentium utique inlinunt.

labrusca quoque oenanthen fert satis dictam. quae, a graecis ampelos agria appellata, spissis et candicantibus foliis, geniculata, rimoso cortice, fert uvas rubentes cocci modo, quae cutem in facie mulierum purgant et varos, coxendicum et lumborum vitiis tusae cum foliis et suco prosunt. radix decocta in aqua pota in vini coi cyathis ii umorem alvi ciet et ideo hydropicis datur. hanc potius crediderim esse quam vulgus uvam taminiam vocat. utuntur ea pro amuleto et ad expuitionem sanguinis quoque adhibent, non ultra gargarizationes et ne quid devoretur, addito sale, thymo, aceto mulso. ideo et purgationibus ancipitem putant.

est huic similis, sed in salictis nascens; ideo distinguitur nomine, cum eosdem usus habeat, et salicastrum vocatur. scabiem et pruriginem hominum quadripedumque aceto mulso trita haec efficacius tollit.

vitis alba est quam graeci ampelon leucen, alii staphylen, alii melothron, alii psilotrum, alii archezostim, alii cedrostin, alii madon appellant. huius sarmenta longis et exilibus internodiis geniculata scandunt. folia pampinosa ad magnitudinem hederae dividuntur ut vitium. radix alba, grandis, raphano similis initio. ex ea caules asparagi similitudine exeunt. hi decocti in cibo alvum et urinam cient. folia et caules exulcerant corpus, utique ulcerum phagedaenis et gangraenis tibiarumque taedio cum sale inlinuntur. semen in uva raris acinis dependet, suco rubente, postea crocino. novere id qui coria perficiunt; illo enim utuntur. psoris et lepris inlinitur, lactis abundantiam facit coctum cum tritico potumque. radix, numerosis utilitatibus nobilis, contra serpentium ictus trita drachmis ii bibitur. vitia cutis in facie varosque et lentigines et suggillata emendat et cicatrices, eademque praestat in oleo decocta. datur et comitialibus potus, item mente conmotis aut vertigine laborantibus, drachmae

pondere cotidie anno toto. et ipsa autem largior aliquando sensus turbat. illa vis praeclara, quod ossa infracta extrahit in aqua inposita ut bryonia; quare quidam hanc albam bryoniam vocant, aliam vero nigram. efficacior in eodem usu cum melle et ture. suppurationes incipientes discutit, veteres maturat et purgat. ciet menses et urinam. ecligma ex ea fit suspiriosis et contra lateris dolores, ruptis, convulsis. splenem ternis obolis pota xxx diebus consumit. inlinitur eadem cum fico et pterygiis digitorum. ex vino secundas feminarum adposita trahit et pituitam drachma pota in aqua mulsa. sucus radicis colligi debet ante seminis maturitatem. qui inlitus per se et cum ervo laetiore quodam colore et cutis teneritate mangonicat corpora, serpentes fugat. tunditur ipsa radix cum fico pingui erugatque corpus, si statim bina stadia ambulentur, alias uret et nisi frigida abluatur. iucundius hoc idem praestat nigra vitis, quoniam alba pruritum adfert.

est ergo et nigra, quam proprie bryoniam vocant, alii chironiam, alii gynaecanthen aut aproniam, similem priori, praeterquam colore; huius enim nigrum esse diximus. asparagos eius diocles praetulit veris asparagis in cibo urinae ciendae lienique minuendo. in frutectis et harundinetis maxume nascitur. radix foris nigra, intus buxeo colore. ossa infracta vel efficacius extrahit quam supra dicta, cetera eadem. peculiare quod iumentorum cervicibus unice medetur. aiunt, si quis villam ea cinxerit, fugere accipitres tutasque fieri villares alites. eadem in iumento homineque flemina aut sanguinem, qui se ad talos deiecerit, circumligata sanat. et hactenus de vitium generibus.

musta differentias habent naturales has, quod sunt candida aut nigra aut inter utrumque, alia ex quibus vinum fiat, alia ex quibus passum. cura differentias innumerabiles facit; in plenum ergo haec dixisse conveniat: mustum omne stomacho inutile, venis iucundum. a balneis raptim et sine interspiratione potum necat. cantharidum naturae adversatur, item serpentibus, maxime haemorrhoidi et salamandrae. capitis dolores facit et gutturi inutile, prodest renibus, iocineri et interaneis, vesicae; conlevat enim ea. privatim contra buprestim valet, contra meconium, lactis coagulationem, cicutam, toxica, dorycnium, ex oleo potum redditumque vomitionibus. ad omnia infirmius album, iucundius passi mustum et quod minorem capitis dolorem adferat.

vini genera differentiasque perquam multas exposuimus et fere cuiusque proprietates. neque est ulla pars difficilior tractatu aut numerosior, quippe cum sit arduum dictu, pluribus prosit an noceat. praeterea quam ancipiti eventu potum statim auxilium fit aut venenum! etenim de natura ad remedia tantum pertinente nunc loquimur. unum de dando eo volumen asclepiades condidit, ab eo cognominatis qui postea uno de volumine illo disseruere innumera. nos ista romana gravitate artiumque liberalium adpetentia non ut medici, sed ut indices salutis humanae diligenter distinguemus.

de generibus singulis disserere inmensum et inexplicabile est, discordibus medicorum sententiis. surrentinum veteres maxime probavere, sequens aetas albanum aut falernum, et deinde alia alii iniquissimo genere decreti, quod cuique gratissimum, ceteris omnibus pronuntiando. quod ut constarent sententiae, quota portio tamen mortalium his generibus posset uti iam vero nec proceres usquam sinceris. eo venere mores, ut nomina modo cellarum veneant, statim in lacibus vindemiae adulterentur. ergo, hercules, mirum dictu, innocentius iam est quodcumque et ignobilius. haec tamen fere constantissimae videntur sententiae, quorum mentionem fecimus. si quis hoc quoque discrimen exiget, falernum nec in novitate nec in nimia vetustate corpori salubre est; media eius aetas a xv annis incipit. frigido potu stomacho utile, non item in calida. diutinae tussi sorbetur merum utiliter a ieiunis, item in quartanis. nullo aeque venae excitantur. alvum sistit, corpus alit. creditum est obscuritatem visus facere nec prodesse nervis aut vesicae. albana nervis utiliora; stomacho minus quae sunt dulcia; austera vel falerno utiliora. concoctionem minus adiuvant, stomachum modice inplent; at surrentina nullo modo, nec caput temptant, stomachi et intestinorum rheumatismos cohibent. caecuba iam non gignuntur. et, quae supersunt, setina concoqui cibos cogunt; virium plus surrentino, austeritatis albano, vehementiae minus falerno habent. ab his statana non longo intervallo afuerint. alvo citae signinum maxime conducere indubitatum est. reliqua in commune dicentur.

vino aluntur vires, sanguis colosque hominum. hoc distat orbis medius et mitior plaga circumiectis. quantum illis feritas facit roboris, tantum nobis hic sucus. lactis potus ossa alit, frugum nervos, aqua carnes; ideo minus ruboris est in corporibus illis et minus

roboris contraque labores patientiae. vino modico nervi iuvantur, copiosiore laeduntur; sic et oculi. stomachus recreatur et adpetentia ciborum invitatur; tristitia, cura hebetatur, urina et algor expellitur, somnus conciliatur. praeterea vomitiones sistit, collectiones extra lanis umidis inpositis mitigat. asclepiades utilitatem vini aequari vix deorum potentia posse pronuntiavit. vetus copiosiore aqua miscetur; quo magis urinam expellit, minus siti resistit. dulce minus inebriat, sed stomacho innatat; austerum facilius concoquitur. levissimum est quod celerrime inveteratur. minus infestat nervos quod vetustate dulcescit. stomacho minus utile est pingue, nigrum, sed corpora magis alit. tenue et austerum minus alit, magis stomachum nutrit, celerius per urinam transit; tanto magis capita temptat. hoc et in omni alio suco semel dictum sit. vinum diutino fumo inveteratum insaluberrimum. mangones ita in apothecis excogitavere, iam et patresfamilias, aetatem addi. atqui per se cariem traxere. quo certe vocabulo satis consilii dedere prisci, quoniam et in materiis cariem fumus erodit; at nos e diverso fumi amaritudine vetustatem indui persuasum habemus. quae sunt admodum exalbida, haec vetustate insalubria fiunt. quo generosius vinum est, hoc magis vetustate crassescit et in amaritudinem corpori minime utilem coit. condire eo aliud minus annosum insalubre est; sua cuique vino saliva innocentissima est, sua cuique aetas gratissima, hoc est media.

corpus augere volentibus aut mollire alvum conducit inter cibos bibere, contra minuentibus alvumque cohibentibus sitire in edendo, postea parum bibere. vinum ieiunos bibere novicio invento inutilissimum est curiosis vigoremque animi ad procinctum tendentibus; somno vero ac securitatibus iamdudum hoc fuit, quod homerica illa helena ante cibum ministravit. sic quoque in proverbium cessit “sapientiam vino obumbrari”. vino demus homines, quod soli animalium non sitientes bibimus. aquae potum interponere utilissimum itemque iugi superbibere. ebrietatem quidem frigidae potus extemplo discutit. meracis potionibus per xx dies ante canis ortum totidemque postea suadet hesiodus uti. merum quidem remedio est contra cicutas, coriandrum, aconita, viscum, meconium, argentum vivum, apes, vespas, crabrones, phalangia, serpentium scorpionumque ictus contraque omnia, quae refrigerando nocent, privatim contra haemorrhoidas, presteras, fungos, item contra

inflationes rosionesque praecordiorum et quorum stomachus in vomitiones effunditur, et si venter aut interanea rheumatismum sentiant, dysintericis, sudatoribus e longa tussi, in epiphoris meracum. cardiacis in mamma laeva merum in spongea inponi prodest, ad omnia autem maxime album inveterascens. utiliter et fovetur vino calido virilitas. iumentis infusum cornu lassitudinem aufert. simias quadripedesque, quibus digiti sunt, negant crescere adsuetas meri potu.

nunc circa aegritudines sermo de vinis erit. saluberrimum liberaliter genitis campaniae quodcumque tenuissimum, vulgo vero quod quemque maxime iuverit validum. utilissimum omnibus sacco viribus fractis. meminerimus sucum esse, qui fervendo vires e musto sibi fecerit. misceri plura genera omnibus inutile. saluberrimum cui nihil in musta additum est, meliusque, si nec vasis pix adfuit. marmore enim et gypso aut calce condita quis non et validus expaverit in primis igitur vinum marina aqua factum inutile est stomacho, nervis, vesicae. resina condita frigidis stomachis utilia existimantur, non expedire vomitionibus, sicut neque mustum neque sapa neque passum. novicium resinatum nulli conducit; capitis dolorem et vertigines facit. ab hoc dicta crapula est. tussientibus et in rheumatismo nominata prosunt, item coeliacis et dysintericis, mulierum mensibus. in hoc genere rubrum nigrumve magis constringit magisque calefacit. innocentius pice sola conditum. sed et picem meminisse debemus non aliud esse quam conbustae resinae fluxum. hoc genus vini excalfacit, concoquit, purgat. pectori, ventri utile, item vulvarum dolori, si sine febri sint, veteri rheumatismo, exulcerationi, ruptis, convulsis, vomicis, nervorum infirmitati, inflationibus, tussi, anhelationibus, luxatis in sucida lana inpositum. ad omnia haec utilius id, quod sponte naturae suae picem resipit picatumque appellatur helvico in pago, quo tamen nimio caput temptari convenit. quod ad febrium valitudines attinet, certum est, non dandum in febri nisi veteribus aegris nec nisi declinante morbo; in acutis vero periculis nullis nisi qui manifestas remissiones habeant, et has noctu potius - dimidia pars periculi est noctu, hoc est spe somni, bibentibus - , nec a partu abortuve nec a libidine aegrotantibus, nec in capitis doloribus, nec quorum accessiones cum frigore extremitatum fient, nec in febri tussientibus, nec in tremore

nervorumve doloribus vel faucium aut si vis morbi circa ilia intellegatur, nec in duritia praecordiorum, venarum vehementia, neque in opisthotono, tetano, nec singultientibus nec si cum febri dyspnoea sit; minime vero oculis rigentibus, e genis stantibus aut defectis, gravibus nec quorum coniventium perlucebunt oculi palpebrisve non coeuntibus vel si dormientibus hoc idem eveniet aut si cruore suffundentur oculi vel si lemae in oculis erunt; minime lingua fungosa vel gravi et subinde inperfecta loquentibus; nec si urina difficile reddetur, neque expavescentibus repente, nec spasticis aut rursus torpentibus, nec si per somnos genitura effundetur.

cardiacorum morbo unicam spem hanc e vino esse certum est. sed id dandum non nisi in accessione censent, alii in remissione, illi, ut sudorem coerceant, hi, quia tutius putant minuente se morbo, quam plurium sententiam esse video. dari utique non nisi in cibo debet nec a somno nec praecedente alio potu, hoc est utique sitienti, nec nisi in desperatione suprema, et viro facilius quam feminae, seni quam iuveni, iuveni quam puero, hieme quam aestate, adsuetis potius quam expertibus. modus dandi pro vehementia vini, item mixtura aquae. vulgo satis putant unum cyathum ii aquae misceri, si dissolutio sit stomachi, dandum; si cibus non descendat, iterum.

vini genera, quae fingi docuimus, nec fieri iam arbitror et supervacuum eorum usum, cum ipsis rebus, ex quibus finguntur, doceamus uti. et alias modum excesserat medicorum in his ostentatio, veluti e napis vinum utile esse ab armorum equitandive lassitudine praecipientium atque, ut reliqua omittamus, etiam e iunipiro. et quis satius censeat apsinthite vino utendum potius quam apsinthio ipso in reliquis omittatur et palmeum, capiti noxium ventrique tantum molliendo et sanguinem excreantibus non inutile. ficticium non potest videri quod bion appellavimus, cum sit in eo sola pro arte festinatio. prodest stomacho dissoluto aut cibos non perficienti, praegnantibus defectis, paralyticis, tremulis, vertigini, torminibus, inchiadicis. in pestilentia quoque ac peregrinationibus vim magnam auxiliandi habere dicitur.

vini etiam vitium transit in remedia aceto. summa vis ei in refrigerando, non tamen minor in discutiendo; ita fit, ut infuso terra spumet. dictum est saepius diceturque, quotiens cum aliis prosit. per se haustum fastidia discutit, singultus cohibet, sternumenta

olfactatum. in balineis aestus arcet, si contineatur ore. quin et cum aqua bibitur multorum stomacho utiliter, gargarizatur cum eadem convalescentium, et a solis ardoribus oculis quoque illo modo saluberrimum fotu. medetur pota hirudine, item lepris, furfuribus, ulceribus manantibus, canis morsibus, scorpionum ictibus, scolopendrarum, muris aranei contraque omnium aculeatorum venena et pruritus, item contra multipedae morsum calidum in spongea adiecto aut sulphuris sextante sextariis iii aut hysopi fasciculo. medetur et sedis vitiis, in sanguinis fluctione post excisos calculos et omni alia foris in spongea inpositum, intus potum cyathis binis quam acerrimum. conglobatum utique sanguinem discutit. contra lichenem et bibitur et inponitur. sistit alvum et rheumatismos interaneorum infusum, item procidentias sedis vulvaeque. tussim veterem inhibet et gutturis rheumatismos, orthopnoeam, dentium labefactationem. vesicae nocet nervorumque infirmitatibus. nesciere medici, quantum contra aspidas polleret. nuper ab aspide calcata percussus utrem aceti ferens, quotiens deposuisset, sentiebat ictum, alias inlaeso similis. intellectum ibi remedium est potuque succursum. neque aliter os conluunt venena exsugentes. in totum domitrix vis haec non ciborum modo est, verum et rerum plurimarum. saxa rumpit infusum, quae non ruperit ignis antecedens. cibos quidem et sapores non alius magis sucus commendat aut excitat, in quo usu mitigatur usto pane aut cumino vel accenditur pipere ac lasere, utique sale conpescitur. non est praetereundum in eo exemplum ingens, siquidem m. agrippa supremis suis annis conflictatus gravi morbo pedum, cum dolorem eum perpeti nequiret, unius medicorum portentosa scientia ignorante Divo Augusto tanti putavit usu pedum sensuque omni carere, dummodo et dolore illo careret, demersis in acetum calidum cruribus in acerrimo impetu morbi.

acetum scillinum inveteratum magis probatur. prodest super ea, quae diximus, acescentibus cibis, gustatu enim discutit poenam eam; item iis qui ieiuni vomant, callum enim faucium facit ac stomachi. odorem oris tollit, gingivas adstringit, dentes firmat, colorem meliorem praestat. tarditatem quoque aurium gargarizatione purgat et transitum auditus aperit. oculorum aciem obiter exacuit, comitialibus, melancholicis, vertigini, volvarum strangulationibus, percussis aut

praecipitatis et ob id sanguine conglobato, nervis infirmis, renium vitiis perquam utile, cavendum exulceratis.

oxymeli antiqui, ut dieuches tradit, hoc modo temperabant: mellis minas x, aceti veteris heminas v, salis marini pondo libram quadrantem, aquae sextarios v pariter coquebant deciens defervescente cortina atque ita diffundebant inveterabantque. sustulit totum id asclepiades coarguitque - nam etiam in febribus databant - , profuisse tamen fatetur contra serpentes, quas sepas vocant, et contra meconium ac viscum, et anginis calidum gargarizatum et auribus, oris gutturisque desideriis. quae nunc omnia oxyalme contingunt, id est sale et aceto recente, efficacius.

vino cognata res sapa est musto decocto, donec tertia pars supersit. ex albo hoc melius. usus contra cantharidas, buprestim, pinorum erucas, quas pityocampas vocant, salamandras, contra mordentia venenata. secundas partusque emortuos trahit cum bulbis potum. fabianus auctor est venenum esse, si quis ieiunus a balineis id bibat.

consequens horum est faex, sui cuiusque generis. ergo vini faecibus tanta vis est, ut descendentes in cupas enecet. experimentum demissa praebet lucerna, quamdiu extinguatur, periculum denuntians. inlota miscetur medicamentis, cum iridis vero pari pondere eruptionibus pituitae inlinitur, et sicca vel madida contra phalangia et testium mammarumque inflammationi vel in quacumque parte corporis, item cum hordeacia farina et turis polline in vino cocta. crematur et siccata. experimentum est legitime coctae, ut refrigerata linguam tactu videatur urere. celerrime exanimatur non inclusa condita. crematio ei multum virium adicit, utilissimae ad conpescendos lichenas, furfures cum fico decocta. sic et lepris et ulceribus manantibus inponitur. fungorum naturae contraria est pota, sed magis cruda. oculorum medicamentis cocta et lota miscetur. medetur inlita et testibus et genitalibus, in vino autem adversus strangurias bibitur. cum expiravit quoque, lavandis corporibus et vestibus utilis, tunc usum acaciae habet.

faex aceti pro materia acrior sit necesse est multoque magis exulceret. resistit suppurationum incrementis; stomachum, interanea, ventrem inlita adiuvat. sistit rheumatismos earum partium et mulierum menses. panos discutit nondum exulceratos et anginas,

ignes sacros cum cera. mammas lactis sui inpatientes eadem extinguit, ungues scabros aufert. e serpentibus contra cerastas validissima cum polenta, cum melanthio autem contra crocodili morsus et canis. et haec cremata ampliat vires. tunc addito lentiscino oleo inlita una nocte rufat capillum. eadem ex aqua in linteolo adposita vulvas purgat.

sapae faece ambusta sanantur, melius addita lanugine harundinis, eadem faece decocta potaque tusses veteres. decoquitur in patinis cum sale et adipe ad tumorem quoque maxillarum et cervicium.

olearum proxima auctoritas intellegitur. folia earum vehementissime adstringunt, purgant, sistunt. itaque commanducata inposita ulceribus medentur et capitis doloribus inlita cum oleo, decoctum eorum cum melle iis, quae medici usserint, gingivarum inflammationibus et paronychiis sordidisque ulceribus et putrescentibus. cum melle sanguinis profluvium e nervosis partibus cohibet. sucus eorum carbunculantibus circa oculos ulceribus et pusulis procidentique pupillae efficax, quapropter in collyria additur. nam et veteres lacrimationes sanat et genarum erosiones. exprimitur autem sucus tunsis adfuso vino et aqua caelesti siccatusque in pastillos digeritur. sistit menses in lana admotus vulvae, utilis et sanie manantibus, item condylomatis, ignibus sacris quaeque serpunt ulcera, epinyctidi.

eosdem effectus et flos earum habet. uruntur cauliculi efflorescentes, ut cinis spodi vicem praestet, vinoque infuso iterum uritur. suppurationes et panos inlinunt cinere eo vel foliis tusis cum melle, oculos vero cum polenta. sucus fruticis recentis accensi destillans sanat lichenas, furfures, manantia ulcera. nam lacrima, quae ex arbore ipsa destillat, aethiopicae maxime oleae, mirari satis non est repertos, qui dentium dolores inlinendos censerent, venenum esse praedicantes atque etiam in oleastro quaerendum. e radice oleae quam tenerrimae cortex derasus in mel crebro gustatu medetur sanguinem reicientibus et suppurata extussientibus. ipsius oleae cinis cum axungia tumores sanat extrahitque fistulis vitia et ipsas sanat.

olivae albae stomacho utiliores, ventri minus. praeclarum habent usum, antequam condiantur, recentes per se cibi modo devoratae. medentur enim harenosae urinae, item dentibus carne mandenda adtritis aut convolsis. nigra oliva stomacho inutilior, ventri facilior;

capiti, oculis non convenit. utraque ambustis prodest, trita et inlita illa, sed nigra commanducatur et protinus ex ore inposita pusulas gigni prohibet. colymbades sordida ulcera purgant, inutiles difficultatibus urinae.

de amurca poteramus videri satis dixisse catonem secuti, sed reddenda medicinae quoque est. gingivis et oris ulceribus, dentium stabilitati efficacissime subvenit, item ignibus sacris infusa et iis, quae serpant. pernionibus nigrae olivae amurca utilior, item infantibus fovendis, albae vero mulierum vulvae in lana admovetur. multo autem omnis amurca decocta efficacior. coquitur in cyprio vase ad crassitudinem mellis. usus eius cum aceto aut vino vetere aut mulso, ut quaeque causa exigat, in curationem oris, dentium, aurium, ulcerum manantium, genitalium, rhagadum. vulneribus in linteolis inponitur, luxatis in lana. ingens hic usus utique inveterato medicamento; tale enim fistulas sanat. infunditur sedis, genitalium, vulvae exulcerationi, inlinitur vero podagris incipientibus, item articulariis morbis. si vero cum omphacio recoquatur ad mellis crassitudinem, causarios dentes extrahit; item iumentorum scabiem cum decocto lupinorum et chamaeleonte herba mire sanat. cruda amurca podagras foveri utilissimum. oleastri foliorum eadem natura. spodium e cauliculis vehementius inhibet rheumatismos. sedat et inflammationes oculorum, purgat ulcera alienata et explet, excrescentia leniter erodit siccatque et ad cicatricem perducit. cetera ut in oleis, peculiare autem, quod folia decocuntur ex melle et dantur coclearibus iii contra sanguinis excreationes. oleum tantum acrius efficaciusque, et ideo os quoque colluitur illo ad firmitatem dentium. inponuntur folia et paronychiis et carbunculis et contra omnem collectionem cum vino, iis vero, quae purganda sint, cum melle. miscentur oculorum medicamentis decoctum foliorum et sucus oleastri. utiliter et auribus instillatur cum melle vel si pus effluat. flore oleastri condylomata inlinuntur et epinyctides, item cum farina hordeacia venter in rheumatismo, cum oleo capitis dolores. cutem in capite ab ossibus recedentem cauliculi decocti et cum melle inpositi conprimunt. ex oleastro maturi in cibo sumpti sistunt alvum, tosti autem et cum melle triti nomas repurgant, carbunculos rumpunt.

olei naturam causasque abunde diximus. ad medicinam ex olei generibus haec pertinent, utilissimum esse omphacium, proxime

viride, praeterea quam maxime recens - nisi cum vetustissimum quaeritur - , tenue, odoratum quodque non mordeat, e diverso quam cibis eligitur. omphacium prodest gingivis, si contineatur in ore, et colorem dentium custodit motusque stabilit. sudores cohibet. oenanthino idem effectus qui rosaceo. omni autem oleo mollitur corpus, vigorem et robur accipit. stomacho contrarium, auget et ulcerum incrementa. fauces exasperat et venena omnia hebetat, praecipue psimithi et gypsi, in aqua mulsa aut ficorum siccarum decocto potum contra meconium, ex aqua contra cantharidas, buprestim, salamandras, pityocampas, per se potum redditumque vomitionibus contra omnia supra dicta. lassitudinum et perfrictionum refectio est. tormina calidum potum cyathis vi magisque ruta simul decocta pellit, item ventris animalia. solvit alvum heminae mensura cum vino et calida aqua potum aut tisanae suco, vulnerariis emplastris utile faciem purgat. bubus infusum per nares, donec ructent, inflationem sedat. vetus autem magis excalfacit corpora magisque discutit sudores, duritias magis diffundit, lethargicis auxiliare et inclinato morbo. oculorum claritati confert aliquid cum pari portione mellis acapni. capitis doloribus remedium est, item ardoribus in febri cum aqua. si vetusti non sit occasio, decoquitur, ut vetustatem repraesentet.

oleum cicinum bibitur ad purgationes ventris cum pari caldae mensura. privatim dicitur purgare praecordia. prodest et articulorum morbis, duritiis omnibus, vulvis, auribus, ambustis, cum cinere vero muricum sedis inflammationibus, item psorae. colorem cutis commendat capillumque fertili natura evocat. semen, ex quo fit, nulla animans attingit. ellychnia ex uva fiunt claritatis praecipuae, ex oleo lumen obscurum propter nimiam pinguitudinem. folia igni sacro inlinuntur ex aceto, per se autem recentia mammis et epiphoris, eadem decocta in vino inflammationibus cum polenta, croco; per se autem triduo inposita faciem purgant.

oleum amygdalinum purgat, mollit corpora, cutem erugat, nitorem commendat, varos cum melle tollit e facie. prodest et auribus cum rosaceo aut melle et mali punici tegmine decoctum vermiculosque in his necat et gravitatem auditus discutit, sonos incertos et tinnitus, obiter capitis dolores et oculorum. medetur furunculis et a sole ustis cum cera. ulcera manantia et furfures cum vino expurgat,

condylomata cum meliloto; per se vero capiti inlitum somnum adlicit.

oleum laurinum utilius, quo recentius quoque viridius colore. vis eius excalfactoria, et ideo paralyticis, spasticis, ischiadicis, suggillatis, capitis doloribus, inveteratis destillationibus, auribus in calyce punici calfactum inlinitur.

similis et myrtei olei ratio. adstringit, indurat. medetur gingivis, dentium dolori, dysinteriae, volvae exulceratae, vesicis, ulceribus vetustis vel manantibus cum squama aeris et cera, item eruptionibus, ambustis. adtrita sanat et furfures, rhagadas, condylomata, articulos luxatos, odorem gravem corporis. adversatur cantharidi, bupresti aliisque malis medicamentis, quae exulcerando nocent.

chamaemyrsinae sive oxymyrsinae eadem natura. - cupressinum oleum eosdem effectus habet quos myrteum, item citreum. - e nuce vero iuglande, quod caryinum appellavimus, alopeciis utile est et tarditati aurium infusum, item capitis dolori inlitum, cetero iners et gravi sapore. enimvero si quid in nucleo putridi fuerit, totus modius deperit. - ex cnidio grano factum eandem vim habet quam cicinum. - e lentisco factum utilissimum acopo est idemque proficeret quod rosaceum, ni durius paulo intellegeretur. utuntur eo et contra nimios sudores papulasque sudorum. scabiem iumentorum efficacissime sanat. - balaninum oleum repurgat varos, furunculos, lentigines, gingivas.

cypros qualis esset et quemadmodum ex ea fieret oleum docuimus. natura eius excalfacit, emollit nervos. folia stomacho inlinuntur et vulvae concitatae, sucus quoque eorum adponitur. folia recentia commanducata ulceribus in capite manantibus, item oris medentur et collectionibus, condylomatis. decoctum foliorum ambustis et luxatis prodest. ipsa rufant capillum tusa adiecto struthei mali suco. flos capitis dolores sedat cum aceto inlitus, item combustus in cruda olla nomas sanat et putrescentia ulcera per se vel cum melle. odor floris oleique somnum facit. - adstringit gleucinum et refrigerat eadem ratione qua oenanthinum.

balsaminum longe pretiosissimum omnium, ut in unguentis diximus, contra omnes serpentes efficax, oculorum claritati plurimum confert, caliginem discutit, item dyspnoeas, collectiones omnes duritiasque lenit. sanguinem densari prohibet, ulcera purgat, auribus,

capitis doloribus, tremulis, spasticis, ruptis perquam utile. adversatur aconito ex lacte potum, febres cum horrore venientes perunctis leviores facit. utendum tamen modico, quoniam adurit augetque vitia non servato temperamento.

malobathri quoque naturam et genera exposuimus. urinam ciet, oculorum epiphoris in vino expressum utilissime inponitur, item frontibus dormire volentibus, efficacius, si et nares inlinantur aut si ex aqua bibatur. oris et halitus suavitatem commendat linguae subditum folium, sicut et vestium odorem interpositum.

hyoscyaminum emolliendo utile est, nervis inutile. potum quidem cerebri motus facit. - therminum e lupinis emollit, proximum rosaceo effectu. - narcissinum dictum est cum suo flore. - raphaninum phthiriasis longa valitudine contractas tollit scabritiasque cutis in facie emendat. - sesaminum aurium dolores sanat et ulcera, quae serpunt, et quae cacoe+the vocant. - lilinum, quod et syrium vocavimus, renibus utilissimum est sudoribusque evocandis, vulvae molliendae concoquendisque intus. - selgiticum nervis utile esse diximus, sicut herbacium quoque, quod iguvini circa flaminiam viam vendunt.

elaeomeli, quod in syria ex ipsis oleis manare diximus, sapore melleo, non sine nausea alvum solvit, bilem praecipue detrahit ii cyathis in hemina aquae datis; qui bibere, torpescunt excitanturque crebro. potores certaturi praesumunt ex eo cyathum unum. - pissino oleo usus ad tussim et quadripedum scabiem est.

a vitibus oleisque proxima nobilitas palmis. inebriant recentes, capitis dolorem adferunt minus siccae, nec, quantum videtur, utiles stomacho. tussim exasperant, corpus alunt. sucum decoctarum antiqui pro hydromelite dabant aegris ad vires recreandas, sitim sedandam, in quo usu praeferebant thebaicas, sanguinem quoque excreantibus utiles, in cibo maxime. inlinuntur caryotae stomacho, vesicae, ventri, intestinis cum cotoneis et cera et croco. suggillata emendant. nuclei palmarum cremati in fictili novo cinere loto spodi vicem efficiunt miscenturque collyriis et calliblephara faciunt addito nardo.

palma, quae fert myrobalanum, probatissima in aegypto, ossa non habet reliquarum modo in balanis. alvum et menses ciet in vino austero et vulnera conglutinat.

palma elate sive spathe medicinae confert germina, folia, corticem. folia inponuntur praecordiis, stomacho, iocineri, ulceribus, quae serpunt cicatrici repugnantia. psoras cortex eius tener cum resina et cera sanat diebus xx. decoquitur et ad testium vitia. capillum denigrat. suffitu partus extrahit. datur bibendus renium vitiis et vesicae et praecordiorum, capiti et nervis inimicus. vulvae ac ventris fluctiones sistit decoctum eius; item cinis et tormina, potus in vino albo in vulvarum vitiis efficacissimus.

proxime varietates generum medicinarumque mala habent. ex his verna acerba et stomacho inutilia sunt, alvum, vesicam circumagunt, nervos laedunt. cocta meliora. - cotonea cocta suaviora, cruda tamen, dumtaxat matura, prosunt sanguinem excreantibus et dysintericis, cholericis, coeliacis. non idem possunt decocta, quoniam amittunt constringentem illam vim suci, et tamen decocuntur in aqua caelesti ad eadem, quae supra scripta sunt. inponuntur et pectori in febris ardoribus, ad stomachi autem dolores cruda decoctave cerati modo inponuntur. lanugo eorum carbunculos sanat. cocta in vino et inlita cum cera alopeciis capillum reddunt. quae ex iis cruda in melle conduntur, alvum movent; mellis autem suavitati multum adiciunt stomachoque utilius id faciunt. quae vero in melle cocta conduntur, quidam ad stomachi vitia trita cum rosae foliis decoctis dant pro cibo. sucus crudorum lienibus, orthopnoicis, hydropicis prodest, item mammis, condylomatis, varicibus; flos et viridis et siccus inflammationibus oculorum, excreationibus sanguinis, mensibus mulierum. fit et sucus ex illis mitis cum vino dulci tusis, utilis coeliacis et iocineri. decocto quoque eorum foventur, si procidant, vulvae et interanea. fit et oleum ex iis, quod melinum vocavimus, quotiens ... non fuerint in umidis nata. ideo utilissima quae ex sicilia veniunt, minus utilia struthia, quamvis cognata. radix eorum circumscripta terra manu sinistra capitur ita, ut qui id faciet dicat, quare capiat et cuius causa. sic adalligata strumis medetur.

melimela et reliqua dulcia stomachum et ventrem solvunt, siticulosa, aestuosa, sed nervos non laedunt. - orbiculata sistunt alvum et vomitiones, urinas cient. - silvestria mala similia sunt vernis acerbis alvumque sistunt; sane in hunc usum inmatura opus sunt.

citrea contra venenum in vino bibuntur vel ipsa vel semen. faciunt oris suavitatem decocto eorum colluti aut suco expresso. horum

semen edendum praecipiunt in malacia praegnatibus, ipsa vero contra infirmitatem stomachi, sed non nisi ex aceto facile manduntur.

punici mali novem genera nunc iterari supervacuum. ex iis dulcia, quae apyrena alio nomine appellavimus, stomacho inutilia habentur; inflationes pariunt, dentes gingivasque laedunt. quae vero ab his sapore proxima vinosa diximus, parvum nucleum habentia, utiliora paulo intelleguntur; alvum sistunt et stomachum, dumtaxat pauca, ultraque satietatem et haec minime danda, quamquam omnino nulla in febri, nec carne acinorum utili nec suco. caventur aeque vomitionibus ac bilem reicientibus. uvam in his ac ne mustum quidem, sed protinus vinum aperuit natura. utrumque asperiore cortice; hic acerbis in magno usu. vulgus coria maxume perfici illo novit; ob id malicorium appellant medici. urinam cieri eodem monstrant mixtaque galla in aceto decoctum mobiles dentes stabilire. expetitur gravidarum malaciae, quoniam gustatu moveat infantem. dividitur malum caelestique aqua madescit ternis fere diebus; haec bibitur frigida coeliacis et sanguinem excreantibus.

ex acerbo fit medicamentum quod stomatice vocatur, utilissimum oris vitiis, narium, aurium, oculorum caligini, pterygiis, genitalibus et iis, quas nomas vocant et quae in ulceribus excrescunt, contra leporem marinum hoc modo: acinis detracto cortice tunsis sucoque decocto ad tertias cum croci et aluminis scissi, murrae, mellis attici selibris. alii et hoc modo faciunt: punica acida multa tunduntur, sucus in cacabo novo coquitur mellis crassitudine ad virilitatis et sedis vitia et omnia, quae lycio curantur, aures purulentas, epiphoras incipientes, rubras maculas in manibus. rami punicorum serpentes fugant. cortices punici ex vino cocti et inpositi perniones sanant. contusum malum ex iii heminis vini decoctum ad heminam tormina et taenias pellit. punicum in olla nova, coperculo inlito, in furno exustum et contritum potumque in vino sistit alvum, discutit tormina.

primus pomi huius partus florere incipientis cytinus vocatur a graecis, mirae observationis multorum experimento. si quis unum ex his, solutus vinculo omni cinctus et calciatus atque etiam anuli, decerpserit ii digitis, pollice et quarto, sinistrae manus atque ita lustratis levi tactu oculis in os additum devoraverit, ne dente contingat, adfirmatur nullam oculorum inbecillitatem passurus eodem anno. iidem cytini siccati tritique carnes excrescentes

cohibent, gingivis et dentibus medentur, vel si mobiles sint, decocto suco. ipsa corpuscula trita ulceribus, quae serpunt putrescuntve, inlinuntur, item oculorum inflammationi intestinorumque et fere ad omnia quae cortices malorum. adversantur scorpionibus.

non est satis mirari curam diligentiamque priscorum, qui omnia scrutati nihil intemptatum reliquerunt. in hoc ipso cytino flosculi sunt, antequam scilicet malum ipsum prodeat, erumpentes, quos balaustium vocari diximus. hos quoque ergo experti invenere scorpionibus adversari. sistunt potu menses feminarum, sanant ulcera oris, tonsillas, uvam, sanguinis excreationes, ventris et stomachi solutiones, genitalia, ulcera quacumque in parte manantia. siccavere etiam, ut sic quoque experirentur, inveneruntque tusorum farina dysintericos a morte revocari. alvum sistunt. quin et nucleos ipsos acinorum experiri non piguit. tosti tusique stomachum iuvant cibo aut potionibus. per se bibuntur ex aqua caelesti ad sistendam alvum. radix decocta sucum remittit, qui taenias necat victoriati pondere. eadem discocta in aqua quas lycium praestat utilitates.

est et silvestre punicum a similitudine appellatum. eius radices rubro cortice denari pondere ex vino potae somnos faciunt. semine poto aqua, quae subierit cutem, siccatur. mali punici corticis fumo culices fugantur.

pirorum omnium cibus, etiam valentibus onerosus, aegris vini quoque modo negatur. decocta eadem mire salubria et grata, praecipue crustumina; quaecumque vero cum melle decocta stomachum adiuvant. fiunt cataplasmata e piris ad discutienda corporum vitia, et decocto eorum ad duritias utuntur. ipsa adversantur boletis atque fungis pelluntque pondere et pugnante suco. - pirum silvestre tardissime maturescit. conciditur suspensumque siccatur ad sistendam alvum, quod et decoctum eius potu praestat. decocuntur et folia cum pomo ad eosdem usus. pirorum ligni cinis contra fungos etiamnum efficacius proficit. - mala piraque iumentis portatu mire gravia sunt vel pauca. remedio aiunt esse, si prius edenda dentur aliqua aut utique ostendantur.

fici sucus lacteus aceti naturam habet, itaque coaguli modo lac contrahit. excipitur ante maturitatem pomi et in umbra siccatur ad aperienda ulcera, cienda menstrua adpositu cum luteo ovi aut potu cum amylo. podagris inlinitur cum farina graeci feni et aceto. pilos

quoque detrahit palpebrarumque scabiem emendat, item lichenas et psoras. alvum solvit. lactis ficulni natura adversatur crabronum vesparumque et similium venenis, privatim scorpionum. idem cum axungia verrucas tollit. folia et quae non maturuere fici strumis inlinuntur omnibusque, quae emollienda sint discutiendave; praestant hoc et per se folia. et alius usus eorum in fricando lichene et alopeciis et quaecumque exulcerari opus sit. et adversus canis morsus ramorum teneri cauliculi cuti inponuntur. iidem cum melle ulceribus, quae ceria vocantur, inlinuntur. extrahunt infracta ossa cum papaveris silvestris foliis; canum rabiosorum morsus folio trito ex aceto restingunt. e nigra fico candidi cauliculi inlinuntur furunculis, muris aranei morsibus cum cera. cinis earum e foliis gangraenis consumendisque quae excrescant. fici maturae urinam cient, alvum solvunt, sudorem movent papulasque, ob id autumno insalubres, quoniam sudantia huius cibi opera corpora perfrigescunt. nec stomacho utiles, set ad breve tempus, et voci contrariae intelleguntur. novissimae salubriores quam primae, medicatae vero numquam. iuvenum vires augent, senibus meliorem valitudinem faciunt minusque rugarum. sitim sedant, calorem refrigerant, ob id non negandae in febribus constrictis, quas stegnas vocant. siccae fici stomachum laedunt, gutturi et faucibus magnifice utiles. natura his excalfaciendi. sitim adferunt, alvum molliunt, rheumatismis eius et stomacho contrariae, vesicae semper utiles et anhelatoribus ac suspiriosis, item iocinerum, renium, lienum vitiis. corpus et vires adiuvant; ob id antea athletae hoc cibo pascebantur - pythagoras exercitator primus ad carnes eos transtulit - ; recolligentes se a longa valitudine utilissime. item comitialibus et hydropicis omnibusque, quae maturanda aut discutienda sint, inponuntur, efficacius calce aut nitro aut iri admixta. coctae cum hysopo pectus purgant, pituitam, tussim veterem, cum vino autem sedem et tumores maxillarum. ad furunculos, panos, parotidas decoctae inlinuntur. utile et decocto fovere earum, feminasque decocto eodem cum faeno graeco. utiles sunt et pleuriticis ac peripneumonicis, cum ruta coctae torminibus. prosunt tibiarum ulceribus cum aeris flore, et parotidi, pterygiis cum punico malo, ambustis, pernionibus cum cera, hydropicis coctae in vino et cum absinthio et farina hordeacia. nitro addito manducatae alvum solvunt. scorpionum ictibus cum sale tritae inlinuntur.

carbunculos extrahunt in vino coctae et inpositae. carcinomati, si sine ulcere sit, quam pinguissimam ficum inponi paene singulare remedium est, item phagedaenae. cinis non ex alia arbore acrior. purgat, conglutinat, replet, adstringit. bibitur et ad discutiendum sanguinem concretum, item percussis, praecipitatis, ruptis, convulsis cineris cyathus in singulis aquae et olei. datur tetanicis et spasticis, item potus vel infusus coeliacis et dysintericis. et si quis eo cum oleo perunguatur, excalfacit. idem cum cera et rosaceo subactus ambustis cicatricem tenuissimam obducit. lusciosos ex oleo inlitus emendat dentiumque vitia crebro fricatu. produnt etiam, si quis inclinata arbore supino ore aliquem nodum eius morsu abstulerit nullo videnteatque cum aluta inligatum licio e collo suspenderit, strumas et parotidas discuti. cortex tritus cum oleo ventris ulcera sanat. crudae grossi verrucas, thymos nitro, farina additis tollunt. spodi vicem exhibet fruticum a radice exeuntium cinis. bis lotus adiecto psimithio digeritur in pastillos ad ulcera oculorum et scabritiam.

caprificus etiamnum multo efficacior fico; surculo quoque eius lacte coagulatur in caseo. lactis minus habet; exceptum id coactumque in duritiam suavitatem carnibus adfert fricatu. dilutum aceto miscetur exulceratoriis medicamentis. alvum solvit, vulvam cum amylo aperit, menses ciet cum luteo ovi. podagricis cum farina graeci feni inlinitur. lepras, psoras, lichenas, lentigines expurgat, item venenatorum ictus et canis morsus. dentium quoque dolori hic sucus adpositus in lana prodest aut in cava eorum additus. cauliculi et folia admixto ervo contra marinorum venena prosunt; adicitur et vinum. bubulas carnes additi caules magno ligni conpendio percoquunt. grossi inlitae strumas et omnem collectionem emolliunt et discutiunt; aliquatenus et folia. quae mollissima sunt ex iis, cum aceto ulcera manantia et epinyctidas, furfures sanant. cum melle foliis ceria sanant et canis morsus recentes, cum vino phagedaenas; cum papaveris foliis ossa extrahunt. grossi caprifici inflammationes discutiunt suffitu - resistunt et sanguini taurino poto et psimithio et lacti coagulato potae - , item in aqua decoctae atque inlitae parotidas. cauliculi aut grossi eius quam minutissimae ad scorpionum ictus e vino bibuntur. lac quoque instillatur plagae et folia inponuntur, item adversus murem araneum. cauliculorum cinis uvam faucium sedat, arboris ipsius cinis ex melle rhagadia, radix defervefacta in vino

dentium dolores. hiberna caprificus in aceto cocta et trita inpetigines tollit. inlinuntur ramenta e ramo sine cortice quam minutissima ad scobis modum. caprifico quoque medicinae unius miraculum additur: corticem eius intumescentem puer impubis si defracto ramo detrahat dentibus, medullam ipsam adalligatam ante solis ortum prohibere strumas. caprificus tauros quamlibet feroces collo eorum circumdata in tantum mirabili natura conpescit, ut inmobiles praestet.

herbam quoque graeci erinon vocant, reddendam in hoc loco propter gentilitatem. palmum alta est, cauliculis quinis fere, ocimi similitudine; flos candidus, semen nigrum, parvum. tritum cum attico melle oculorum epiphoris medetur. suci instillatio - decerpta enim manat lacte multo dulci herba - perquam utilis aurium dolori nitri exiguo addito. folia resistunt venenis.

pruni folia decocta tonsillis, gingivis, uvae prosunt, in vino decocta et vehementius, subinde conluto ore. ipsa pruna alvum molliunt, stomacho non utilissima, sed brevi momento.

utiliora persica sucusque eorum, etiam in vino aut in aceto expressus. neque alius eis pomis innocentior cibus; nusquam minus odoris, suci plus, qui tamen sitim stimulet ... folia eius trita inlita haemorrhagian sistunt. nuclei persicorum cum oleo et aceto capitis doloribus inlinuntur.

silvestrium quidem prunorum bacae, vel e radice cortex, in vino austero si decoquantur ita, ut triens ex hemina supersit, alvum sistunt et tormina. satis est singulos cyathos decocti sumi. - et in his et sativis prunis est limus arborum, quem graeci lichena appellant, rhagadiis et condylomatis mire utilis.

mora, in aegypto et cypro sui generis, ut diximus, largo suco abundant summo cortice desquamato; altior plaga sicca est mirabili natura. sucus adversatur venenis serpentium, prodest dysintericis, discutit panos omnesque collectiones, vulnera conglutinat, capitis dolores sedat, item aurium. splenicis bibitur atque inlinitur et contra perfrictiones. celerrime teredinem sentit. neque apud nos suco minor usus: adversatur aconito et araneis in vino potus; alvum solvit, pituitas taeniasque et similia ventris animalia extrahit. hoc idem praestat et cortex tritus. folia tingunt capillum cum fici nigrae et vitis corticeve simul coctis aqua caelesti. pomi ipsius sucus alvum solvit protinus. ipsa poma ad praesens stomacho utilia, refrigerant, sitim

faciunt; si non superveniat alius cibus, intumescunt. ex inmaturis sucus sistit alvum, veluti animalis alicuius in hac arbore observandis miraculis, quae in natura eius diximus.

fit ex pomo panchrestos stomatice, eadem arteriace appellata, hoc modo: sextarii iii suci e pomo leni vapore ad crassitudinem mellis rediguntur; post additur omphacii aridi pondus #1108 ii aut murrae #1108 i, croci #1108 i; haec simul trita miscentur decocto. neque est aliud oris, arteriae, uvae, stomachi iucundius remedium. fit et alio modo: suci sextarii ii, mellis attici sextarius decoquuntur ut supra diximus.

mira sunt praeterea quae produntur: prima germinatione, priusquam in folia exeant, sinistra decerpi futura poma. ricinos graeci vocant. hi terram si non attigere, sanguinem sistunt adalligati, sive ex vulnere fluat sive ore sive naribus sive haemorrhoidis. ad hoc servantur repositi. idem praestare et ramus dicitur luna plena defractus incipiens fructum habere, si terram non adtigerit, privatim mulieribus adalligatus lacerto contra abundantiam mensum. hoc et quocumque tempore ab ipsis decerptum ita, ut terram non adtingat, adalligatumque existimant praestare. folia mori trita aut arida decocta serpentium ictibus inponuntur; aeque potu proficitur. scorpionibus adversatur e radice corticis sucus ex vino aut posca potus. reddenda est et antiquorum conpositio. sucum expressum pomi maturi inmaturique mixtum coquebant vase aereo ad mellis crassitudinem. aliqui murra adiecta et cupresso praeduratum in vaso sole torrebant, permiscentes spatha ter die. haec erat stomatice, qua et vulnera ad cicatricem perducebant. alia ratio suci: siccato exprimebant pomo, multum sapori opsoniorum conferentem, in medicina vero contra nomas et pectoris pituitas et ubicumque opus esset adstringi viscera. dentes quoque conluebant eo. tertium genus suci foliis et radice decoctis ad ambusta ex oleo inlinenda. inponuntur et folia per se. radix per messes incisa sucum dat aptissimum dentium dolori collectionibusque et suppurationibus. alvum purgat. folia mori in urina madefacta pilum coriis detrahunt.

cerasia alvum molliunt, stomacho inutilia; eadem siccata alvum sistunt, urinam cient. invenio apud auctores, si quis matutino roscida cum suis nucleis devoret, in tantum levari alvum, ut pedes morbo liberentur.

mespila exceptis setaniis, quae malo propiorem vim habent, reliqua adstringunt stomachum sistuntque alvum. item sorba sicca, nam recentia stomacho et alvo citae prosunt.

nuces pineae, quae resinam habent, contusae leviter, additis in singulas sextariis aquae ad dimidium decoctae, sanguinis excreationi medentur ita, ut cyathi bini bibantur ex eo. corticis e pinu in vino decoctum contra tormina datur. nuclei nucis pineae sitim sedant et acrimoniam stomachi rosionesque et contrarios umores consistentes ibi. et infirmitatem virium roborant, renibus, vesicae utiles. fauces videntur exasperare et tussim. bilem pellunt poti ex aqua aut vino aut passo aut balanorum decocto. miscetur his contra vehementiores stomachi rosiones cucumeris semen et sucus porcilacae, item ad vesicae ulcera et renes, quoniam et urinam cient.

amygdalae amarae radicum decoctum cutem in facie corrigit coloremque hilariorem facit. nuces ipsae somnum faciunt et aviditatem, urinam et menses cient. capitis dolori inlinuntur maximeque in febri; si ab ebrietate, in aceto et rosaceo et aquae sextario. sanguinem sistunt cum amylo et menta, lethargicis et comitialibus prosunt capite peruncto, epinyctidas sanant e vino vetere, ulcera putrescentia, canum morsus cum melle et furfures ex facie ante fotu praeparata, item iocineris et renium dolores ex aqua potae, set saepe et ecligmate cum resina terebinthina. calculosis et difficili urinae in passo et ad purgandam cutem in aqua mulsa tritae sunt efficaces. prosunt ecligmate cum lacte iocineri, tussi et colo cum elelisphaco modice addito e melle; sumitur nucis abellanae magnitudo. aiunt quinis fere praesumptis ebrietatem non sentire potores, vulpesque, si ederint eas nec contingat e vicino aquam lambere, mori. minus valent in remediis dulces. et hae tamen purgant, urinam cient. recentes stomachum implent.

nucibus graecis cum absinthi semine ex aceto sumptis morbus regius sanari dicitur, isdem inlitis per se vitia sedis et privatim condylomata, item tussis, sanguinis reiectio.

nuces iuglandes graeci a capitis gravedine appellavere. etenim arborum ipsarum foliorumque virus in cerebrum penetrat. hoc minore tormento, sed in cibis, nuclei faciunt. sunt autem recentes iucundiores; siccae unguinosiores et stomacho inutiles, difficiles concoctu, capitis dolorem inferentes, tussientibus inimicae, vomituris

ieiunis aptae in tenesmo solo, trahunt enim pituitam. eaedem praesumptae venena hebetant, item adversantur cepis leniuntque earum saporem. aurium inflammationi inponuntur, cum mellis exiguo et ruta mammis et luxatis, anginae cum ruta et oleo, cum cepa autem et sale et melle canis hominisque morsui. putamine nucis iuglandis dens cavus inuritur. putamen combustum tritumque in oleo aut vino infantium capite peruncto nutrit capillum; ideo ad alopecias sic utuntur. quo plures nuces quis ederit, hoc facilius taenias pellit. quae perveteres sunt, nuces gangraenis et carbunculis medentur, item suggillatis; cortex iuglandium lichenum vitio et dysintericis, folia trita cum aceto aurium dolori. in sanctuariis mithridatis, maximi regis, devicti cn. pompeius invenit in peculiari commentario ipsius manu conpositionem antidoti e ii nucibus siccis, item ficis totidem et rutae foliis xx simul tritis, addito salis grano: ei, qui hoc ieiunus sumat, nullum venenum nociturum illo die. contra rabiosi quoque canis morsum nuclei a ieiuno homine commanducati inlitique praesenti remedio esse dicuntur.

nucis abellanae capitis dolorem faciunt et inflationem stomachi, corpori et pinguitudinis conferunt plus quam sit verisimile. set tostae et destillationi medentur, tussique veteri tritae in aqua mulsa potae; quidam adiciunt grana piperis, alii e passo bibunt. - pistacia eosdem usus habent, quos nuclei pinei, praeterque ad serpentium ictus, sive edantur sive bibantur. - castaneae vehementer sistunt stomachi et ventris fluctiones, alvum cient, sanguinem excreantibus prosunt, carnes alunt.

siliquae recentes, stomacho inutiles, alvum solvunt. eaedem siccatae sistunt stomachoque utiliores fiunt, urinam cient. syriacas in dolore stomachi ternas in aquae sextariis decoquunt quidam ad dimidium eumque sucum bibunt. - sudor virgae corni arboris, lamna candente ferrea exceptus non contingente ligno, inlitaque inde ferrugo incipientes lichenas sanat. - arbutus sive unedo fructum fert difficilem concoctioni et stomacho inutilem.

laurus excalfactoriam naturam habet et foliis et cortice et bacis; itaque decoctum ex his maximeque foliis, prodesse volvis et vesicis convenit. inlita vero vesparum crabronumque et apium, item serpentium venenis resistunt, maxime sepos, dipsadis et viperae. prosunt et mensibus feminarum cum oleo cocta, cum polenta autem,

quae tenera sunt, trita ad inflammationes oculorum, cum ruta testium, cum rosaceo capitis dolores aut cum irino. quin et commanducata atque devorata per triduum terna liberant tussi, eadem suspiriis trita cum melle. cortex radicis cavendus gravidis. ipsa radix calculos rumpit, iocineri prodest iii obolis in vino odorato pota. folia potu vomitiones movent. bacae menses trahunt adpositae tritae vel potae. tussim veterem et orthopnoean sanant binae detracto cortice in vino potae, si et febris sit, ex aqua aut ecligmate ex passo aut aqua mulsa decoctae. prosunt et phthisicis eodem modo et omnibus thoracis rheumatismis; nam et concoquunt pituitam et extrahunt. adversus scorpiones quaternae ex vino bibuntur. epinyctidas ex oleo inlitae et lentigines et ulcera manantia et ulcera oris et furfures, cutis porriginem sucus bacarum emendat et phthiriasim; aurium dolori aut gravitati instillatur cum vino vetere et rosaceo. perunctos eo fugiunt venenata omnia; prodest contra ictus et potus.

maxime autem valet laurus, quae tenuissima habet folia. bacae cum vino serpentibus et scorpionibus et araneis resistunt; ex oleo et aceto inlinuntur et lieni, iocineri, gangraenis cum melle. et in fatigatione etiam aut perfrictione suco eo perungui nitro adiecto prodest. sunt qui celeritati partus conferre multum putent radicem acetabuli mensura in aqua potam, efficacius recentem quam aridam. quidam adversus scorpionum ictus x bacas dari iubent potui, item et in remedio uvae iacentis quadrantem pondo bacarum foliorumve decoqui in aquae sextariis iii ad tertias, eam calidam gargarizare et in capitis dolore inpari numero bacas cum oleo conterere et calfacere. - laurus delphicae folia trita olfactaque subinde pestilentiae contagia prohibent, tanto magis si et urantur. oleum ex delphica ad cerata acopumque, ad perfrictiones discutiendas, nervos laxandos, lateris dolores, febres frigidas utile est, item ad aurium dolorem in mali punici cortice tepefactum. folia decocta ad tertias partes aquae uvam cohibent gargarizatione, potu alvi dolores intestinorumque, tenerrima ex iis trita in vino papulas pruritusque inlita noctibus. - proxime valent cetera laurus genera. laurus alexandrina sive idaea partus celeres facit radice pota iii denariorum pondere in vini dulcis cyathis iii, secundas etiam pellit mensesque. eodem modo pota daphnoides sive iis nominibus, quae diximus, silvestris laurus prodest, alvum solvit vel recenti folio vel arido drachmis iii cum sale in hydromelite.

manducata pituitas extrahit, folium et vomitus, stomacho inutile. sic et bacae quinae denae purgationis causa sumuntur.

myrtus sativa candida minus utilis medicinae quam nigra. semen eius medetur sanguinem excreantibus, item contra fungos in vino potum. odorem oris commendat vel pridie commanducatum; ita apud menandrum synaristosae hoc edunt. datur et dysintericis idem denarii pondere in vino. ulcera difficilia in extremitatibus corporis sanat cum vino subfervefactum. inponitur lippitudini cum polenta et cardiacis in mamma sinistra et contra scorpionis ictum in mero et ad vesicae vitia, capitis dolores, aegilopas, antequam suppurent, item tumoribus, exemptisque nucleis in vino vetere tritum eruptionibus pituitae. sucus seminis alvum sistit, urinam ciet. ad eruptiones pusularum pituitaeque cum cerato inlinitur et contra phalangia; capillum denigrat. lenius suco oleum est ex eadem myrto, lenius et vinum, quo numquam inebriantur. inveteratum sistit alvum et stomachum, tormina sanat, fastidium abigit. foliorum arentium farina sudores cohibet inspersa vel in febri, utilis et coeliacis, procidentiae vulvarum, sedis vitiis, ulceribus manantibus, igni sacro fotu, capillis fluentibus, furfuribus, item aliis eruptionibus, ambustis. additur in medicamenta, quae liparas vocant, eadem de causa, qua oleum ex iis, efficacissimum ad ea, quae in umore sunt, tamquam in ore et vulva. folia ipsa fungis adversantur trita ex vino, cum cera vero articulariis morbis et collectionibus. eadem in vino decocta dysintericis et hydropicis potui dantur. siccantur in farinam, quae inspergitur ulceribus aut haemorrhagiae. purgant et lentigines, pterygia et paronychia et epinyctidas, condylomata, testes, tetra ulcera, item ambusta cum cerato. ad aures purulentas et foliis crematis utuntur et suco et decocto. comburuntur et in antidota; item cauliculi in flore decerpti et in fictili novo operto cremati in furno, dein triti ex vino. et ambustis foliorum cinis medetur. inguen ne intumescat ex ulcere, satis est surculum tantum myrti habere secum nec ferro nec terra contactum.

myrtidanum diximus quomodo fieret. vulvae prodest adpositu, fotu et inlitu, myrto efficacius et cortice et folio et semine. exprimitur et foliis sucus, mollissimis in pila tusis, adfuso paulatim vino austero, alias aqua caelesti, atque etiam expresso utuntur ad oris, sedis ulcera, vulvae et ventris, capillorum nigritiam, alarum perfusiones,

purgationes lentiginum et ubi constringendum aliquid est.

myrtus silvestris sive oxymyrsine sive chamaemyrsine bacis rubentibus et brevitate a sativa distat. radix eius in honore est, decocta vino ad renium dolores pota et difficili urinae praecipueque crassae et graveolenti, morbo regio et vulvarum purgationi trita cum vino; cauliculi quoque incipientes asparagorum modo in cibo sumpti et in cinere cocti. semen cum vino potum aut oleo et aceto calculos frangit, item in aceto et rosaceo tritum capitis dolores sedat et potum morbum regium. castor oxymyrsinen myrti ... foliisque acutis, ex qua fiunt ruri Scopae, ruscum vocavit, ad eosdem usus.

et hactenus habent se medicinae urbanarum arborum; transeamus ad silvestres.

LIBER XXIV

ne silvae quidem horridiorque naturae facies medicinis carent, sacra illa parente rerum omnium nusquam non remedia disponente homini, ut medicina fieret etiam solitudo ipsa, et ad singula illius discordiae atque concordiae miraculis occursantibus. quercus et olea tam pertinaci odio dissident, ut altera in alterius scrobe depacta emoriantur, quercus vero et iuxta nucem iuglandem. pernicialia et brassicae cum vite odia; ipsum olus, quo vitis fugatur, adversum cyclamino et origano arescit. quin et annosas iam et quae sternantur arbores difficilius caedi, celerius marcescere tradunt, si prius manu quam ferro attingantur. pomorum onera a iumentis statim sentiri, ac, nisi prius ostendantur iis, quamvis pauca portent, sudare ilico. ferulae asinis gratissimo sunt in pabulo, ceteris vero iumentis praesentaneo veneno, qua de causa id animal libero patri adsignatur, cui et ferula. surdis etiam rerum sua cuique sunt venena ac minimis quoque. philyra coci et polline nimium salem cibis eximunt; praedulcium fastidium sal temperat; nitrosae aut amarae aquae polenta addita mitigantur, ut intra duas horas bibi possint, qua de causa in saccos vinarios additur polenta. similis vis rhodiae cretae et argillae nostrati. concordia valent, cum pix oleo extrahitur, quando utrumque pinguis naturae est. oleum solum calci miscetur, quando utrumque aquas odit. cummis aceto facilius eluitur, atramentum aqua, innumera praeterea alia, quae suis locis dicentur adsidue.

hinc nata medicina. haec sola naturae placuerat esse remedia, parata vulgo, inventu facilia ac sine inpendio e quibus vivimus. postea fraudes hominum et ingeniorum capturae officinas invenere istas, in quibus sua cuique homini venalis promittitur vita. statim compositiones et mixturae inexplicabiles decantantur, arabia atque india remedia aestimantur, ulcerique parvo medicina a rubro mari inputatur, cum remedia vera cotidie pauperrimus quisque cenet. nam si ex horto petantur aut herba vel frutex quaeratur, nulla artium vilior fiat. ita est profecto, magnitudine populus r. perdidit ritus, vincendoque victi sumus. paremus externis, et una artium imperatoribus quoque imperaverunt. verum de his alias plura.

loton herbam itemque aegyptiam eodem nomine, alias et syrticam

arborem, diximus suis locis. haec lotos, quae faba graeca appellatur a nostris, alvum bacis sistit. ramenta ligni decocta in vino prosunt dysintericis, menstruis, vertigini, comitialibus, cohibent et capillum. mirum his ramentis nihil esse amarius fructuque dulcius. fit et e scobe eius medicamentum ex aqua myrti decocta subacta et divisa in pastillos, dysintericis utilissimum pondere victoriati cum aquae cyathis iii.

glans intrita duritias, quas cacoe+the vocant, cum salsa axungia sanat. vehementiores iligna et in omnibus cortex ipse corticique tunica subiecta. haec decocta iuvat coeliacos. dysintericis et inlinitur vel ipsa glans. eadem resistit serpentium ictibus, rheumatismis, suppurationibus. folia et bacae vel cortex vel sucus decocti prosunt contra toxica. cortex inlinitur decoctus lacte vaccino serpentis plagae; datur et ex vino dysintericis. eadem et ilici vis.

coccum ilicis vulneribus recentibus ex aceto inponitur, epiphoris ex aqua, oculis subfusis sanguine instillatur. est autem genus ex eo in africa fere et asia nascens, celerrime in vermiculum id se mutans, quod ideo scolecium vocant inprobantque. principalia eius genera diximus.

nec pauciora gallae genera fecimus, solidam perforatam, item albam nigram, maiorem minorem. vis omnium similis; optima commagena. excrescentia in corpore tollunt, prosunt gingivis, uvae, oris exulcerationi. crematae et vino extinctae ... coeliacis, dysintericis inlinuntur, paronychiis ex melle et unguibus scabris, pterygiis, ulceribus manantibus, condylomatis, ulceribus quae phagedaenica vocantur. in vino autem decoctae auribus instillantur, oculis inlinuntur, adversus eruptiones, panos cum aceto. nucleus commanducatus dentium dolorem sedat, item intertrigines et ambusta. inmaturae ex iis ex aceto potae lienem consumunt; eaedem crematae et aceto salso extinctae menses sistunt vulvasque procidentes fotu. omnis capillos denigrat.

viscum e robore praecipuum haberi diximus et quo conficeretur modo. quidam contusum in aqua decocunt, donec nihil innatet, quidam commanducantes acinos expuunt cortices. optimum quod sine cortice quodque levissimum, extra fulvum, intus porraceum. nihil est glutinosius. emollit, discutit tumores, siccat strumas; cum resina et cera panos mitigat omnis generis. quidam et galbanum

adiciunt pari pondere singulorum eoque modo et ad vulnera utuntur. unguium scabritias expolit, si septenis diebus illinantur nitroque conluantur. quidam id religione efficacius fieri putant prima luna collectum e robore sine ferro, si terram non attigerit; comitialibus mederi, conceptum feminarum adiuvare, si omnino secum habeant; ulcera commanducato inpositoque efficacissime sanari.

roboris pilulae ex adipe ursino alopecias capillo replent. - cerri folia et cortex et glans siccat collectiones suppurationesque, fluctiones sistit. torpentes membrorum partes conroborat decoctum eius fotu, cui et insidere expedit siccandis adstringendisque partibus. radix cerri adversatur scorpionibus.

suberis cortex tritus ex aqua calida potus sanguinem fluentem ex utralibet parte sistit. eiusdem cinis ex vino calido sanguinem excreantibus magnopere laudatur.

fagi folia manducantur in gingivarum labrorumque vitiis. calculis glandis fagineae cinis inlinitur, item cum melle alopeciis.

cupressi folia trita serpentibus ulceribus inponuntur, et capiti cum polenta, si a sole doleat, item ramici, qua de causa et bibuntur. testium quoque tumori cum cera inlinuntur, capillum denigrant ex aceto. eadem trita cum ii partibus panis mollis e vino ammineo subacta pedum ac nervorum dolores sedant. pilulae adversus serpentium ictus bibuntur aut si eiciatur sanguis; collectionibus inlinuntur. ramici quoque tenerae tusae cum axungia et lomento prosunt. bibuntur ex eadem causa. parotidi et strumae cum farina inponuntur. exprimitur sucus tusis cum semine. qui mixtus oleo caliginem oculorum aufert; item victoriati pondere in vino potus inlitusve cum fico sicca pingui exemptis granis vitia testium sanat, tumores discutit et cum fermento strumas. radix cum foliis trita pota vesicae et stranguriae medetur et contra phalangia. ramenta pota menses cient, scorpionum ictibus adversantur.

cedrus magna, quam cedrelaten vocant, dat picem, quae cedria vocatur, dentium doloribus utilissimam. frangit enim eos et extrahit, dolores sedat. cedri sucus ex ea quomodo fieret diximus. magni ad volumina usus, ni capiti dolorem inferret, defuncta corpora incorrupta aevis servat, viventia corrumpit, mira differentia, cum vitam auferat spirantibus defunctisque pro vita sit. vestes quoque corrumpit et animalia necat. ob haec non censeam in anginis hoc

remedio utendum neque in cruditatibus, quod suasere aliqui, gustatu. dentes quoque conluere ex aceto in dolore timuerim vel gravitati aut vermibus aurium instillare. portentum est, quod tradunt, abortivum fieri in venere ante perfusa virilitate. phthiriasis perunguere eo non dubitaverim, item porrigines. suadent et contra venenum leporis marini bibere in passo. facilius in elephantiasi inlinant. et ulcera sordida et excrescentia in iis auctores quidam et oculorum albugines caliginesque inunxere eo et contra pulmonis ulcera cyathum eius sorberi iusserunt, item adversus taenias. fit ex eo et oleum, quod pisselaeon vocant, vehementioris ad omnia eadem usus. cedri scobe serpentes fugari certum est, item bacis tritis cum oleo si qui perunguantur.

cedrides, hoc est fructus cedri, tussim sanant, urinam cient, alvum sistunt, utiles ruptis, convulsis, spasticis, stranguriae, vulvis, contra aconita, lepores marinos, eadem quae supra, collectionibus inflammationibusque.

de galbano diximus. neque umidum neque aridum probatur et quale docuimus. per se bibitur ad tussim veterem, suspiria, rupta, convulsa, inponitur ischiadicis, lateris doloribus, panis, furunculis, corpori ab ossibus recedenti, strumis, articulorum nodis, dentium quoque doloribus. inlinitur et cum melle capitis ulceribus. purulentis infunditur auribus cum rosaceo aut nardo. odore comitialibus subvenit et vulva strangulante vel in stomachi defectu. abortus non exeuntes trahit adpositu vel suffitu, item ramo hellebori circumlitum atque subiectum. serpentes nidore urentium fugari diximus. fugiunt et perunctos galbano. medetur et a scorpione percussis. bibitur et in difficili partu fabae magnitudine in cyatho vini, vulvasque conversas corrigit, cum murra autem et vino mortuos partus extrahit. adversatur et venenis, maxime toxicis, cum murra et vino. serpentes oleo et spondylio mixto tactu necat. nocere urinae existimatur.

similis hammoniaci natura atque lacrimae, probandae ut diximus. mollit, calefacit, discutit, dissolvit. claritati visus in collyriis convenit, pruritum, cicatrices, albugines oculorum tollit, dentium dolores sedat, efficacius accensum. prodest dyspnoicis, pleuriticis, pulmonibus, vesicis, urinae cruentae, lieni, ischiadicis potum - sic et alvum solvit - , articulis et podagrae cum pari pondere picis aut cerae et rosaceo coctum. maturat panos, extrahit clavos cum melle; sic et

duritias emollit; lieni cum aceto et cera cypria vel rosaceo efficacissime inponitur. lassitudines perungui cum aceto et oleo exiguoque nitro utile.

et styracis naturam in peregrinis arboribus exposuimus. placet praeter illa, quae diximus, maxime pinguis, purus, albicantibus fragmentis. medetur tussi, faucibus, pectoris vitiis, vulvae praeclusae duritieve laboranti, ciet menses potu adposituque, alvum mollit. invenio potu modico tristitiam animi resolvi, largiore contrahi. sonitus aurium emendat infusu, strumas illitu nervorumque nodos. adversatur venenis, quae frigore necent, ideo et cicutae.

spondylium una demonstratum infunditur capitibus phreneticorum et lethargicorum, item capitis doloribus longis cum oleo vetere; bibitur et in iocinerum vitiis, morbo regio, comitialibus, orthopnoicis, vulvarum strangulatione, quibus et suffitu prodest. alvum mollit. illinitur ulceribus, quae serpunt, cum ruta. flos auribus purulentis efficaciter infunditur, sed sucus, cum exprimitur, integendus est, quoniam mire adpetitur a muscis et similibus. radix derasa et in fistulas coniecta callum earum erodit. auribus quoque instillatur cum suco. datur et ipsa contra morbum regium et in iocineris vitio et vulvarum. capillos crispos facit peruncto capite.

sphagnos sive sphacos sive bryon et in gallia, ut indicavimus, nascitur, vulvis insidentium utilis, item genibus et feminum tumoribus mixtus nasturtio et aquae salsae tritus. cum vino autem et resina sicca potus urinam pellit celerrime. hydropicos inanit cum vino et iuniperis tritus ac potus.

terebinthi folia et radix collectionibus inponuntur. decoctum eorum stomachum firmat. semen in capitis dolore bibitur in vino et contra difficultatem urinae, ventrem leniter emollit, venerem excitat.

piceae et laricis folia trita ... et in aceto decocta dentium dolori. prodest cinis corticum intertrigini, ambustis; potus alvum sistit, urinam movet, suffitu vulvas corrigit. piceae folia privatim iocineri utilia sunt drachmae pondere in aqua mulsa pota. silvas eas dumtaxat, quae picis resinaeque gratia radantur, utilissimas esse phthisicis aut qui longa aegritudine non recolligant vires satis constat et illum caeli ae+ra plus ita quam navigationem aegyptiam proficere, plus quam lactis herbidos per montium aestiva potus.

chamaepitys latine abiga vocatur propter abortus, ab aliis tus

terrae, cubitalibus ramis, flore pinus et odore. altera brevior et incurva, ... similis. tertia eodem odore et ideo nomine quoque, parvola, cauliculo digitali, foliis scabris, exilibus, albis, in petris nascens, omnes herbae, sed propter cognationem nominis non differendae. prosunt adversus scorpionum ictus, item iocineri inlitae cum palmis aut cotoneis; renibus et vesicae decoctum earum cum farina hordeacea. morbo quoque regio et urinae difficultatibus ex aqua decoctae bibuntur. novissima contra serpentes valet cum melle; sic et adpositu vulvas purgat. sanguinem densatum extrahit pota. sudores facit perunctis ea, peculiariter renibus utilis. fiunt ex ea et hydropicis pilulae cum fico alvum trahentes. lumborum dolorem victoriati pondere in vino finit et tussim recentem. mortuos partus ex aceto cocta et pota eicere protinus dicitur.

cum honore et pityusa simili de causa dicetur, quam quidam in tithymali genere numerant. frutex est similis piceae, flore parvo, purpureo. bilem et pituitam per alvum detrahit radix decocti hemina aut seminis lingula in balanis. folia in aceto decocta furfures cutis emendant, mammas quoque mixto rutae decocto et tormina et serpentium ictus et in totum collectiones incipientes.

resinam supra dictis arboribus gigni docuimus et genera eius et nationes in ratione vini ac postea in arboribus. summae species duae, sicca et liquida. sicca e pinu et picea fit, liquida terebintho, larice, lentisco, cupresso; nam et hae ferunt in asia ac syria. falluntur qui eandem putant esse e picea atque larice; picea enim pinguem et turis modo sucosam fundit, larix gracilem ac mellei coloris, virus redolentem. medici liquida raro utuntur et in ovo fere, e larice propter tussim ulceraque viscerum - nec pinea magnopere in usu - , ceteris non nisi coctis. et coquendi genera satis demonstravimus.

arborum differentia placet terebinthina odoratissima atque levissima, nationum cypria et syriaca, utraque mellis attici colore, sed cypria carnosior crassiorque. in sicco genere quaerunt ut sit candida, pura, perlucida, in omni autem ut montana potius quam campestris, item aquilonia potius quam ab alio vento. resolvitur resina ad vulnerum usus et malagmata oleo, in potiones amygdalis amaris. natura in medendo contrahere vulnera, purgare, discutere collectiones. lenit pectoris vitia terebinthina; inlinitur eadem calida membrorum doloribus spasticisque - in sole abluitur - et totis

corporibus mangonum maxime cura ad gracilitatem emendandam, spatiis ita laxantium cutem per singula membra, capacioraque ciborum facienda corpora. proximum locum optinet e lentisco. inest ei vis adstringendi, movet et ante ceteras urinam. reliquae ventrem emolliunt, cruda concocunt, tussim veterem sedant, vulvae onera extrahunt etiam suffitae. privatim adversantur visco, panos et similia cum sebo taurino et melle sanant. palpebras lentiscina commodissime replicat, fractis quoque utilissima et auribus purulentis, item in pruritu genitalium. pinea capitis vulneribus optime medetur.

pix quoque unde et quibus conficeretur modis indicavimus et eius duo genera, spissum liquidumque. spissarum utilissima medicinae bruttia, quoniam pinguissima et resinosissima utrasque praebet utilitates, ob id et magis rutila quam ceterae. id enim quod in hoc adiciunt, ex mascula arbore meliorem esse, non arbitror posse intellegi. picis natura excalfacit, explet. adversatur privatim cerastae morsibus cum polenta, item anginae cum melle, destillationibus et sternumentis a pituita. auribus infunditur cum rosaceo, inlinitur cum cera. sanat lichenas, alvum solvit, excreationes pectoris adiuvat ecligmate aut inlitis tonsillis cum melle; sic et ulcera purgat, explet. cum uva passa et axungia carbunculos purgat et putrescentia ulcera; quae vero serpunt, cum pineo cortice aut sulpure. phthisicis cyathi mensura quidam dederunt et contra veterem tussim. rhagadas sedis et pedum panosque et ungues scabros emendat, vulvae duritias et conversiones, item odore lethargicos. strumas cum farina hordeacea et pueri inpubis urina decocta ad suppurationem perducit. et ad alopecias sicca pice utuntur, ad mulierum mammas bruttia ex vino subfervefacta cum polline farraceo quam calidissimis linteis inpositis.

liquida pix oleumque, quod pisselaeon vocant, quemadmodum fieret diximus. quidam iterum decocunt et vocant palimpissam. liquida anginae perunguntur intus et uva, ... aurium dolores, claritatem oculorum, oris circumlitiones, suspiriosos, vulvas, tussim veterem et crebras exscreationes pectoris, spasmos, tremores, opisthotonos, paralysis, nervorum dolores, praestantissimum ad canum et iumentorum scabiem.

est et pissasphaltos, mixta bitumini pice naturaliter ex

apolloniatarum agro - quidam ipsi miscent - , praecipuum ad scabiem pecorum remedium aut si fetus mammas laeserit. nativum optimum ex eo, quod, cum fervet, innatat.

zopissam eradi navibus diximus, cera marino sale macerata. optima haec a tirocinio navium. additur autem in malagmata ad discutiendas collectiones.

taedae ... decoctaeque in aceto dentium dolores efficaciter colluunt.

lentisci arboris et semen et cortex et lacrima urinam cient, alvum sistunt; decoctum eorum ulcera, quae serpunt, fotu. inlinitur in umidis et igni sacro, gingivas conluit. folia dentibus in dolore atteruntur; mobiles decocto colluuntur; capillum tingunt. lacrima sedis vitiis prodest, cum quid siccari excalfierive opus sit. decoctum et e lacrima stomacho utile, ructum et urinam movens. quod et capitis doloribus cum polenta illinitur. folia tenera oculis inflammatis illinuntur. mastiche lentisci replicandis palpebris et ad extendendam cutem in facie et zmegmata adhibetur et sanguinem reicientibus, tussi veteri et ad omnia, quae acaciae vis. medetur et attritis partibus sive oleo e semine eius facto ceraeque mixto sive foliis ex oleo decoctis, si hae cum aqua ita foveantur. scio democratem medicum in valitudine considiae, m. servili consularis filiae, omnem curationem austeram recusantis diu efficaciter usum lacte caprarum, quas lentisco pascebat.

platani adversantur vespertilionibus, pilulae earum in vino potae #1108 iiii pondere omnibus serpentium et scorpionum venenis, item ambustis. tunsae autem cum aceto acri magisque scillite sanguinem omnem sistunt et lentiginem et carcinomata malandriasque veteres addito melle emendant. folia autem et cortex inlinuntur collectionibus et suppurationibus, his et decoctum eorum, corticis autem in aceto dentium remedium est, foliorum tenerrima in vino albo decocta oculorum. lanugo foliorum auribus et oculis inutilis. cinis pilularum sanat ambusta igni vel frigore. cortex e vino scorpionum ictus restinguit.

fraxinus quam vim adversus serpentes haberet indicavimus. semen foliis eius inest, quo medentur iocineris, laterum doloribus in vino, aquam, quae subit cutem, extrahunt. corpus obesum levant onere sensim ad maciem reducentibus isdem foliis cum vino tritis ad

virium portionem, ita ut puero v folia iii cyathis diribeantur, robustioribus vii folia quinis vini. non omittendum ramenta eius et scobem a quibusdam cavenda praedici.

aceris radix contunsa e vino iocineris doloribus efficacissime inponitur.

populi albae uvarum in unguentis usum exposuimus. cortex potus ischiadicis, stranguriae prodest, foliorum sucus calidus aurium dolori. virgam populi in manu tenentibus intertrigo non metuitur. populus nigra efficacissima habetur, quae in creta nascitur; comitialibus semen ex aceto utile. fundit illa et resinam exiguam, qua utuntur ad malagmata. folia podagris in aceto decocta inponuntur. umor e cavis populi nigrae effluens verrucas papulasque - est attritu odoratus - tollit. populi ferunt et in foliis guttam, ex qua apes propolim faciunt. gutta quoque ad quae propolis ex aqua efficax.

ulmi et folia et cortex et rami vim habent spissandi et volnera contrahendi. corticis utique interior tilia lepras sedat et folia ex aceto inlita. corticis denarii pondus potum in hemina aquae frigidae alvum purgat pituitasque et aquas privatim trahit. inponitur et collectionibus lacrima et volneribus et ambustis, quae decocto fovere prodest. umor in folliculis arboris huius nascens cuti nitorem inducit faciemque gratiorem praestat. cauliculi foliorum primi vino decocti tumores sanant extrahuntque per fistulas. idem praestant et tiliae corticis. multi corticem commanducatum volneribus utilissimum putant, folia trita aqua adspersa pedum tumori. umor quoque e medulla, uti diximus, castratae arboris effluens capillum reddit capiti inlitus defluentesque continet.

arbor tilia lenius ad eadem fere utilis est, ad quae oleaster. folia autem tantum in usu et ad infantium ulcera et in ore et commanducata et decocta. urinam cient, menses sistunt inlita, sanguinem pota detrahunt.

sabucus habet alterum genus magis silvestre, quod graeci chamaeacten, alii helion vocant, multo brevius. utriusque decoctum in vino vetere foliorum vel seminis vel radicis ad cyathos binos potum stomacho inutile, set alvo detrahens aquam. refrigerat etiam inflammationem, maxime recentia ambusta et canis morsus, cum polenta mollissimis foliorum inlitis. sucus cerebri collectiones privatimque membranae, quae circa cerebrum est, lenit infusus. acini

eius infirmiores quam reliqua; tingunt capillum, poti acetabuli mensura urinam movent. foliorum mollissima ex oleo et sale eduntur ad pituitam bilemque detrahendam. ad omnia efficacior quae minor. radicis eius decoctae in vino ii cyathi poti hydropicos exinaniunt, volvas emolliunt, has et foliorum decoctum insidentium. caules teneri mitioris sabuci in patinis cocti alvum solvunt. resistunt folia et serpentium ictibus in vino pota. podagris cum sebo hircino vehementer prosunt cauliculi inliti. iidem in aqua macerantur, ut sparsa ea pulices necentur; foliorum decocto si locus spargatur, muscae necantur. boa appellatur morbus papularum, cum rubent corpora; sabuci ramo verberatur. cortex interior tritus ex vino albo potus alvum solvit.

iunipirus vel ante cetera omnia excalfacit, extenuat, cedro alias similis. et huius duo genera, altera minor. utraque accensa serpentes fugat. semen stomachi, pectoris, lateris doloribus utile. inflationes algoresque discutit, tusses; concoquit duritias. inlitum tumores sistit, item alvum bacis ex vino nigro potis, item ventris tumores inlitis. miscetur et antidotis, oxyporis. urinas ciet. inlinitur et oculis in epiphoris. datur convolsis, ruptis, torminibus, volvis, ischiadicis cum vino albo potum pilulis quaternis aut decoctis xx in vino. sunt qui et perunguant corpus suco e semine eius in serpentium metu.

salicis fructus ante maturitatem in araneam abit, sed, si prius colligatur, sanguinem reicientibus prodest. corticis e ramis primis cinis clavum et callum aqua mixta sanat. vitia cutis in facie emendat, magis admixto suco suo. est autem hic trium generum: unum arbor ipsa exsudat cummium modo, altero manat in plaga, cum floret, exciso cortice iii digitorum magnitudine. vis ad expurganda quae obstent oculis, item ad spissanda quae opus sit, ciendamque urinam et ad omnes collectiones intus extrahendas. tertius sucus est detruncatione ramorum a falce destillans. ex his ergo aliquis cum rosaceo in calice punici calfactus auribus infunditur vel folia cocta et cum cera trita inponuntur. item podagricis cortice et foliis in vino decoctis foveri nervos utilissimum. flos tritus cum foliis furfures purgat in facie. folia contrita et pota intemperantiam libidinis coercent atque in totum auferunt usum saepius sumpta. amerinae nigrae semen cum spuma argenti pari pondere a balneo inlitum psilotrum est.

non multum a salice vitilium usu distat vitex, foliorum quoque adspectu, nisi odore gratior esset. graeci lygon vocant, alias agnon, quoniam matronae thesmophoriis athenieniensium castitatem custodientes his foliis cubitus sibi sternunt. duo genera eius: maior in arborem salicis modo adsurgit, minor ramosa, foliis candidioribus, lanuginosis. prima album florem emittit cum purpureo; quae et candida vocatur, nigra quae tantum purpureum. nascuntur palustribus campis. semen potum vini quendam saporem habet et dicitur febres solvere et, cum unguantur oleo admixto, sudorem facere, sicut lassitudines dissolvere. urinam cient et menses. caput temptant vini modo - nam et odor similis - , set inflationes pellunt in inferiora, alvum sistunt, hydropicis et lienibus perquam utiles. lactis ubertatem faciunt. adversantur venenis serpentium, maxime quae frigus inferunt; minor efficacior ad serpentes: bibitur seminis drachma in vino vel posca aut ii foliorum tenerrimorum. et inlinuntur utraque adversus araneorum morsus; vel perunctis tantum, suffitu quoque aut substratu fugant venenata. ad venerem impetus inhibent eoque maxime phalangiis adversantur, quorum morsus genitale excitat. capitis dolorem ex ebrietate sedant cum rosaceo flos tenerique cauliculi. seminis decoctum vehementiorem capitis dolorem dissolvit fotu et volvam etiam suffitu vel adpositu purgat, alvum cum puleio et melle potum. vomicas et panos, difficile concoquens, cum farina hordeacea mollit. lichenas et lentigines cum aphronitro et aceto semen sanat et oris ulcera et eruptionum cum melle, testium cum butyro et foliis vitium, rhagadas sedis cum aqua illitum. luxatis cum sale et nitro et cera et semine utilissimae et folio. additur in malagmata ad vitia nervorum et podagras semen; instillatur in oleo decoctum capiti in lethargia et phrenesi. virgam qui in manu habeant aut in cinctu, negantur intertriginem sentire.

ericen graeci vocant fruticem non multum a vitice differentem, colore roris marini et paene folio. hoc adversari serpentibus tradunt.

genista quoque vinculi usum praestat, floris apibus gratissimi. dubito an haec sit quam graeci auctores sparton appellavere, cum ex ea lina piscatoria apud eos factitari docuerim, et numquid hanc designaverit homerus, cum dixit navium sparta dissoluta. nondum enim fuisse hispanum africanumve spartum in usu certum est et, cum fierent sutiles naves, lino tamen, non sparto umquam sutas. semen

eius, quod graeci eodem nomine appellant, in folliculis passiolorum modo nascens purgat hellebori vice drachma et dimidia pota in aquae mulsae cyathis iiii ieiunis. rami, similiter frondes, in aceto macerati pluribus diebus et tunsi sucum dant ischiadicis utilem cyathi unius potu. quidam marina aqua macerare malunt et infundere clystere. perunguntur eodem suco ischiadici addito oleo. quidam et ad stranguriam utuntur semine. genista tunsa cum axungia genua dolentia sanat.

myricen ericam vocat lenaeus, similem scopis amerinis; sanari dicit ea carcinomata in vino decocta tritaque cum melle inlita. eandem esse arbitrantur quidam tamaricem et ad lienem praecipuam, si sucus eius expressus in vino bibatur, adeoque mirabilem eius antipathian contra solum hoc viscerum faciunt, ut adfirment, si ex ea alveis factis bibant sues, sine liene inveniri. et ideo homini quoque splenico cibum potumque dant in vasis ex ea factis. gravis autem auctor in medicina virgam ex ea defractam, ut neque terram neque ferrum attingeret, sedare ventris dolores adseveravit inpositam ita, ut tunica cinctuque corpori adprimeretur. volgus infelicem arborem eam appellat, ut diximus, quoniam nihil ferat nec seratur umquam. corinthus et quae circa est graecia bryan vocat eiusque duo genera facit, silvestrem plane sterilem, alteram mitiorem. haec fert in aegypto syriaque etiam abundanter lignosum fructum, maiorem galla, asperum gustu, quo medici utuntur vice gallae in compositionibus, quas antheras vocant. et lignum autem et flos et folia et cortex in eosdem usus adhibentur, quamquam remissiora. datur sanguinem reicientibus cortex tritus et contra profluvia feminarum, coeliacis quoque; idem tunsus inpositusque collectiones omnes inhibet. foliis exprimitur sucus ad haec eadem et in vino decoquitur; ipsa vero adiecto melle gangraenis inlinuntur. decoctum eorum in vino potum ... imposita cum rosaceo et cera sedant; sic et epinyctidas sanant. dentium dolori, aurium decoctum eorum salutare est. radix ad eadem similiter. folia hoc amplius ad ea, quae serpunt, inponuntur cum polenta. semen drachmae pondere adversus phalangia et araneos bibitur, cum altilium vero pingui furunculis inponitur, efficax et contra serpentium ictus praeterquam aspidum. nec non morbo regio, phthiriasi, lendibus decoctum infusum prodest abundantiamque mulierum sistit. cinis arboris ad omnia eadem

prodest. aiunt, si bovis castrati urinae misceatur vel in potu vel in cibo, venerem finiri. carbo ex eo genere urina ea restinctus in umbra conditur: idem, cum libeat accendere, restituitur. magi id et spadonis urina fieri tradiderunt.

nec virga sanguinea felicior habetur. cortex eius interior cicatrices, quae praesanuere, aperit.

sileris folia inlita fronti capitis dolores sedant. eiusdem semen contritum in oleo phthiriasis coercet. serpentes et hunc fruticem fugiunt, baculumque rustici ob id ex eo gerunt.

ligustrum si eadem arbor est, quae in oriente cypros, suos in europa usus habet. sucus discutit nervos, articulos, algores; folia ubique veteri ulceri, cum salis mica et oris exulcerationi prosunt, acini contra phthiriasim, item contra intertrigines vel folia. sanant et gallinaceorum pituitas acini.

folia alni ex ferventi aqua remedio sunt tumoris.

hederae genera viginti demonstravimus. natura omnium in medicina anceps. mentem turbat et caput purgat largius pota; nervis intus nocet, iisdem nervis adhibita foris prodest. eadem natura, quae aceto est, omnia genera eius refrigerant. urinam cient potu, capitis dolorem sedant, praecipue cerebro continentique cerebrum membranae utiliter mollibus inpositis foliis cum aceto et rosaceo tritis et decoctis, addito postea rosaceo oleo; inlinuntur autem fronti. et decocto eorum fovetur os caputque perunguitur. lieni et pota et inlita prosunt. decocuntur et contra horrores febrium eruptionesque pituitae aut in vino teruntur. corymbi quoque poti vel inliti lienem sanant, iocinera autem inliti. trahunt et menses adpositi. sucus hederae taedia narium graveolentiamque emendat, praecipue albae sativae. idem infusus naribus caput purgat, efficacius addito nitro. infunditur etiam purulentis auribus aut dolentibus cum oleo. cicatricibus quoque decorem facit. ad lienes efficacior albae ferro calefactus. satis est acinos vi in vini cyathis ii sumi. acini ex eadem alba terni in aceto mulso poti taenias pellunt, in qua curatione ventri quoque inposuisse eos utile est. hedera, quam chrysocarpon appellavimus, bacis aurei coloris xx in vini sextario tritis, ita ut terni cyathi potentur, aquam, quae cutem subierit, urina educit; erasistratus eiusdem acinos v tritos in rosaceo oleo calefactosque in cortice punici instillavit dentium dolori a contraria aure. acini, qui croci

sucum habent, praesumpti potu a crapula tutos praestant; item sanguinem excreantes aut torminibus laborantes hederae nigrae. candidioris corymbi poti steriles etiam viros faciunt. inlinitur decocta quaecumque in vino omni ulcerum generi, etiamsi cacoe+the sint. lacrima hederae psilotrum est phthiriasimque tollit. flos cuiuscumque generis iii digitorum captu dysintericos et alvum citam emendat in vino austero bis die potus. et ambustis inlinitur utiliter cum cera. denigrant capillum corymbi. radicis sucus in aceto potus contra phalangia prodest. huius quoque ligni vaso splenicos bibentes sanari invenio. et acinos terunt, mox comburunt et ita inlinunt ambusta prius perfusa aqua calida. sunt qui et incidant suci gratia eoque utantur ad dentes erosos, frangique tradunt, proximis cera munitis, ne laedantur. cummim etiam in hedera quaerunt, quam ex aceto utilissimam dentibus promittunt.

graeci vicino vocabulo cisthon appellant fruticem maiorem thymo, foliis ocimi. duo eius genera: flos masculo rosaceus, feminae albus. ambo prosunt dysintericis et solutionibus ventris in vino austero ternis digitis flore capto et similiter bis die poto, ulceribus veteribus et ambustis cum cera et per se oris ulceribus. - sub his maxime nascitur hypocisthis, quam inter herbas dicemus.

cissos erythranos ab iisdem appellatur similis hederae, coxendicibus utilis e vino potus, item lumbis, tanta vi acini, ut sanguinem urina detrahat. - item chamaecisson appellant hederam non attollentem se a terra. et haec contunsa in vino acetabuli mensura lieni medetur, folia ambustis cum axungia. - milax quoque, quae, anthophoros cognominatur, similitudinem hederae habet, tenuioribus foliis. coronam ex ea factam inpari foliorum numero aiunt capitis doloribus mederi. quidam duo genera milacis dixere: alteram inmortalitati proximam in convallibus opacis, scandentem arborum, comantibus acinorum corymbis, contra venenata omnia efficacissime iuvantem acinorum suco: infantibus saepe instillato nulla postea venena nocitura. alterum genus culta amare et in his gigni, nullius effectus. illam esse milacem priorem, cuius lignum ad aures sonare diximus. - similem huic aliqui clematida appellaverunt, repentem per arbores, geniculatam et ipsam. folia eius lepras purgant; semen alvum solvit acetabuli mensura in aquae hemina aut aqua mulsa. datur ex eadem causa et decoctum eius.

harundinis genera xxviii demonstravimus, non aliter evidentiore illa naturae vi, quam continuis his voluminibus tractamus, siquidem harundinis radix contrita inposita felicis stirpem corpore extrahit, item harundinem felicis radix. et, quo plura genera facimus, illa, quae in iudaea syriaque nascitur odorum unguentorumque causa, urinam movet cum gramine aut apii semine decocta; ciet et menstrua admota; medetur convulsis ii obolis pota, iocineri, renibus, hydropi, tussi etiam suffitu magisque cum resina, furfuribus ulcerumque manantibus cum murra decocta. excipitur et sucus eius fitque elaterio similis. efficacissima in omni harundine quae proxima radici, efficaciora genicula. harundo cypria, quae donax vocatur, corticis cinere alopecias emendat, item putrescentia ulcera. foliis eius ad extrahendos aculeos utuntur, efficacibus et contra ignes sacros collectionesque omnes. vulgaris harundo extractoriam vim habet et recens tusa, non in radice tantum, in mulso enim et ipsam harundinem tradunt. medetur et luxatis et spinae doloribus radix in aceto inlita; eadem recens trita et in vino pota venerem concitat. harundinum lanugo inlata auribus obtundit auditum.

cognata in aegypto res est harundini papyrum, praecipuae utilitatis, cum inaruit, ad laxandas siccandasque fistulas et intumescendo ad introitum medicamentorum aperiendas. charta, quae fit ex eo, cremata inter caustica est. cinis eius ex vino potus somnum facit; ipsa ex aqua inposita callum sanat.

ne in aegypto quidem nascitur hebenus, ut docuimus, nec tractamus in medicina alienos orbes, non omittetur tamen propter miraculum. scobem eius oculis unice mederi dicunt lignoque ad cotem trito cum passo caliginem discuti, ex aqua vero radice albugines oculorum, item tussim pari modo dracunculi radicis adiecto cum melle. hebenum medici et inter erodentia adsumunt.

rhododendros ne nomen quidem apud nos invenit latinum; rhododaphnen vocant aut nerium. mirum folia eius quadripedum venenum esse, homini vero contra serpentes praesidium ruta addita e vino pota. pecus etiam et caprae, si aquam biberint, in qua folia ea maduerint, mori dicuntur.

nec rhus latinum nomen habet, cum in usum pluribus modis veniat. nam et herba est silvestris, foliis myrti, cauliculis brevibus, quae taenias pellit, et frutex coriarius appellatur, subrutilus, cubitalis,

crassitudine digitalis, cuius aridis foliis ut malicorio coria perficiuntur. medici autem rhoicis utuntur ad contusa, item coeliacos et sedis ulcera aut quae phagedaenas vocant; ... trita cum melle et inlita cum aceto. decoctum eorum instillatur auribus purulentis. fit et stomatice decoctis ramis ad eadem quae ex moris, sed efficacior admixto alumine. inlinitur eadem hydropicorum tumori.

rhus, qui erythros appellatur, semen est huius fruticis. vim habet adstringendi refrigerandique. adspergitur pro sale obsoniis alvo soluta omnesque carnes cum silphio suaviores facit. medetur ulceribus manantibus, cum melle asperitati linguae, percussis, lividis, desquamatis; eodem modo capitis vulnera ad cicatricem celerrime perducit. feminarum abundantiam sistit cibo.

alia res erythrodanum, quam aliqui ereuthodanum vocant, nos rubiam, qua tinguntur lanae pellesque perficiuntur. in medicina urinam ciet, morbum regium sanat ex aqua mulsa - et lichenas ex aceto inlita - , ischiadicos, paralyticos ita, ut bibentes laventur cotidie. radix semenque trahunt menses, alvum sistunt et collectiones discutiunt. contra serpentes rami cum foliis inponuntur. folia et capillum inficiunt. invenio apud quosdam morbum regium sanari hoc frutice, etiam si adalligatus spectetur tantum.

distat ab eo qui alysson vocatur foliis tantum et ramis minoribus. nomen accepit, quod a cane morsos rabiem sentire non patitur ex aceto potus adalligatusque. mirum est quod additur, saniem conspecto omnino frutice eo siccari.

tinguentibus et radicula lanas praeparat, quam struthion a graecis vocari diximus. medetur morbo regio et ipsa et decoctum eius potu, item pectoris vitiis. urinam ciet, alvum solvit. et vulvas purgat, quam ob rem aureum πεσσὸν medici vocant ex ea. e melle prodest magnifice et tussi, orthopnoeae coclearis mensura, cum polenta vero et aceto lepras tollit. eadem cum panace et capparis radice calculos frangit pellitque, panos discutit cum farina hordeacia et vino decocta. miscetur et malagmatis et collyriis claritatis causa, sternumento utilis inter pauca, lieni quoque ac iocineri. eadem pota denarii unius pondere ex aqua mulsa suspiriosos sanat, sic et pleuriticos et omnes lateris doloris. - apocyni semen ex aqua - frutex est folio hederae, molliore tamen, et minus longis viticulis, semine acuto, diviso, lanuginoso, gravi odore - canes et omnes quadripedes necat in cibo

datum.

rosmarinum dictum est. duo genera eius: alterum sterile, alterum cui et caulis et semen resinaceum, quod cachrys vocatur. foliis odor turis. radix vulnera sanat viridis inposita et sedis procidentiam, condylomata, haemorrhoidas, sucus et fruticis et radicis morbum regium et ea, quae repurganda sunt. oculorum aciem exacuit. semen ad vetera pectoris vitia datur potui et ad vulvas cum vino et pipere, menses adiuvat, podagris inlinitur cum aerina farina, purgat etiam lentigines et quae excalfacienda sint aut cum sudor quaerendus inlitum, item convulsis. auget et lacte in vino potum, item radix. ipsa herba strumis cum aceto inlinitur, ad tussim cum melle prodest.

cachrys multa genera habet, ut diximus. sed haec, quae ex rore supra dicto nascitur, si fricetur, resinosa est. adversatur venenis et venenatis praeterquam anguibus. sudores movet, tormina discutit, lactis ubertatem facit.

herba sabina, brathy appellata a graecis, duorum generum est, altera tamarici folio similis, altera cupresso; quare quidam creticam cupressum dixerunt. a multis in suffitus pro ture adsumitur, in medicamentis vero duplicato pondere eosdem effectus habere quos cinnamum traditur. collectiones minuit et nomas conpescit, inlita ulcera purgat, partus emortuos adposita extrahit et suffita. inlinitur igni sacro et carbunculis cum melle; ex vino pota regio morbo medetur. gallinacii generis pituitas fumo eius herbae sanari tradunt.

similis herbae huic sabinae est selago appellata. legitur sine ferro, dextra manu per tunicam operta, sinistra eruitur velut a furante, candida veste vestito pureque lautis nudis pedibus, sacro facto, priusquam legatur, pane vinoque; fertur in mappa nova. hanc contra perniciem omnem habendam prodidere druidae gallorum et contra omnia oculorum vitia fumum eius prodesse.

iidem samolum herbam nominavere nascentem in umidis, et hanc sinistra manu legi a ieiunis contra morbos suum boumque, nec respicere legentem neque alibi quam in canali deponere, ibi conterere poturis.

cummium genera diximus. in his maiores effectus melioris cuiusque erunt. dentibus inutiles sunt, sanguinem coagulant et ideo reicientibus sanguinem prosunt, item ambustis, arteriae vitiis inutiles, urinam cient, amaritudines hebetant. adstrictoriis ceteris, quae ex

amygdala amara est spissandisque visceribus efficacior, habet excalfactorias vires. proponuntur prunorum etiam et cerasorum ac vitium. siccant inlitae et adstringunt, ex aceto vero infantium lichenes sanant, prosunt et tussi veteri iiii obolis in mixto potis. creduntur et colorem gratiorem facere ciborumque adpetentiam et calculosis prodesse cum passo potae. oculorum et vulnerum utilitatibus maxime conveniunt.

spina arabica - spinae aegyptiae laudes in odorum loco diximus - et ipsa astringit spissatque destillationes omnes et sanguinis excreationes mensumque abundantiam, etiamnum radice valentior.

spinae albae semen contra scorpiones auxiliatur. corona ex ea inposita capitis dolores minuit. - est huic similis quam graeci acanthion vocant, minoribus multo foliis, aculeatis per extremitates et araneosa lanugine obductis, qua collecta etiam vestes quaedam bombycinis similes fiunt in oriente. ipsa folia vel radices ad remedia opisthotoni bibuntur.

et acacia e spina fit in aegypto, alba nigraque arbore, item viridi, sed longe meliore prioribus. fit et in galatia, deterrima spinosiore arbore. semen omnium lenticulae simile, minore tantum et grano et folliculo. colligitur autumno, ante collectum nimio validius spissat. sucus ex folliculis aqua caelesti perfusis, mox in pila tusis exprimitur organis, tunc densatur in sole mortariis in pastillos. fit et foliis minus efficax. ad coria perficienda semine pro galla utuntur. foliorum sucus et galaticae acaciae nigerrimus inprobatur, item qui valde rufus. purpurea aut leucophaea et quae facillime diluitur - vis summa ad spissandum refrigerandumque est - oculorum medicamentis ante alia utiles. lavantur in eos usus pastilli, ab aliis torrentur, ab aliis peruruntur. capillum tingunt, sanant ignem sacrum, ulcera, quae serpunt, et umida vitia corporis, collectiones, articulos contusos, perniones, pterygia. abundantiam mensum in feminis sistunt vulvamque et sedem procidentes, item oculos, oris ulcera et genitalium.

vulgaris quoque haec spina, ex qua aenae fulloniae inplentur, radicis usus habet. per hispanias quidem multi et inter odores et ad unguenta utuntur illa, aspalathum vocantes. est sine dubio hoc nomine spina silvestris in oriente, ut diximus, candida, magnitudine arboris iustae, sed et frutex humilior, aeque spinosus, in nisyro et

rhodiorum insulis, quem alii erysisceptrum, alii phasganon, syri diaxylon vocant. optimus qui minime ferulaceus, rubens aut in purpuram vergens detracto cortice. nascitur pluribus locis, sed non ubique odoratus. quam vim haberet caelesti arcu in eum innixo diximus. sanat taetra oris ulcera et ozaenas, genitalia exulcerata aut carbunculantia, item rhagadia, inflationes potu discutit et strangurias. cortex sanguinem reddentibus medetur. decoctum eius alvum sistit. similia praestare silvestrem quoque putant.

spina et appendix appellata, quoniam bacae puniceo colore in ea appendices vocantur. hae crudae per se et aridae decoctae in vino alvum citam ac tormina conpescunt. - pyracanthae bacae contra serpentium ictus bibuntur.

paliurus quoque spinae genus est. semen eius afri zuram vocant, contra scorpiones efficacissimum, item calculosis et tussi. folia adstrictoriam vim habent. radix discutit panos, collectiones, vomicas, urinas trahit pota. decoctum eius in vino alvum sistit, serpentibus adversatur. radix praecipue datur in vino.

aquifoliae folia contusa addito sale articulorum morbis prosunt, bacae purgationi feminarum, coeliacis, dysintericis, cholericis. in vino potae sistunt alvum. radix decocta et inlita extrahit infixa corpori, utilissima et luxatis tumoribusque. aquifolia arbor in domo aut villa sata veneficia arcet. flore eius aquam glaciari pythagoras tradit; item baculum ex ea factum in quodvis animal emissum, etiamsi citra ceciderit defectu mittentis, ipsum per sese cubito propius adlabi; tam praecipuam naturam inesse arbori. - taxi arboris fumus necat mures.

nec rubos ad maleficia tantum genuit natura, ideoque et mora his, hoc est vel hominibus cibos, dedit. vim habent siccandi, adstringendi, gingivis, tonsillis, genitalibus accommodatissimi. adversantur serpentium sceleratissimis, haemorrhoidi et presteri, flos aut mora scorpionibus. vulnera sine collectionum periculo iungunt. urinas cient. caules eorum teneri tunduntur exprimiturque sucus, mox sole cogitur in crassitudinem mellis; singulari remedio contra mala oris oculorumque, sanguinem exscreantes, anginas, vulvas, sedes, coeliacos intellegitur potus aut inlitus. oris quidem vitiis etiam folia commanducata prosunt et ulceribus manantibus aut quibuscumque in capite inlinuntur. cardiacis sic vel per se inponuntur a mamma

sinistra, item stomacho in doloribus oculisque procidentibus. instillatur sucus eorum et auribus. sanat condylomata cum rosaceo cerato. cauliculorum ex vino decoctum uvae praesentaneum remedium est. iidem per se in cibo sumpti cymae modo aut decocti in vino austero labantes dentes firmant. alvum sistunt et profluvia sanguinis; dysintericis prosunt. siccantur in umbra, ut cinis crematorum uvam reprimat. folia quoque arefacta et contusa iumentorum ulceribus utilia traduntur. mora, quae in iis nascuntur, vel efficaciorem stomaticen praebuerint quam sativa morus. eadem compositione vel cum hypocisthide tantum et melle bibuntur in cholera et a cardiacis et contra araneos. inter medicamenta, quae styptica vocant, nihil efficacius rubi mora ferentis radice decocta in vino ad tertias partes, ut colluantur eo oris ulcera et sedis foveantur, quae tanta vis est, ut spongeae ipsae lapidescant.

alterum genus rubi, in quo rosa nascitur, gignit pilulam castaneae similem, calculosis praecipuo remedio - alia est cynorrhoda, quam proximo dicemus volumine - ; cynosbaton, alii cynapanxin, alii neurospaston vocant. folium habet vestigio hominis simile. fert et uvam nigram, in cuius acino nervum habet, unde neurospastos dicitur tota, alia quam cappari, quod medici cynosbaton appellarunt. huius thyrsus ad remedia splenis et inflationes conditus ex aceto manditur. nervus eius cum mastiche chia commanducatus os purgat. ruborum rosa alopecias cum axungia emendat. mora capillum tingunt cum omphacino oleo. flos mori messe colligitur; candidus pleuriticis praecipuus ex vino potus, item coeliacis. radix ad tertias decocta alvum sistit et sanguinem, item dentes collutos decocto. eodem suco foventur sedis atque genitalium ulcera. cinis e radice reprimit uvam.

idaeus rubus appellatus est, quoniam in ida non alius nascitur. est autem tenerior ac minor, rarioribus calamis innocentioribusque, sub arborum umbra nascens. huius flos cum melle epiphoris inlinitur et ignibus sacris, stomachicisque ex aqua bibendus datur. cetera eadem praestat, quae supra dicta.

inter genera ruborum rhamnos appellatur a graecis, candidior, fruticosior et ramos spargens rectis aculeis, non, ut ceteri, aduncis, foliis maioribus. alterum genus eius silvestre, nigrius et quadamtenus rubens; fert veluti folliculos. huius radice decocta in aqua fit medicamentum, quod vocatur lycium. semen secundas trahit. alter

ille candidior adstringit magis, refrigerat, collectionibus et vulneribus adcommodatior. folia utriusque et cruda et decocta inlinuntur cum oleo.

lycium praestantius spina fieri tradunt, quam et pyxacanthon chironian vocant, qualem in indicis arboribus diximus, quoniam longe praestantissimum existimatur indicum. coquuntur in aqua tusi rami radicesque summae amaritudinis aereo vase per triduum iterumque exempto ligno, donec mellis crassitudo fiat. adulteratur amaris sucis, etiam amurca et felle bubulo. spuma eius ac flos quidam oculorum medicamentis additur. reliquo suco faciem purgat et psoras sanat, erosos angulos oculorum veteresque fluctiones, aures purulentas, tonsillas, gingivas, tussim, sanguinis excreationes fabae magnitudine devoratum aut, si ex vulneribus fluat, inlitum, rhagadia, genitalium ulcera, attritus, ulcera recentia et serpentia ac putrescentia, in naribus clavos, suppurationes. bibitur et mulieribus in lacte contra profluvia. indici differentia glaebis extrinsecus nigris, intus rufis, cum fregeris, cito nigrescentibus. adstringit vehementer cum amaritudine. ad eadem omnia utile est, sed praecipue ad genitalia.

sunt qui et sarcocollam spinae lacrimam putent, pollini turis similem, cum quadam acrimonia dulcem, cumminosam. sistit fluctiones, inlinitur infantibus maxime. vetustate et haec nigrescit, melior quo candidior.

unum etiamnum arborum medicinis debetur nobile medicamentum, quod oporicen vocant. fit ad dysintericos stomachique vitia in congio musti albi lento vapore decoctis malis cotoneis v cum suis seminibus, punicis totidem, sorborum sextario et pari mensura eius, quod rhun syriacam vocant, croci semuncia. coquitur usque ad crassitudinem mellis.

his subtexemus ea, quae graeci communicatione nominum in ambiguo fecere, anne arborum essent.

chamaedrys herba est, quae latine trixago dicitur. aliqui eam chamaeropem, alii teucriam appellavere. folia habet magnitudine mentae, colore et divisura quercus - alii serrata et ab eo serram inventam esse dixerunt - , flore paene purpureo. carpitur praegnans suco in petrosis, adversus serpentium venena potu inlituque efficacissima, item stomacho, tussi vetustae, pituitae in gula

cohaerescenti, ruptis, convulsis, lateris doloribus. lienem consumit, urinam et menses ciet, ob id incipientibus hydropicis efficax, manualibus scopis eius in iii heminis aquae decoctis usque ad tertias. faciunt et pastillos terentes eam ex aqua ad supra dicta. sanat et vomicas et vetera ulcera vel sordida cum melle. fit et vinum ex ea pectoris vitiis. foliorum sucus cum oleo caligines oculorum discutit, ad splenem ex aceto sumitur. excalfacit perunctione.

chamaedaphne unico ramulo est, cubitali ferme; folia tenuiora lauro; semen rubens adnexum foliis. inlinitur capitis doloribus recens, ardores refrigerat, ad tormina cum vino bibitur. menses sucus eius et urinam ciet potu partusque difficiles in lana adpositus.

chamelaea similitudinem foliorum oleae habet - sunt autem amara, odorata - , in petrosis, palmum altitudine non excedente. alvum purgat, detrahit pituitam, bilem foliis in ii absinthii partibus decoctis, suco eo cum melle poto. foliis inpositis et ulcera purgantur. aiunt, si quis ante solis ortum eam capiat dicatque ad albugines oculorum se capere, adalligata discuti id vitium, quoquo modo vero collectam iumentorum pecorumque oculis salutarem esse.

chamaesyce lentis folia habet nihil se adtollentia, in aridis, petrosis, claritati oculorum et contra subfusiones utilis suco ad cicatrices, caligines, nubeculas inuncto. vulvae dolores sedat adposita in linteolo. tollit et verrucas omnium generum inlita. prodest et orthopnoicis.

chamaecissos spicata est tritici modo, ramulis quinis fere, foliosa - cum floret, existimari potest alba viola - , radice tenui. bibunt ischiadici folia iii obolis in vini cyathis ii septenis diebus, admodum amara potione.

chamaeleucen apud nos farfarum sive farfugium vocant. nascitur secundum fluvios, folio populi, sed ampliore. radix eius inponitur carbonibus cupressi, atque is nidor per infundibulum bibitur inveteratae tussi.

chamaepeuce, larici folio similis, lumborum et spinae doloribus propria est. - chamaecyparissos herba ex vino pota contra venena serpentium omnium scorpionumque pollet. - ampeloprason in vinetis nascitur, foliis porri, ructu gravis, contra serpentium ictus efficax. urinam et menses ciet, eruptiones sanguinis per genitale inhibet potum inpositumque. datur et a partu mulieribus et contra canis

morsus. - ea quoque, quae stachys vocatur, porri similitudinem habet, longioribus foliis pluribusque et odoris iucundi colorisque in luteum inclinati. pellit menstrua.

clinopodium alii cleopiceton, alii zopyrontion, alii ocimoides appellant, serpyllo similem, surculosam, palmi altitudine, in petrosis, orbiculato foliorum ambitu speciem lecti pedum praebentem. bibitur ad convulsa, rupta, strangurias, serpentium ictus, item decoctae sucus.

nunc subtexemus herbas mirabiles quidem, sed minus claras, nobilibus in sequentia volumina dilatis.

centunculum vocant nostri, foliis ad similitudinem capitis paenularum, iacentem in arvis, graeci clematidem, egregii effectus ad sistendam alvum in vino austero. idem sanguinem sistit tritus oxymelitis aut aquae calidae cyathis v denarii unius pondere, sic et ad secundas mulierum efficax. - sed graeci clematidas et alias habent, unam quam aliqui aetiten vocant, alii laginen, nonnulli tenuem scamoniam. ramos habet pedales, foliosos, non dissimiles scamoniae, nisi quod nigriora minoraque sunt folia. invenitur in vineis arvisque. estur ut olus cum oleo ac sale; alvum ciet. eadem dysintericis cum lini semine ex vino austero sorbetur. folia epiphoris inponuntur cum polenta subposito udo linteolo. strumas inposita ad suppurationem perducunt, deinde axungia adiecta percurant; item haemorrhoida cum oleo viridi, phthisicos iuvant cum melle. lactis quoque ubertatem faciunt in cibis et infantibus inlita capillum alunt, ex aceto edentium venerem stimulant. - est alia clematis aegyptia cognomine, quae ab aliis daphnoides, ab aliis polygonoides vocatur, folio lauri, longa tenuisque, adversus serpentes et privatim aspidas ex aceto pota efficax.

aegyptus hanc maxime gignit, quae et aron, de qua inter bulbos diximus, magnae cum dracontio litis; quidam enim eandem esse dixere. glaucias satu discrevit, dracontium silvestrem aron pronuntiando. aliqui radicem aron appellarunt, caulem vero dracontium, in totum alium, si modo hic est qui apud nos dracunculus vocatur. namque aros radicem nigram in latitudinem rotundam habet multoque maiorem et qua manus inpleatur, dracunculus subrutilam et draconis convoluti modo, unde et nomen. quin et ipsi graeci inmensam posuere differentiam: semen dracunculi

fervens mordaxque tradendo tantumque et virus, ut olfactum gravidis abortum inferret, aron miris laudibus tulere, primum in cibis feminam praeferentes, quoniam mas durior esset et in coquendo lentior; pectoris vitia purgare, aridum potioni inspersum aut ecligmate urinam et menses ciere, sic et in oxymelite potum. stomacho interaneisque exulceratis ex lacte ovillo bibendum, ad tussim in cinere coctum dedere ex oleo. alii coxere in lacte, ut decoctum biberetur. epiphoris elixum inposuere, item suggillatis, tonsillis. glaucias ex oleo haemorrhoidum vitio infudit, lentigines ex melle inlinens. laudavit et pro antidoto contra venena, pleuriticis, peripneumonicis quo tussientibus modo. semen intritum cum oleo aut rosaceo infudit aurium dolori. dieuches tussientibus aut suspiriosis et orthopnoicis et pura excreantibus farinae permixtum pane cocto dedit, diodotus phthisicis e melle ecligmate et pulmonis vitiis, ossibus etiam fractis inposuit. partus omnium animalium extrahit naturae circumlitum. sucus radicis cum melle attico oculorum caligines, stomachi vitia discutit, tussim decocti ius cum melle. ulcera omnium generum, sive phagedaenae sint sive carcinomata sive serpant sive polypi in naribus, sucus mire sanat. folia ambustis prosunt ex vino et oleo cocta. alvum inaniunt ex sale et aceto sumpta et luxatis cum melle cocta prosunt, item articulis podagricis cum sale recentia vel sicca. hippocrates utralibet ad collectiones cum melle inposuit. ad menses trahendos seminis vel radicis drachmae ii in vini cyathis ii sufficiunt. eadem potio, si a partu non purgentur, et secundas trahit. hippocrates et radicem ipsam adposuit. dicunt et in pestilentia salutarem esse in cibis. ebrietatem discutit. serpentes nidore, cum crematur, privatim aspidas, fugat aut inebriat ita, ut torpentes inveniantur. perunctos quoque aro e laureo oleo fugiunt. ideo et contra ictus dari potui in vino nigro putant utile. in foliis ari caseus optime servari traditur.

dracunculus, quem dixi, hordeo maturescente effoditur luna crescente. omnino habentem serpentes fugiunt. adeo percussis prodesse potum aiunt; maiorem vim esse, si ferro non attingatur. sucus eius et aurium dolori prodest. id autem, quod graeci dracontion vocant, triplici effigie demonstratum mihi est: foliis betae, non sine thyrso, flore purpureo; hoc est simile aro. alii radice longa veluti signata articulosaque monstravere, ternis omnino cauliculis, foliis,

decoqui ex aceto contra serpentium ictus iubentes. tertia demonstratio fuit folio maiore quam cornus, radicis harundineae, totidem, ut adfirmabant, geniculatae nodis, quot haberet annos, totidemque esse folia; hi ex vino vel aqua contra serpentes dabant.

est et aris, quae in eadem aegypto nascitur, similis aro, minor tantum minoribusque foliis et utique radice, quae tamen olivae grandis magnitudinem inpleat, alba geminum caulem, altera unum tantum emittens. medetur utraque ulceribus manantibus, item ambustis ac fistulis collyrio inmisso. nomas sistunt inlitu decoctarum in aqua et postea tritarum rosaceo addito. sed unum miraculum ingens, contacto genitali cuiusque feminini sexus animal in perniciem agi.

myriophyllon, quod nostri milifolium vocant, caulis est teneri, similis feniculo, plurimis foliis, unde et nomen accepit. nascitur in palustribus, magnifici usus ad vulnera cum aceto. bibitur ad difficultates urinae et vesicae aut suspiria praecipitatisque ex alto. eadem efficacissima ad dentium dolores. etruria hoc nomine appellat herbam in pratis tenuem, a lateribus capillamenti modo foliosam, eximii usus ad vulnera, boum nervos abscisos vomere solidari ea rursusque iungi addita axungia adfirmans.

pseudobunion napi folia habet, fruticans palmi altitudine, laudatissima in creta. contra tormina, stranguriam, laterum praecordiorumque dolores bibuntur rami eius quini senive.

myrris, quam alii myrrizan, alii myrran vocant, simillima est cicutae caule foliisque et flore, minor tantum et exilior, cibo non insuavis. ciet menstrua et partus cum vino. aiunt eandem potam in pestilentia salutarem esse. subvenit et phthisicis in sorbitione data. aviditatem cibi facit, phalangiorum morsus restinguit. ulcera quoque in facie aut capite sucus eius in aqua triduo maceratae sanat.

oenobreches folia lentis habet, longiora paulo, florem rubentem, radicem exiguam et gracilem. nascitur circa fontes. siccata in farinae modum et inspersa vino albo strangurias finit, alvum sistit. sucus eius perunctis cum oleo sudores movet.

in promisso herbarum mirabilium occurrit aliqua dicere et de magicis. quae enim mirabiliores primi eas in nostro orbe celebravere pythagoras atque democritus, consectati magos.

coracesia et calicia pythagoras aquam glaciari tradit, quarum

mentionem apud alios non reperio, nec apud eum alia de his. idem minyada appellat et nomine alio corinthiam, cuius decocto in aqua suco protinus sanari ictus serpentium, si foveantur, dicit. eundem effusum in herba qui vestigio contigerint aut forte respersos insanabili leto perire, monstrifica prorsus natura veneni praeterquam contra venena. ab eodem pythagora aproxis appellatur herba, cuius radix e longinquo concipiat ignes, ut naphtha, de qua in terrae miraculis diximus. idem tradit, si qui morbi humano corpori inciderint florente brassica, quamvis sanatos admonitionem eorum sentire, quotiens floreat; item si florente acciderint aut frumento aut cicuta aut viola, similem conditionem habere. nec me fallit hoc volumen eius a quibusdam cleemporo medico adscribi, verum pythagorae pertinax fama antiquitasque vindicant, et id ipsum auctoritatem voluminum adfert, si quis alius curae suae opus illo viro dignum iudicavit, quod fecisse cleemporum, cum alia suo et nomine ederet, quis credat

democriti certe chirocmeta esse constat. at in his ille post pythagoram magorum studiosissimus quanto portentosiora tradit! ut aglaophotim herbam, quae admiratione hominum propter eximium colorem acceperit nomen, in marmoribus arabiae nascentem persico latere, qua de causa et marmaritim vocari; hac magos uti, cum velint deos evocare. - achaemenida, colore electri, sine folio nascentem taradastilis indiae, qua pota in vino noxii per cruciatus confiteantur omnia per varias numinum imaginationes; eandem hippophobada appellat, quoniam equae praecipue caveant eam. - theombrotion xxx schoenis a choaspe nasci, pavonis picturis similem, odore eximio; hanc a regibus persarum bibi contra omnia corporum incommoda; a stabilitate mentis et iustitiae, eandem semnion a potentiae maiestate appellari. - aliam deinde adamantida, armeniae cappadociaeque alumnam; hac admota leones resupinari cum hiatu lasso. nominis causam esse quod conteri nequeat. - arianida in arianis gigni, igneam colore; colligi, cum sol in leone sit. huius tactu peruncta oleo ligna accendi. - therionarca in cappadocia et mysia nascente omnes feras torpescere nec nisi hyaenae urina adspersa recreari. aethiopida in meroe nasci, ob id et meroida appellari, folio lactucae, hydropicis utilissimam e mulso potam; ophiusam in elephantine eiusdem aethiopiae, lividam difficilemque aspectu, qua pota terrorem

minasque serpentium obversari ita, ut mortem sibi eo metu consciscant; ob id cogi sacrilegos illam bibere. adversari ei palmeum vinum. - thalassaeglen circa indum amnem inveniri, quae ob id nomine alio potamaugis appellatur; hac pota lymphari homines obversantibus miraculis. - theangelida in libano syriae, dicte cretae montibus et babylone et susis persidis nasci, qua pota magi divinent; gelotophyllida in bactris et circa borysthenen. haec si bibatur cum murra et vino, varias obversari species ridendique finem non fieri nisi potis nucleis pineae nucis cum pipere et melle in vino palmeo. - hestiaterida a convictu nominari in perside, quoniam hilarentur illa, eandem protomediam, qua primatum apud reges obtineant; casigneten, quoniam secum ipsa nascatur nec cum aliis ullis herbis, eandem dionysonymphadem, quoniam vino mira conveniat. - helianthes vocat in themiscyrena regione et ciliciae montibus maritimis, folio myrti. hac cum adipe leonino decocta, addito croco et palmeo vino, perungui magos et persarum reges, ut fiat corpus aspectu iucundum; ideo eandem heliocallida nominari. - hermesias ab eodem vocatur ad liberos generandos pulchros bonosque non herba, sed conpositio e nucleis pineae nucis tritis cum melle, murra, croco, vino palmeo, postea admixto theombrotio et lacte. bibere generaturos iubet et a conceptu, puerperas partum nutrientes; ita fieri excellentes animi et formae bonis. atque harum omnium magica quoque vocabula ponit.

adiecit his apollodorus adsectator eius herbam aeschynomenen, quoniam adpropinquante manu folia contraheret, aliam crocida, cuius tactu phalangia morerentur, crateuas onothurin, cuius aspersu e vino feritas omnium animalium mitigaretur, anacampseroten celeber arte grammatica paulo ante, cuius omnino tactu redirent amores vel cum odio depositi. et abunde sit hactenus attigisse insignia magorum in herbis alia de his aptiore dicturis loco.

eriphiam multi prodidere. scarabaeum haec in avena habet sursum deorsum decurrentem cum sono haedi, unde et nomen accepit. hac ad vocem nihil praestantius esse tradunt.

herba lanaria ovibus ieiunis data lactis abundantiam facit. - aeque nota lactoris vulgo est, plena lactis quod degustatum vomitiones concitat. eandem hanc aliqui esse dicunt, alii similem illi, quam militarem vocant, quoniam vulnus ferro factum nullum non intra dies

v sanet ex oleo inposita.

celebratur autem et a graecis stratiotes, sed ea in aegypto tantum et inundatione nili nascitur, aizoo similis, ni maiora haberet folia. refrigerat mire et vulnera sanat ex aceto inlita, item ignes sacros et suppurationes. sanguinem quoque, qui defluit a renibus, pota cum ture masculo mirifice sistit.

herba in capite statuae nata, collecta in vestis alicuius pannum et inligata lino rufo, capitis dolorem confestim sedare traditur. - herba quaecumque e rivis aut fluminibus ante solis ortum collecta ita, ut nemo colligentem videat, adalligata laevo bracchio ita, ut aeger quid sit illud ignoret, tertianas arcere traditur. - lingua herba nascitur circa fontes. radix eius conbusta et trita cum adipe suis - adiciunt ut nigra sit et sterilis - alopecias emendat unguentium in sole. - cribro in limite abiecto herbae intus extantes decerptae adalligataeque gravidis partus adcelerant. - herba, quae gignitur super fimeta ruris, contra anginas efficacissime pollet ex aqua pota. - herba, iuxta quam canes urinam fundunt, evulsa ne ferro attingatur, luxatis celerrime medetur.

rumpotinum arborem demonstravimus inter arbusta. iuxta hanc viduam vite nascitur herba, quam galli rodarum vocant. caulem habet virgae ficulneae modo geniculatum, folia urticae in medio exalbida, eadem procedente tempore tota rubentia, florem argenteum, praecipua contra tumores fervoresque et collectiones cum axungia vetere tusa ita, ut ferro non attingatur. qui perunctus est, despuit ad suam dexteram terna. efficacius remedium esse aiunt, si tres trium nationum homines perungant dextrorsus.

herba impia vocatur incana, roris marini aspectu, thyrsi modo vestita atque capitata. inde alii ramuli exsurgunt sua capitula gerentes; ob id impiam appellavere, quoniam liberi super parentem excellant. alii potius ita appellatam, quoniam nullum animal eam attingat, existimavere. haec inter duos lapides trita fervet praecipuo adversus anginas suco, lacte et vino admixto. mirum traditur, numquam eo morbo temptari qui gustaverint; itaque et subus dari, quaeque medicamentum id noluerint haurire, eo morbo interimi. sunt qui avium nidis inseri aliquid ex ea putent atque ita non strangulari pullos avidius devorantes.

veneris pectinem appellant a similitudine pectinum, cuius radix cum malva tusa omnia corpori infixa extrahit. - veterno liberat quae

exedum vocatur. - notia herba coriariorum officinis familiaris est aliis aliisve nominibus; efficacissimam adversus scorpionem esse potam e vino aut posca reperio.

philanthropon herbam graeci appellant nasute, quoniam vestibus adhaerescat. ex hac corona inposita capitis dolores sedat. - nam quae canaria appellatur lappa, cum plantagine et milifolio trita ex vino carcinomata sanat, ternis diebus soluta. medetur et subus, effossa sine ferro, addita in colluviem poturis vel ex lacte ac vino. quidam adiciunt effodientem dicere oportere: “haec est herba argemon, quam minerva repperit subus remedium, quae de illa gustaverint”.

tordylon alii semen silis esse dixerunt, alii herbam per se, quam et syreon vocaverunt. neque aliud de ea proditum invenio quam in montibus nasci, conbustam potu ciere menses et pectoris excreationes, efficaciore etiamnum radice; suco eius ternis obolis hausto renes sanari; addi radicem eius et in malagmata.

gramen ipsum inter herbas vulgatissimum geniculatis serpit internodiis crebroque ab his et ex cacumine novas radices spargit. folia eius in reliquo orbe in exilitatem fastigantur, in parnaso tantum hederacia specie densius quam usquam fruticant, flore odorato candidoque. iumentis herba non alia gratior, sive viridis sive in feno siccata et, cum detur, adspersa aqua. sucum quoque eius in parnaso excipi tradunt propter ubertatem; dulcis hic est. in vicem eius in reliqua parte terrarum succedit decoctum ad vulnera conglutinanda, quod et ipsa herba tusa praestat tueturque ab inflammationibus plagas. adicitur decocto vinum ac mel, ab aliquis et turis, piperis, murrae tertiae portiones, rursusque coquitur in aereo vase ad dentium dolores, epiphoras. radix decocta in vino torminibus medetur et urinae difficultatibus ulceribusque vesicae, calculos frangit. semen vehementius urinam inpellit, alvum vomitionesque sistit. privatim autem draconum morsibus auxiliatur. sunt qui genicula viiii vel unius vel e duabus tribusve herbis ad hunc articulorum numerum involvi lana sucida nigra iubeant ad remedia strumae panorumve. ieiunum esse debere qui colligat; ita ire in domum absentis, cui medeatur, supervenientique ter dicere, ieiuno ieiunum medicamentum dare, atque ita adalligare triduoque id facere. quod e graminum genere vii internodia habet, efficacissime capiti contra dolores adalligatur. quidam propter vesicae cruciatus decoctum ex vino gramen ad

dimidias a balineis bibi iubent.

sunt qui et aculeatum gramen vocent trium generum. cum in cacumine aculei sunt plurimum quini, dactylon appellant. hos convolutos naribus inserunt extrahuntque sanguinis ciendi gratia. altero, quod est aizoo simile, ad paronychia et pterygia unguium et, cum caro unguibus increvit, utuntur cum axungia, ideo dactylon appellantes, quia digitis medeatur. tertium genus dactyli, sed tenuis, nascitur in parietinis aut tegulis. huic caustica vis est. sistit ulcera, quae serpunt. gramen capiti circumdatum sanguinis e naribus fluctiones sistit. camelos necare traditur in babylonis regione id, quod iuxta vias nascitur.

nec faeno graeco minor auctoritas, quod telin vocant, alii carphos, aliqui buceras, alii aegoceras, quoniam corniculis semen est simile, nos siliciam. quomodo sereretur, docuimus suo loco. vis eius siccare, mollire, dissolvere. sucus decocti feminarum pluribus malis subvenit, sive duritia sive tumor sive contractio sit vulvae: foventur, insidunt; infusum quoque prodest. furfures in facie extenuat. spleni addito nitro decoctum et inpositum medetur, item ex aceto. sic et iocineri decoctum. diocles difficile parientibus semen eius dedit acetabuli mensura tritum in viiii cyathis sapae, ut tertias partes biberent, dein calida lavarentur, et in balineo sudantibus dimidium ex relicto iterum dedit, mox a balineo relicum, pro summo auxilio. farinam faeni cum hordeo aut lini semine decoctam aqua mulsa contra vulvae cruciatus subiecit idem inposuitque imo ventri. lepras, lentigines sulpuris pari portione mixta farinae curavit, nitro ante praeparata cute, saepius die inlinens perunguique prohibens. theodorus faeno miscuit quartam partem purgati nasturci acerrimo aceto ad lepras. timon semen feni acetabuli dimidii mensura cum sapae et aquae viiii cyathis ad menses ciendos dedit potui. nec dubitatur, quin decoctum eius utilissimum sit vulvis interaneisque exulceratis, sicuti semen articulis atque praecordiis; si vero cum malva decoquatur postea addito mulso, potus ante cetera vulvis interaneisque laudatur, quippe cum vapor quoque decocti plurimum prosit. alarumque etiam graveolentiam decoctum faeni semen emendat. farina porrigines capitis furfuresque cum vino et nitro celeriter tollit. in hydromelite autem decocta addita axungia genitalibus medetur, item pano, parotidi, podagrae, chiragrae, articulis, carnibus quae recedunt ab ossibus, aceto vero

subacta luxatis. inlinitur et lieni decocta in aceto et melle tantum. carcinomata subacta ex vino purgat, mox addito melle persanat. sumitur et sorbitio e farina ad pectus exulceratum longamque tussim. decoquitur, donec amaritudo desinat; postea mel additur. - nunc ipsa claritas herbarum dicetur.

LIBER XXV

ipsa quae nunc dicetur herbarum claritas, medicinae tantum gignente eas tellure, in admirationem curae priscorum diligentiaeque animum agit. nihil ergo intemptatum inexpertumque illis fuit, nihil deinde occultatum quodque non prodesse posteris vellent. at nos elaborata iis abscondere ac supprimere cupimus et fraudare vitam etiam alienis bonis. ita certe recondunt qui pauca aliqua novere, invidentes aliis, et neminem docere in auctoritatem scientiae est. tantum ab excogitandis novis ac iuvanda vita mores absunt, summumque opus ingeniorum diu iam hoc fuit, ut intra unumquemque recte facta veterum perirent. at, hercules, singula quosdam inventa deorum numero addidere, omnium utique vitam clariorem fecere cognominibus herbarum, tam benigne gratiam memoria referente. non aeque haec cura eorum mira est in iis, quae satu blandiuntur aut cibo invitant: culmina quoque montium invia et solitudines abditas omnesque terrae fibras scrutati invenere, quid quaeque radix polleret, ad quos usus herbarum fila pertinerent, etiam quadripedum pabulo intacta ad salutis usus vertentes.

minus hoc quam par erat nostri celebravere, omnium utilitatium et virtutum rapacissimi, primusque et diu solus idem ille m. cato, omnium bonarum artium magister, paucis dumtaxat attigit, boum etiam medicina non omissa. post eum unus inlustrium temptavit gaius valgius eruditione spectatus inperfecto volumine ad Divum Augustum, inchoata etiam praefatione religiosa, ut omnibus malis humanis illius potissimum principis semper mederetur maiestas.

antea condiderat solus apud nos, quod equidem inveniam, pompeius lenaeus magni libertus, quo primum tempore hanc scientiam ad nostros pervenisse animo adverto. namque mithridates, maximus sua aetate regum, quem debellavit pompeius, omnium ante se genitorum diligentissimus vitae fuisse argumentis, praeterquam fama, intellegitur. uni ei excogitatum cotidie venenum bibere praesumptis remediis, ut consuetudine ipsa innoxium fieret; primo inventa genera antidoti, ex quibus unum etiam nomen eius retinet; illius inventum, sanguinem anatum ponticarum miscere antidotis, quoniam veneno viverent; ad illum asclepiadis medendi arte clari

volumina composita extant, cum sollicitatus ex urbe roma praecepta pro se mitteret; illum solum mortalium certum est xxii linguis locutum, nec e subiectis gentibus ullum hominem per interpretem appellatum ab eo annis lvi, quibus regnavit. is ergo in reliqua ingeni magnitudine medicinae peculiariter curiosus et ab omnibus subiectis, qui fuere magna pars terrarum, singula exquirens scrinium commentationum harum et exemplaria effectusque in arcanis suis reliquit, pompeius autem omni praeda regia potitus transferre ea sermone nostro libertum suum lenaeum grammaticae artis iussit vitaeque ita profuit non minus quam reipublicae victoria illa.

praeter hos graeci auctores prodidere, quos suis locis diximus, ex his crateuas, dionysius, metrodorus ratione blandissima, sed qua nihil paene aliud quam difficultas rei intellegatur. pinxere namque effigies herbarum atque ita subscripsere effectus. verum et pictura fallax est coloribus tam numerosis, praesertim in aemulationem naturae, multumque degenerat transcribentium socordia. praeterea parum est singulas earum aetates pingi, cum quadripertitis varietatibus anni faciem mutent.

quare ceteri sermone eas tradidere, aliqui ne effigie quidem indicata et nudis plerumque nominibus defuncti, quoniam satis videbatur potestates vimque demonstrare quaerere volentibus. nec est difficilis cognitio: nobis certe, exceptis admodum paucis, contigit reliquas contemplari scientia antoni castoris, cui summa auctoritas erat in ea arte nostro aevo, visendo hortulo eius, in quo plurimas alebat centesimum annum aetatis excedens, nullum corporis malum expertus ac ne aetate quidem memoria aut vigore concussis. neque aliud mirata magis antiquitas reperietur. inventa iam pridem ratio est praenuntians horas - non modo dies ac noctes - solis lunaeque defectuum; durat tamen tradita persuasio in magna parte vulgi, veneficiis et herbis id cogi eamque unam feminarum scientiam praevalere. certe quid non repleverunt fabulis colchis media aliaeque, in primis itala circe dis etiam adscripta unde arbitror natum, ut aeschylus e vetustissimis in poetica refertam italiam herbarum potentia proderet, multique circeios, ubi habitavit illa, magno argumento etiam nunc durante in marsis, a filio eius orta gente, quoniam esse domitores serpentium constat.

homerus quidem primus doctrinarum et antiquitatis parens, multus

alias in admiratione circae, gloriam herbarum aegypto tribuit, cum etiam tum quae rigatur aegyptus illa non esset, postea fluminis limo invecta. herbas certe aegyptias a regis uxore traditas helenae suae plurimas narrat ac nobile illud nepenthes oblivionem tristitiae veniamque adferens et ab helena utique omnibus mortalibus propinandum. primus autem omnium, quos memoria novit, orpheus de herbis curiosius aliqua prodidit. post eum musaeus et hesiodus polium herbam in quantum mirati sint diximus. orpheus et hesiodus suffitiones commendavere. homerus et alias nominatim herbas celebrat, quas suis locis dicemus. ab eo pythagoras clarus sapientia primus volumen de effectu earum composuit, apollini, aesculapio et in totum dis immortalibus inventione et origine adsignata; composuit et democritus, ambo peragratis persidis, arabiae, aethiopiae, aegypti magis, adeoque ad haec attonita antiquitas fuit, ut adfirmaverit etiam incredibilia dictu. xanthus historiarum auctor in prima earum tradit, occisum draconis catulum revocatum ad vitam a parente herba, quam balim nominat, eademque tylonem, quem draco occiderat, restitutum saluti. et iuba in arabia herba revocatum ad vitam hominem tradit. dixit democritus, credidit theophrastus esse herbam, cuius contactu inlatae ab alite, quam retulimus, exiliret cuneus a pastoribus arbori adactus. quae etiamsi fide carent, admirationem tamen implent coguntque confiteri multum esse quod vero supersit. inde et plerosque ita video existimare, nihil non herbarum vi effici posse, sed plurimarum vires esse incognitas, quorum in numero fuit herophilus clarus medicina, a quo ferunt dictum, quasdam fortassis etiam calcatas prodesse. observatum certe est, inflammari vulnera ac morbos superventu eorum, qui pedibus iter confecerint.

haec erat antiqua medicina, quae tota migrabat in graeciae linguas. sed quare non plures noscantur, causa est quod eas agrestes litterarumque ignari experiuntur, ut qui soli inter illas vivant; praeterea securitas quaerendi obvia medicorum turba. multis etiam inventis desunt nomina, sicut illi, quam retulimus in frugum cura scimusque defossam in angulis segetis praestare, ne qua ales intret. turpissima causa raritatis quod etiam qui sciunt demonstrare nolunt, tamquam ipsis periturum sit quod tradiderint aliis. accedit ratio inventionis anceps, quippe etiam in repertis alias invenit casus, alias, ut vere dixerim, deus. insanabile ad hosce annos fuit rabidi canis

morsus, pavorem aquae potusque omnis adferens odium. nuper cuiusdam militantis in praetorio mater vidit in quiete, ut radicem silvestris rosae, quam cynorrhodon vocant, blanditam sibi aspectu pridie in frutecto, mitteret filio bibendam. in laeetania res gerebatur, hispaniae proxima parte, casuque accidit, ut milite a morsu canis incipiente expavescere aquas superveniret epistula orantis, ut pareret religioni, servatusque est ex insperato et postea quisquis auxilium simile temptavit. alias apud auctores cynorrhodi una medicina erat spongiolae, quae in mediis spinis eius nascitur, cinere cum melle alopecias capitis expleri. in eadem provincia cognovi in agro hospitis nuper ibi repertum dracunculum appellatum caulem pollicari crassitudine, versicoloribus viperarum maculis, quem ferebant contra omnium morsus esse remedio, alium quam quos in priore volumine eiusdem nominis diximus. est huic alia figura, aliud miraculum exerenti se terra ad primas serpentium vernationes bipedali fere altitudine rursusque cum isdem in terram condenti, nec omnino occultato eo apparet serpens, vel hoc per se satis officioso naturae munere, si tantum praemoneret tempusque formidinis demonstraret.

nec bestiarum solum ad nocendum scelera sunt, sed interim aquarum quoque ac locorum. in germania trans rhenum castris a germanico caesare promotis maritimo tractu fons erat aquae dulcis solus, qua pota intra biennium dentes deciderent compagesque in genibus solverentur. stomacacen medici vocabant et scelotyrben ea mala. reperta auxilio est herba, quae appellatur britannica, non nervis modo et oris malis salutaris, sed contra anginas quoque et contra serpentes. folia habet oblonga nigra, radicem nigram. sucus eius exprimitur et e radice. florem vibones vocant, qui collectus, priusquam tonitrum audiatur, et devoratus securos in totum annum a metu anginae praestat. frisi, gens tum fida, in qua castra erant, monstravere illam. mirorque nominis causam, nisi forte confines oceano britanniae veluti propinquae dicavere. non enim inde appellatam, quoniam ibi plurima nasceretur, certum est etiam tum britannia libera.

fuit quidem et hic quondam ambitus nominibus suis eas adoptandi, ut docebimus fecisse reges. tanta res videbatur herbam invenire, vitam iuvare, nunc fortassis aliquis curam hanc nostram frivolam quoque existimaturis; adeo deliciis sordent. etiam quae ad

salutem pertinent. auctores tamen, quarum inveniuntur, in primis celebrari par est effectu earum digesto in genera morborum. qua quidem in reputatione misereri sortis humanae subit, praeter fortuita casusque et quae nova omnis hora excogitat, milia morborum singulis mortalium timenda. qui gravissimi ex his sint, discernere stultitiae prope videri possit, cum suus cuique ac praesens quisque atrocissimus videatur. et de hoc tamen iudicavere aevi experimenta, asperrimi cruciatus esse calculorum a stillicidio vesicae, proximum stomachi, tertium eorum, quae in capite doleant, non ob alios fere morte conscita.

a graecis et noxias herbas demonstratas miror equidem, nec venenorum tantum, quoniam ea condicio vitae est, ut mori plerumque etiam optumis portus sit, tradatque M. Varro, servium clodium equitem romanum magnitudine doloris in podagra coactum veneno crura perunxisse et postea caruisse sensu omni aeque quam dolore in ea parte corporis. sed quae fuit venia monstrandi qua mentes solverentur, partus eliderentur, multaque similia ego nec abortiva dico ac ne amatoria quidem, memor lucullum imperatorem clarissimum amatorio perisse, nec alia magica portenta, nisi ubi cavenda sunt aut coarguenda, in primis fide eorum damnata. satis operae fuerit abundeque praestatum vitae salutares dixisse, ... ac postea inventas.

clarissima herbarum est homero teste quam vocari a dis putat moly, et inventionem eius mercurio adsignat contraque summa veneficia demonstrationem. nasci eam hodie circa pheneum et in cyllene arcadiae tradunt specie illa homerica, radice rotunda nigraque, magnitudine cepae, folio scillae, effodi autem non difficulter. graeci auctores florem eius luteum pinxere, cum homerus candidum scripserit. inveni e peritis herbarum medicis qui et in italia nasci eam diceret adferrique e campania autumni aliquot diebus, effossam inter difficultates saxeas, radicis xxx pedes longae ac ne sic quidem solidae, sed abruptae.

ab ea maxima auctoritas herbae est, quam dodecatheon vocant omnium deorum maiestate commendantes. in aqua potam omnibus morbis mederi tradunt. folia eius septem, lactucis simillima, exeunt a lutea radice.

vetustissima inventu paeonia est nomenque auctoris retinet, quam

quidam pentorobon appellant, alii glycysiden. nam haec quoque difficultas est, quod eadem aliter alibi nuncupatur. nascitur opacis montibus, caule inter folia digitorum iiii, ferente in cacumine veluti graecas nuces iiii aut v. inest his semen copiosum, rubrum nigrumque. haec medetur et faunorum in quiete ludibriis. praecipiunt eruere noctu, quoniam, si picus martius videat, tuendo in oculos impetum faciat.

panaces ipso nomine omnium morborum remedia promittit, numerosum et dis inventoribus adscriptum. unum quippe asclepion cognominatur, a quo is filiam panaciam appellavit. sucus est coactus ferulae qualem diximus, radice multi corticis et salsi. hac evolsa scrobem repleri vario genere frugum religio est ac terrae piamentum. ubi et quonam fieret modo aut quale maxime probaretur, inter peregrina docuimus. id, quod e macedonia adfertur, bucolicon vocant armentariis sponte erumpentem sucum excipientibus; hoc celerrime evanescit. et in aliis autem generibus inprobatur maxime nigrum ac molle; id enim argumento est cera adulterati. - alterum genus heracleon vocant et ab hercule inventum tradunt, alii origanum heracleoticum aut silvestre, quoniam est origano simile, radice inutili, de quo origano diximus. - tertium panaces chironium cognominatur ab inventore. folium eius simile lapatho, maius tamen et hirsutius, flos aureus, radix parva. nascitur pinguibus locis. huius flos efficacissimus, eoque amplius quam supra dicta prodest. - quartum genus panaces, ab eodem chirone repertum, centaurion cognominatur, sed et pharnaceon, in controversia inventionis a pharnace rege deductum. seritur hoc, longioribus quam cetera foliis et serratis. radix odorata in umbra siccatur vinoque gratiam adicit. alia eius genera duo fecere aliqui, levis folii, alterum tenuius.

heracleon siderion et ipsum ab hercule inventum est, caule tenui, digitorum iiii altitudine, flore puniceo, foliis coriandri. iuxta lacus et amnes invenitur omniaque vulnera ferro inlata efficacissime sanat.

est chironis inventum ampelos, quae vocatur chironia, de qua diximus inter vites, sicuti de herba, cuius inventio adsignatur minervae.

herculi eam quoque adscribunt, quae apollinaris aut a rabie aliis altercum, apud graecos vero hyoscyamos appellatur. plura eius genera: unum nigro semine, floribus paene purpureis, spinosum

calice, nascitur in galatia; vulgare autem candidius est et fruticosius, altius papavere; tertii semen irionis semini simile est, omnia insaniam gignentia capitisque vertigines. quartum genus molle, lanuginosum, pinguius ceteris, candidi seminis, in maritimis nascens. hoc recepere medici, item rufi seminis; nonnumquam autem candidum rufescit, si non ematuruit, inprobaturque. et alioqui nulla nisi cum inaruit legitur. natura vini, ideo mentem caputque infestans. usus seminis et per se et suco expresso. exprimitur separatim et caulibus foliisque. utuntur et radice, temeraria in totum, ut arbitror, medicina. quippe etiam foliis constat mentem corrumpi, si plura quam iiii bibant; ... etiam antiqui in vino, febrim depelli arbitrantes. oleum fit ex semine, ut diximus, quod ipsum auribus infusum temptat mentem, mireque, ut contra venenum, remedia prodidere iis, qui id bibissent, et ipsum pro remediis, adeo nullo omnia experiendi fine, ut cogant etiam venena prodesse.

linozostis sive parthenium mercuri inventum est. ideo apud graecos hermu poan multi vocant eam, apud nos omnes mercurialem. duo eius genera, masculus et femina, quae efficacior, caule et cubitali, interdum ramoso in cacumine, ocimo angustioribus foliis, geniculis ... , densis alarum cavis multis, semine in geniculis dependente, feminae copioso, mari iuxta genicula stante et rariore ac brevi contortoque, feminae soluto et candido. folia maribus nigriora, feminis candidiora; radix supervacua, praetenuis. nascuntur in campestribus cultis. mirum est quod de utroque eorum genere proditur: ut mares gignantur, hunc facere, ut feminae, illam; hoc contingere, si a conceptu protinus bibatur sucus in passo edanturve folia decocta ex oleo et sale, vel cruda ex aceto. quidam decocunt eam in novo fictili cum heliotropio et ii vel iii spicis, donec cogatur. decoctum dari iubent et herbam ipsam in cibo altero die purgationis mulieribus per triduum, quarto die a balineo coire eas. hippocrates miris laudibus in mulierum usum praedicavit has, at hunc modum medicorum nemo novit. ille eas volvae cum melle vel rosaceo vel irino vel lilino admovit, item ad ciendos menses secundasque. idem praestare potu fotuque dixit. instillavit auribus olidis sucum, inunxit cum vino vetere alvo. folia inposuit epiphoris; stranguriae et vesicis decoctum eius dedit cum murra et ture. alvo quidem solvendae vel in febri decoquitur quantum manus capiat in ii sextariis aquae ad

dimidias; bibitur sale et melle admixto nec non cum ungula suis aut gallinaceo decocta salubrius. purgationis causa putavere aliqui utramque dandam sive cum malva decoctam. thoracem purgant, bilem detrahunt, sed stomachum laedunt. reliquos usus dicemus suis locis.

invenisse et achilles discipulus chironis qua volneribus mederetur - quae ob id achilleos vocatur - ac sanasse telephum dicitur. alii primum aeruginem invenisse utilissimam emplastris - ideoque pingitur ex cuspide decutiens eam gladio in volnus telephi - , alii utroque usum medicamento volunt. aliqui et hanc panacem heracliam, alii sideriten et apud nos milifoliam vocant, cubitali scapo, ramosam, minutioribus quam feniculi foliis vestitam ab imo. alii fatentur quidem illam vulneribus utilem, sed veram achilleon esse scapo caeruleo pedali, sine ramis, ex omni parte singulis foliis rotundis eleganter vestitam; alii quadrato caule, capitulis marruvii, foliis quercus; hac etiam praecisos nervos glutinari. faciunt alii et sideritim in maceriis nascentem, cum teratur, foedi odoris; etiamnum aliam similem huic, sed candidioribus foliis et pinguioribus, teneriorem cauliculis, in vineis nascentem, aliqui vero binum cubitorum, ramulis exilibus, triangulis, folio felicis pediculo longo, betae semine, omnes volneribus praecipuas. nostri eam, quae est latissimo folio, Scopas regias vocant. medetur anginis suum.

invenit et teucer eadem aetate teucrion, quam quidam hemionion vocant, spargentem iuncos tenues, folia parva, asperis locis, austero sapore. numquam florem neque semen gignit. medetur lienibus, constatque sic inventam: cum exta super eam proiecta essent, adhaesisse lieni eumque exinanisse. ob id a quibusdam splenion vocatur. narrant sues, qui radicem eius edint, sine splene inveniri. quidam ramis hysopi surculosam, folio fabae, eodem nomine appellant et colligi, cum floreat, iubent - adeo florere non dubitant - maximeque ex ciliciis et pisidiae montibus laudant.

melampodis fama divinationis artibus nota est. ab hoc appellatur unum hellebori genus melampodion. aliqui pastorem eodem nomine invenisse tradunt, capras purgari pasto illo animadvertentem, datoque lacte earum sanasse proetidas furentes ... quam ob rem de omnibus eius generibus dici simul convenit.

prima duo sunt, candidum ac nigrum. hoc radicibus tantum

intellegi tradunt plerique, alii et folia nigri platano similia, sed minora nigrioraque et pluribus divisuris scissa, albi betae incipientis, haec quoque nigriora et canalium dorso rubescentia, utraque caule palmi, ferulaceo, bulborum tunicis convoluto, radice fimbriata ceparum modo. nigro equi, boves, sues necantur, itaque cavent id, cum candido vescantur. tempestivum esse tradunt messibus. plurimum autem nascitur in oete monte et optimum, uno eius loco circa pyram. nigrum ubique provenit, sed melius in helicone, qui mons et aliis laudatur herbis. candidum probatur secundum oetaeum ponticum, tertio loco eleaticum, quod in vitibus nasci ferunt, quarto parnasium, quod adulteratur aetolico ex vicino. nigrum ex his melampodium vocant, quo et domus suffiunt purgantque, spargentes et pecora, cum precatione sollemni. hoc et religiosius colligitur, primum enim gladio circumscribitur, dein qui succisurus est ortum spectat et precatur, ut id liceat sibi concedentibus diis facere observatque aquilae volatus; fere enim secantibus interest, et, si prope advolavit, moriturum illo anno qui succidat augurium est. nec album facile colligitur, caput adgravans maxime, nisi praesumatur alium et subinde vinum sorbeatur celeriterque fodiatur. nigrum alii encymon vocant, alii polyrrhizon. purgat per inferna, candidum autem vomitione causasque morborum extrahit, quondam terribile, postea tam promiscuum, ut plerique studiorum gratia, ad pervidenda acrius quae commentabantur, saepius sumptitaverint. carneaden responsurum zenonis libris ... drusumque apud nos, tribunorum popularium clarissimum, cui ante omnis plebs adstans plausit, optimates vero bellum marsicum inputavere, constat hoc medicamento liberatum comitiali morbo in anticyra insula. ibi enim tutissime sumitur, quoniam, ut diximus, sesamoides admiscent. italia veratrum vocat.

farina eorum per se et mixta radiculae, qua lanas diximus lavari, sternumentum facit, amboque somnum. leguntur autem tenuissimae radices brevesque ac velut decurtatae et imae. nam summa, quae est crassissima, cepis similis, canibus tantum datur purgationis causa. antiqui radicem cortice quam carnosissimo seligebant, quo tenuior eximeretur medulla; hanc umidis spongeis opertam turgescentemque acu in longitudinem findebant, dein fila in umbra siccabant his utentes. nunc ramulos ipsos ab radice quam crassissimi corticis ita

dant. optimum quod acre gustu fervensque in frangendo pulverem emittit. durare vim xxx annis ferunt.

nigrum medetur paralyticis, insanientibus, hydropicis, dum citra febrim, podagris veteribus, articulariis morbis. trahit ex alvo bilem, pituitas, aquas. datur ad leniter molliendam alvum plurimum drachma una, modice iiii obolis. miscuere aliqui et scamonium, sed tutius salem. in dulcibus datum copiosius periculum infert. oculorum caliginem fotu discutit; ob id quidam et inunxere trito. strumas, suppurata, duritias concoquit et purgat, item fistulas tertio die exemptum. verrucas tollit cum squama aeris et sandaraca. hydropicorum ventri inponitur cum farina hordeacia et vino. pecorum et iumentorum pituitas sanat surculo per aurem traiecto et postero die eadem hora exempto, scabiem quadripedum cum ture, cera ac pice vel cum pisselaeo.

album optimum, quod celerrime movet sternumenta, sed multum terribilius nigro, praecipue si quis apparatum poturorum apud antiquos legat contra horrores, strangulatus, intempestivas somni vires, singultus infinitos aut sternumenta, stomachi dissolutiones, tardiores vomitus aut longiores, exiguos aut nimios. quippe alia dare soliti, quae concitarent vomitiones, ipsumque helleborum extrahere medicamentis aut clysteribus, saepius etiam sanguine venis emisso. iam vero et cum prospere cedat, terribilius variis coloribus vomitionum et post vomitiones observatione alvi, balinearum dispensatione, totius corporis cura, antecedente omnia haec magno terrore famae, namque tradunt absumi carnes, si coquatur una. sed antiquorum vitium erat quod propter hos metus parcius dabant, cum celerius erumpat, quo largius sumitur. themison binas, non amplius, drachmas datavit; sequentes et quaternas dedere claro herophili praeconio, qui helleborum fortissimi ducis similitudini aequabat; concitatis enim intus omnibus ipsum in primis exire. praeterea mirum inventum est, quod incisum forficulis, ut diximus, cribrant: cortex remanet, hoc inaniunt; medulla cadit, haec in nimia purgatione data vomitiones sistit.

cavendum est felici quoque cura, ne nubilo die detur, inpetibiles quippe cruciatus existunt. nam aestate potius quam hieme dandum non est in dubio. corpus vii diebus ante praeparandum cibis acribus, abstinentia vini, quarto et tertio die vomitionibus, pridie cenae

abstinentia. album et in dulci datur, aptissime vero in lente aut pulte. nuper invenere dissectis raphanis inserere helleborum rursusque conprimere raphanos, ut transeat vis, atque lenimento dare. reddi post iiii fere horas incipit; totum opus septenis peragitur horis. medetur ita morbis comitialibus, ut diximus, vertigini, melancholicis, insanientibus, lymphatis, elephantiasi albae, lepris, tetano, tremulis, podagricis, hydropicis incipientibusque tympanicis, stomachicis, spasticis cynicis, ischiadicis, quartanis, quae aliter non desinant, tussi veteri, inflationibus, torminibus redeuntibus.

vetant dari senibus, pueris, item mollis ac feminei corporis animive, exilibus aut teneris, et feminis minus quam viris, item timidis aut si exulcerata sint praecordia vel tumeant, minime sanguinem excreantibus causariisve latere. faucibus medetur extra corpori inpositum, eruptionibus pituitae cum axungia salsa inlitum, item suppurationi veteri. mures polentae admixtum necat. galli sagittas in venatu helleboro tingunt circumcisoque vulnere teneriorem sentiri carnem adfirmant. muscae quoque necantur albo trito et cum lacte sparso. eodem et phthiriasis emendatur.

ipsi mithridati crateuas adscripsit unam, mithridatiam vocatam. huic folia ii a radice, acantho similia, caulis inter utraque sustinens roseum florem. alteram lenaeus, scordotim sive scordion, ipsius manu adscriptam, magnitudine cubitali, quadriangulo caule, ramosam, querna similitudine foliis lanuginosis. reperitur in ponto campis pinguibus umidisque, gustus amari. est et alterius generis, latioribus foliis, mentastro similis, plurimosque utraque ad usus per se et inter alia in antidotis.

polemoniam alii philetaeriam a certamine regum inventionis appellant, cappadoces autem chiliodynamiam. radice crassa, exilibus ramis, quibus in summis corymbi dependent nigro semine, cetero rutae similis, nascitur in montosis.

eupatoria quoque regiam auctoritatem habet, caulis lignosi, nigricantis, hirsuti, cubitalis et aliquando amplioris, foliis per intervalla quinquefolii aut cannabis, per extremitates incisis quinquepertito, nigris et ipsis plumosisque, radice supervacua. semen dysintericis in vino potum auxiliatur unice.

centaurio curatus dicitur chiron, cum herculis excepti hospitio pertractanti arma sagitta excidisset in pedem, quare aliqui chironion

vocant. folia sunt lata et oblonga, serrato ambitu, densi ab radice caules ternum cubitorum, geniculati - in his capita ceu papaverum - , radix vasta, rubescens, tenera fragilisque, ad bina cubita, madida suco, amara cum quadam dulcedine. nascitur in collibus pingui solo, laudatissima in arcadia, elide, messenia, pholoe, lycaeo, et in alpibus vero plurimisque aliis locis. in lycia quidem et ex ea lycium faciunt. vis in vulneribus tanta est, ut cohaerescere etiam carnes tradant, si coquatur simul. in usu radix, tantum ii drachmis bibenda quibus dicetur, si febris sit, in aqua trita, ceteris in vino. medetur et febrium morbis decoctae sucus.

est alterum centaurium cognomine lepton, minutis foliis, quod aliqui libadion vocant, quoniam secundum fontes nascitur, origano simile, angustioribus et longioribus foliis, anguloso caule, palmum alto, fruticosum, flore lychnidis, radice tenui et supervacua, suco efficax. ipsa herba autumno legitur, sucus e fronde. quidam caules concisos madefaciunt diebus xviii atque ita exprimunt. hoc centaurium nostri fel terrae vocant propter amaritudinem summam, galli exacum, quoniam omnia mala medicamenta potum e corpore exigat per alvum.

tertia est centauris cognomine triorchis. qui eam secat, rarum est ut non vulneret sese. haec sucum sanguineum emittit. theophrastus defendi eam inpugnarique colligentes tradit a triorche accipitrum genere, unde et nomen accepit. inperiti confundunt haec omnia et primo generi adsignant.

clymenus a rege herba appellata est, hederae foliis, ramosa, caule inani articulis praecincta, odore gravi et semine hederae, silvestribus et montuosis nascens. quibus morbis pota medeatur, dicemus, sed hic indicandum est, dum medeatur, sterilitatem pota etiam viris fieri. graeci plantagini similem esse dixerunt, caule quadrato, folliculis cum semine inter se inplexis veluti polyporum cirris. et sucus autem in usu, vi summa in refrigerando.

gentianam invenit gentius rex illyriorum, ubique nascentem, illyrico tamen praestantissimam, folio fraxini, sed magnitudine lactucae, caule tenero, pollicis crassitudine, cavo et inani, ex intervallis foliato, iii aliquando cubitorum, radice lenta, subnigra, sine odore, aquosis montibus subalpinis plurima. usus in radice et suco. radicis natura est excalfactoria, sed praegnantibus non bibenda.

invenit et lysimachus quae ab eo nomen retinet, celebrata erasistrato. folia habet salicis viridia, florem purpureum, fruticosa ramulis erectis, odore acri. gignitur in aquosis. vis eius tanta est, ut iumentis discordantibus iugo inposita asperitatem cohibeat.

mulieres quoque hanc gloriam adfectavere, in quibus artemisia uxor mausoli adoptata herba, quae antea parthenis vocabatur. sunt qui ab artemide ilithyia cognominatam putent, quoniam privatim medeatur feminarum malis. est autem absinthii modo fruticosa, maioribus foliis pinguibusque. ipsius duo genera: altior latioribus foliis, altera tenera tenuioribus et non nisi in maritimis nascens. sunt qui in mediterraneis eodem nomine appellent, simplici caule, minimis foliis, floris copiosi, erumpentis cum uva maturescit, odore non iniucundo. quam quidam botryn, alii ambrosiam vocant, talis in cappadocia nascitur.

nymphaea nata traditur nympha zelotypia erga herculem mortua - quare heracleon vocant aliqui, alii rhopalon a radice clavae simili - , ideoque eos, qui biberint eam xii diebus, coitu genituraque privari. laudatissima in orchomenia et marathone. boeoti mallon vocant et semen edunt. nascitur in aquosis, foliis magnis in summa aqua et aliis ex radice, flore lilio simili et, cum defloruit, capite papaveris, levi caule. secatur autumno radix nigra, in sole siccatur. adversatur ita lieni. est et alia nymphaea in thessalia, amne penio, radice alba, capite luteo, rosae magnitudine.

invenit et patrum nostrorum aetate rex iuba quam appellavit euphorbeam medici sui nomine. frater is fuit musae, a quo Divum Augustum conservatum indicavimus. iidem fratres instituere a balineis frigida multa corpora adstringere; antea non erat mos nisi calida tantum lavari, sicut apud homerum etiam invenimus. sed iubae volumen quoque extat de ea herba et clarum praeconium. invenit eam in monte atlante, specie thyrsi, foliis acanthinis. vis tanta est, ut e longinquo sucus excipiatur incisa conto; subitur excipulis ventriculo haedino. umor lactis videtur defluens; siccatus cum coiit, turis effigiem habet. qui colligunt, clarius vident. contra serpentes medetur quacumque parte percussa vertice inciso et medicamento addito ibi. gaetuli, qui legunt, taedio lacte adulterant, sed discernitur igni; id enim, quod sincerum non est, fastidiendum odorem habet. multum infra hunc sucum est qui in gallia fit ex herba chamelaea, granum

cocci ferente. fractus hammoniaco similis est, etiam levi gustu os accensum diu detinens et magis ex intervallo, donec fauces quoque siccet.

celebravit et themiso medicus vulgarem herbam plantaginem tamquam inventor volumine de ea edito. duo eius genera: minor angustioribus foliis et nigrioribus linguae pecorum similis, caule anguloso in terram inclinato, in pratis nascens; altera maior, foliis laterum modo inclusa, quae quia septena sunt, quidam eam heptapleuron vocavere. huius et caulis cubitalis est. et ipsa in umidis nascitur, multo efficacior. mira vis in siccando densandoque corpore, cauterii vicem optinens. nulla res aeque sistit fluctiones, quas graeci rheumatismos vocant.

iungitur huic buglossos, boum linguae similis, cui praecipuum, quod in vinum deiecta animi voluptates auget et vocatur euphrosynum. iungitur et cynoglossos caninam linguam imitata, topiariis operibus gratissima. aiunt quae iii thyrsos seminis emittat, eius radicem potam ex aqua ad tertianas prodesse, quae iiii, ad quartanas. - est et alia similis ei, quae fert lappas minutas. eius radix pota ex aqua ranis et serpentibus adversatur.

est et buphthalmus similis boum oculis, folio feniculi, circa oppida nascens, fruticosa caulibus, qui et manduntur decocti. quidam chalcan vocant. haec cum cera steatomata discutit.

invenere herbas et universae gentes, scythia primam eam, quae scythice vocatur circa maeotim nascens, praedulcem alias utilissimamque ad ea, quae asthmata vocant. magna et ea commendatio, quod in ore eam habentes sitim famemque non sentiunt. - idem praestat apud eosdem hippace, distincta, quod in equis quoque eundem effectum habeat, traduntque his duabus herbis scythas etiam in duodenos dies durare in fame sitique.

ischaemonem thracia invenit, qua ferunt sanguinem sisti non aperta modo vena, sed etiam praecisa. serpit in terra, milio similis, foliis asperis et lanuginosis. farcitur in nares, quae in italia nascitur, et ciet sanguinem, eadem adalligata sistit.

vettones in hispania eam, quae vettonica dicitur in gallia, in italia autem serratula, a graecis cestros aut psychrotrophon, ante cunctas laudatissima. exit anguloso caule cubitorum ii, a radice spargens folia fere lapathi, serrata, semine purpureo. folia siccantur in farinam

plurimos ad usus. fit vinum ex ea et acetum stomacho et claritati oculorum, tantumque gloriae habet, ut domus, in qua sata sit, tuta existimetur a piaculis omnibus.

in eadem hispania inventa est cantabrica per Divi Augusti tempora a cantabris reperta. nascitur ubique caule iunceo, pedali, in quo sunt flosculi oblongi veluti calathi, in his semen perquam minutum. nec alias defuere hispaniae herbis exquirendis, ut in quibus etiam nunc hodie in more sit laetiore convictu potionem e centum herbis mulso additis credere saluberrimam suavissimamque. nec quisquam genera earum iam novit aut multitudinem, numerus tamen constat in nomine.

nostra aetas meminit herbam in marsis repertam. nascitur et in aequicolis circa vicum nervesiae; vocatur consiligo. prodest, ut demonstrabimus suo loco, deploratis in phthisi.

invenit nuper et servilius democrates e primis medentium quam appellavit hiberida, quamquam ficto nomini inventione eius adsignata carmine. nascitur maxime circa vetera monumenta parietinasque et inculta itinerum; floret semper, folio nasturci, caule cubitali, semine vix ut aspici possit. radici odor nasturci. usus aestate efficacior et recenti tantum; tunditur difficulter. coxendicibus et articulis omnibus cum axungia modica utilissima, viris plurimum quaternis horis, feminis minus dimidio adalligata, ut deinde in balineis descendatur in calidam et postea oleo ac vino perunguatur corpus, diebusque vicenis interpositis idem fiat, si qua admonitio doloris supersit. hoc modo rheumatismos omnes sanat occultos. inponitur non in ipsa inflammatione, sed inminuta.

animalia quoque invenere herbas, in primisque chelidoniam. hac enim hirundines oculis pullorum in nido ... restituuntque visum, ut quidam volunt, etiam erutis oculis. genera eius duo: maior fruticosa, folio pastinacae erraticae ampliore, ipsa altitudine ii cubitorum, colos albicans, flos luteus; minori folia hederae rotundiora, minus candida. sucus croci, mordax, semen papaveris. florent adventu hirundinum, discessu marcescunt. sucus florentibus exprimitur et in aereo vase cum melle attico leniter cinere ferventi decoquitur, singulari remedio contra caligines oculorum. utuntur et per se suco et in collyriis, quae chelidonia appellantur ab ea.

inveniunt et canes qua fastidium vincunt eamque in nostro

conspectu mandunt, sed ita, ut numquam intellegatur, quae sit; etenim depasta cernitur. notata est haec animalis eius malignitas in alia herba maior. percussus enim a serpente mederi sibi quadam dicitur, sed illam homine spectante non decerpit.

simplicius cervae monstravere elaphoboscon, de qua diximus, item helxinen a partu dictam, ostendere, ut indicavimus, dictamnum vulneratae pastu statim telis decidentibus. non est alibi quam in creta, ramis praetenue, puleio simile, fervens et acre gustu. foliis tantum utuntur; flos nullus aut semen aut caulis, radix tenuis ac supervacua. et in creta autem non spatiose nascitur mireque capris expetitur. pro eo est pseudodictamnum multis in terris nascens, folio simile, ramulis minoribus, a quibusdam chondris vocatum. minoris effectus statim intellegitur; dictamnum enim minima potione accendit os. qui legere eas, in ferula aut harundine condunt praeligantque, ne potentia evanescat. sunt qui dicant utramque nasci multifariam, sed deteriores in agris pinguibus, veram quidem dictamnum non nisi in asperis. est et tertium genus dictamnum vocatum, sed neque facie neque effectu simile, folio sisymbri, ramis maioribus, praecedente persuasione illa, quicquid in creta nascatur, infinito praestare ceteris eiusdem generis alibi genitis, proxime quod in parnaso. alioqui herbiferum esse et pelium montem in thessalia et telethrium in euboea et totam arcadiam ac laconicam tradunt, arcades quidem non medicaminibus uti, sed lacte circa ver, quoniam tum maxime sucis herbae turgeant medicenturque ubera pascuis. bibunt autem vaccinum, quoniam boves omnivori fere sunt in herbis. potentia earum per quadripedes etiamnum duobus claris exemplis manifesta fit. circa abderam et limitem, qui diomedis vocatur, equi pasti inflammantur rabie, circa potnias vero et asini.

inter nobilissimas aristolochiae nomen dedisse gravidae videntur, quoniam esset ἀρίστη λεχούσαις. nostri malum terrae vocant et quattuor genera eius servant: unum tuberibus radicis rotundis, foliis inter malvam et hederam, nigrioribus mollioribusque, alterum masculae, radice longa, iiii digitorum longitudine, baculi crassitudine, tertium longissimae, tenuitate vitis novellae, cuius sit praecipua vis, quae et clematitis vocatur, ab aliis cretica. omnes colore buxeo, caulibus parvis, flore purpureo. ferunt baculas parvas, ut cappari. valent radice tantum. est et quae plistolochia vocatur,

quarti generis, tenuior quam proxime dicta, densis radicis capillamentis, iunci plenioris crassitudine. hanc quidem polyrrhizon cognominant. odor omnium medicatus, sed oblongae radici tenuiorique gratior; carnosi enim est corticis, unguentis quoque nardinis conveniens. nascuntur pinguibus locis et campestribus. effodere eas messibus tempestivum; in desquamato terreno servantur. maxime tamen laudatur pontica et in quocumque genere ponderosissima quaeque, medicinis aptior rotunda, contra serpentes oblonga, in summa tamen gloria est ea, si modo a conceptu admota vulvis in carne bubula mares figurat, ut traditur. piscatores campaniae radicem eam, quae rotunda est, venenum terrae vocant, coramque nobis contusam mixta calce in mare sparsere. advolant pisces cupiditate mira statimque exanimati fluitant. quae polyrrhizos cognominatur convulsis, contusis, ex alto praecipitatis radice pota ex aqua utilissima esse traditur, semine pleuriticis et nervis, confirmare, excalfacere, eadem satyrion esse.

verum et effectus ususque dicendi sunt ordiendumque malorum omnium pessimo est, serpentium ictu. medentur ergo britannica herba, panacis omnium generum radix e vino, chironii et flos et semen potum inlitumve ex vino et oleo, privatim quae cunila bubula appellatur, polemonia vel philetaeris radicis drachmis iiii in mero, teucria, sideritis, scordotis ex vino, privatim ad angues, pota et inlita sive suco sive folio sive decocto, centaurii maioris radix drachma in vini albi cyathis iii, gentiana praecipue adversus angues ii drachmis cum pipere et ruta in vini cyathis vi, sive viridis sive sicca. et lysimachiae odorem fugiunt. datur ex vino percussis chelidonia; morsibus inponitur vettonica praecipue, cui vis tanta perhibetur, ut inclusae circulo eius serpentes ipsae sese interimant flagellando. datur ad ictus semen eius denarii pondere cum iii cyathis vini vel farina drachmis iii sextario aquae - farina et inponitur - , cantabrica, dictamnum, aristolochia radicis drachma in vini hemina, sed saepius bibenda. prodest et inlita ex aceto; similiter plistolochia, quin omnino suspensa supra focum fugat e domibus serpentes; argemonia quoque radicis denarii pondere in vini cyathis iii poto. plura de ea convenit dici ceterisque, qua primum nominabuntur, in eo autem genere medendi primum nominari quamque, in quo maxime valebit. folia habet qualia anemone, divisa apii modo, caput in cauliculo papaveris

silvestris, item radicem, sucum croci colore acrem et acutum. nascitur in arvis. apud nos tria genera eius faciunt et id demum probant, cuius radix tus redoleat.

agaricum ut fungus nascitur in arboribus circa bosporum colore candido; dantur oboli iiii contriti cum binis cyathis aceti mulsi. id, quod in gallia nascitur, infirmius habetur. praeterea mas spissior amariorque - hic et capitis dolores facit - , femina solutior. initio gustus dulcis mox in amaritudinem transit.

echios utriusque generis puleio similis, foliis coronat; datur drachmis ii ex vini cyathis iiii. item altera, quae lanugine distinguitur spinosa, cui et capitula viperae similia sunt; haec ex vino et aceto. quidam echion personatam vocant, cuius folio nullum est latius, grandes lappas ferentem; huius radicem decoctam ex aceto dant potui. - hyoscyamum contusum cum foliis ex vino datur peculiariter contra aspidas.

nulla tamen romanae nobilitatis plus habet quam hiera botane. aliqui aristereon, nostri verbenacam vocant. haec est quam legatos ferre ad hostes indicavimus; hac iovis mensa verritur, domus purgantur lustranturque. genera eius duo: foliosa, quam feminam putant, mas rarioribus foliis. ramuli utriusque plures, tenues, cubitales, angulosi, folia minora quam quercus angustioraque, divisuris maioribus, flos glaucus, radix longa, tenuis. nascitur ubique in planis aquosis. quidam non distingunt et unum omnino genus faciunt, quoniam utraque eosdem effectus habeat. utraque sortiuntur galli et praecinunt responsa, sed magi utique circa hanc insaniunt: hac perunctos inpetrare quae velint, febres abigere, amicitias conciliare nullique non morbo mederi. colligi debere circa canis ortum ita, ne luna aut sol conspiciat, favis ante et melle terrae ad piamentum datis; circumscriptam ferro effodi sinistra manu et in sublime tolli; siccari in umbra separatim folia, caulem, radicem. aiunt, si aqua spargatur triclinium, in qua maduerit, laetiores convictus fieri. adversus serpentes conteritur ex vino.

est similis verbasco herba, quae saepe fallit pro ea capta, foliis minus candidis, cauliculis pluribus, flore luteo. haec abiecta blattas in se contrahit ideoque romae blattaria vocatur.

molemonium sucum lacteum emittit concrescentem cummis modo, umidis locis. datur denarii pondus in vino.

quinquefolium nulli ignotum est, cum etiam fraga gignendo commendetur; graeci pentapetes aut pentaphyllon aut chamaezelon vocant. cum effoditur, rubram habet radicem; haec inarescens nigrescit et angulosa fit. nomen a numero foliorum. et ipsa herba incipit et desinit cum vite. adhibetur et purgandis domibus.

adversus serpentes bibitur et eius radix, quae sparganion vocatur, ex vino albo.

dauci genera quattuor fecit petronius diodotus, quae persequi nihil attinet, cum sint differentiae duae, probatissimi in creta, mox in achaia et ubicumque in siccis nati, feniculi similitudiue, candidioribus foliis et minoribus hirsutisque, caule pedali recto, radice suavissimi gustus et odoris. hoc in saxosis nascitur meridianis; reliqua genera ubique nascuntur terrenis collibus limitibusque, nec nisi pingui solo ... foliis coriandri, caule cubitali, capitibus rotundis, saepe pluribus quam ternis, radice lignosa et, cum inaruit, supervacua. semen huius cumino simile, prioris milio, album, acre, odoratum omnibus et fervens. secundum priore vehementius est ideoque parce sumi debet. si iam maxime tertium genus facere libeat, est simile staphylino, quod pastinacam erraticam appellant, semine oblongo, radice dulci. omnia haec et hieme et aestate sunt intacta quadripedi nisi post abortus. ex aliis usus seminis, ex cretico radicis et magis ad serpentes. bibitur e vino drachma una, datur et quadripedibus percussis.

therionarca alia quam magica et in nostro orbe nascitur, fruticosa, foliis subviridibus, flore roseo. serpentes necat. cuicumque admota ferae et haec torporem adfert.

persollata, quam nemo ignorat, graeci arcion vocant, folia habet maiora etiam cucurbitis et hirsutiora nigrioraque et crassiora, radicem albam et grandem. haec ex vino bibitur denariorum ii pondere; item cyclamini radix contra serpentes omnes. folia habet minora quam hedera nigrioraque et tenuiora, sine angulis, in quibus albicant maculae, caule exiguo, inani, floribus purpureis, radice lata, ut rapum videri possit, cortice nigro. nascitur in umbrosis. a nostris tuber terrae vocatur, in omnibus serenda domibus, si verum est, ubi sata sit, nihil nocere mala medicamenta; amuletum vocant. narrant et ebrietatem repraesentari addita in vinum. radix et siccata, scillae modo concisa reponitur; decoquitur eadem ad crassitudinem mellis. suum tamen

venenum ei est, traduntque, si praegnans radicem eam transgrediatur, abortum fieri.

est et altera cyclaminos cognomine cissanthemos, geniculatis caulibus supervacuis a priore distans, circa arbores se volvens, acinis hederae, sed mollibus, flore candido, specioso, radice supervacua. acini tantum in usu, gustu acres et lenti. siccantur in umbra tusique dividuntur in pastillos.

mihi et tertia cyclaminos demonstrata est cognomine chamaecissos, uno omnino folio, radice ramosa, qua pisces necabantur.

sed inter prima celebratur peucedanum, laudatissima in arcadia, mox samothrace. caulis ei tenuis, longus, feniculo similis, iuxta terram foliosus, radice nigra, crassa, gravi odore, sucosa. gignitur in montibus opacis, foditur exitu autumni. placent tenerrimae et altissimae radices. hae conciduntur in quaternos digitos osseis cultellis funduntque sucum in umbra, capite prius et naribus rosaceo perunctis, ne vertigo sentiatur. et alius sucus invenitur caulibus adhaerens; incisi quoque manant. probatur crassitudine mellea, colore rufo, odore suaviter gravi, fervens gustu. hic in usu et radix et decoctum eius plurimis medicamentis, suco tamen efficacissimo, qui resolvitur amaris amygdalis aut ruta contra serpentes bibiturque et ex oleo perunctos tuetur. - ebuli quoque, quam nemo ignorat, fumo fugantur serpentes.

privatim adversatur scorpionibus polemoniae radix, vel adalligata tantum, item phalangio ac ceteris minoribus venenatis, scorpionibus aristolochia, agaricum obolis iiii in vini mixti cyathis totidem, verbenaca et phalangio cum vino aut posca, item quinquefolium, daucum.

verbascum graeci phlomon vocant. genera habet prima duo: album, in quo mas intellegitur, alterum nigrum, in quo femina. tertium genus non nisi in silvis invenitur. sunt folia brassicae latiora, pilosa, caulis erectus, cubitali amplior. semen nigrum inutile, radix una, crassitudine digiti. nascuntur in campestribus. silvestri folia elelisphaci, alta, ramis lignosis. sunt et phlomides duae hirsutae, rotundis foliis, humiles. tertia lychnitis vocatur, ab aliis thryallis, foliis ternis aut cum plurimum quaternis, crassis pinguibusque, ad lucernarum lumina aptis. aiunt in foliis eius, quam feminam diximus,

ficus omnino non putrescere. distingui genera haec paene supervacuum est, cum sint omnia eiusdem effectus. contra scorpiones bibitur radix cum ruta ex aqua, magna amaritudine, sed effectu pari.

thelyphonon herba ab aliis scorpion vocatur propter similitudinem radicis. cuius tactu moriuntur scorpiones; itaque contra eorum ictus bibitur. scorpionem mortuum si quis helleboro candido linat, revivescere aiunt. thelyphonon omnem quadripedem necat inposita verendis radice, folio quidem intra eundem diem. quod est simile cyclamino, ipsa geniculata. nascitur in opacis. - scorpionibus adversatur et vettonicae sucus ac plantaginis.

sunt et ranis venena, rubetis maxime, vidimusque psyllos in certamen e patinis candefactis admittentes, ociore etiam quam aspidum pernicie. auxiliatur phrynion in vino pota. aliqui neurada appellant, alii poterion, floribus parvis, radicibus multis, nervosis, bene olentibus. item alcima, quam alii damasonion, alii lyron appellant. folia erant plantaginis, nisi angustiora essent et magis laciniosa convexaque in terram, alias etiam venosa similiter, caule simplici, tenui, cubitali, capite thyrsi, radicibus densis, tenuibus ut veratri nigri, acribus, odoratis, pinguibus. nascitur in aquosis. alterum genus eiusdem in silvis, nigrius, maioribus foliis. in usu radices utriusque adversus ranas et lepores marinos drachmae pondere in vini potu. lepori marino adversatur et cyclaminos. veneni vim canis quoque rabidi morsus habent, contra quos erit cynorrhodum, de quo diximus; plantago et ad omnes bestiarum morsus pota atque inlita, vettonica ex mero vetere.

peristereos vocatur caule alto, foliato, cacumine in alios caules se spargens, columbis admodum familiaris, unde et nomen. hanc habentes negant latrari a canibus.

proxima ab his malis venena sunt, quae sibimet ipsi homines excogitant. contra haec omnia magicasque artes erit primum illud homericum moly, dein mithridatia ac scordotis. et centaurium potu omnia mala medicamenta exigit per alvum, vettonicae semen in mulso aut passo vel farina drachma in vini veteris cyathis iiii; vomere cogendi atque iterum bibere. iis, qui cotidie gustent eam, nulla nocitura mala medicamenta tradunt. poto veneno aristolochia subvenit eadem mensura qua contra serpentes, quinquefolii sucus, agaricum, postquam vomuerint, denarii pondere ex aquae mulsae

cyathis iii.

antirrinum vocatur sive anarrinon lychnis agria, simile lino, radice nulla, flore hyacinthi, semine vituli narium. et hoc perunctos venustiores fieri nec ullo malo medicamento laedi posse vel si quis in bracchiali habeat, arbitrantur magi. similiter ea, quam eupliam vocant, traduntque ea perunctos commendatioris esse famae. artemisiam quoque secum habentibus negant nocere mala medicamenta aut bestiam ullam, ne solem quidem; bibitur et haec ex vino. - adversus opium alcima privatim potens traditur, pota ut adversus ranas.

pericarpum bulbi genus est. duae eius species: cortice rubro, alterum nigro, papaveri simile, sed vis maior quam priori, utrique autem in excalfaciendo. ideo contra cicutam datur, contra quam et tus et panaces, chironium praecipue; hoc et contra fungos.

verum et generatim membratimque singulis corporum morbis remedia subtexemus orsi a capite.

alopecias emendat nymphaeae heracliae radix, sive una ... trita inlinantur. polythrix distat a callitriche, quod iuncos albos habet et folia plura maioraque, frutice quoque maior est. defluentem capillum confirmant et densant. item lingulaca, circa fontes nascens, cuius radix admixta combusta teritur cum adipe suis nigrae; id quoque excipitur, ut eius suis, quae numquam pepererit; sol deinde plurimum confert inlitae. similis usus est cyclamini radicis. - porriginem veratri radix tollit in oleo decocta vel in aqua. - capitis dolori medetur panacis omnium generum radix in oleo contrita, aristolochia, hiberis adalligata hora vel diutius, si pati possit, comitante balinei usu. medetur et daucum. purgat autem cyclaminos cum melle in nares addita et ulcera capitis sanat inlita. medetur et peristereos.

cacalia sive leontice vocatur, semen margaritis minutis simile, dependens inter folia grandia, in montibus fere. huius grana xv in oleo macerantur, atque ita adverso capillo caput inungitur.

fit et ex callitriche sternumentum. folia sunt lenticulae, caules iunci tenuissimi, radice minima. nascitur opacis et umidis, gustatu fervens.

hysopum in oleo contritum phthiriasi resistit et prurigini in capite. est autem optimum cilicium e tauro monte, dein pamphylium ac zmyrnaeum. stomacho contrarium, purgat cum fico sumptum per

inferna, cum melle vomitionibus. putant et serpentium ictibus adversari, tritum cum melle et sale et cumino.

lonchitis non, ut plerique existimaverunt, eadem est quae xiphion aut phasganion, quamquam cuspidi similis semine; habet enim folia porri, rubentia ad radicem et plura quam in caule, capitula personis comicis similia, parvam exserentibus linguam, radicibus praelongis. nascitur in sitientibus, e diverso xiphion et phasganion in umidis. cum primum exit, gladii praebet speciem, caule ii cubitorum, radice ad nucis abellanae figuram fimbriata, quam effodi ante messes oportet, siccari in umbra. superior pars eius cum ture trita, aequo pondere admixto vino, ossa fracta capite extrahit aut quicquid in corpore suppuret vel si calcata sint ossa serpentis; eadem contra venena efficax. - caput in dolore veratro in oleo vel rosaceo decocto tritoque ungui convenit, peucedano ex oleo vel rosaceo et aceto. tepidum hoc prodest et doloribus, qui plerumque ex dimidia parte capitis sentiuntur, et vertigini. perungunt et radice eius sudoris causa eliciendi, quoniam caustica vis ei est.

psyllion alii cynoides, alii crystallion, alii sicelicon, alii cynomyiam appellant, radice tenui, supervacua, sarmentosum, fabae granis in cacuminibus, foliis canino capiti non dissimilibus, semine autem pulici, unde et nomen. hoc in bacis, ipsa herba in vineis invenitur. vis ad refrigerandum et discutiendum ingens. semen in usu. fronti inponitur in dolore et temporibus ex aceto et rosaceo aut posca; ad cetera inlinitur. acetabuli mensura sextarium aquae densat ac contrahit; tunc terere oportet et crassitudinem inlinere cuicumque dolori et collectioni inflammationique. - vulneribus capitis medetur aristolochia, fracta extrahens ossa et in alia quidem parte corporis, sed maxime capite; similiter plistolochia. - thryselinum est non dissimile apio; huius radix commanducata purgat capitis pituitas.

oculorum aciem centaurio maiore putant adiuvari, si addita aqua foveantur, suco vero minoris cum melle culices, nubeculas, obscuritates discuti, cicatrices extenuari, albugines quidem etiam iumentorum sideritide. nam chelidonia supra dictis omnibus mire medetur. panacis radicem cum polenta epiphoris inponunt. hyoscyami semen et bibunt obolo, tantundem meconii adicientes vinumque, ad epiphoras inhibendas. inungunt et gentianae suco, quem collyriis quoque acrioribus pro meconio miscent. facit

claritatem et euphorbeum inunctis. instillatur plantaginis sucus lippitudini. caligines aristolochia discutit, hiberis adalligata capiti, quinquefolium. epiphoras et si qua in oculis vitia sunt emendat verbascum. epiphoris inponitur peristereos ex rosaceo vel aceto. ad hypochysis et caliginem cyclamini pastillos diluunt, peucedani sucum ut diximus, ad claritatem et caligines cum meconio et rosaceo. psyllion inlitum fronti epiphoras suspendit.

anagallida aliqui acoron vocant. duo genera eius: mas flore phoeniceo, femina caeruleo, non altiores palmo, frutice tenero, foliis pusillis, rotundis, in terra iacentibus. nascuntur in hortis et aquosis. prior floret caerulea. utriusque sucus oculorum caliginem discutit cum melle et ex ictu cruorem et argema rubens, magis cum attico melle inunctis. pupillas dilatat, et ideo hae inunguntur ante quibus paracentesis fit. iumentorum quoque oculis medentur. sucus caput purgat per nares infusus ita, ut deinde vino colluatur. bibitur et contra angues suci drachma in vino. mirum quod feminam pecora vitant aut, si decepta similitudine - flore enim tantum distant - degustavere, statim eam, quae asyla appellatur, in remedium quaerunt. a nostris felis oculus vocatur. praecipiunt aliqui effossuris ante solis ortum, priusquam quicquam aliud loquantur, salutare eam, sublatam exprimere; ita praecipuas esse vires. de euphorbeae suco satis dictum est. lippitudini, si tumor erit, absinthium cum melle tritum, item cum ... vettonicae farina conveniet.

aegilopas sanat herba eodem nomine, quae in hordeo nascitur, tritici folio, semine contrito cum farina permixta inpositaque vel suco. exprimitur hic e caule foliisque praegnantibus dempta spica et in trimestri farina digeritur in pastillos.

antiqui et mandragora utebantur, postea abdicatus est in hac curatione. epiphoris, quod certum est, medetur et oculorum dolori radix tusa cum rosaceo et vino. nam sucus multis oculorum medicamentis miscetur. mandragoran alii circaeon vocant. duo eius genera: candidus qui et mas, niger qui femina existimatur, angustioribus quam lactucae foliis, hirsutis et caulibus, radicibus binis ternisve rufulis, intus albis, carnosis tenerisque, paene cubitalibus. ferunt mala abellanarum nucum magnitudine et in iis semen ceu pirorum. hoc albo alii arsena, alii morion, alii hippophlomon vocant. huius folia alba, alterius foliis latiora, ut

lapathi sativae. effossuri cavent contrarium ventum et iii circulis ante gladio circumscribunt, postea fodiunt ad occasum spectantes. sucus fit et e malis et caule deciso cacumine et e radice punctis aperta aut decocta. utilis haec vel surculo; concisa quoque in orbiculos servatur in vino. sucus non ubique invenitur, sed, ubi potest, circa vindemias quaeritur. odor gravis ei, ut et radicis et mali, gravior ex albo. mala matura in umbra siccantur. sucus ex iis sole densatur, item radicis tusae vel in vino nigro ad tertias decoctae. folia servantur in muria efficacius; salsus rore tantum sucus pestis est; sic quoque noxiae vires gravedinem adferunt etiam olfactu. quamquam mala in aliquis terris manduntur, nimio tamen odore obmutescunt ignari, potu quidem largiore etiam moriuntur. vis somnifica pro viribus bibentium; media potio cyathi unius. bibitur et contra serpentes et ante sectiones punctionesque, ne sentiantur; ob haec satis est aliquis somnum odore quaesisse. bibitur et pro helleboro ii obolis in mulso - efficacius helleborum - ad vomitiones et ad bilem nigram extrahendam.

cicuta quoque venenum est, publica atheniensium poena invisa, ad multa tamen usus non omittendi. semen habet noxium; caulis autem et viridis estur a plerisque et in patinis. levis hic et geniculatus ut calami, nigricans, altior saepe binis cubitis, in cacuminibus ramosus, folia coriandri teneriora, gravia odoratu, semen aneso crassius, radix concava, nullius usus. semini et foliis refrigeratoria vis; sic et necat: incipiunt algere ab extremitatibus corporis. remedio est, priusquam ad vitalia perveniat, vini natura excalfactoria. sed in vino pota inremediabilis existit. sucus exprimitur foliis floribusque, tum enim maxime tempestivus est; melior semine trito expressus et sole densatus in pastillos. necat sanguinem spissando - haec altera vis ei - ; ideo sic necatorum maculae in corporibus apparent. ad dissolvenda medicamenta utuntur illo pro aqua. fit ex eo et ad refrigerandum stomachum malagma. praecipuus tamen est ad cohibendas epiphoras aestivas oculorumque dolores sedandos circumlitus; miscetur collyriis. et alias omnes rheumatismos cohibet. folia quoque tumorem omnem doloremque et epiphoras sedant. anaxilaus auctor est mammas a virginitate inlitas semper staturas. quod certum est, lac puerperarum mammis inposita extinguit veneremque testibus circa pubertatem inlita. remedia, in quibus bibenda censetur, non equidem

praeceperim. vis maxima natae susis parthorum, mox laconicae, creticae, asiaticae, in graecia vero megaricae, deinde atticae.

cremnos agrios gremias tollit oculorum inpositus, tumorem quoque polenta addita.

nascitur vulgo molybdaena, id est plumbago, etiam in arvo, folio lapathi, crassa, hispida. hac commanducata si oculus subinde lingatur, plumbum, quod est genus vitii, ex oculo tollitur.

capnos trunca, quam pedes gallinacios vocant, nascens in parietinis et saepibus, ramis tenuissimis sparsisque, flore purpureo, viridis suco caliginem discutit; itaque in medicamenta oculorum additur.

similis et nomine et effectu, sed alia est capnos fruticosa, praetenera, foliis coriandri, cineracei coloris, flore purpureo. nascitur in hortis et segetibus hordeaciis. claritatem facit inunctis oculis delacrimationemque ceu fumus, unde nomen. eadem evolsas palpebras renasci prohibet.

acoron iridis folia habet, angustiora tantum et longiore pediculo, radices nigras minusque venosas, cetero et has similes iridis, gustu acres, odore non ingratas, ructu faciles. optumae daspetiacae e galatia, mox creticae, sed plurimae in colchide iuxta phasin amnem et ubicumque in aquosis. recentibus virus maius quam vetustis, creticae candidiores ponticis. siccantur, ut iris, in umbra digitalibus frustis. nec non inveniuntur qui oxymyrsinae radicem acoron vocant, ideoque quidam hanc acorion vocare malunt. vis ei ad calfaciendum extenuandumque, efficax contra suffusiones et caligines oculorum, suco eiusdem poto contra serpentes.

cotyledon parvula herba est, in cauliculo tenero, pusillo folio pingui, concavo ut coxendices. nascitur in maritimis petrosisque umidis, radice olivae modo rotunda. oculis medetur suco. est aliud genus eiusdem sordidis foliis, latioribus densioribusque circa radicem velut oculum cingentibus, asperrimi gustus, longiore caule, sed pergracili. usus ad eadem quae sativi aizoi.

duo genera eius: maius in fictilibus vasculis seritur, quod aliqui buphthalmon appellant, alii zoophthalmon, alii stergethron, quia amatoriis conveniat, alii hypogeson, quoniam in subgrundiis fere nascitur; sunt qui ambrosiam potius vocant et qui amerimnon, italia sedum magnum aut oculum aut digitillum. alterum minusculum,

quod erithales vocant, alii trithales, quia ter floreat, alii erysithales, aliqui isoe+tes, italia sedum, sed aeque aizoum utrumque, quoniam vireat semper. maius et cubiti altitudinem excedit, crassitudine plus quam pollicari. folia in cacumine linguae similia, carnosa, pinguia, larga suco, latitudine pollicari, alia in terram convexa, alia stantia ita, ut ambitu effigiem imitentur oculi. quod minus est, in muris parietinisque et tegulis nascitur, fruticosum a radice et foliosum usque ad cacumen, foliis angustis, mucronatis, sucosis, palmum alto caule. radix inutilis.

huic similis est quam graeci andrachnen agrian vocant, italia inlecebram, pusillis latioribus foliis et breviore cacumine. nascitur in petris et colligitur cibi causa.

omnium harum vis eadem, refrigerare et adstringere. medentur epiphoris folia inposita vel sucus inunctis, purgat enim ulcera oculorum expletque et ad cicatricem perducit, palpebras deglutinat. eaedem capitis doloribus medentur suco vel folio temporibus inlitis, adversantur phalangiorum ictibus, aconito vero maius aizoum praecipue. a scorpionibus quoque habentem id feriri negant.

medentur et aurium dolori, item sucus hyoscyami modicus, item achilleae et centaurii minoris et plantaginis, peucedani cum rosaceo et meconio, acori sucus cum rosa - omnis autem strigili calefactus infunditur - , cotyledon etiam purulentis cum medulla cervina calefacta, ebuli radicis tritae sucus linteo colatus, mox in sole densatus et, cum opus sit, rosaceo dilutus et calefactus.

parotidas verbenaca, item plantago sanat, item sideritis cum axungia vetere.

narium ozaenas emendat aristolochia cum cypero.

dentibus remedio sunt panacis radix commanducata, praecipue chironiae, item sucus collutis, radix hyoscyami ex aceto manducata, item polemoniae. commanducatur et plantaginis radix, aut colluuntur in aceto decoctae suco; et folia esse utile, vel si sanguine gingivae putrescant; vel semen eiusdem apostemata et collectiones gingivarum sanat. et aristolochia gingivas dentesque confirmat, verbenaca cum radice commanducata et decoctae ex vino aut aceto sucus collutus, item quinquefolii radicis decoctae ad tertias in vino aut aceto. prius quam decoquatur, aqua marina aut salsa lavatur; decoctum diu tenendum in ore. quidam cinere quinquefolii fricare

malunt. et verbasci radix decoquitur in vino ad colluendos dentes, et hysopo colluuntur et peucedani suco cum meconio vel radicum anagallidis, magis feminae, suco ab altera nare, quam doleat, infuso.

erigeron a nostris vocatur senecio. hanc si ferro circumscriptam effodiat aliquis tangatque ea dentem et alternis ter despuat ac reponat in eundem locum ita, ut vivat herba, aiunt dentem eum postea non doliturum. herba est trixaginis specie et mollitia, cauliculis subrubicundis. nascitur in tegulis et in muris. nomen hoc graeci dederunt, quia vere canescit. caput eius numerose dividitur lanugine, qualis est spinae, inter divisuras exeunte; quare callimachus eam acanthida appellavit, alii pappum. nec deinde graecis de ea constat. alii erucae foliis esse dixerunt, alii roboris - at minora multo - , radice alii supervacua, alii nervis utili, alii potu strangulante. e diverso quidam regio morbo cum vino dederunt et contra omnia vesicae vitia, item cordis et iocineris. extrahere renibus harenam dixere. ischiadicis drachmam cum oxymelite ab ambulatione propinavere, torminibus quoque et in passo utilissimam, praecordiis etiam cibo ex aceto eam praedicantes serentesque in hortis. nec defuere qui et alterum genus facerent nec quale esset demonstrarent, contra serpentes in aqua bibendam edendamque comitialibus dantes. nos eam romanis experimentis per usus digeremus. lanugo eius cum croco et exiguo aquae frigidae trita inlinitur epiphoris, tosta cum mica salis strumis.

ephemeron folia habet lilii, sed minora, caulem parem, florem caeruleum, semen supervacuum, radicem unam digitali crassitudine, dentibus praecipuam concisam in aceto decoctamque, ut tepido colluantur. et ipsa etiam radix sistit; cavis, exesis inprimitur. chelidoniae radix ex aceto trita continetur ore, erosis veratrum nigrum inprimitur, mobiles utrolibet decocto in aceto firmantur.

labrum venerium vocant in flumine nascentem. est ei vermiculus, qui circa dentes fricatur aut cavis dentium cera includitur. cavendum ne vulsa herba terram tangat.

ranunculum vocamus quam graeci batrachion. genera eius iiii: unum pinguioribus quam coriandri foliis et ad latitudinem malvae accedentibus, colore livido, caule alto, gracili et radice alba. nascitur in limitibus umidis et opacis. alterum foliosius, pluribus foliorum incisuris, altius caulibus. tertium minimum est, gravi odore, flore

aureo. quartum simile huic, flore lacteo. omnibus vis caustica, si cruda folia inponantur, pusulasque ut ignis faciunt. ideo ad lepras et psoras iis utuntur et ad tollenda stigmata, causticisque omnibus miscent. alopeciis inponunt celeriter removentes. radix in dolore commanducata diutius rumpit dentes; eadem sicca concisa sternumentum est. nostri herbarii strumum eam vocant, quoniam medetur strumis et panis parte in fumo suspensa, creduntque ea rursus sata rebellare quae curaverint vitia, in quo scelere et plantagine utuntur. oris ulcera intus sucus plantaginis emendat et folia radicesque commanducatae, vel si rheumatismo laboret os, ulcera faetoremque quinquefolium, ulcera psyllium.

conposita quoque contra faetores, vel maxime pudendum vitium, trademus. ergo folia myrti et lentisci pari pondere, gallae syriacae dimidium pondus simul terere et vino vetusto sparsa mandere matutino ex usu est, vel hederae bacas cum casia et murra pari pondere ex vino. naribus utilissimum est dracontii semen contritum ex melle, etiam si carcinomata in iis sint. suggillata hysopo emendantur, stigmata in facie mandragoras inlitus delet.

LIBER XXVI

sensit facies hominum et novos omnique aevo priore incognitos non italiae modo, verum etiam universae prope europae morbos, tunc quoque non tota italia nec per illyricum galliasve aut hispanias magno opere vagatos aut alibi quam romae circaque, sine dolore quidem illos ac sine pernicie vitae, sed tanta foeditate, ut quaecumque mors praeferenda esset.

gravissimum ex iis lichenas appellavere graeco nomine, latine, quoniam a mento fere oriebatur, ioculari primum lascivia, ut est procax multorum natura in alienis miseriis, mox et usurpato vocabulo mentagram, occupantem multis et latius totos utique voltus, oculis tantum inmunibus, descendentem vero et in colla pectusque ac manus foedo cutis furfure.

non fuerat haec lues apud maiores patresque nostros et primum ti. claudi caesaris principatu medio inrepsit in italiam quodam perusino equite romano, quaestorio scriba, cum in asia adparuisset, inde contagionem eius inportante. nec sensere id malum feminae aut servitia plebesque humilis aut media, sed proceres veloci transitu osculi maxime, foediore multorum, qui perpeti medicinam toleraverant, cicatrice quam morbo. causticis namque curabatur, ni usque in ossa corpus exustum esset, rebellante taedio. adveneruntque ex aegypto, genetrice talium vitiorum, medici hanc solam operam adferentes magna sua praeda, siquidem certum est manilium cornutum e praetoriis legatum aquitanicae provinciae hs cc elocasse in eo morbo curandum sese. accidit quoque saepius, ut nova contra genera morborum gregatim sentirentur. quo mirabilius quid potest reperiri aliqua gigni repente vitia terrarum in parte certa membrisque hominum certis vel aetatibus aut etiam fortunis, tamquam malo eligente, haec in pueris grassari, illa in adultis, haec proceres sentire, illa pauperes!

l. paullo q. marcio censoribus primum in italia carbunculum evenisse annalibus notatum est, peculiare narbonensis provinciae malum, quo duo consulares obiere condentibus haec nobis eodem anno, iulius rufus atque laecanius bassus, ille medicorum inscitia sectus, hic vero pollici laevae manus evulso acu ab semet ipso tam

parvo, ut vix cerni posset. nascitur in occultissimis corporum partibus et plerumque sub lingua duritia rubens vari modo, sed capite nigricans, alias livida, in corpus intendens neque intumescens, sine dolore, sine pruritu, sine alio quam somni indicio, quo gravatos in triduo aufert, aliquando et horrorem adferens circaque pusulas parvas, rarius febrem, stomachum faucesque ut invasit, ocissime exanimans.

diximus elephantiasim ante pompei magni aetatem non accidisse in italia, et ipsam a facie saepius incipientem, in nare prima veluti lenticula, mox increscente per totum corpus, maculosa variis coloribus et inaequali cute, alibi crassa, alibi tenui, dura, alibi ceu scabie aspera, ad postremum vero nigrescente et ad ossa carnes adprimente, intumescentibus digitis in pedibus manibusque. aegypti peculiare hoc malum et, cum in reges incidisset, populis funebre, quippe in balineis solia temperabantur humano sanguine ad medicinam eam. et hic quidem morbus celeriter in italia restinctus est, sicut et ille, quem gemursam appellavere prisci inter digitos pedum nascentem, etiam nomine oblitterato.

id ipsum mirabile, alios desinere in nobis, alios durare, sicuti colum. ti. caesaris principatu inrepsit id malum, nec quisquam id prior imperatore ipso sensit, magna civitatis ambage, cum in edicto eius excusantis valetudinem legeret nomen incognitum. quid hoc esse dicamus aut quas deorum iras parum enim erant homini certa morborum genera, cum supra trecenta essent, nisi etiam nova timerentur! neque ipsi autem homines pauciora sibi opera sua negotia inportant.

haec apud priscos erant quae memoramus remedia, medicinam ipsa quodammodo rerum natura faciente, et diu fuere. hippocratis certe, qui primus medendi praecepta clarissime condidit, referta herbarum mentione invenimus volumina, nec minus diocli carysti, qui secundus aetate famaque extitit, item praxagorae et chrysippi ac deinde erasistrati cei, herophilo quidem, quamquam subtilioris sectae conditori, ante omnis celebratam rationem, iam paulatim, usu efficacissimo rerum omnium magistro, peculiariter utique medicinae, ad verba garrulitatemque descendentem. sedere namque in scholis auditioni operatos gratius erat quam ire per solitudines et quaerere herbas alias aliis diebus anni.

durabat tamen antiquitas firma magnasque confessae rei vindicabat reliquias, donec asclepiades aetate magni pompei orandi magister nec satis in arte ea quaestuosus, ut ad alia quam forum sagacis ingenii, huc se repente convertit atque, ut necesse erat homini qui nec id egisset nec remedia nosset oculis usuque percipienda, torrenti ac meditata cotidie oratione blandiens omnia abdicavit totamque medicinam ad causas revocando coniecturae fecit, quinque res maxume communium auxiliorum professus, abstinentiam cibi, alias vini, fricationem corporis, ambulationem, gestationes, quae cum unusquisque semet ipsum sibi praestare posse intellegeret, faventibus cunctis, ut essent vera quae facillima erant, universum prope humanum genus circumegit in se non alio modo quam si caelo demissus advenisset.

trahebat praeterea mentes artificio inani, alias vinum promittendo aegris dandoque tempestive, iam frigidam aquam et, quoniam causas morborum scrutari prius herophilus instituerat, vini rationem inlustraverat cleophantus apud priscos, ipse cognominari se frigida danda praeferens, ut auctor est M. Varro. alia quoque blandimenta excogitabat, iam suspendendo lectulos, quorum iactatu aut morbos extenuaret aut somnos adliceret, iam balneas avidissima hominum cupidine instituendo et alia multa dictu grata atque iucunda, magna auctoritate nec minore fama, cum occurrisset ignoto funeri, relato homine ab rogo atque servato, ne quis levibus momentis tantam conversionem factam existimet. id solum possumus indignari, unum hominem e levissima gente, sine opibus ullis orsum, vectigalis sui causa repente leges salutis humano generi dedisse, quas tamen postea abrogavere multi. asclepiaden adiuvere multa in antiquorum cura nimis anxia et rudia, ut obruendi aegros veste sudoresque omni modo ciendi, nunc corpora ad ignes torrendi solesve adsiduo quaerendi in urbe nimbosa, immo vero tota italia imbricitrice, tum primum pensili balinearum usu ad infinitum blandiente. praeterea in quibusdam morbis medendi cruciatus detraxit, ut in anginis, quas curabant in fauces organo demisso. damnavit merito et vomitiones tunc supra modum frequentes. arguit et medicamentorum potus stomacho inimicos, quod est magna ex parte verum. itaque nos in primis quae sunt stomacho utilia signamus.

super omnia adiuvere eum magicae vanitates in tantum evectae, ut

abrogare herbis fidem cunctis possent: aethiopide herba amnes ac stagna siccari; onothuridis tactu clausa omnia aperiri; achaemenide coniecta in aciem hostium trepidare agmina ac terga verti; latacen dari solitam a persarum rege legatis, ut, quocumque venissent, omnium rerum copia abundarent, ac multa similia. ubinam istae fuere, cum cimbri teutonique terribili marte ululārent aut cum lucullus tot reges magorum paucis legionibus sterneret curve romani duces primam semper in bellis commerciorum habuere curam cur caesaris miles ad pharsaliam famem sensit, si abundantia omnis contingere unius herbae felicitate poterat non satius fuit aemilianum scipionem carthaginis portas herba patefacere quam machinis claustra per tot annos quatere siccentur hodie meroide pomptinae paludes tantumque agri suburbanae reddatur italiae! nam quae apud eundem democritum invenitur compositio medicamenti, quo pulchri bonique et fortunati gignantur liberi, cui umquam persarum regi tales dedit mirum esset profecto hucusque provectam credulitatem antiquorum saluberrimis ortam initiis, si in ulla re modum humana ingenia novissent atque non hanc ipsam medicinam ab asclepiade repertam probaturi suo loco essemus evectam ultra magos etiam. haec est omni in re animorum condicio, ut a necessariis orsa primo cuncta pervenerint ad nimium. igitur demonstratarum priore libro herbarum reliquos effectus reddemus, adicientes ut quasque ratio dictabit.

sed in lichenis remediis atque tam foedo malo plura undique acervabimus, quamquam non paucis iam demonstratis. medetur ergo plantago trita, quinquefolium, radix albuci ex aceto, ficulni caules ex aceto decocti, hibisci radix cum glutino et aceto acri decocta ad quartas. defricant etiam pumice, ut rumicis radix trita ex aceto inlinatur. et flos visci cum calce subactus laudatur et tithymalli cum resina decoctum. lichen vero herba omnibus his praefertur, inde nomine invento. nascitur in saxis, folio uno ad radicem lato, caule uno parvo, longis foliis dependentibus. haec delet et stigmata. teritur cum melle. est aliud genus lichenis, petris totum adhaerens ut muscus, qui et ipse inlinitur. hic et sanguinem sistit volneribus instillatus et collectiones inlitus. morbum quoque regium cum melle sanat ore inlito et lingua. qui ita curentur, aqua salsa lavari iubentur, ungui oleo amygdalino, hortensiis abstinere. ad lichenas et thapsiae

radice utuntur trita cum melle.

anginae argemonia medetur sumpta ex vino, hysopum cum fico decoctum et gargarizatum, peucedanum cum coagulo vituli marini aequis partibus, proserpinaca cum muria ex menis et oleo trita vel sub lingua habita, item sucus de quinquefolio potus cyathis iii. hic et omnibus faucium vitiis medetur gargarizatus, verbascum privatim tonsillis in aqua potum, strumis plantago, chelidonia cum melle et axungia, quinquefolium, radix persollatae, item cum axungia operitur folio suo inposita, item artemisia, radix mandragorae ex aqua. sideritis latifolia clavo sinistra manu circumfossa adalligatur, custodienda sanatis, ne rursus sata taedium herbariorum scelere, ut in quibusdam diximus, rebellet, quod et in iis, quos artemisia sanaverit, praedici reperio, item in iis, quos plantago. damasonium, quae et alcima vocatur, sub solstitio collecta inponitur ex aqua caelesti, folium tritum vel radix tusa cum axungia ita, ut inposita folio suo operiatur. sic et ad omnes cervicis dolores tumoresque quacumque in parte. - bellis in pratis nascitur, flore albo, aliquatenus rubente. hanc cum artemisia inlitam efficaciorem esse produnt. - condurdum quoque herba solstitialis, flore rubro, suspensa in collo conprimere dicitur strumas, item verbenaca cum plantagine. - digitorum vitiis omnibus et privatim pterygiis quinquefolium medetur.

in pectoris vitiis vel gravissimum est tussis. huic medetur panacis radix in vino dulci, sucus hyoscyami etiam sanguinem excreantibus, nidor quoque accensi tussientibus, item scordotis mixto nasturcio et resina cum melle tunsa arida - facit et per se faciles excreationes - , item centaurium maius vel sanguinem reicientibus, cui vitio et plantaginis sucus medetur et vettonica obolis iii in aqua; contra purulentas contraque cruentas exscreationes persollatae radix drachmae pondere cum pineis nucleis xi, peucedani sucus. pectoris doloribus acorum subvenit, idem antidotis miscetur; tussi daucum, item scythica herba, eadem omnibus pectoris vitiis; tussi et purulenta excreantibus obolis iii in passi totidem verbascum, cuius est flos aureus. huic tanta vis, ut iumentis etiam non tussientibus modo, sed ilia quoque trahentibus auxilietur potu, quod et de gentiana reperio. radix cacaliae conmanducata et in vino madefacta non tussi tantum, sed et faucibus prodest. hysopi v rami cum ii rutae et ficis iii decocti thoracem purgant, tussim sedant.

bechion tussilago dicitur. duo eius genera. silvestris ubi nascitur, subesse aquas credunt, et hoc habent signum aquileges. folia sunt maiuscula quam hederae v aut vii, subalbida a terra, superne pallida, sine caule, sine flore, sine semine, radice tenui. quidam eandem esse arcion et alio nomine chamaeleucen putant. huius aridae cum radice fumus per harundinem haustus et devoratus veterem sanare dicitur tussim, sed in singulos haustus passum gustandum est. altera a quibusdam salvia appellatur, similis verbasco. conteritur et colata calfit atque ita ad tussim laterisque dolores bibitur, contra scorpiones eadem et dracones marinos efficax. contra serpentes quoque ex oleo perungui ea prodest. - hysopi fasciculus cum quadrante mellis decoquitur ad tussim, lateris, pectoris dolores, verbascum cum ruta ex aqua, vettonicae farina bibitur ex aqua calida.

stomachum conroborat scordotis suco, centaurium, gentiana ex aqua pota, plantago aut per se in cibo sumpta aut cum lente alicaeve sorbitione. vettonica alias gravis stomacho, vitia tamen sanat pota vel foliis conmanducata, item aristolochia pota, agaricum manducatum siccum, ut ex intervallo merum sorbeatur, nymphaea heraclia inlita, peucedani sucus. psyllion ardoribus inponitur, vel cotyledon trita cum polenta vel aizoum.

molon scapo est striato, foliis mollibus, parvis radice iiii digitorum, in qua extrema alii caput est. vocatur a quibusdam syron. ex vino stomacho ... dyspnoeae medetur centaurium maius ecligmate, plantago suco vel cibo, vettonicae tusae pondo libra, mellis attici semuncia ex aqua calida cotidie bibentibus, aristolochia vel agaricum obolis ternis ex aqua calida aut lacte asini potum. cissanthemos ad orthopnoeas bibitur, item hysopum et asthmaticis, peucedani sucus in iocineris doloribus et pectoris laterisque, si febres non sint. sanguinem quoque expuentibus subvenit agaricum victoriati pondere tritum et in mulsi v cyathis datum. idem et amomon facit. iocineri privatim teucria bibitur recens drachmis iiii in poscae hemina, vettonicae drachma i in aquae calidae cyathis iii ad cordis vitia in frigidae cyathis ii. quinquefolii sucus iocineris et pulmonis vitiis sanguinemque reicientibus et cuicumque vitio sanguinis intus occurrit. iocineri anagallides mire prosunt. capnon herbam qui edere, bilem per urinam reddunt. acoron iocineri medetur, thoraci et praecordiis daucum.

ephedra, ab aliis anabasis vocata, nascitur ventoso fere tractu scandens arborem et ex ramis propendens, folio nullo cirris numerosa, qui sint iunci geniculati, radice pallida. datur ex vino nigro austero trita ad tussim, suspiria, tormina et sorbitione facta, in quam vinum addi convenit. item gentiana madefacta pridie contrita denarii pondere in vini cyathis iii.

gaeum radiculas tenues habet nigras, bene olentes. medetur non modo pectoris doloribus aut lateris, sed et cruditates discutit iucundo sapore. verbenaca vero omnibus visceribus medetur, lateribus, pulmonibus, iocineribus, thoraci; peculiariter autem pulmonibus et quos ab iis phthisis temptet radix herbae consiliginis, quam nuper inventam diximus. suum quidem et pecoris omnis remedium praesens est pulmonum vitio vel traiecta tantum in auricula. bibi debet ex aqua haberique in ore adsidue sub lingua. superficies eius herbae an sit in aliquo usu, adhuc incertum est. renibus prodest plantaginis cibus, vettonicae potus, agaricum potum ut in tussi.

tripolion in maritimis nascitur saxis, ubi adludit unda, neque in mari neque in sicco, folio isatis crassiore, caule palmum alto, in mucrone diviso, radice alba, odorata, crassa, calidi gustus. datur hepaticis in farre cocta. haec herba eadem videtur quibusdam quae polium, de qua suo loco diximus.

gromphaena, alternis viridibus roseisque per caulem foliis, in posca sanguinem reicientibus medetur. iocineri autem herba malundrum, nascens in segete ac pratis, flore albo, odorata. eius cauliculus conteritur ex vino vetere. item herba calcetum e vinaceis contrita inponitur. faciles praestat vomitiones radix vettonicae, hellebori modo iiii drachmis in passo aut mulso, hysopum tritum cum melle, utilius praesumpto nasturcio aut irione, molemonium denarii pondere. et sillybi lacteus sucus, qui densatur in cummim, sumitur cum melle supra dicto pondere praecipueque bilem trahit. rursus sistunt vomitionem cuminum silvestre, vettonicae farina; sumuntur ex aqua. abstergent fastidia cruditatesque digerunt daucum, vettonicae farina ex aqua mulsa, plantago decocta caulium modo. - singultus hemionium sedat, item aristolochia, suspiria clymenus. - pleuriticis et peripneumonicis centaurium maius, item hysopum bibitur, pleuriticis peucedani sucus. alus autem, quam galli sic vocant, veneti cotoneam, medetur lateri, item renibus convolsisque et

ruptis. similis est cunilae bubulae, cacuminibus thymo, dulcis et sitim sedans, radicis alibi albae, alibi nigrae. eosdem effectus in lateris doloribus habet chamaerops myrteis circa caules geminos foliis, capitibus graeculae rosae, ex vino pota. - ischiadicos dolores et spinae levat agaricum potum ut in tussi, item stoechadis aut vettonicae farina ex aqua mulsa.

plurimum tamen homini negotii alvus exhibet, cuius causa maior pars mortalium vivit. alias enim cibos non transmittit, alias non continet, alias non capit, alias non conficit, eoque mores venere, ut homo maxime cibo pereat. pessimum corporum vas instat ut creditor et saepius die appellat. huius gratia praecipue avaritia expetit, huic luxuria condit, huic navigatur ad phasim, huic profundi vada exquiruntur; et nemo vilitatem eius aestimat consummationis foeditate. ergo numerosissima est circa hanc medicinae opera.

sistit eam scordotis recens drachma cum vino trita vel decocta potu, polemonia, quae et dysintericis ex vino datur, verbasci radix pota ex aqua ii digitorum magnitudine, nymphaeae heracliae semen cum vino potum, radix superior e xiphio drachmae pondere ex aceto, semen plantaginis in vino tritum vel ipsa ex aceto cocta aut alica ex suco eius sumpta, item cum lenticula cocta vel aridae farina inspersa potioni cum papavere tosto et trito vel sucus infusus aut potus, vettonica in vino ferro calefacto. eadem coeliacis in vino austero datur; his et hiberis inponitur uti dictum est. - tenesmo radix nymphaeae heracliae e vino bibitur, psyllium in aqua, acori radicis decoctum. aizoi sucus alvum sistit et dysinterias et taenias rotundas pellit. symphyti radix pota in vino alvum et dysinteriam sistit, item dauci. aizoum foliis contritis ex vino torminibus resistit, alcimae siccae farina torminibus pota cum vino.

astragalus folia habet longa, incisuris multis obliquis, circa radicem caules iii aut iiii, foliorum plenos, florem hyacinthi, radices villosas, inplicatas, rubras, praeduras. nascitur in petrosis, apricis et isdem nivalibus, sicut in pheneo arcadiae. vis ei ad spissanda corpora. alvum sistit radix in vino pota, quo fit ut moveat urinam repercusso liquore, sicut pleraque quae alvum sistunt. sanat et dysintericos in vino rubro tusa; difficile autem tunditur. eadem gingivarum suppurationi utilissima est fotu. colligitur exitu autumni, cum folia amisit; siccatur in umbra.

et ladano sistitur alvus utroque, quod in segetibus nascitur contuso et cribrato. bibitur ex aqua mulsa, item nobili e vino. ledon appellatur herba, ex qua fit in cypro barbis caprarum adhaerescens. nobilius in arabia fit, iam et in syria atque africa quod toxicum vocant; nervos enim in arcu circumdatos lanis trahunt adhaerescente roscida lanugine. plura de eo diximus inter unguenta. hoc gravissimum odore est durissimumque tactu. plurimum enim terrae colligit, cum probetur maxime purum, odoratum, molle, viride, resinosum. natura ei molliendi, siccandi, concoquendi, somnum adliciendi. capillum fluentem cohibet nigritiamque custodit, auribus cum hydromelite aut rosaceo infunditur, furfures cutis et manantia ulcera sale addito sanat, tussim veterem cum styrace sumptum, efficacissimum ad ructus.

alvum sistit et chondris sive pseudodictamnum. - hypocisthis, orobethron quibusdam dicta, malo granato inmaturo similis, nascitur, ut diximus, sub cistho, unde nomen. haec arefacta in umbra sistit alvum, ex vino nigro austero utraque. duo enim genera eius, candida et rufa. usus in suco: spissat, siccat. et rufa magis stomachi rheumatismos emendat pota iii obolis, sanguinis excreationes cum amylo, dysinterias pota et infusa, item verbenaca ex aqua data aut carentibus febri ex vino ammineo, cochlearibus v additis in cyathos iii vini.

laver quoque, nascens in rivis, condita et cocta torminibus medetur, potamogiton vero ex vino dysintericis etiam et coeliacis, similis betae foliis, minor tantum hirsutiorque, paulum semper eminens extra aquam. usus in foliis: refrigerant, spissant, peculiariter cruribus vitiosis utilia et contra ulcerum nomas cum melle vel aceto. castor hanc aliter noverat, tenui folio velut equinis saetis, thyrso longo et levi, in aquosis nascentem. radice sanabat strumas et duritias. potamogiton adversatur crocodilis; itaque secum habent eam qui venantur. alvum sistit et achillea. eosdem effectus praestat et statice, vii caulibus veluti rosae capita sustinens.

ceratia uno folio, radice nodosa et magna, in cibo coeliacis et dysintericis medetur. leontopodion alii leuceoron, alii doripetron, alii thorybethron vocant, cuius radix alvum sistit purgatque bilem, in aquam mulsam addito pondere denariorum ii. nascitur in campestri et gracili solo. semen eius potum lymphatica somnia facere dicitur. lagopus sistit alvom e vino pota aut in febri ex aqua. eadem inguini

adalligatur in tumore. nascitur in segetibus. multi super omnia laudant ad deploratos dysintericos quinquefolium decoctis in lacte radicibus potis et aristolochiam victoriati pondere in cyathis vini iii. quae ex supra dictis calida sumentur, haec candente ferro temperari aptius erit.

e diverso purgat alvum sucus centaurii minoris drachma in hemina aquae cum exiguo salis et aceti bilemque detrahit, maiore tormina discutiuntur. vettonica alvum solvit drachmis iiii in hydromelitis cyathis viiii, item euphorbeum vel agaricum drachmis ii cum sale modico potum ex aqua aut in mulso obolis iii. solvit et cyclaminos ex aqua pota aut balanis subditis, item chamaecissi balanus. hysopi manipulus decoctus ad tertias cum sale et pituitas trahit vel tritus cum oxymelite et sale pellitque ventris animalia. pituitam et bilem detrahit peucedani radix.

alvum purgant anagallides ex aqua mulsa, item epithymum, qui est flos e thymo satureiae simili. differentia, quod hic herbaceus est, alterius thymi albus; quidam hippopheon vocant. stomacho minus utilis vomitiones movet, sed tormina et inflationes discutit. sumitur et ecligmate ad pectoris vitia cum melle et aliquando iride. alvum solvit a iiii drachmis ad vi cum melle et exiguo salis atque aceti. quidam aliter epithymum tradunt sine radice nasci, tenue, similitudine pallioli, rubens, siccari in umbra, bibi ex aqua acetabuli parte dimidia, detrahere pituitam bilemque alvo leniter soluta. et nymphaea in vino austero solvit et pycnocomon, erucae foliis crassioribus et acrioribus, radice rotunda, lutei coloris, terram olente, caule quadriangulo, modico, tenui, flore ocimi. invenitur in saxosis. radix eius in aqua mulsa #1108 ii pondere et alvum et bilem et pituitam exinanit; semen somnia tumultuosa facit una drachma in vino potum. et capnos trunca detrahit bilem.

polypodi, quam nostri feliculam vocant, similis felici, radix in usu, pilosa, coloris intus herbacei, crassitudine digiti minimi, acetabulis cavernosa ceu polyporum cirri, subdulcis, in petris nascens aut sub arboribus vetustis. exprimitur sucus aqua madefactae, et ipsa minute concisa inspergitur oleri vel betae vel malvae vel salsamento aut cum pulticula coquitur ad alvum vel in febri leniter solvendam. detrahit bilem et pituitam, stomachum offendit. aridae farina indita naribus polypum consumit. florem et semen non fert.

scamonium quoque dissolutione stomachi bilem detrahit, alvum solvit, praeterquam si adiciantur aloes drachmae ii obolis eius ii. est autem sucus herbae ab radice ramosae, pinguibus foliis, triangulis, albis, radice crassa, madida, nausiosa. nascitur pingui et albo solo. radix circa canis ortum excavatur, ut in ipsam confluat sucus, qui sole siccatus digeritur in pastillos. siccatur et ipsa vel cortex. laudatur natione colophonium, mysium, prienense, specie autem nitidum et quam simillimum taurino glutini, fungosum tenuissimis fistulis, cito liquescens, virus redolens, cumminosum, linguae tactu lactescens, quam levissimum, cum diluatur, albescens. hoc evenit et adulterino, quod fit ervi farina et tithymalli marini suco fere in iudaea. quod etiam strangulat sumptum. deprehenditur gustu, tithymallus enim linguam excalefacit. usus bimo; nec ante nec postea utile. dedere et per se ex aqua vel mulsa et sale quaternis obolis, sed utilissime cum aloe ita, ut incipiente purgatione mulsum bibatur. fit et decoctum radicis in aceto ad crassitudinem mellis, quo leprae inlinuntur et caput inunguitur in dolore cum oleo.

tithymallum nostri herbam lactariam vocant, alii lactucam caprinam, narrantque lacte eius inscripto corpore, cum inaruerit, si cinis inspergatur, apparere litteras, et ita quidam adulteras adloqui maluere quam codicillis. genera eius multa. primus cognominatur characias, qui et masculus existimatur, ramis digitali crassitudine, rubris, sucosis, v aut vi, cubitali longitudine, a radice foliis paene oleae, in cacuminibus coma iunci. nascitur in asperis maritimis, legitur semen autumno cum coma, siccatum sole tunditur et reponitur. sucus vero incipiente pomorum lanugine defractis ramis excipitur farina ervi aut ficis, ut cum iis arescat. quinas autem guttas singulis excipi satis est, traduntque totiens purgari hydropicos fico sumpta, quot guttas ea lactis exceperit. sucus cum colligitur, ne attingat oculos, cavendum est. fit et e foliis tunsis priore minus efficax. fit et decoctum e ramis. est et semen in usu cum melle decoctum ad catapotia solvendae alvi gratia. semen et dentium cavis cera includitur. colluuntur et radicis decocto e vino aut oleo. inlinunt et lichenas suco bibuntque eum, ut purget vomitione et alvo soluta, alias stomacho inutilem. trahit pituitam sale addito in potu, bilem aphronitro, si per alvum purgari libeat, in posca, si vomitione, in passo aut aqua mulsa. media potio iii obolis datur. ficos a cibo

sumpsisse melius est. fauces urit leniter, est enim tam ferventis naturae, ut per se extra corpori inpositus pusulas ignium modo faciat et pro caustico in usu sit. - alterum genus tithymalli myrtiten vocant, alii caryiten, foliis myrti acutis et pungentibus, sed maioribus, et ipsum in asperis nascens. colliguntur comae eius hordeo turgescente siccataeque in umbra diebus viiii in sole inarescunt. fructus non pariter maturescit, sed pars anno sequente, et nux vocatur. inde cognomen graeci dedere. demetitur cum messium maturitate lavaturque, deinde siccatur et datur cum papaveris nigri ii partibus ita, ut sit totum acetabuli modus. minus hic vomitorius quam superior, ceteri item. aliqui sic et folium eius dedere, nucem vero ipsam in mulso aut passo vel sesima. trahit pituitam et bilem per alvum, oris ulcera sanat. ad nomas oris folium cum melle estur. - tertium genus tithymalli paralium vocatur sive tithymallis folio rotundo, caule palmum alto, ramis rubentibus, semine albo, quod colligitur incipiente uva et siccatum teritur sumiturque acetabuli mensura ad purgationes. - quartum genus helioscopion appellant, foliis porcillacae, ramulis stantibus a radice iiii aut v rubentibus, semipedali altitudine, suci plenis. hoc circa oppida nascitur, semine albo, columbis gratissimo. nomen accepit, quoniam capita cum sole circumagit. trahit bilem per inferna in oxymelite dimidio acetabulo. ceteri usus qui characiae. - quintum cyparittian vocant propter foliorum similitudinem, caule gemino aut triplici, nascentem in campestribus. eadem vis quae helioscopio aut characiae. - sextum platyphyllon vocant, alii corymbiten, alii amygdaliten a similitudine. nec ullius latiora sunt folia. pisces necat. alvum solvit radice vel foliis vel suco in mulso aut aqua mulsa drachmis iiii. detrahit privatim aquas. - septimum dendroides cognominant, alii cobion, alii leptophyllon, in petris nascens, comosissimum ex omnibus, maximis cauliculis rubentibus et semine copiosissimum, eiusdem effectus cuius characian.

apios ischas sive raphanos agria, iuncos ii aut iii spargit in terra rubentes, foliis rutae. radix cepae, sed amplior, quare quidam raphanum silvestrem vocant. intus habet mammam candidam, extra cortices nigros. nascitur in montosis asperis, aliquando et herbosis. effoditur vere tusaque in fictili mergitur, deiectoque quod supernatat reliquus sucus purgat utraque parte sesquiobolo in aqua mulsa. sic et

hydropicis datur acetabuli mensura. inspergitur et aridae radicis farina potioni. aiunt superiorem partem eius vomitione biles extrahere, inferiorem per alvum in aqua.

tormina discutit quodcumque panaces, vettonica praeterquam a cruditate, peucedani sucus et inflationes, ructus gignens, acori radix, daucum vel si lactucae modo sumatur. ladanum cyprium potum interaneorum vitiis occurrit, gentianae farina ex aqua tepida fabae magnitudine, plantago mane sumpta ii lingulis et tertia papaveris in vini cyathis iiii non veteris. datur et in somnum euntibus addito nitro vel polenta, si multo post cibum detur. colo infunditur hemina suci vel in febri.

agaricum potum obolis iii in vini veteris cyatho uno lieni medetur, e panace omnium generum radix in mulso, sed teucria praecipue pota arida et decocta, quantum manus capiat, in aceti heminis iii ad heminam. inlinitur eadem ex aceto aut, si tolerari non possit, ex fico vel aqua. polemonia bibitur ex vino, vettonica drachma in oxymelitis cyathis iii, aristolochia ut contra serpentes. argemonia vii diebus in cibo sumpta lienem consumere dicitur, agaricum in aceto mulso obolis ii. nymphaeae heracliae radix in vino pota et ipsa consumit. cissanthemus drachma bis die sumpta in vini albi cyathis ii per dies xl lienem dicitur paulatim emittere per urinam. prodest et hysopum cum fico decoctum, lonchitidis radix decocta prius quam semen demittat, peucedani quoque radix et lieni et renibus. lien suco acori poto consumitur, praecordiis et ilibus utilissimae radices; ... clymeni semen potum diebus xxx pondere denarii in vino albo, vettonicae farina ex melle et aceto scillite pota, radix lonchitidis in aqua. teucrium inlinitur, item scordium cum cera, agaricum cum farina e feno graeco.

vesicae malis contraque calculos, gravissimis cruciatibus, ut diximus, auxilio est polemonia ex vino pota, item agaricum, plantago foliis vel radice potis ex passo, vettonica ut in iocinere diximus, item ramici pota atque inlita, eadem ad strangurias efficacissima. quidam ad calculos vettonicam et verbenacam et milifolium aequis portionibus ex aqua pro singulari remedio bibere suadent. strangurias discuti et dictamno certum est, item quinquefolio decocto ad tertias in vino. hoc et enterocelicis dari atque inlini utilissimum est. xiphi quoque radix superior urinam ciet, infantibus enterocelicis datur ex

aqua et inlinitur. vesicae vitiis peucedani sucus, infantium ramici et umbilicis eminentibus psyllion inlinitur. urinam cient anagallides, acori radicis decoctum vel ipsa trita potaque et omnia vesicae vitia depellit, calculos et herba et radix cotyledonis itemque genitalium inflammationem omnem pari pondere et caulis et seminis et murrae. ebulum teneris cum foliis tritum ex vino potum calculos pellit, inpositum testes sanat. erigeron quoque cum farina turis et vino dulci testium inflammationes sanat. symphyti radix inlita enterocelas cohibet, genitalium nomas hypocisthis alba. artemisia quoque datur contra calculos ex vino dulci et ad stranguriam, dolores vesicae sedat ex vino radix nymphaeae heracliae.

eadem vis crethmo ab hippocrate admodum laudatae. est autem inter eas quae eduntur silvestrium herbarum; hanc certe apud callimachum adponit rustica illa hecale. species quae elatae hortensiae. caulis unus palmum altus; semen fervens, odoratum ceu libanotidis, rotundum; siccatum rumpitur. habet intus nucleum candidum, quem aliqui cachrym vocant. folia pinguia albicant veluti olivae, crassiora et salsa gustu; radices digiti crassitudine iii aut iiii. nascitur in maritimis petrosis. estur cruda coctave cum olere, odorati saporis et iucundi. servatur etiam in muria. praecipue ei usus ad strangurias folio vel caule vel radice ex vino. colorem quoque corporis gratiorem facit, verum largior inflationes. alvum solvit decocto, urinam et a renibus umorem trahit, sicut alcimae siccae farina, e vino pota stranguriae efficacius addito dauco, lieni quoque utilis. adversus serpentes bibitur. iumentis quoque in pituita aut stranguria hordeo inspersa succurrit.

anthyllion est lenti simillima, quae in vino pota vesicas vitiis liberat, sanguinem sistit. altera anthyllis, chamaepityi similis, flore purpureo, odore gravi, radice intubi, vel magis medetur ... .

cepaea, similis porcilacae, nigriore radice, sed inutili, nascens in litoribus harenosis, gustu amara, in vino cum asparagi radice vesicae plurimum prodest. eadem praestat hypericon - alii chamaepityn, alii corissum appellant - , oleraceo frutice, tenui, cubitali, rubente, folio rutae, odore acri, semine in siliqua nigro, maturescente cum hordeo. natura semini spissandi. alvum sistit, urinam ciet, vesicae cum vino bibitur. est aliud hypericon, quod aliqui caron appellant, folio tamaricis - et sub ea nascitur - , sed pinguioribus foliis et minutis,

rubentibus, odoratum, palmo altius, suave, leniter acutum. vis semini excalfactoria, et ideo inflammationem facit, sed stomacho non inutile, praecipuum ad stranguriam, si exulcerata non sit vesica. medetur et pleuriticis ex vino potum, vesicae autem callithrix trita simul cum cumino et data ex vino albo, verbenacaque cum foliis decocta ad tertias vel radix eius e mulso calido calculos eicit; item perpressa, quae arreti et in illyrico nascitur, in aqua decocta ex iii heminis ad unam pota, trifolium ex vino sumptum et chrysanthemum primum. anthemis quoque calculos eicit, parvis a radice foliis quinis, caulibus longis ii, flore roseo, radices tritae per se ... cei, laver crudum. silaus nascitur glariosis et perennibus rivis, cubitalis apii similitudine. coquitur ut olus acidum, magna utilitate vesicae. quae si scabiem sentiat, panacis radice sanatur, aliter inutilis vesicis. - calculos pellit malum erraticum radicis libra in congio decocta ad dimidias - inde heminae sumuntur per triduum, relicum ex vino - et urtica marina et daucum et plantaginis semen ex vino et herba fulviana trita ex vino. et haec nomen inventoris habet, nota tractantibus. urinas ciet scordion, testium tumores sedat hyoscyamum, genitalibus medetur peucedani sucus, ex melle semen, stranguriae agaricum obolis iii in vini veteris cyatho uno, trifolii radix drachmis ii in vino, dauci una drachma vel seminis.

ischiadici semine et foliis erythrodani tritis sanantur, panace poto et infricato, polemonia, aristolochiae decocto folii. agarico quidem et nervus, qui platys appellatur, et umerorum dolor sanatur obolis iii in vini veteris cyatho uno poto. quinquefolium ischiadicis et bibitur et inponitur, item scamonia decocta et cum hordei farina. semen hyperici utriusque bibitur ex vino.

sedis vitia et adtritus celerrime sanat plantago, condylomata quinquefolium, sed ea in callum iam conversa cyclamini radix ex aceto. anagallidum caerulea procidentiam sedis retro agit, e diverso rubens proritat. cotyledon condylomata et haemorrhoidas mire curat, testium tumores acori radix decocta in vino tritaque inlita. intertrigines negat fieri cato absinthium ponticum secum habentibus. alii adiciunt et puleium, quod ieiunus quis legerit: si post se alliget, inguinis dolores prohibet aut sedat coeptos. inguinalis, quam quidam argemonion vocant, passim in vepribus nascens, ut prosit, in manu tantum habenda est.

panos sanat panaces ex melle, plantago cum sale, quinquefolium, persollatae radix ut in strumis, item damasonium, verbascum cum sua radice tusum, vino aspersum folioque involutum et ita in cinere calefactum, ut inponatur calidum. experti adfirmavere plurimum referre, si virgo inponat nuda ieiuna ieiuno et manu supina tangens dicat: “negat apollo pestem posse crescere cui nuda virgo restinguat” atque ita retrorsa manu ter dicat totiensque despuant ambo. medetur et radix mandragorae ex aqua, radicis scamoniae decoctum cum melle, sideritis cum adipe vetere contusa, marruvium cum axungia vetere, vel chrysippios cum ficis pinguibus. et haec ab inventore habet nomen.

venerem in totum adimit, ut diximus, nymphaea heraclia, eadem semel pota in xl dies, insomnia quoque veneris a ieiuno pota et in cibo sumpta. inlita quoque radix genitalibus inhibet non solum venerem, sed et affluentiam geniturae; ob id corpus alere vocemque dicitur. adpetentiam veneris facit radix e xiphio superior data potui in vino, item quam cremnon agrion appellant, orminos agrios cum polenta contritus.

sed inter pauca mirabilis est orchis herba sive serapias, foliis porri, caule palmeo, flore purpureo, gemina radice testiculis simili, ita ut maior sive, ut aliqui dicunt, tenuior ex aqua pota excitet libidinem, minor sive mollior e lacte caprino inhibeat. quidam folio scillae esse dicunt leviore ac minore, caule spinoso. radices sanant oris ulcera, thoracis pituitas, alvum sistunt e vino potae.

concitatricem vim habet et satyrion. duo eius genera: longioribus foliis quam oleae, caule iiii digitorum, flore purpureo, radice gemina ad formam hominis testium, alternis annis intumescente ac residente. altera satyrios orchis cognominatur et femina esse credita est. distinguitur internodiis et ramosiore frutice, radice fascini. nascitur fere iuxta mare. haec tumores et vitia partium earum cum polenta inlita sedat vel per se trita. superioris radix in lacte ovis colonicae data nervos intendit, eadem ex aqua remittit. graeci satyrion foliis lilii rubris, minoribus et iii non amplius e terra exeuntibus tradunt, caule levi, cubitali, nudo, radice gemina, cuius inferior pars et maior mares gignat, superior ac minor feminas. et aliud genus satyrii erythraicon appellant, semine viticis maiore, levi, duro, radicis cortice rufo; intus album includi sapore subdulce, fere in montuosis

inveniri. venerem, etiam si omnino manu teneatur radix, stimulari, adeo si bibatur in vino austero; arietibus quoque et hircis segnioribus in potu dari, et a sarmatia equis ob adsiduum laborem pigrioribus in coitu, quod vitium prosedamum vocant. restinguit vim eius aqua mulsa aut lactuca sumpta. in totum quidem graeci, cum concitationem hanc volunt significare, satyrion appellant, sic et crataegin cognominantes et thelygonon et arrhenogonon, quarum semen testibus simile est. tithymalli quoque ramorum medullam habentes ad venerem proniores fieri dicuntur. prodigiosa sunt quae circa hoc tradit theophrastus, auctor alioqui gravis, septuageno coitu durasse libidinem contactu herbae, cuius nomen genusque non posuit. - sideritis adalligata varices minuit et sine dolore praestat.

podagrae morbus rarior solebat esse non modo patrum avorumque memoria, verum etiam nostra, peregrinus et ipse, nam si italiae fuisset antiquitus, latinum nomen invenisset. insanabilis non est credendus, quippe quoniam et in multis sponte desiit et in pluribus cura. medentur radices panacis cum uva passa, sucus hyoscyami cum farina vel semen, scordion ex aceto, hiberis uti dictum est, verbenaca cum axungia trita, cyclamini radix, cuius decoctum et pernionibus. podagras refrigerat radix e xiphio, semen e psyllio, cicuta cum lithargyro aut axungia, aizoum in primo impetu podagrae rubentis, hoc est calidae. utrilibet vero convenit erigeron cum axungia, plantaginis folia trita addito sale modico, argemonia tusa ex melle. medetur et verbenaca inlita aut si pedes macerentur in aqua, in qua decocta sit, et lappago, similis anagallidi, nisi esset ramosior ac pluribus foliis, gravis odoris. quae talis est, mollugo vocatur; similis, sed asperioribus foliis asperugo. superioris et sucus pondere #1108 i in vini ii cyathis cotidie sumitur. - praecipue vero liberat eo malo phycos thalassion, id est fucus marinus, lactucae similis, qui conchyliis substernitur, non podagrae modo, sed omnibus articulorum morbis inpositus, priusquam arefiat. tria autem genera eius: latum et alterum longius, quadamtenus rubens, tertium crispis foliis, quo in creta vestes tingunt, omnia eiusdem usus. nicander ea et adversus serpentes in vino dedit. salutare est et semen eius herbae, quam psyllion appellavimus, madefactum aqua admixtis in heminam seminis resinae colophoniae coclearibus ii, turis uno. laudantur et mandragorae folia cum polenta tunsa.

talis vero tumentibus limus aquaticus cum oleo subactus mire prodest, articulis sucus e centaurio minore. idem nervis utilissimus, item centauris. vettonica nervis discurrentibus per scapulas, umeris, spinae, lumbis pota ut in iocinere, articulis quinquefolium inpositum, mandragorae folia cum polenta vel radix recens tusa cum cucumere silvestri vel decocta in aqua, digitorum in pedibus rimis polypodii radix, articulis sucus hyoscyami cum axungia, amomon suco decocto, item centunculus decocta vel muscus recens ex aqua obligatus, donec inarescat, item lappae boariae radix e vino pota. - cyclaminos decocta in aqua perniunculos curat omniaque alia frigoris vitia, perniunculos et cotydelon cum axungia, folia ex batrachio, epithymi sucus. clavos pedum extrahit ladanum cum castoreo, verbenaca ex vino.

nunc peractis malis, quae membratim sentiuntur, dicemus de iis, quae totis corporibus grassantur. remedia autem haec communia invenio aput auctores potanda: dodecatheum, de qua diximus, deinde panacis omnium generum radices, peculiariter longinquis morbis, et semen interaneorum vitiis, ad omnes vero dolores corporis sucum e scordio, item vettonicae, quae pota colorem plumbeum corporis privatim emendat, gratiorem reducit.

geranion aliqui myrrin, alii myrtidan appellant. similis est cicutae, minutioribus foliis et caule brevior, rotunda, saporis et odoris iucundi. nostri sic eam tradunt, graeci foliis paulo candidioribus quam malvae, caulibus tenuibus, pilosis ramosam ex intervallis, binum palmorum; esse in his folia, inter quae in cacuminibus capitula sint gruum. alterum genus foliis anemones, divisuris longioribus, radice mali modo rotunda, dulci, reficientibus se ab imbecillitate utilissima, et fere talis vera est. bibitur contra phthisis drachma in cyathis vini iii bis die, item contra inflationes, et cruda idem praestat. sucus radicis auribus medetur, opisthotonis semen drachmis iiii cum pipere et murra potum. phthisis sanat et plantaginis sucus, si bibatur, et ipsa decocta in cibo; e sale et oleo a somno matutino refrigerat. eadem datur iis, quos atrophos vocant, interpositis diebus, vettonica vero phthisicis ecligmate cum melle, fabae magnitudine, agaricum potum obolis ii in passo, vel daucum cum centaurio maiore in vino. phagedaenis, quod nomen sine modo esurientium est et alias ulcerum, tithymalli medentur cum sesamis

sumpti.

inter mala universi corporis vigiliae sunt plerisque. harum remedio monstratur panaces, clymenos, aristolochia odore et peruncto capite, aizoum sive sedum, si involutum panno nigro ignorantis pulvino subiciatur, et onotheras sive onear, hilaritatem adferens in vino, amygdalae folio, flore roseo, fruticosa, longa radice et, cum siccata est, vinum olente. haec in potu data feras quoque mitigat. cruditates, quae nausiam faciunt, digeruntur vettonica pota; eadem a cena concoctionem facit in oxymelitis cyathis iii drachmae pondere et crapulam discutit, item agaricum post cibum in aqua calida potum. - paralysin vettonica sanare dicitur, item hiberis ut dictum est. eadem et torpentibus membris prodest, item argemonia omniaque, quae secari periclitentur, discutiendo.

comitiales sanantur panacis, quam heraclion diximus, radice pota cum coagulo vituli marini ita, ut sint panacis iii partes, plantagine pota, vettonica in oxymelitis drachma vel agarico obolis iii, foliis quinquefolii ex aqua. sanat et archezostis, sed anno pota. sanat et baccaris radix arida in pulverem contrita cyathis iii cum coriandri uno in aqua calida, et centunculus trita in aceto aut melle aut in aqua calida, verbenaca ex vino pota, hysopi bacae ternae contritae in aqua potae diebus xvi, peucedanum cum coagulo vituli marini aequis portionibus potum, quinquefolii contrita folia ex vino et sumpta diebus xxx, vettonicae farina pondere #1108 iii cum aceti scillini cyatho, mellis attici uncia, scamonium obolis ii cum castorei drachmis iiii.

febres frigidas leviores facit agaricum potum in calida aqua, tertianas sideritis cum oleo, item ladanum, quod in segetibus nascitur, contusum, plantago ex aqua mulsa ii horis ante accessionem pota binis drachmis vel sucus radicis madefactae vel tusae vel ipsa radix trita in aqua ferro calfacta. quidam ternas radices in iii cyathis aquae dedere. eadem in quartanis quaterna fecerunt. buglosso inarescente, si quis medullam e caule eximat dicatque, ad quem liberandum febri id faciat, et alliget ei vii folia ante accessionem, aiunt febri liberari; item vettonicae ... drachmam in aquae mulsae cyathis iii vel agaricum, maxime in iis febribus, quae cum horrore veniant. quinquefolii folia quidam terna tertianis dedere, quaterna quartanis, plura ceteris; alii omnibus iii obolos cum pipere ex aqua

mulsa. verbenaca quidem et iumentorum febribus in vino medetur, sed in tertianis a tertio geniculo incisa, quartanis a quarto. bibitur et semen hyperici utriusque in quartanis et horroribus, vettonicae farina, quae omnes horrores coercet, item panaces, adeo excalefactoria natura, ut per nivem ituris bibere id perunguique eo praecipiant. et aristolochia perfrictionibus resistit.

phreneticos somnus sanat, qui contingit peucedano ex aceto capiti infuso, anagallidum suco. e diverso lethargicos excitare labor est; hoc praestant euphorbeum ex aceto naribus tactis, peucedani sucus. contra insanias vettonica bibitur. carbunculos rumpit panaces, sanat vettonicae farina ex aqua aut brassica cum ture, frequenti potu calidae, vel e carbone in conspectu restincto favilla digito sublata et inlita, vel plantago tusa, tithymallus characias.

hydropicos sanat panaces, plantago in cibo, cum prius panem siccum comederint sine potu, vettonica drachmis ii in ii cyathis vini aut mulsi, vel agaricum vel semen lonchitidis ii lingulis ex aqua potum, psyllion ex vino, anagallidum sucus, cotyledonis radix e mulso, ebuli recentis radix excussa tantum nec colluta, quod ii digiti conprehendant, ex vini veteris caldi hemina, trifolii radix drachmis ii in vino, tithymallum platyphyllon cognomine, semen hyperici, quod caros appellatur, acte, quam esse ebulum putant quidam, radice contrita in vini cyathis iii, si febris absit, vel semine ex vino nigro, item verbenaca fasciculo manus plenae in aqua decocta ad dimidias. praecipue tamen chamaeactes sucus aptissimus creditur. - eruptiones pituitae emendant plantago, cyclamini radix e melle, ebuli folia trita e vetere vino; inposita etiam boam sanant, id est rubentes papulas, pruriginem sucus strychni inlitus.

igni sacro medentur aizoum, folia trita cicutae, mandragorae radix; secatur in asses ut cucumis, primumque super mustum suspenditur, mox in fumo, dein teritur e vino aut aceto. prodest et vino myrteo fovere, mentae sextans vivi sulpuris uncia ex aceto simul trita, fuligo ex aceto. ignis sacri plura sunt genera, inter quae medium hominem ambiens, qui zoster vocatur, et enecat, si cinxit. medetur plantago cum creta cimolia et peristereos per se, radix persollatae; aliis, quae serpunt, cotyledonis radix cum mulso, aizoum, sucus e linozosti ex aceto. radix polypodi inlita luxatis medetur, doloremque et tumores tollunt semen psyllii, folia

plantaginis trita, sale modice addito, verbasci semen ex vino decoctum contritum, cicuta cum axungia. folia ephemeri tuberibus tumoribusque inlinuntur, quae etiamtum discuti possunt.

morbum regium in oculis praecipue mirari est, tenuitatem etiam densitatemque tunicularum felle subeunte. hippocrates a septimo die in febri mortiferum signum esse dicit. nos scimus vixisse aliquos etiam ab hac desperatione. fit vero et citra febres expugnaturque centaurio maiore ut diximus poto, vettonica, agarici obolis iii ex vini veteris cyatho, item verbenacae folio obolis iii ex vini calidi hemina quadriduo. sed celerrime quinquefolii sucus medetur iii cyathis potus. cyclamini radix drachmis iii bibitur in loco calido et a perfrictionibus tuto - sudores enim felleos movet - , folia tussilaginis ex aqua, semen linozostis utriusque inspersum potioni vel cum absinthio aut cicere decoctum, hysopi bacae cum aqua potae, lichen herba, si, cum sumitur, cetero olere abstineatur, polythrix in vino data, struthion in mulso.

passim et in quacumque parte, sed maxime incommoda nascuntur qui furunculi vocantur, mortiferum aliquando malum consectis corporibus. remedio sunt pycnocomi folia trita cum polenta, si nondum caput fecerint. discutiunt et folia ephedri inlita.

fistulae quoque in omni parte serpunt medicorum vitio male sectis corporibus. auxilio est centaurium minus collyriis cum melle decocto additis, plantaginis sucus infusus, quinquefolium cum sale et melle, ladanum cum castoreo, cotyledon cum medulla cervina calefacta et inposita; verbasci radicis medulla collyrii tenuitate in fistulam additur vel aristolochiae radix vel sucus tithymalli.

collectiones inflammationesque sanant argemoniae folia inlita, duritias et collectiones omnes verbenaca vel quinquefolium decoctum in aceto, verbasci folia vel radix, hysopum e vino inpositum, acori radix decocto eius foventibus, aizoum, item quae contusa sint duritiasque et sinus corporis illecebra. omnia infixa corpori extrahunt folia tussilaginis, daucum, semen leontopodii tritum in aqua cum polenta. suppurationibus inponuntur pycnocomi folia trita cum polenta vel semen, item orchis. vitia, quae sint in ossibus, satyrii radice inposita efficacissime sanari dicuntur, nomae et collectiones omnes fuco maris, priusquam inarescat. et alcimae radix collectiones discutit.

ambusta sanantur plantagine, arctio ita ut cicatrix fallat - folia eius in aqua decocta contrita inlinuntur - , radice cyclamini, aizoo, herba ipsa hyperici, quod corissum appellavimus.

nervis et articulis convenit plantago trita cum sale, argemonia tusa ex melle. peucedani suco perunguntur spastici, tetanici, nervorum duritiae aegilopis suco; doloribus erigeron ex aceto inlinitur, epithymum. spasticis et opisthotonicis perungui semine hyperici, quod caros vocatur, idemque bibere prodest. phrynion dicitur etiam abscisos sanare nervos, si confestim inponatur trita vel mansa. spasticis, tremulis, opisthotonicis alcimae radix bibitur ex aqua mulsa. sic et rigores excalfacit.

sanguinis profluvia sistit herbae paeoniae semen rubrum - eadem et in radice vis - , clymenus vero, sive ore sanguis reiciatur sive naribus sive alvo fluat sive feminarum utero, item lysimachia pota vel inlita vel naribus indita, item plantaginis semen, quinquefolium potum et inlitum, cicutae semen in nares, si inde fluat, tritum ex aqua inditum, aizoum, astragali radix. sistit et ischaemon et achillia.

equisaetum, hippuris graecis dicta et in pratis vituperata nobis - est autem pilus terrae equinae saetae similis - , lienes cursorum extinguit decocta fictili novo ad tertias quantum vas capiat et per triduum heminis pota; unctis esculentis ex ante diem unum interdicitur. graecorum varia circa hanc opinio: alii pinus foliis similem, nigricantem eodem nomine appellant, vim eius admirabilem tradentes, sanguinis profluvia vel tacto tantum ea homine sisti; alii hippurin, alii ephedron, alii anabasim vocant, traduntque iuxta arbores nasci et scandentem eas dependere comis iunceis multis, nigris, ut ex equorum cauda, geniculatis ramulis, folia habere pauca, tenuia, exigua, semen rotundum, simile coriandro, radice lignosa, nasci in arbustis maxume. vis eius spissare corpora. sucus sanguinem e naribus fluentem inclusus sistit, item alvum. medetur dysintericis in vino dulci potus cyathis iii, urinam ciet, tussim, orthopnoeam sanat, item rupta et quae serpunt. intestinis et vesicae folia bibuntur, enterocelen cohibet. faciunt et aliam hippurim brevioribus et mollioribus comis candidioribusque, perquam utilem ischiadicis et vulneribus ex aceto inpositam propter sistendum sanguinem. - et nymphaea trita plagis inponitur. peucedanum cum semine cupressi bibitur, si sanguis per os redditus est fluxitve ab infernis. sideritis

tantam vim habet, ut quamvis recenti gladiatoris vulneri inligata sanguinem claudat, quod facit et ferulae cinis vel carbo, fungus vero etiam efficacius, qui secundum radicem eius nascitur. per nares autem fluenti et cicutae semen tritum ex aqua additumque efficax habetur, item stephanomelis ex aqua. vettonicae farina e lacte caprino pota sistit ex ubere fluentem plantagoque contusa. eiusdem sucus vomentibus sanguinem datur. ad erraticum autem radix persollatae cum axungia vetere inlita probatur; ruptis convulsisque, ex alto deiectis centaurium maius, gentianae radix trita vel decocta vel sucus, vettonica et hoc amplius a vocis aut lateris contentionibus panaces, scordium, aristolochia pota, agaricum, idem contusis et eversis potum ii obolis in mulsi cyathis iii aut, si febris sit, in aqua mulsa, verbascum, cuius flos similis auro est, acori radix, aizoum omne, sed maioris sucus efficacissime, item symphyti ius vel radicis decoctum, daucos cruda, erysithales - flore luteo, foliis acanthi - e vino, item chamaerops et in sorbitione irio vel plantago omnibus modis, item ... .

phthiriasi sulla dictator consumptus est, nascunturque in sanguine ipso hominis animalia exesura corpus. resistitur uvae taminiae suco aut veratri cum oleo perunctis corporibus; taminia quidem in aceto decocta etiam vestes eo taedio liberat.

ulcera multorum sunt generum ac multis modis curantur. panacis omnium generum radix ex vino calido inlinitur manantibus. siccat privatim quam chironiam diximus; cum melle trita tubera aperit ulceribusque, quae serpunt, deploratis auxilio est cum aeris flore vino temperata omnibus modis, vel semine vel flore vel radice. eadem cum polenta vetustis volneribus prodest, heraclion quoque siderion, apollinaris, psyllium, tragacantha. scordotis cum melle purgat; farina eius carnis excrescentes per se inspersa consumit. polemonia ulcera, quae cacoe+the vocant, sanat; centaurium maius inspersum vel inlitum, item minoris coma decocta vel trita vetera quoque ulcera purgat et persanat. folliculi clymeni recentibus plagis inponuntur. inlinitur autem gentiana ulceribus, quae serpunt, radice tusa vel decocta in aqua ad mellis crassitudinem vel suco, volneribus ex ea factum lycium. lysimachia recentibus plagis medetur, plantago omnium generum ulceribus, peculiariter senum et infantium. igni emollita melior et cum cerato crassa ulcerum labra purgat, nomas

sistit; tritam suis foliis integere oportet. suppurationes, collectiones, sinus ulcerum chelidonia quoque siccantur, volnera adeo, ut etiam pro spodio utantur; eadem iam desperatis cum axungia inponitur. dictamnum pota sagittas pellit et alia tela extrahit inlita - bibitur ex aquae cyatho foliorum obolo - , proxime pseudodictamnum; utraque et suppurationes discutit. aristolochia quoque putria ulcera exest, sordida purgat cum melle vermesque extrahit, item clavos in ulcere natos et infixa corpori omnia, praecipue sagittas et ossa fracta cum resina, cava vero ulcera explet per se et cum iride, recentia vulnera ex aceto; vetera ulcera verbenaca, quinquefolium cum sale et melle. radices persollatae volneribus ferro inlatis recentibus inponuntur, folia veteribus; cum axungia utrimque et suo folio operitur damasonium, ut in struma, folia verbasci ex aceto aut vino. peristereos ad omnia genera vel callosorum putrescentiumque ulcerum facit. manantia nymphaeae heracliae radix sanat, item cyclamini radix vel per se vel ex aceto vel cum melle; eadem et contra steatomata efficax. sic et ad ulcera manantia hysopum, item peucedanum; ei ad recentia volnera vis tanta est, ut squamam ossibus extrahat. praestant hoc et anagallides cohibentque quas vocant nomas et rheumatismos, utiles et recentibus plagis, sed praecipue senum corpori, cum cerato apostemata et ulcera taetra folia mandragorae recentia, radix volnera cum melle aut oleo, cicuta cum siligine mixta mero, aizoum herpetas quoque ac nomas ac putrescentia, sicut erigeron verminosa, recentia autem volnera astragali radix et vetera ulcera, quae purgat hypocisthis utraque. leontopodii semen tritum in aqua et cum polenta inlitum spicula sagittarum extrahit, item pycnocomi semen. tithymallus characias suco gangraenas, phagedaenas, putria vel decocto ramorum cum polenta et oleo, orchis radices hoc amplius et cacoe+the cum melle, siccae et recentes per se vulnera, onothera efferantia sese ulcera sanat. scythae ulcera scythica curant. ad carcinomata argemonia ex melle efficacissima est. ulceribus praesanatis asphodeli radix decocta ut diximus, trita cum polenta et inlita, quibuscumque vero apollinaris, astragali radix in pulverem trita umidis ulceribus prodest, item callithrix decocta in aqua, privatim vero iis, quae calciamento facta sint, verbenaca nec non et lysimachia contrita ac nymphaea arida infriata. polythrix inveteratis iisdem utilior est. - polycnemon cunilae bubulae similis

est, semine pulei, surculosa, multis geniculis, corymbo odorata acri et dulci odore, ferro factis conmanducata inponitur, quinto die solvitur. symphyton ad cicatricem celerrime perducit, item sideritis; haec inponitur ex melle. verbasci semine ac foliis ex vino decoctis ac tritis omnia infixa corpori extrahuntur, item mandragorae foliis cum polenta, cyclamini radicibus cum melle. trixaginis folia in oleo contrita iis maxime adhibentur ulceribus, quae serpunt, et alcima in melle trita, vettonica ad carcinomata et malandrias veteres addito sale.

verrucas tollit argemonia ex aceto vel batrachii radix, quae et ungues scabros aufert, linozostidis utriusque folia vel sucus inlitus. tithymalli omnes genera verrucarum omnia, item pterygia, varos tollunt; cicatrices cum elegantia ad colorem reducit ladanum. - artemisiam et elelisphacum alligatas qui habeat viator negatur lassitudinem sentire. -

muliebribus morbis medetur maxime in universum paeoniae herbae semen nigrum ex aqua mulsa; eadem et in radice vis. menses ciet panacis semen cum absinthio, menses et sudores scordotis potu et inlitu. vettonica drachma in vini cyathis iii bibitur contra omnia volvarum vitia aut quae a partu fiunt. menses nimios sistit achillia adposita et decoctum eius insidentibus. mammis inponitur hyoscyami semen ex vino, locis radix in cataplasmate, mammis et chelidonia. secundas morantes vel partus emortuos radices panacis adpositae extrahunt. ipsum panaces e vino potum volvas purgat adpositumque cum melle. polemonia pota ex vino secundas pellit, nidore corrigit volvas. centauri minoris sucus potu fotuque menses ciet, item maioris radix in volvae doloribus isdem modis prodest, derasa vero et adposita extrahit partus emortuos. plantago adponitur in lana in dolore volvae, in strangulatu bibitur. sed praecipua dictamno vis est: menses ciet, partus emortuos vel traversos eicit - bibitur ex aqua foliorum obolo - , adeo ad haec efficax, ut ne in cubiculum quidem praegnantium inferatur, nec potu tantum, sed et inlitu et suffitu valet; proxime pseudodictamnum, sed menses ciet cum mero decoctum denarii pondere. plurimis tamen modis aristolochia prodest, nam et menses et secundas ciet et emortuos partus extrahit, murra et pipere additis pota vel subdita; volvas quoque procidentes inhibet fotu vel suffitu vel subiectu, maxime tenuis. strangulatum ab his mensumque

difficultatem agaricum obolis iii in vini veteris cyatho potum emendat, peristereos adposita in adipe suillo recenti, antirrhinon cum rosaceo et melle. item adposita nymphaeae thessalae radix dolori medetur, in vino nigro pota profluvia inhibet; e diverso ciet cyclamini radix pota et adposita et vesicae insidentium decocto medetur. secundas pota cissanthemos pellit, volvam sanat. e xiphio radix superior menses ciet drachma ex aceto pota. peucedanum strangulatus volvae nidore ustum recreat, menses albos praecipue psyllion drachma in cyathis iii aquae, semen mandragorae potum volvam purgat, menses ciet sucus adpositus et emortuos partus. nimia rursus profluvia sistit semen cum vivo sulphure, contra ea ciet batrachium potu vel cibo, ardens alias, ut diximus, cruda, sed cocta commendatur sale et oleo et cumino. daucum et menses et secundas potu facillime pellit, ladanum suffitu corrigit volvas, dolori earum exulceratisque inponitur. emortua scamonium pellit potum vel adpositum. menses ciet hypericum utrumque adpositum, ante alia vero, ut hippocrati videtur, crethmos e vino semine vel radicis cortice, trahit et secundas, succurrit et strangulationibus ex aqua pota; item radix e geranio peculiariter secundis inflationibusque volvarum conveniens. purgat hippuris pota et adposita volvas, polygonus pota. menses ciet et alcimae radix, folia plantaginis pellunt, item agaricum ex aqua mulsa. artemisia volvae medetur trita, ex oleo irino aut cum fico aut cum murra adposita; eiusdem radix pota in tantum purgat, ut partus enectos extrahat. menses et secundas ciet ramorum decoctum insidentibus, item folia pota drachma. ad eadem omnia prosunt vel inposita ventri imo cum farina hordeacia. acoron quoque utile est interioribus feminarum morbis et conyza utraque et crethmos. et anthyllides duae vulvis utilissimae torminibusque et secundarum morae in vino potae. callithrix fotu locis medetur, albugines in capite tollit, capillos inficit oleo trita. geranion in vino albo potum, hypocisthis in rubro profluvium sistunt. hysopum suffocationes laxat. radix verbenacae pota ex aqua ad omnia in partu aut ex partu mala praestantissima est. peucedano quidam miscent in vino nigro semen cupressi contritum. nam semen psyllii defervefactum in aqua, cum intepuit, epiphoras omnes uteri lenit. symphyton tritum in vino nigro evocat menses. partus accelerat scordotis pota drachma suci in aquae mulsae cyathis iiii. dictamni folia praeclare dantur ex aqua; constat

unius oboli pondere, vel si mortui sint in utero infantes, protinus reddi sine vexatione puerperae. similiter prodest pseudodictamnum, sed tardius, cyclaminos adalligata, cissanthemos pota, item vettonicae farina ex aqua mulsa.

arsenogonon et thelygonon herbae sunt habentes uvas floribus oleae similes, pallidioris tamen, semen album papaveris modo. thelygoni potu feminam concipi narrant; arsenogonon ab ea semine oleae nec alio distat; huius potu mares generari, si credimus. alii utramque ocimo similem tradunt, arsenogoni autem semen geminum esse testibus simile.

mammarum vitiis aizoum, quod digitillum appellavimus, unice medetur. erigeron ex passo mammas uberiores facit, sonci cum farre cocti ius. quae vero mastos vocatur, inlita pilos mammarum partu nascentes aufert; testas in facie aliaque cutis vitia emendat gentiana, nymphaea heraclia inlita, cyclamini radix maculas omnes. cacaliae grana mixta cerae liquidae extendunt cutem in facie erugantque. vitia omnia acori radix emendat.

capillum lycium suco flavum facit, denigrat hypericum, quod et corissum vocatur, item ophrys herba, denticulato oleri similis, foliis ii. nigritiam dat et polemonia in oleo decocta. psilotrum nos quidem in muliebribus medicamentis tractamus, verum iam et viris est in usu. efficacissimum autem habetur archezostis, item tithymalli, suco vel in sole cum oleo inlito crebro vel evolsis pilis. - quadripedum scabiem sanat hysopum ex oleo, suum anginas peculiariter sideritis. - verum et reliqua genera herbarum reddamus.

LIBER XXVII

crescit profecto apud me certe tractatu ipso admiratio antiquitatis, quantoque maior copia herbarum dicenda restat, tanto magis adorare priscorum in inveniendo curam, in tradendo benignitatem subit. nec dubie superata hoc modo posset videri etiam rerum naturae ipsius munificentia, si humani operis esset inventio. nunc vero deorum fuisse eam apparet aut certe divinam, etiam cum homo inveniret, eandemque omnium parentem et genuisse haec et ostendisse, nullo vitae miraculo maiore, si verum fateri volumus. scythicam herbam a maeotis paludibus et euphorbeam e monte atlante ultraque herculis columnas ex ipso rerum naturae defectu, parte alia britannicam ex oceani insulis extra terras positis, itemque aethiopidem ab exusto sideribus axe, alias praeterea aliunde ultro citroque humanae saluti in toto orbe portari, inmensa romanae pacis maiestate non homines modo diversis inter se terris gentibusque, verum etiam montes et excedentia in nubes iuga partusque eorum et herbas quoque invicem ostentante! aeternum, quaeso, deorum sit munus istud! adeo romanos velut alteram lucem dedisse rebus humanis videntur.

sed antiquorum curam diligentiamque quis possit satis venerari constat omnium venenorum ocissimum esse aconitum et tactis quoque genitalibus feminini sexus animalium eodem die inferre mortem. hoc fuit venenum, quo interemptas dormientes a calpurnio bestia uxores m. caelius accusator obiecit. hinc illa atrox peroratio eius in digitum. ortum fabulae narravere e spumis cerberi canis extrahente ab inferis hercule ideoque apud heracleam ponticam, ubi monstratur is ad inferos aditus, gigni. hoc quoque tamen in usus humanae salutis vertere scorpionum ictibus adversari experiendo datum in vino calido. ea est natura, ut hominem occidat, nisi invenerit quod in homine perimat. cum eo solo conluctatur veluti praesentius invento, sola haec pugna est, cum venenum in visceribus reperit mirumque, exitialia per se ambo cum sint, duo venena in homine conmoriuntur, ut homo supersit. immo vero etiam ferarum remedia antiqui prodiderunt demonstrando, quomodo venenata quoque ipsa sanarentur. torpescunt scorpiones aconiti tactu stupentque pallentes et vinci se confitentur. auxiliatur iis helleborum

album tactu resolvente, ceditque aconitum duobus malis, suo et omnium. quae si quis ulla forte ab homine excogitari potuisse credit, ingrate deorum munera intellegit. tangunt carnes aconito necantque gustatu earum pantheras, nisi hoc fieret, repleturas illos situs. ob id quidam pardalianches appellavere. at illas statim liberari morte excrementorum hominis gustu demonstratum. quod certe casu repertum quis dubitet et, quotiens fiat, etiam nunc ut novum nasci, quoniam feris ratio et usus inter se tradi non possit hic ergo casus, hic est ille qui pluruma in vita invenit deus - hoc habet nomen per quem intellegitur eadem et parens rerum omnium et magistra - , utraque coniectura pari, sive ista cotidie feras invenire sive semper scire iudicemus. pudendumque rursus omnia animalia, quae sint salutaria ipsis, nosse praeter hominem. sed maiores oculorum quoque medicamentis aconitum misceri saluberrime promulgavere aperta professione, ne malum quidem ullum esse sine aliquo bono. fas ergo nobis erit, qui nulla diximus venena, monstrare quale sit aconitum, vel deprehendendi gratia. folia habet cyclamini aut cucumeris, non plura iiii, ab radice, leniter hirsuta, radicem modicam, cammaro similem marino; quare quidam cammaron appellavere, alii thelyphonon ex qua diximus causa. cauda radicis incurvatur paulum scorpionum modo, quare et scorpion aliqui vocavere. nec defuere qui myoctonon appellare mallent, quoniam procul et e longinquo odore mures necat. nascitur in nudis cautibus, quas aconas nominant, et ideo aconitum aliqui dixere, nullo iuxta, ne pulvere quidem, nutriente. hanc aliqui rationem nominis adtulere; alii, quoniam vis eadem esset in morte, quae cotibus in ferri acie deterenda, statimque admota velocitas sentiretur.

aethiopis folia habet phlomo similia, magna ac multa et hirsuta, ab radice, caulem quadriangulum, scabrum, similem arctio, multis concavum alis, semen ervo simile, candidum, geminum, radices numerosas, longas, plenas, molles, glutinosas gustu. siccae nigrescunt indurescuntque, ut cornua videri possint. praeter aethiopiam nascuntur et in ida monte troadis et in messenia. colliguntur autumno, siccantur in sole aliquot diebus, ne situm sentiant. medentur volvis potae in vino albo, ischiadicis, pleuriticis, faucibus scabris decoctae potui dantur. sed quae ex aethiopia venit, eximie atque ilico prodest. - ageraton ferulacea est, duorum

palmorum altitudine, origano similis, flore bullis aureis. huius ustae nidor urinam ciet volvasque purgat, tanto magis insidentibus. causa nominis non haec, sed quoniam diutissime non marcescit. - aloe scillae similitudinem habet, maior et pinguioribus foliis, ex obliquo striata. caulis eius tener est, rubens medius, non dissimilis antherici, radice una, ceu palo in terram demissa; ipsa gravis odore, gustu amara. laudatissima ex india adfertur, sed nascitur et in asia, non tamen ea utuntur nisi ad volnera recentibus foliis, mirifice enim conglutinant suco. ob id in turbinibus cadorum eam serunt ut aizoum maius. quidam et caulem ante maturitatem seminis incidunt suci gratia, aliqui et folia. invenitur et per se lacrima adhaerens; ergo pavimentandum ubi sata sit censent, ut lacrima non absorbeatur. fuere qui traderent in iudaea super hierosolyma metallicam eius naturam, sed nulla magis inproba est, neque alia nigrior est aut umidior. erit ergo optima pinguis ac nitida, rufi coloris, friabilis et iocineris modo coacta, facile liquescens; inprobanda nigra et dura, harenosa, quaeque gustu intellegitur, cummi adulterata et acacia. natura eius spissare, densare et leniter calfacere; usus multi, sed principalis alvum solvere, cum paene sola medicamentorum, quae id praestant, confirmet etiam stomachum, adeo non infestet ulla vi contraria. bibitur drachma, ad stomachi vero dissolutionem in ii cyathis aquae tepidae vel frigidae coclearis mensura bis terve in die ex intervallis, ut res exigit, purgationis autem causa plurimum iii drachmis, efficacior, si pota ea sumatur cibus. capillum fluentem continet cum vino austero capite contra pilum peruncto. dolorem capitis sedat temporibus et fronti inposita ex aceto et rosaceo dilutiorque infusa. oculorum vitia omnia sanari ea convenit, privatim prurigines et scabritiem genarum, item insignita ac livida inlita cum melle, maxime pontico, tonsillas, gingivas et omnia oris ulcera, sanguinis excreationes, si modicae sint, drachma ex aqua, si minus, ex aceto pota. vulnerum quoque sanguinem et undecumque fluentem sistit per se vel ex aceto. alias etiam est vulneribus utilissima ad cicatricem perducens. eadem inspergitur exulceratis genitalibus virorum, condylomatis rimisque sedis, alias ex vino, alias ex passo, alias sicca per se, ut exigat mitiganda curatio aut coercenda. haemorrhoidum quoque abundantiam leniter sistit. dysinteriae infunditur et, si difficilius concoquantur cibi, bibitur a cena modico

intervallo, et in regio morbo iii obolis ex aqua; devorantur et pilulae cum melle decocto aut resina terebinthina ad purganda interiora. digitorum pterygia tollit. oculorum medicamentis lavatur, ut quod sit harenosissimum subsidat, aut torretur in testa pinnaque subinde versatur, ut possit aequaliter torreri. - alcea folia habet similia verbenacae, quae aristereon cognominatur, caules iii aut iiii, foliorum plenos, florem rosae, radices albas cum plurimum vi, cubitales, obliquas. nascitur in pingui solo nec sicco. usus radicis ex vino vel aqua dysintericis, alvo citae, ad rupta, convulsa. - alypon cauliculus est, molli capite, non dissimile betae, acre gustu ac lentum mordensque vehementer et accendens. alvum solvit in aqua mulsa addito sale modico. minima potio ii drachmarum, media iiii, maxima vi, eximia purgatione quibus datur e gallinaceo iure. - alsine, quam quidam myosoton appellant, nascitur in lucis, unde et alsine dicta est. incipit a media hieme, arescit aestate media. cum prorepit, musculorum aures imitatur foliis. sed aliam docebimus esse quae iustius myosotis vocetur. haec eadem erat quae helxine, nisi minor minusque hirsuta esset. nascitur in hortis et maxime parietibus. cum teritur, odorem cucumeris reddit. usus eius ad collectiones inflammationesque, item eadem omnia quae helxines, sed infirmius. epiphoris peculiariter inponitur, item verendis ulceribusque cum farina hordeacia. sucus eius auribus infunditur. - androsaces herba est alba, amara, sine foliis, folliculos in cirris habens et in his semen. nascitur in maritimis syriae. maxime datur hydropicis drachmis ii tusa aut decocta in aqua vel aceto vel vino; vehementer enim urinas ciet. datur et podagricis inliniturque. idem effectus et seminis. - androsaemon sive, ut alii appellavere, ascyron non absimile est hyperico, de qua diximus, cauliculis maioribus densioribusque et magis rubentibus. folia alba, rutae figura, semen papaveris nigri. comae tritae sanguineo suco manant; odor est resinosus. gignitur in vineis, fere medio autumno effoditur suspenditurque. usus ad purgandam alvum tusae cum semine potaeque matutino vel a cena ii drachmis in aqua mulsa vel vino vel aqua pura, potionis totius sextario. trahit bilem, prodest ischiadi maxime, sed postero die capparis radicem resinae permixtam devorare oportet drachmae pondere iterumque quadridui intervallo eadem facere, a purgatione autem ipsa robustiores vinum bibere, infirmiores aquam. inponitur et

podagris et ambustis, et volneribus cohibens sanguinem. - ambrosia vagi nominis et circa alias herbas fluctuati unam habet certam, densam, ramosam, tenuem, iii fere palmorum, tertia parte radice breviore, foliis rutae circa imum caulem. in ramulis semen est uvis dependentibus, odore vinoso, qua de causa botrys a quibusdam vocatur, ab aliis artemisia. coronantur illa cappadoces. usus eius ad ea, quae discuti opus sit. - anonim quidam ononida malunt vocare, ramosam, similem faeno graeco, nisi fruticosior hirsutiorque esset. odore iucunda, post ver spinosa. estur etiam muria condita, recens vero margines ulcerum erodit. radix decoquitur in posca dolori dentium. eadem cum melle pota calculos pellit. comitialibus datur in oxymelite decocta ad dimidias. - anagyros, quam aliqui acopon vocant, fruticosa est, gravis odore, flore oleris, semen in corniculis non brevibus gignit, simile renibus, quod durescit per messes. folia collectionibus inponuntur difficulterque parientibus adalligantur ita, ut a partu statim auferantur. quod si emortuus haereat et secundae mensesque morentur, drachma bibuntur in passo folia. sic et suspiriosis dantur et in vino vetere ad phalangiorum morsus. radix discutiendis concoquendisque adhibetur, semen commanducatum vomitiones facit. - anonymos non inveniendo nomen invenit. adfertur e scythia, celebrata hicesio, non parvae auctoritatis medico, item aristogitoni in volneribus praeclara, ex aqua tusa inposita, pota vero mammis praecordiisve percussis, item sanguinem excreantibus. putavere et bibendam volneratis. fabulosa arbitror quae adiciuntur, recentem eam, si uratur, in ferrum aut aes feruminari. - aparinen aliqui omphalocarpon, alii philanthropon vocant, ramosam, hirsutam, quinis senisve in orbem circa ramos foliis per intervalla. semen rotundum, durum, concavum, subdulce. nascitur in frumentario agro aut hortis pratisve, asperitate etiam vestium tenaci. efficax contra serpentes semine poto ex vino drachma et contra phalangia. sanguinis abundantiam ex volneribus reprimunt folia inposita, sucus auribus infunditur. - arction aliqui potius arcturum vocant. similis est verbasco foliis, nisi quod hirsutiora sunt, caule longo, molli, semine cumini. nascitur in petrosis radice tenera, alba, dulci, quae decoquitur in vino ad dentium dolorem, ut ore ita contineatur. decoctum bibitur propter ischiada et stranguriam. ex vino ambustis inponitur et pernionibus; foventur eadem cum radice semine trito in vino. -

asplenon sunt qui hemionion vocant, foliis trientalibus, multis, radice limosa, cavernosa sicut felicis, candida hirsuta. nec caulem nec florem nec semen habet. nascitur in petris parietibusque opacis, umidis, laudatissima in creta. huius foliorum in aceto decocto per dies xxx poto lienem absumi aiunt; et illinuntur autem eadem. sedant et singultus. feminis non danda, quoniam sterilitatem facit. - asclepias folia hederae habet, ramos longos, radices numerosas, tenues, odoratas, floris virus grave, semen securiclatum. nascitur in montibus. radices torminibus medentur et contra serpentium ictus non solum potu, sed et inlitu. - aster ab aliquis bubonion appellatur, quoniam inguinum praesentaneum remedium est. cauliculus foliis oblongis ii aut iii, in cacumine capitula stellae modo radiata. bibitur et adversus serpentes. sed ad inguinum medicinam sinistra manu decerpi iubent et iuxta cinctus alligari. prodest et coxendicis dolori adalligata. - ascyron et ascyroides similia sunt inter se et hyperico, sed maiores habet ramos quod ascyroides vocatur, ferulaceos, coma rubentes, capitulis parvis, luteis. semen in caliculis pusillum, nigrum, resinosum. comae tritae velut cruentant, qua de causa quidam hanc androsaemon vocavere. usus seminis ad ischiadicos poti ii drachmis in hydromelitis sextario. alvum solvit, bilem detrahit. inlinitur et ambustis. - aphaca tenuia admodum folia habet, pusilla. altior lenticula et siliquas maiores fert, in quibus terna aut quaterna semina sunt, nigriora et minora lenticula. nascitur in arvis. natura ad spissandum efficacior quam lenti; reliquos usus eosdem habet. stomachi alvique fluctiones sistit semen decoctum. - alcibium qualis esset herba, non repperi apud auctores, sed radicem eius et folia trita ad serpentis morsum inponi et bibi, folia quantum manus capiat trita cum vini meri cyathis iii aut radicem drachmarum iii pondere cum vini eadem mensura. - alectoros lophos, quae apud nos crista dicitur, folia habet similia gallinacei cristae plura, caulem tenuem, semen nigrum in siliquis. utilis tussientibus cocta cum faba fresa, melle addito et caligini oculorum. solidum semen coicitur in oculum nec turbat, sed in se caliginem contrahit; mutat colorem et ex nigro albicare incipit et intumescit ac per se exit. - alum nos vocamus, graeci symphyton petraeum, simile cunilae bubulae, foliis parvis, ramis iii aut iiii a radice, cacuminibus thymi, surculosum, odoratum, gustu dulce, salivam ciens, radice longa, rutila. nascitur in petris,

ideo petraeum cognominatum, utilissimum lateribus, renibus, torminibus, pectori, pulmonibus, sanguinem reicientibus, faucibus asperis. bibitur radix trita et in vino decocta, et aliquando superlinitur. quin et commanducata sitim sedat praecipueque pulmonem refrigerat. luxatis quoque inponitur et contusis, lenit interanea. alvum sistit cocta in cinere detractisque folliculis trita cum piperis granis viiii et ex aqua pota. volneribus sanandis tanta praestantia est, ut carnes quoque, dum cocuntur, conglutinet addita, unde et graeci nomen inposuere. ossibus quoque fractis medetur, alga rufa scorpionum ictibus. - actaea gravi foliorum odore, caulibus asperis, geniculatis, semine nigro ut hederae, bacis mollibus, nascitur in opacis et asperis aquosisque. datur acetabulo pleno interioribus feminarum morbis. - ampelos agria vocatur herba foliis duris, cineracei coloris, qualem in satis diximus, viticulis longis, callosis, rubentibus qualiter flos quam iovis flammam appellamus. in uvolis fert semen simile punici mali acinis. radix eius decocta in aquae cyathis ternis, additis vini coi cyathis ii, alvum solvit leniter ideoque hydropicis datur. uvolae vitia cutis in facie mulierum emendant. ischiadicos quoque uti hac herba prodest tusa cum foliis et inlita cum suco suo.

absinthii genera plura sunt: santonicum appellatur e galliae civitate, ponticum e ponto, ubi pecora pinguescunt illo et ob id sine felle reperiuntur, neque aliud praestantius, multoque italicum amarius, sed medulla pontici dulcis. de usu eius convenit, herbae facillimae atque inter paucas utilissimae, praeterea sacris populi romani celebratae peculiariter, siquidem latinarum feriis quadrigae certant in capitolio victorque absinthium bibit, credo, sanitatem praemio dari honorifice arbitratis maioribus. stomachum corroborat, et ob hoc sapor eius in vina transfertur, ut diximus. bibitur et decoctum aqua ac postea nocte et die refrigeratum sub diu; decoci vi drachmis foliorum cum ramis suis in caelestis aquae sextariis iii oportet, nec non salem addi vetustissimi usus est. bibitur et madefacti dilutum; ita enim appelletur hoc genus. diluti ratio ut, quisquis fuerit modus aquae, tegatur per triduum. tritum raro in usu est, sicut et sucus expressi. exprimitur autem, cum primum semen turgescit, madefactum aqua triduo recens aut siccum vii diebus, dein coctum in ae+neo vaso ad tertias x heminis in aquae sextariis xlv iterumque

percolatum, herba electa, coquitur ad crassitudinem mellis, qualiter ex minore centaurio quaeritur sucus. sed hic absinthii inutilis stomacho capitique est, cum sit ille decoctus saluberrimus. namque adstringit stomachum bilemque detrahit, urinam ciet, alvum emollit et in dolore sanat, ventris animalia pellit, malaciam stomachi et inflationes discutit cum sile et nardo gallico, aceti exiguo addito, fastidia absterget, concoctiones adiuvat, cruditates detrahit cum ruta et pipere et sale. antiqui purgationis causa dabant cum marinae aquae veteris sextario seminis vi drachmas cum iii salis, mellis cyatho; efficacius purgat duplicato sale. diligenter autem teri debet propter difficultatem. quidam et in polenta dedere supra dictum pondus, addito puleio, alii pueris folia in fico sicca, ut amaritudinem fallerent. thoracem purgat cum iride sumptum. in regio morbo crudum bibitur cum apio aut adianto. adversus inflationes calidum paulatim sorbetur ex aqua, iocineris causa cum gallico nardo, lienis cum aceto aut pulte aut fico sumitur. adversatur fungis ex aceto, item visco, cicutae ex vino et muris aranei morsibus, draconi marino, scorpionibus. oculorum claritati multum confert, epiphoris cum passo inponitur, suggillatis cum melle. aures decocti eius vapor suffitu sanat aut, si manent sanie, cum melle tritum. urinam ac menses cient iii iiiive ramuli cum gallici nardi radice una, cyathis aquae vi, menses privatim cum melle sumptum et in vellere adpositum. anginae subvenit cum melle et nitro. epinyctidas ex aqua sanat, volnera recentia prius quam aqua tangantur inpositum, praeterea capitis ulcera. peculiariter ilibus inponitur cum cypria cera aut cum fico. sanat et pruritus. non est dandum in febri. nausiam maris arcet in navigationibus potum, inguinum tumorem in ventrali habitum. somnos adlicit olfactum aut inscio sub capite positum. vestibus insertum tineas arcet. culices ex oleo perunctis abigit et fumo, si uratur. atramentum librarium ex diluto eius temperatum litteras a musculis tuetur. capillum denigrat absinthii cinis unguento rosaceoque permixtus. - est et absinthium marinum, quod quidam seriphum vocant, probatissimum in taposiri aegypti. huius ramum isiaci praeferre sollemne habent. angustius priore minusque amarum, stomacho inimicum, alvum mollit pellitque animalia interaneorum. bibitur cum oleo et sale aut in farinae trimestris sorbitione dilutum. coquitur quantum manus capiat in aquae sextario ad dimidias.

balloten alio nomine porrum nigrum graeci vocant, herbam fruticosam angulosis caulibus, nigris, hirsutis, foliis vestientibus maioribus quam porri et nigrioribus, graveolentibus. vis eius efficax adversus canis morsus ex sale foliis tritis inpositae, item ad condylomata coctis cinere in folio oleris. purgat et sordida ulcera cum melle. - botrys fruticosa herba est luteis ramulis. semen circa totos nascitur, folia cichorio similia. invenitur in torrentium ripis. medetur orthopnoicis. hoc cappadoces ambrosiam vocant, alii artemisiam. - brabilla spissandi vim habet cotonei mali modo, nec amplius de ea tradunt auctores. - bryon marinum herba sine dubitatione est lactucae foliis similis, rugosa velut contracta, sine caule ab una radice exeuntibus foliis. nascitur in scopulis maxime testisque terra conprehensis. praecipua siccandi spissandique vis ei et collectiones inflammationesque omnes inhibendi, praecipue podagrae et quicquid refrigerari opus sit. - bupleuri semen ad ictus serpentium dari reperio foverique plagas decocta ea herba adiectis foliis mori aut origani.

catanancen thessalam herbam, qualis sit, describi a nobis supervacuum est, cum sit usus eius ad amatoria tantum. illud non ab re est dixisse ad detegendas magicas vanitates, electam ad hunc usum coniectura, quoniam arescens contraheret se ad speciem unguium milui exanimati. eadem ex causa et cemos silebitur nobis. - calyx duorum generum est. una similis aro nascitur in arationibus, colligitur ante quam inarescat. usus eosdem habet quos aris, at bibitur radix quoque huius ad exinaniendas alvos mensesque mulierum, item caules cum foliis in leguminibus decocti sanant tenesmon. alterum genus eius quidam anchusam vocant, alii rhinocliam. folia lactucae longiora, plumosa, radice rubra, quae ignes sacros cum flore polentae sanat inposita, iocineris autem vitia in vino albo pota. - circaea trychno sativo similis est, flore nigro, pusillo, parvo semine milii nascente in quibusdam corniculis, radice semipedali, triplici fere aut quadruplici, alba, odorata, gustus calidi. nascitur in apricis saxis. diluitur in vino bibiturque ad dolorem vulvae et vitia - macerari oportet in sextariis iii quadrantem radicis tusae nocte et die - et trahit eadem potione secundas, semine lac minuit in vino aut mulsa aqua poto. - cirsion cauliculus est tener ii cubitorum, triangulo similis, foliis spinosis circumdatus. spinae molles sunt; folia bovis linguae

similia, minora, subcandida, in cacumine capitula purpurea, quae solvuntur in lanugines. hanc herbam radicemve eius adalligatam dolores varicum sanare tradunt. - crataegonon spicae tritici simile est, multis calamis ex una radice emicantibus multorumque geniculorum, in opacis, semine milii, vehementer aspero gustu, quod si bibant ex vino ante cenam iii obolis in cyathis aquae totidem mulier ac vir ante conceptum diebus xl, virilis sexus partum futurum aiunt. et alia est crataegonos, quae thelygonos vocetur; differentia intellegitur lenitate gustus. sunt qui florem crataegoni bibentes mulierum intra xl diem concipere tradant. eadem sanant ulcera vetera nigra cum melle et explent sinus ulcerum et atropha carnosiora faciunt, purulenta expurgant; panos discutiunt, podagras collectionesque omnes leniunt, peculiariter mammarum. theophrastus arboris genus intellegi voluit crataegon sive crataegona, quam itali aquifolium vocant. - crocodileon chamaeleonis herbae nigrae figuram habet, radice longa, aequaliter crassa, odoris asperi. nascitur in sabuletis. pota sanguinem per nares pellit copiosum crassumque; ita et lienes consumere dicitur. - cynosorchim aliqui orchim vocant, foliis oleae, mollibus, ternis per semipedem longitudinis in terra stratis, radice bulbosa, oblonga, duplici ordine, superiore quae durior est, inferiore quae mollior. eduntur, ut bulbi coctae, in vineis fere inventae. ex his radicibus si maiorem edant viri, mares generari dicunt, si minorem feminae, alterum sexum. in thessalia molliorem in lacte caprino viri bibunt ad stimulandos coitus, duriorem vero ad inhibendos. adversantur altera alteri. - chrysolachanum in pineto lactucae simile nascitur. sanat nervos incisos, si confestim inponatur. et alibi genus chrysolachani traditur, flore aureo, foliis oleris. coctum estur ut olus molle. haec herba adalligata morbum regium habentibus ita, ut spectari ab his possit, sanare id malum traditur. de chrysolachano nec satis dici scio nec plura reperio. namque et hoc vitio laboravere proximi utique herbarii nostri, quod ipsis notas veluti vulgares strictim et nominibus tantum indicavere, tamquam coagulo terrae alvum sisti, stranguriam dissolvi, si bibatur ex aqua aut vino, cuculli folia trita cum aceto serpentium ictibus et scorpionum mederi. quidam hanc alio nomine strumum appellant, alii graece strychnum. acinos habet nigros; ex his cyathus suci cum mulsi ii medetur lumbis, item capitis dolori cum rosaceo infusus, ipsa strumae inlita. - peculiaris est alpinis maxime

fluminibus conferva appellata a conferuminando, spongea aquarum dulcium verius quam muscus aut herba, villosae densitatis atque fistulosae. curatum ea scio omnibus fere ossibus confractis prolapsum ex arbore alta putatorem, circumdata universo corpori, aquam suam adspergentibus, quotiens inaresceret, raroque nec nisi deficientem herbam mutationis causa resolventibus, convaluisse vix credibili celeritate. - cocco cnidio color cocci, magnitudo grano piperis maior, vis ardens; itaque in pane devoratur, ne adurat gulam transitu. vis praesentanea contra cicutam, sistit alvum.

dipsacos folia habet lactucae bullasque spinosas in dorsi medio, caulem ii cubitorum iisdem spinis horridum, genicula eius binis foliis amplectentibus concavo alarum sinu, in quo subsistit ros salsus. in cacumine capitula sunt echinata spinis. nascitur in aquosis. sanat rimas sedis, item fistulas decocta in vino radice usque, dum sit crassitudo cerae, ut possit in fistulas collyrium mitti, item verrucas omnium generum. quidam et alarum, quas supra diximus, sucum inlinunt iis. - dryopteris felici similis in arboribus nascitur, tenui foliorum subdulcium incisura, radice hirsuta. vis ei caustica, et ideo psilotrum est radix tusa, inlinitur enim usque, dum sudores evocet, iterum et tertium ita, ne sudor abluatur. - drabe phono similis herba est, cauliculis tenuibus, cubitalibus, circumdatis utrimque foliis pollicari amplitudine, qualia oxymyrsines, sed candidioribus mollioribusque, flore candido sabuci. edunt cauliculos decoctos, semine vero eius pro pipere utuntur.

elatine folia habet casiae, pusilla, pilosa, rotunda, semipedalibus ramulis quinis senisque, a radice statim foliosis. nascitur in segete, acerba gustu et ideo oculorum fluctionibus efficax foliis cum polenta tritis et inpositis, subdito linteolo. eadem cum lini semine cocta sorbitionis usu dysinteria liberat. - empetros, quam nostri calcifragam vocant, nascitur in montibus maritimis, fere in saxo. quae propius mari fuit, salsa est potaque trahit bilem ac pituitas; quae longius magisque terrena, amarior sentitur. trahit aquam; sumitur autem in iure aliquo aut in hydromelite. vetustate vires perdit, recens urinas ciet decoctum in aqua vel tritum calculosque frangit. qui fidem promisso huic quaerunt, adfirmant lapillos, qui subfervefiant, una rumpi. - epicactis ab aliis elleborine vocatur, parva herba, exiguis foliis, iocineris vitiis utilissima et contra venena pota. - epimedion

caulis est non magnus, hederae foliis denis atque duodenis, numquam florens, radice tenui, nigra, gravi odore ac ... in umidis nascitur. et huic spissandi refrigerandique natura, feminis cavenda. folia in vino trita virginum mammas cohibent. - enneaphyllon longa folia novena habet, causticae naturae. inponitur lana circumdatum, ne urat latius - continuo pusulas excitat - , lumborum doloribus et coxendicum utilissimum.

felicis duo genera nec florem habent nec semen. pterim vocant graeci, alii blachnon, cuius ex una radice conplures exeunt felices bina etiam cubita excedentes longitudine, non graves odore; hanc marem existimant. alterum genus thelypterim graeci vocant, alii nymphaeam pterim; est autem singularis atque non fruticosa, brevior molliorque et densior, foliis ad radicem canaliculata. utriusque radice sues pinguescunt. folia utriusque lateribus pinnata, unde nomen graeci inposuere. radices utriusque longae in oblicum, nigrae, praecipue cum inaruere; siccari autem eas sole oportet. nascuntur ubique, sed maxime frigido solo. effodi debent vergiliis occidentibus. usus radicis in trimatu tantum, neque ante nec postea. pellunt interaneorum animalia, ex his taenias cum melle, cetera ex vino dulci triduo potae, utraque stomacho inutilissima. alvum solvit primo bilem trahens, mox aquam, melius taenias cum scamonii pari pondere. radix eius pondere ii obolorum ex aqua post unius diei abstinentiam bibitur, melle praegustato contra rheumatismos. neutra danda mulieribus, quoniam gravidis abortum, ceteris sterilitatem facit. farina earum ulceribus taetris inspergitur, iumentorum quoque in cervicibus. folia cimicem necant, serpentem non recipiunt; ideo substerni utile est in locis suspectis, usta etiam fugant nidore. fecere medici huius quoque herbae discrimen: optima macedonica est, secunda cassiopica. - femur bubulum appellatur herba, nervis et ipsa utilis recens in aceto ac sale trita.

galeopsis aut, ut alii, galeobdolon vel galion caulem et folia habet urticae leviora et quae gravem odorem trita reddant, flore purpureo. nascitur circa saepes ac semitas ubique. folia caulesque duritias et carcinomata ex aceto trita et inposita, item strumas, panos, parotidas discutiunt. ex usu est et decoctae suco fovere. putrescentia quoque et gangraenas sanat cum sale. - glaux antiquitus eugalacton vocabatur, cytiso et lenticulae foliis similis; aversa candidiora. rami in terra

serpunt quini seni, admodum tenues, a radice. flosculi purpurei exeunt. invenitur iuxta mare. coquitur in sorbitione similaginis ad excitandam ubertatem lactis; eam qui hauserint, balineis uti convenit. glaucion in syria et parthia nascitur, humilis herba, densis foliis fere papaveris, minoribus tamen sordidioribusque, odoris taetri, gustus amari cum adstrictione. granum habet crocei coloris. hoc in olla fictili luto circumlita in clibanis calfaciunt, deinde exempto sucum exprimunt eiusdem nominis. usus et suci et foliorum, si terantur, adversus epiphoras, quae universo impetu cadant. hinc temperatur collyrium, quod medici dia glauciu vocant. - (lactis quoque ubertas intermissa restituitur; sumitur huius rei causa ex aqua). - glycyside, quam aliqui paeoniam aut pentorobon vocant, caulem habet ii palmorum, comitantibus ii aut iii, subrutilum, cute lauri, folia qualia isatis, pinguiora rotundioraque et minora, semen in siliquis, aliud grano rubente, aliud nigro. duo autem genera sunt: femina existimatur cuius radicibus ceu balani longiores circiter viii aut vi adhaerent. mas plures non habet, quoniam una radice nixus est palmi altitudine, candida, quae gustu adstringit. feminae folia murram redolent et densiora sunt. nascuntur in silvis. tradunt nocte effodiendas, quoniam interdiu periculosum sit pico martio inpetum in oculos faciente; radix vero cum effodiatur, periculum esse, ne sedes procidat, magna vanitate ad ostentationem rei fictum arbitror. usus in iis diversus. rubra grana rubentes menses sistunt xv fere pota in vino nigro. nigra grana vulvis medentur ex passo aut vino totidem pota. radix omnes ventris dolores sedat in vino alvumque purgat, sanat opisthotonum, morbum regium, renes, vesicam, arteriam autem et stomachum decocta in vino, alvumque sistit. estur etiam in alimentis, sed in medendo iiii drachmae satis sunt. grana nigra auxiliantur et suppressionibus nocturnis in vino pota quo dictum est numero, stomachicis vero et rosionibus et esse ea et inlinere prodest. suppurationes quoque discutiuntur, recentes nigro semine, veteres rubro. utrumque auxiliatur a serpente percussis et pueris contra calculos incipientes stranguria. - gnaphalium aliqui chamaezelon vocant, cuius foliis albis mollibusque pro tomento utuntur; sane et similia sunt. datur in vino austero ad dysinteriam, ventris solutiones mensesque mulierum sistit. infunditur autem tenesmo. inlinitur et putrescentibus ulcerum. - gallidragam vocat xenocrates leucacantho

similem, palustrem et spinosam, caule ferulaceo, alto, cui summo capite inhaereat simile ovo. in hoc crescente aestate vermiculos nasci tradit, quos pyxide conditos adalligari cum pane bracchio ab ea parte, qua dens doleat, mireque ilico dolorem tolli. valere non diutius anno et ita, si terram non adtigerint.

holcus in saxis nascitur siccis. aristas habet in cacumine, tenui culmo, quale hordeum restibile. haec circa caput alligata vel circa lacertum educit e corpore aristas. quidam ob id aristida vocant. - hyoseris intubo similis, sed minor et tactu asperior, vulneribus contusa praeclare medetur. - holosteon sine duritia est herba, ex adverso appellata a graecis sicut fel dulce, radice tenuis usque in capillamenti speciem, longitudine iiii digitorum, ceu gramen foliis angustis, adstringens gustu. nascitur in collibus terrenis. usus eius ad vulsa, rupta in vino potae. volnera quoque conglutinat, nam et carnes, dum cocuntur, addita. - hippophaeston nascitur in spinis, ex quibus fiunt ae+nae fulloniae, sine cauliculo, sine flore, capitulis tantum inanibus et foliis parvis, multis, herbacei coloris. radiculae albae, molles. sucus earum exprimitur aestate ad solvendam alvum iii obolis, maxime in comitialibus morbis et tremulis, hydropicis, contra vertigines, orthopnoeas, paralysis incipientes. - hypoglossa folia habet figura silvestris myrti, coma spinosa, et in his ceu linguas folio parvo exeunte de foliis. capitis dolores corona ex iis inposita minuit. - hypecoon in segetibus nascitur, foliis rutae. natura eius eadem quae papaveris suco.

idaeae herbae folia sunt quae oxymyrsines. adhaerent iis velut pampini, in quibus flos. ipsa alvum mensesque et omnem abundantiam sanguinis sistit spissandi cohibendique natura. - isopyron aliqui phaselion vocant, quoniam folium, quod est aneso simile, in passeoli pampinos torquetur. capitula sunt in summo caule tenuia, plena seminis melanthi, contra tussim et cetera pectoris vitia cum melle aut aqua mulsa, item iocineri utilissimi.

lathyris folia habet multa lactucae similia, tenuiora, germina multa, in quibus semen tuniculis continetur, ut capparis, quae cum inaruere, eximuntur grana piperis magnitudine, candida, dulcia, facilia purgatu. haec vicena in aqua pura aut mulsa pota hydropicos sanant; trahunt et bilem. qui vehementius purgari volunt, cum folliculis ipsis sumunt ea, nam stomachum laedunt; itaque inventum

est ut cum pisce aut iure gallinacei sumerentur. - leontopetalon alii rapadion vocant, folio brassicae, caule semipedali. alae numerosae, semen in cacumine in siliquis ciceris modo, radix rapo similis, grandis, nigra. nascitur in arvis. radix adversatur omnibus serpentium generibus ex vino pota, nec alia res celerius proficit. datur et ischiadicis. - lycapsos longioribus quam lactucae foliis crassioribusque, cauli longo hirsutis adgnatis, multis, cubitalibus, flore parvo, purpureo; nascitur in campestribus. inlinitur cum farina hordeacea igni sacro; sudores in febribus movet suco aquae calidae admixto. - inter omnes herbas lithospermo nihil est mirabilius. aliqui exonychon vocant, alii Διὸς πυρόν, alii Ἡρακλέους. herba quincuncialis fere, foliis duplo maioribus quam rutae, ramulis surculosis, crassitudine iunci. gerit iuxta folia singulas veluti barbulas et in earum cacuminibus lapillos candore et rotunditate margaritarum, magnitudine ciceris, duritia vero lapidea. ipsi, qua pediculis adhaereant, cavernulas habent et intus semen. nascitur et in italia, sed laudatissimum in creta, nec quicquam inter herbas maiore equidem miraculo aspexi. tantus est decor velut aurificum arte alternis inter folia candicantibus margaritis, tam exquisita difficultas lapidis ex herba nascentis. iacere atque humi serpere auctores tradunt; ego volsam, non haerentem vidi. his lapillis drachmae pondere potis in vino albo calculos frangi pellique constat et stranguriam discuti. neque in alia herbarum fides est certior, ad quam medicinam nata sit, talis autem eius species, ut etiam sine auctore visu statim nosci possit. - lapis vulgaris iuxta flumina fert muscum siccum, canum. hic fricatur altero lapide addita hominis saliva; illo lapide tangitur inpetigo. qui tangit, dicit:

φεύγετε κανθαρίδες, λύκος ἄγριος αἷμα διώκει. limeum herba appellatur a gallis, qua sagittas in venatu tingunt medicamento, quod venenum cervarium vocant. ex hac in iii modios salivati additur quantum in unam sagittam addi solet; ita offa demittitur boum faucibus in morbis. alligari postea ad praesepia oportet, donec purgentur - insanire enim solent - ; si sudor insequetur, aqua frigida perfundi. - leuce mercuriali similis nomen ex causa accepit, per medium folium candida linea transcurrente, quare mesoleucon quidam vocant. sucus eius fistulas sanat, ipsa contrita carcinomata. fortassis eadem sit quae leucas appellatur, contra marina omnia

venena efficax. speciem eius auctores non tradunt nec aliud quam silvestrem latioribus foliis esse, efficaciorem hanc semine acriore. - leucographis qualis esset, scriptum non repperi, quod eo magis miror, quoniam utilis proditur sanguinem excreantibus iii obolis cum croco, item coeliacis, trita ex aqua et adposita profluvio feminarum, oculorum quoque medicamentis et explendis ulceribus, quae fiant in teneris partibus.

medion folia habet iridis sativae, caulem tripedalem et in eo florem grandem, purpureum, rotundum, semine minuto, radicem semipedalem. in saxis opacis nascitur. radix drachmis ii cum melle menses feminarum sistit ecligmate per aliquot dies sumpto. semen quoque in vino contra abundantiam feminarum datur. - myosota sive myosotis levis herba, caulibus pluribus ab una radice, aliquatenus rubentibus, concavis ab imo, foliis angustis, oblongis, dorso acuto, nigris, per intervalla adsidue geminatis, tenuibus cauliculis ex alis prodeuntibus, flore caeruleo. radix digitali crassitudine multis capillamentis fimbriata. vis ei septica et exulceratrix, ideoque aegilopas sanat. tradunt aegypti, mensis, quem thoti vocant, die xxviii fere in augustum mensem incurrente si quis huius herbae suco inungatur mane, priusquam loquatur, non lippiturum eo anno. - myagros herba ferulacea est, foliis similis rubiae, tripedanea. semen oleosum, quod et fit ex eo. medetur oris ulceribus perunctis hoc suco.

herba, quae vocatur nyma, iii foliis longis, intubaceis, inlita cicatrices ad colorem reducit. - natrix vocatur herba, cuius radix evulsa virus hirci redolet. hac in piceno feminis abigunt quos mira persuasione fatuos vocant; ego species lymphantium hoc modo animorum esse crediderim, quae tali medicamento iuventur.

odontitis inter feni genera est, cauliculis densis ab eadem radice, geniculatis, triangulis, nigris. in geniculis folia parva habet, longiora tamen quam polygonum, semen in alis hordeo simile, florem purpureum, pusillum. nascitur in pratis. decoctum cauliculorum eius in vino austero quantum manus capiat dentium dolori medetur ita, ut contineatur ore. - othonna in syria nascitur, similis erucae perforatis crebro foliis, flore croci; quare quidam anemonen vocaverunt. sucus eius oculorum medicamentis convenit; mordet enim leniter et calefacit adstringitque siccando, purgat cicatrices et nubeculas et quicquid obstet. quidam tradunt lavari atque ita siccatam digeri in

pastillos. - onosma longa folia habet fere ad iii digitos, in terra iacentia ad similitudinem anchusae, ... similis sive caule sive flore sive semine. praegnas, si edit eam aut supergradiatur, abortum facere dicitur. - onopradon cum ederunt, asini crepitus reddere dicuntur. trahit urinas et menses, alvum sistit, suppurationes et collectiones discutit. - osyris ramulos fert nigros, tenues, lentos et in his folia nigra ceu lini semenque in ramulis nigrum initio, dein colore mutato rubescens. smegmata mulieribus faciunt ex iis. radicum decoctum potu sanat arquatos. eaedem, priusquam maturescat semen, concisae et sole siccatae alvum sistunt; post maturitatem vero collectae et in sorbitione decoctae rheumatismis ventris medentur et per se tritae ex aqua caelesti bibuntur. - oxys folia terna habet. datur ad stomachum dissolutum. edunt et qui enterocelen habent.

polyanthemum, quam quidam batrachion appellant, caustica vi exulcerat, cicatrices et ad colorem reducit, eademque vitiligines concorporat. - polygonum graeci vocant quam nos sanguinariam. non attollitur a terra foliis rutae similis gramini. sucus eius infusus naribus supprimit sanguinem et potus cum vino cuiuslibet partis profluvium excreationesque cruentas inhibet. qui plura genera polygoni faciunt, hanc marem intellegi volunt appellarique a multitudine seminis aut densitate fruticis, alii polygonaton a frequentia geniculorum, alii thalattiada, alii carcinothron, alii clema, multi myrtopetalum. nec non inveniuntur qui hanc feminam esse dicant, marem autem maiorem minusque nigram et geniculis densiorem, semine sub omnibus foliis turgescente. quocumque haec modo se habent, vis earum est spissare ac refrigerare. semine alvum solvunt, largius sumpto urinam cient, rheumatismos cohibent, qui si non fuere, non prosunt. stomachi fervori folia inponuntur, vesicae dolori inlinuntur et ignibus sacris. sucus et auribus purulentis instillatur et oculorum dolori. per se datur et in febribus ante accessiones ii cyathis, in tertianis quartanisque praecipue, item cholericis, dysintericis et in solutione stomachi. tertium genus orion vocant, in montibus nascens, harundini tenerae simile, uno caule, densis geniculis et in se infarctis, foliis autem piceae, radicis supervacuae, inefficacius quam superiora, peculiare ischiadicis. quartum genus silvestre appellatur, paene arboris frutice, radice lignosa, stirpe cedri rubicunda, ramis sparti binum palmorum, nigris

geniculorum ternis quaternisque articulis. huic quoque spissandi natura; sapor mali cotonei. decoquitur in aqua ad tertias aut aridi farina inspergitur et oris ulceribus et adtritis partibus. propter gingivarum vero vitia ipsa commanducatur. nomas sistit omniaque, quae serpunt aut difficilem cicatricem habent, privatim vero sanat a nive facta ulcera. herbarii et ad anginas utuntur illa et in capitis dolore coronam ex ea inponunt et contra epiphoras collo circumdant; in tertianis quidem sinistra manu evulsam adalligant, adeo contra profluvia sanguinis, nec ullam magis aridam quam polygonum servant.

pancratium aliqui scillam pusillam appellare malunt, foliis albi lilii longioribus crassioribusque, radice bulbi magni, colore rufo. alvum solvit suco cum farina ervi sumpto, ulcera purgat. hydropicis, splenicis cum melle datur. alii decocunt eam, donec aqua dulcis fiat, eaque effusa radicem terentes digerunt in pastillos sole siccatos et postea utuntur ad capitis ulcera et cetera, quae repurganda sint, item ad tussim, quantum iii digitis adprehenderint in vino dantes, et ad lateris dolores aut peripneumonicis ecligmate. dant et propter ischiada in vino bibendam et propter tormina mensesque ciendos. - peplis, quam aliqui sycen, alii meconion, alii mecona aphrode vocant, ex una radice tenui fruticat foliis rutae paulo latioribus. semen est sub foliis, rotundum, minus candido papavere. inter vites fere colligitur messibus siccaturque cum fructu suo, subiectis in quae excidat. hoc poto alvus solvitur, bilis ac pituita detrahitur. media potio est acetabuli mensura in aquae mulsae heminis iii. et cibis inspergitur obsoniisque ad molliendam alvum. - periclymenon fruticat et ipsa ex intervallo ii folia habens subcandida, mollia, in cacumine autem semen inter folia durum et quod difficile vellatur. nascitur in arvis ac saepibus circumvolvens se adminiculis quibuscumque. semen eius in umbra siccatum tunditur et in pastillos digeritur; hi resoluti dantur in vini albi cyathis ternis tricenis diebus ad lienem, eumque urina cruentata aut per alvum absumit, quod intellegitur a decimo statim die. urinam cient et folia decocta, quae et orthopnoicis prosunt. partum quoque adiuvant secundasque pellunt pota simili modo. - pelecinon in segetibus diximus nasci, fruticosam cauliculis, foliis ciceris. semen in siliquis fert corniculorum modo aduncis ternis quaternisve, quale git novimus, amarum, stomacho

utile. additur in antidota. - polygala palmum altitudine inplet, in caule summo foliis lenticulae, gustu adstricto. quae pota lactis abundantiam facit. - poterion aut, ut alii vocant, phrynion vel neuras large fruticat, spinis retorrida, lanugine spissa, foliis parvis, rotundis, ramulis longis, mollibus, lentis, tenuibus, flore longo, herbacei coloris. seminis nullus usus; est gustu acuto et odorato. invenitur in aquosis collibus. radices habet ii aut iii binum cubitorum in altitudinem, nervosas, candidas, firmas. circumfoditur autumno et praecisa radice dat sucum cummi similem. radix mira vulneribus sanandis traditur praecipueque nervis vel praecisis inlita. decoctum quoque eius cum melle potum dissolutiones nervorum et infirmitates et incisuras iuvat. - phalangitis a quibusdam phalangion vocatur, ab aliis leucanthemum vel, ut in quibusdam exemplaribus invenio, leucacantha. ramuli sunt ei numquam pauciores ii, in diversa tendentes, flos candidus, lilio rubro similis, semen nigrum, latum, ad lenticulae dimidiae figuram multo tenuius, radice tenui, herbacei coloris. huius folio vel flore vel semine auxiliantur contra scorpionum phalangiorumque et serpentium ictus, item contra tormina. - phyteuma quale sit, describere supervacuum habeo, cum sit usus eius tantum ad amatoria. - phyllon a graecis vocatur herba in saxosis montibus. femina magis herbacei coloris, caule tenui, radice parva. semen papaveri rotundo simile. haec sui sexus facit partus, mares autem mas, semine tantum differens, quod est incipientis olivae. utrumque bibitur in vino. - phellandrion nascitur in palustribus folio apii. bibitur semen eius propter calculos et vesicae incommoda. - phaleris thyrsum habet longum, tenuem ceu calamum, in summo florem inclinatum, semen simile sesamae. et hoc calculos frangit potum ex vino vel aceto vel cum melle et lacte; idem et vitia vesicae sanat. - polyrrhizon folia habet myrti, radices multas. hae tusae dantur e vino contra serpentes, prosunt et quadripedibus. - proserpinaca herba vulgaris est, eximii adversus scorpiones remedii. eadem contrita, addita muria e menis et oleo, anginam eximie curari tradunt, praeterea et quantalibet lassitudine recreari defessos, etiam cum obmutuerint, si subiciatur linguae; si devoretur, vomitionem sequi salutarem.

rhecoma adfertur ex iis quae supra pontum sunt regionibus. radix costo nigro similis, minor et rufior paulo, sine odore, calfaciens gustu

et adstringens. eadem trita vini colorem reddit ad crocum inclinantem. inlita collectiones inflammationesque sedat, vulnera sanat, epiphoras oculorum sedat ex passo, insignita cum melle et alia liventia ex aceto. farina eius inspergitur contra cacoe+the et sanguinem reicientibus drachmae pondere in aqua, dysintericis autem et coeliacis, si febri careant, in vino, sin aliter, ex aqua. facilius teritur nocte antecedente madefacta. datur et decoctum eius bibendum duplici mensura ad rupta, convolsa, contusis, ex sublimi devolutis. si pectoris sint dolores, additur piperis aliquid et murrae; si dissolutio stomachi, ex frigida aqua sumitur; sic et in tussi vetere ac purulentis excreationibus, item hepaticis, splenicis, ischiadicis. at renium vitia, suspiria, orthopnoeas, arteriae scabritias sanat ex passo iii obolis potis trita aut decoctum eius. lichenas quoque ex aceto inposita purgat. bibitur contra inflationes et perfrictiones, febres frigidas, singultus, tormina, herpetas, capitis gravitates, melancholicas vertigines, lassitudinum dolores et convolsiones. - circa ariminum nota est herba quam resedam vocant. discutit collectiones inflammationesque omnes. qui curant ea, addunt haec verba: “reseda, morbos reseda; scisne, scisne, quis hic pullus egerit radices nec caput nec pedes habeat.” haec ter dicunt totiensque despuunt.

stoechas in insulis tantum eiusdem nominis gignitur, odorata herba, coma hysopi, amara gustu. menses ciet potu, pectoris dolores levat. antidotis quoque miscetur. - solanum graeci στρύχνον vocant, ut tradit cornelius celsus. huic vis reprimendi refrigerandique. - smyrnion caulem habet apii, folia latiora et maxime circa stolones multos, quorum a sinu exiliunt, pinguia et ad terram infracta, odore medicato cum quadam acrimonia iucundo, colore in luteum languescente, capitibus caulium orbiculatis ut apii, semine rotundo nigroque; arescit incipiente aestate. radix quoque odorata, gustu acri mordet, sucosa, mollis. cortex eius foris niger, intus pallidus. odor murrae habet qualitatem, unde et nomen. nascitur et in saxosis collibus et in terrenis. usus eius calfacere, extenuare. urinam et menses cient folia et radix et semen. alvum sistit. radix collectiones et suppurationes non veteres, item duritias discutit inlita, prodest et contra phalangia ac serpentes admixto cachry aut polio aut melissophyllo in vino pota, sed particulatim, quoniam universitate

vomitiones movet; qua de causa aliquando cum ruta datur. medetur tussi et orthopnoeae semen vel radix, item thoracis aut lienis aut renium aut vesicae vitiis, radix autem ruptis, convolsis. partus quoque adiuvat et secundas pellit. datur et ischiadicis cum crethmo in vino. sudores ciet et ructus, ideo inflationem stomachi discutit. vulnera ad cicatricem perducit. exprimitur et sucus radici utilis feminis et thoracis praecordiorumque desideriis, calfacit enim et concoquit et purgat. semen peculiariter hydropicis datur potui, quibus et sucus inlinitur. et in malagmate cortice arido et ad obsonia utuntur cum mulso et oleo et garo, maxime in elixis carnibus. - sinon concoctiones facit, sapore simillima piperi. eadem in dolore stomachi efficax.

telephion porcilacae similis est et caule et foliis. rami a radice septeni octonique fruticant foliis crassis, carnosis. nascitur in cultis et maxime inter vites. inlinitur lentigini et, cum inaruit, deteritur. inlinitur et vitiligini ternis fere mensibus senis horis noctis aut diei et ut postea farina hordeacia inlinatur. medetur et vulneribus et fistulis. - trichomanes adianto simile est, exilius modo nigriusque, foliis lenticulae, densis, parvis, adversis inter se. decoctum eius strangurias sanat in vino albo potum addito cumino rustico, lienem. cohibet capillos fluentes aut, si effluxerint, reparat alopeciasque densat tritum in oleo et inlitum. sternumenta quoque gustatu movet. - thalictrum folia coriandri habet, pinguiora paulo, caulem papaveris. nascitur ubique, praecipue campestribus. medentur ulceribus folia cum melle. - thlaspi duorum generum est: angustis foliis, digitali latitudine et longitudine, in terram versis, in cacumine divisis, cauliculo semipedali non sine ramis, ... peltarum specie semine incluso, lenticulae effigie, nisi quod infringitur, unde nomen. flos albicat. nascitur in semitis et saepibus. semen asperi gustus bilem et pituitam utrimque extrahit; modus sumendi acetabuli mensura. prodest et ischiadicis infusum. potione sanguinem trahit, menses quoque ciet, sed partus necat. alterum thlaspi aliqui persicon napy vocant, latis foliis, radicibus magnis, et ipsum utile ischiadicorum infusioni. prodest et inguinibus utrumque. praecipitur, ut qui colligat dicat, sumere se contra inguina et contra omnes collectiones et contra vulnera, una manu tollat. - trachinia herba qualis sit, non traditur. credo falsum et promissum democriti portentosum esse, adalligatam

triduo absumere lienes. - tragonis sive tragion nascitur in cretae tantum insulae maritimis, iunipiro similis et semine et folio et ramis. sucus eius lacteus in cummim spissatus vel semen in potione ... spicula e corpore eicit; tunditur recens et cum vino inlinitur aut siccae farina cum melle. eadem lactis abundantiam facit mammisque unice medetur. - est et alia herba tragos, quam aliqui scorpion vocant, semipedem alta, fruticosa, sine foliis, pusillis racemis rubentibus grani tritici, acuto cacumine, et ipsa in maritimis nascens. huius racemorum x et xii cacumina trita ex vino pota coeliacis, dysintericis, sanguinem excreantibus mensumque abundantiae auxiliantur. - est et tragopogon, quem alii comen vocant, caule parvo, foliis croci, radice longa, dulci, super caulem calice lato, nigro. nascitur in asperis manditurque, sine usu.

et de herbis quidem memoria digna hactenus accepimus aut comperimus. in fine earum admonere non ab re iudicamus, alias aliis virium aetates esse. longissimo tempore durat elaterium, ut diximus, chamaeleon niger xl annis, centaurium non ultra xii, peucedanum et aristolochia ad vi, vitis silvestris anno, in umbra si serventur. et animalium quidem exterorum nullum aliud radices a nobis dictas adtingit excepta sphondyle, quae omnes persequitur. genus id serpentis est.

ne illud quidem dubitatur, omnium radicum vim effectusque minui, si fructus prius ematurescant, item seminum ante radice propter sucum incisa. resolvitur autem omnium vis consuetudine, et desinunt prodesse, cum opus est, quae cottidie in usu fuere, aeque quam nocere. omnes vero herbae vehementiores effectu viribusque sunt in frigidis et in aquiloniis, item siccis.

sunt et gentium differentiae non mediocres, sicut accipimus de taeniis lumbricisque, inesse aegypti, arabiae, syriae, ciliciae populis, e diverso threciae, phrygiae omnino non innasci. minus id mirum quam quod in confinio atticae et boeotiae thebanis innascuntur, cum absint atheniensibus. quae contemplatio aufert nos ad ipsorum animalium naturas ingenitasque iis vel certiores morborum omnium medicinas. rursus enim cum rerum parens nullum animal ad hoc tantum, ut pasceretur aut alia satiaret, nasci voluit artesque salutares inseruit et visceribus, quippe cum surdis etiam rebus insereret, tum vero illa animae auxilia praestantissima ex alia anima esse voluit,

contemplatione ante cuncta mirabili.

LIBER XXVIII

dictae erant naturae omnium rerum inter caelum ac terram nascentium, restabantque quae ex ipsa tellure fodiuntur, si non herbarum ac fruticum tractata remedia auferrent traversos ex ipsis animalibus, quae sanantur, reperta maiore medicina. quid ergo dixerimus herbas et florum imagines ac pleraque inventu rara ac difficilia, iidem tacebimus, quid in ipso homine prosit homini, ceteraque genera remediorum inter nos viventia, cum praesertim nisi carenti doloribus morbisque vita ipsa poena fiat minime vero, omnemque insumemus operam, licet fastidii periculum urgeat, quando ita decretum est, minorem gratiae quam utilitatium vitae respectum habere. quin immo externa quoque et barbaros etiam ritus indagabimus. fides tantum auctores appellet, quamquam et ipsi consensu prope iudicii ista eligere laboravimus potiusque curae rerum quam copiae institimus. illud admonuisse perquam necessarium est, dictas iam a nobis naturas animalium et quae cuiusque essent inventa - neque enim minus profuere medicinas reperiendo quam prosunt praebendo - , nunc quae in ipsis auxilientur indicari, neque illic in totum omissa; itaque haec esse quidem alia, illis tamen conexa.

incipiemus autem ab homine ipsum sibi exquirente, inmensa statim difficultate obvia. sanguinem quoque gladiatorum bibunt, ut viventibus poculis, comitiales morbi, quod spectare facientes in eadem harena feras quoque horror est. at, hercule, illi ex homine ipso sorbere efficacissimum putant calidum spirantemque et vivam ipsam animam ex osculo vulnerum, cum plagis omnino ne ferarum quidem admoveri ora mos sit humanus. alii medullas crurum quaerunt et cerebrum infantium. nec pauci apud graecos singulorum viscerum membrorumque etiam sapores dixere, omnia persecuti ad resigmina unguium, quasi vero sanitas videri possit feram ex homine fieri morboque dignum in ipsa medicina, egregia, hercules, frustratione, si non prosit. aspici humana exta nefas habetur: quid mandi quis ista invenit, osthane tecum enim res erit, eversor iuris humani monstrorumque artifex, qui primus ea condidisti, credo, ne tui vita oblivisceretur. quis invenit singula membra humana mandere qua

coniectura inductus quam potest medicina ista originem habuisse quis veneficia innocentiora fecit quam remedia esto, barbari externique ritus invenerant: etiamne graeci suas fecere has artes extant commentationes democriti ad aliud noxii hominis ex capite ossa plus prodesse, ad alia amici et hospitis. iam vero vi interempti dente gingivas in dolore scariphari Apollonius efficacissimum scripsit, meletos oculorum suffusiones felle hominis sanari, artemon calvaria interfecti neque cremati propinavit aquam e fonte noctu comitialibus morbis. ex eadem suspendio interempti catapotia fecit contra canis rabiosi morsus antaeus. atque etiam quadrupedes homine sanavere, contra inflationes boum perforatis cornibus inserentes ossa humana, ubi homo occisus esset aut crematus, siliginem, quae pernoctasset, suum morbis dando. procul a nobis nostrisque litteris absint ista. nos auxilia dicemus, non piacula, sicubi lactis puerperarum usus mederi poterit, sicubi saliva tactusve corporis, ceteraque similia. vitam quidem non adeo expetendam censemus, ut quoquo modo trahenda sit. quisquis es, talis aeque moriere, tamquam obscaenus vixeris aut nefandus. quapropter hoc primum quisque in remediis animi sui habeat, ex omnibus bonis, quae homini tribuit natura, nullum melius esse tempestiva morte, idque in ea optimum, quod illam sibi quisque praestare possit.

ex homine remediorum primum maximae quaestionis et semper incertae est, polleantne aliquid verba et incantamenta carminum. quod si verum est, homini acceptum fieri oportere conveniat, sed viritim sapientissimi cuiusque respuit fides, in universum vero omnibus horis credit vita nec sentit. quippe victimas caedi sine precatione non videtur referre aut deos rite consuli. praeterea alia sunt verba inpetritis, alia depulsoriis, alia commendationis, videmusque certis precationibus obsecrasse summos magistratus et, ne quod verborum praetereatur aut praeposterum dicatur, de scripto praeire aliquem rursusque alium custodem dari qui adtendat, alium vero praeponi qui favere linguis iubeat, tibicinem canere, ne quid aliud exaudiatur, utraque memoria insigni, quotiens ipsae dirae obstrepentes nocuerint quotiensve precatio erraverit; sic repente extis adimi capita vel corda aut geminari victima stante. durat inmenso exemplo deciorum patris filiique, quo se devovere, carmen; extat tucciae vestalis incesti de precatio, qua usa aquam in cribro tulit anno

urbis dxviiii. boario vero in foro graecum graecamque defossos aut aliarum gentium, cum quibus tum res esset, etiam nostra aetas vidit. cuius sacri precationem, qua solet praeire xv virum collegii magister, si quis legat, profecto vim carminum fateatur, omnia ea adprobantibus dcccxxx annorum eventibus. vestales nostras hodie credimus nondum egressa urbe mancipia fugitiva retinere in loco precatione, cum, si semel recipiatur ea ratio, et deos preces aliquas exaudire aut ullis moveri verbis, confitendum sit de tota coniectatione.

prisci quidem nostri perpetuo talia credidere, difficillimumque ex his, etiam fulmina elici, ut suo loco docuimus. l. piso primo annalium auctor est, tullum hostilium regem ex numae libris eodem, quo illum, sacrificio iovem caelo devocare conatum, quoniam parum rite quaedam fecisset, fulmine ictum, multi vero magnarum rerum fata et ostenta verbis permutari. cum in tarpeio fodientes delubro fundamenta caput humanum invenissent, missis ob id ad se legatis etruriae celeberrimus vates olenus calenus, praeclarum id fortunatumque cernens, interrogatione in suam gentem transferre temptavit, scipione determinata prius templi imagine in solo ante se: “hoc ergo dicitis, romani hic templum iovis optimi maximi futurum est, hic caput invenimus” constantissima annalium adfirmatione, transiturum fuisse fatum in etruriam, ni praemoniti a filio vatis legati respondissent: “non plane hic, sed romae inventum caput dicimus.” iterum id accidisse tradunt, cum in fastigium eiusdem delubri praeparatae quadrigae fictiles in fornace crevissent, iterum simili modo retentum augurium.

haec satis sint, exemplis ut appareat, ostentorum vires et in nostra potestate esse ac, prout quaeque accepta sint, ita valere. in augurum certe disciplina constat neque diras neque ulla auspicia pertinere ad eos, qui quamque rem ingredientes observare se ea negaverint, quo munere divinae indulgentiae maius nullum est. quid non et legum ipsarum in duodecim tabulis verba sunt: “qui fruges excantassit,” et alibi: “qui malum carmen incantassit” verrius flaccus auctores ponit, quibus credat in obpugnationibus ante omnia solitum a romanis sacerdotibus evocari deum, cuius in tutela id oppidum esset, promittique illi eundem aut ampliorem apud romanos cultum. et durat in pontificum disciplina id sacrum, constatque ideo occultatum,

in cuius dei tutela roma esset, ne qui hostium simili modo agerent. defigi quidem diris precationibus nemo non metuit. huc pertinet ovorum, quae exorbuerit quisque, calices coclearumque protinus frangi aut isdem cochlearibus perforari. hinc theocriti apud graecos, catulli apud nos proximeque vergilii incantamentorum amatoria imitatio. multi figlinarum opera rumpi credunt tali modo, non pauci etiam serpentes, ipsas recanere et hunc unum illis esse intellectum, contrahique marsorum cantu etiam in nocturna quiete. iam parietes incendiorum deprecationibus conscribuntur. neque est facile dictu, externa verba atque ineffabilia abrogent fidem validius an latina et inopinata, quae inridicula videri cogit animus semper aliquid inmensum exspectans ac dignum deo movendo, immo vero quod numini imperet. dixit homerus profluvium sanguinis vulnerato femine ulixen inhibuisse carmine, theophrastus ischiadicos sanari, cato prodidit luxatis membris carmen auxiliare, M. Varro podagris. caesarem dictatorem post unum ancipitem vehiculi casum ferunt semper, ut primum consedisset, id quod plerosque nunc facere scimus, carmine ter repetito securitatem itinerum aucupari solitum.

libet hanc partem singulorum quoque conscientia coarguere. cur enim primum anni incipientis diem laetis precationibus invicem faustum ominamur cur publicis lustris etiam nomina victimas ducentium prospera legimus cur effascinationibus adoratione peculiari occurrimus, alii graecam nemesin invocantes, cuius ob id romae simulacrum in capitolio est, quamvis latinum nomen non sit cur ad mentionem defunctorum testamur, memoriam eorum a nobis non sollicitari cur inpares numeros ad omnia vehementiores credimus, idque in febribus dierum observatione intellegitur cur ad primitias pomorum haec vetera esse dicimus, alia nova optamus cur sternuentes salutamus quod etiam tiberium caesarem, tristissimum, ut constat, hominum, in vehiculo exegisse tradunt, et aliqui nomine quoque consalutare religiosius putant quin et absentes tinnitu aurium praesentire sermones de se receptum est. attalus adfirmat, scorpione viso si quis dicat “duo”, cohiberi nec vibrare ictus. et quoniam scorpio admonuit, in africa nemo destinat aliquid nisi praefatus africam, in ceteris vero gentibus deos ante obtestatus, ut velint. nam si mensa adsit, anulum ponere translatitium videmus, quoniam etiam mutas religiones pollere manifestum est. alius saliva post aurem

digito relata sollicitudinem animi propitiat. pollices, cum faveamus, premere etiam proverbio iubemur. in adorando dextram ad osculum referimus totumque corpus circumagimus, quod in laevum fecisse galliae religiosius credunt. fulgetras poppysmis adorare consensus gentium est. incendia inter epulas nominata aquis sub mensam profusis abominamur. recedente aliquo ab epulis simul verri solum aut bibente conviva mensam vel repositorium tolli inauspicatissimum iudicatur. servi sulpicii principis viri commentatio est quamobrem mensa linquenda non sit, nondum enim plures quam convivae numerabantur. nam sternumento revocari ferculum mensamve, si non postea gustetur aliquid, inter diras habetur. ... aut omnino inane esse haec instituere illi, qui omnibus negotiis horisque interesse credebant deos et ideo placatos etiam vitiis nostris reliquerunt. quin et repente conticescere convivium adnotatum, set non nisi in pari praesentium numero, isque famae labor est ad quemcumque eorum pertinens. cibus etiam e manu prolapsus reddebatur utique per mensas, vetabantque munditiarum causa deflare, et sunt condita auguria, quid loquenti cogitantive id acciderit, inter execratissima, si pontifici accidat dicis causa epulanti. in mensa utique id reponi adolerique ad larem piatio est. medicamenta, priusquam adhibeantur, in mensa forte deposita negant prodesse. ungues resecari nundinis romanis tacenti atque a digito indice multorum persuasione religiosum est, capillum vero contra defluvia ac dolores capitis xvii luna atque xxviiii. pagana lege in plerisque italiae praediis cavetur, ne mulieres per itinera ambulantes torqueant fusos aut omnino detectos ferant, quoniam adversetur id omnium spei, praecipue frugum. m. servilius nonianus princeps civitatis non pridem in metu lippitudinis, priusquam ipse eam nominaret aliusve ei praediceret, duabus litteris graecis *r*a chartam inscriptam circumligatam lino subnectebat collo, mucianus ter consul eadem observatione viventem muscam in linteolo albo, his remediis carere ipsos lippitudine praedicantes. carmina quidem extant contra grandines contraque morborum genera contraque ambusta, quaedam etiam experta, sed prodendo obstat ingens verecundia in tanta animorum varietate. quapropter de iis ut cuique libitum fuerit opinetur.

hominum monstrificas naturas et veneficos aspectus diximus in portentis gentium et multas animalium proprietates, quae repeti

supervacuum est. quorundam hominum tota corpora prosunt, ut ex iis familiis, quae sunt terrori serpentibus, tactu ipso levant percussos suctuve modo, quorum e genere sunt psylli marsique et qui ophiogenes vocantur in insula cypro, ex qua familia legatus euagon nomine a consulibus romae in dolium serpentium coniectus experimenti causa circummulcentibus linguis miraculum praebuit. signum eius familiae est, si modo adhuc durat, vernis temporibus odoris virus. atque eorum sudor quoque medebatur, non modo saliva. nam in insula nili tentyri nascentes tanto sunt crocodilis terrori, ut vocem quoque eorum fugiant. horum omnium generum insita repugnantia interventum quoque mederi constat, sicuti adgravari vulnera introitu eorum, qui umquam fuerint serpentium canisve dente laesi. iidem gallinarum incubitus, pecorum fetus abortu vitiant; tantum remanet virus ex accepto semel malo, ut venefici fiant venena passi. remedio est ablui prius manus eorum aquaque illa eos, quibus medearis, inspergi. rursus a scorpione aliquando percussi numquam postea a crabronibus, vespis apibusve feriuntur. minus miretur hoc qui sciat, vestem a tineis non attingi, quae fuerit in funere, serpentes aegre praeterquam laeva manu extrahi. e pythagorae inventis non temere fallere, inpositivorum nominum inparem vocalium numerum clauditates oculive orbitatem ac similes casus dextris adsignare partibus, parem laevis. ferunt difficiles partus statim solvi, cum quis tectum, in quo sit gravida, transmiserit lapide vel missili ex iis, qui iii animalia singulis ictibus interfecerint, hominem, aprum, ursum. probabilius id facit hasta velitaris evulsa corpori hominis, si terram non attigerit; eosdem enim inlata effectus habet. sic et sagittas corpori eductas, si terram non attigerint, subiectas cubantibus amatorium esse orpheus et archelaus scribunt, quin et comitialem morbum sanari cibo e carne ferae occisae eodem ferro, quo homo interfectus sit. quorundam partes medicae sunt, sicuti diximus de pyrrhi regis pollice, et elide solebat ostendi pelopis os ulnamque eam eburneam adfirmabant. - (naevos in facie tondere religiosum habent etiam nunc multi). -

omnium vero in primis ieiunam salivam contra serpentes praesidio esse docuimus, sed et alios efficaces eius usus recognoscat vita. despuimus comitiales morbos, hoc est contagia regerimus. simili modo et fascinationes repercutimus dextraeque clauditatis

occursum. veniam quoque a deis spei alicuius audacioris petimus in sinum spuendo, et iam eadem ratione terna despuere precatione in omni medicina mos est atque ita effectus adiuvare, incipientes furunculos ter praesignare ieiuna saliva. mirum dicimus, sed experimento facile: si quem paeniteat ictus eminus comminusve inlati et statim expuat in mediam manum qua percussit, levatur ilico in percusso culpa. hoc saepe delumbata quadrupede adprobatur statim a tali remedio correcto animalis ingressu. quidam vero adgravant ictus ante conatum simili modo saliva in manum ingesta. credamus ergo et lichenas leprasque ieiunae inlitu adsiduo arceri; item lippitudines matutina cottidie velut inunctione, carcinomata malo terrae subacto, cervicis dolores saliva ieiuni dextra manu ad dextrum poplitem relata, laeva ad sinistrum; si quod animal aurem intraverit et inspuatur, exire. inter amuleta est editae quemque urinae inspuere, similiter in calciamentum dextri pedis, priusquam induatur, item cum quis transeat locum, in quo aliquod periculum adierit. marcion zmyrnaeus, qui de simplicibus effectibus scripsit, rumpi scolopendras marinas sputo tradit, item rubetas aliasque ranas, ofilius serpentes, si quis in hiatum earum expuat, salpe torporem sedari quocumque membro stupente, si quis in sinum expuat aut si superiores palpebras saliva tangat. cur non et haec credamus rite fieri, extranei interventu aut, si dormiens spectetur infans, a nutrice terna adspui in os quamquam religione eum tutatur et fascinus, imperatorum quoque, non solum infantium, custos, qui deus inter sacra romana a vestalibus colitur, et currus triumphantium, sub his pendens, defendit medicus invidiae, iubetque eosdem respicere similis medicina linguae, ut sit exorata a tergo fortuna gloriae carnifex.

morsus hominis inter asperrimos quosque numeratur. medentur sordes ex auribus ac, ne quis miretur, et scorpionum ictibus serpentiumque statim inpositae, melius e percussi auribus. produnt ita et reduvias sanari, serpentium vero ictum contusi dentis humani farina.

capillus puero qui primum decisus est, podagrae inpetus dicitur levare circumligatus; et in totum inpubium inpositus, virorum quoque, capillus canis morsibus medetur ex aceto et capitum volneribus ex oleo aut vino; si credimus, e revulso cruci quartanis,

conbustus utique capillus carcinomati. pueri qui primus ceciderit dens, ut terram non attingat, inclusus in armillam et adsidue in bracchio habitus muliebrium locorum dolores prohibet. - pollex in pede praeligatus proximo digito tumores inguinum sedat, in manu dextera ii medii lino leviter colligati destillationes atque lippitudines arcent. quin et eiectus lapillus calculoso alligatusque supra pubem levare ceteros dicitur ac iocineris etiam dolores et celeritatem partus facere; adicit granius efficaciorem ad hoc esse ferro exemptum. partus accelerat et mas, ex quo quaeque conceperit, si cinctu suo soluto feminam cinxerit, dein solverit adiecta precatione, et cinxisse eundem et soluturum, atque abierit.

sanguine ipsius hominis ex quacumque parte emisso efficacissime anginam inlini tradunt orpheus et archelaus, item ora comitiali morbo conlapsorum, exurgere enim protinus; quidam, si pollices pedum pungantur eaeque guttae referantur in faciem, aut si virgo dextro pollice attingat, hac coniectura censentes virgines carnes edendas. - aeschines atheniensis excrementorum cinere anginis medebatur et tonsillis uvisque et carcinomatis. hoc medicamentum vocabat botryon. - multa genera morborum primo coitu solvuntur primoque feminarum mense aut, si hoc non contigit, longinqua fiunt, maximeque comitiales. quin et a serpente, a scorpione percussos coitu levari produnt, verum feminas venere ea laedi. - oculorum vitia fieri negant nec lippire eos, qui, cum pedes lavent, aqua inde ter oculos tangant.

inmatura morte raptorum manu strumas, parotidas, guttura tactu sanari adfirmant, quidam vero cuiuscumque defuncti, dumtaxat sui sexus, laeva manu aversa. et ligno fulgure icto reiectis post terga manibus demorderi aliquid et ad dentem, qui doleat, admoveri remedio esse produnt. sunt qui praecipiant dentem suffiri dente hominis sui sexus et eum, qui caninus vocetur, insepulto exemptum adalligari. - terram e calvaria psilotrum esse palpebrarum tradunt, herba vero, si qua ibi genita sit, commanducata dentes cadere, ulcera non serpere osse hominis circumscripta. alii e tribus puteis pari mensura aquas miscent et prolibant novo fictili, relicum dant in tertianis accessu febrium bibendum. iidem in quartanis fragmentum clavi a cruce involutum lana collo subnectunt aut spartum e cruce, liberatoque condunt caverna, quam sol non attingat. magorum haec

commenta sunt, ut cotem, qua ferramenta saepe exacuta sint, subiectam ignari cervicalibus de veneficio deficientis evocare indicium, ut ipse dicat, quid sibi datum sit et ubi et quo tempore, auctorem tamen non nominare. fulmine utique percussum circumactum in vulnus hominem loqui protinus constat. inguinibus medentur aliqui liceum telae detractum alligantes novenis septenisve nodis, ad singulos nominantes viduam aliquam atque ita inguini adalligantes. liceo et clavum aliudve, quod quis calcaverit, alligatum ipsos iubent gerere, ne sit dolori vulnus. verrucas abolent a vicensima luna in limitibus supini ipsam intuentes ultra caput manibus porrectis et, quicquid adprehendere, eo fricantes. clavum corporis, cum cadit stella, si quis destringat, vel cito sanari aiunt, cardinibus ostiorum aceto adfusis lutum fronti inlitum capitis dolorem sedare, item laqueum suspendiosi circumdatum temporibus. si quid e pisce haeserit in faucibus, cadere demissis in aquam frigidam pedibus; si vero ex aliis ossibus, inpositis capiti ex eodem vase ossiculis; si panis haereat, ex eodem in utramque aurem addito pane.

quin et sordes hominis in magnis fecere remediis quaestus gymnici graecorum, quippe ea strigmenta molliunt, calfaciunt, discutiunt, conplent, sudore et oleo medicinam facientibus. volvis inflammatis contractisque admoventur; sic et menses cient, sedis inflammationes et condylomata leniunt, item nervorum dolores, luxata, articulorum nodos. efficaciora ad eadem strigmenta a balneis, et ideo miscentur suppuratoriis medicamentis. nam illa, quae sunt e ceromate permixta caeno, articulos tantum molliunt, calfaciunt, discutiunt efficacius, sed ad cetera minus valent. excedit fidem inpudens cura, qua sordes virilitatis contra scorpionum ictus singularis remedii celeberrimi auctores clamant, rursus in feminis qua infantium alvo editas in utero ipso contra sterilitatem subdi censent; meconium vocant. immo etiam ipsos gymnasiorum rasere parietes, et illae quoque sordes excalfactoriam vim habere dicuntur; panos discutiunt, ulceribus senum puerorumque et desquamatis ambustisve inlinuntur.

eo minus omitti convenit ab animo hominis pendentes medicinas. abstinere se cibo omni aut potu, alias vino tantum aut carne, alias balneis, cum quid eorum postulet valetudo, in praesentissimis remediis habetur. his adnumeratur exercitatio, intentio vocis, ungui,

fricari cum ratione; vehemens enim fricatio spissat, lenis mollit, multa adimit corpus, auget modica. in primis vero prodest ambulatio, gestatio et ea pluribus modis, equitatio stomacho et coxis utilissima, phthisi navigatio, longis morbis locorum mutatio, item somno sibi mederi aut lectulo et rara vomitione. supini cubitus oculis conducunt, at proni tussibus, in latera adversus destillationes. aristoteles et fabianus plurimum somniari circa ver et autumnum tradunt, magisque supino cubitu, at prono nihil, theophrastus celerius concoqui dextri lateris incubitu, difficilius a supinis. sol quoque, remediorum maximum, ab ipso sibi praestari potest, sicuti linteorum strigiliumque vehementia. perfundere caput calida ante balnearum vaporationem et postea frigida saluberrimum intellegitur; item praesumere cibis et interponere frigidam eiusdemque potu somnos antecedere et, si libeat, interrumpere. notandum nullum animal aliud calidos potus sequi, ideoque non esse naturales. mero ante somnos colluere ora propter halitus, frigida matutinis inpari numero ad cavendos dentium dolores, item posca oculos contra lippitudines certa experimenta sunt, sicut totius corporis valetudini in varietate victus inobservata. hippocrates tradit non prandentium celerius senescere exta; verum id remediis cecinit, non epulis, quippe multo utilissima est temperantia in cibis. l. lucullus hanc de se praefecturam servo dederat, ultimoque probro manus in cibis triumphali seni deiciebatur vel in capitolio epulanti, pudenda re servo suo facilius parere quam sibi.

sternumenta pinna gravedinem emendant et si quis mulae nares, ut tradunt, osculo attingat, sternumenta et singultum. ad hoc Varro suadet palmam alterna manu scalpere; plerique anulum e sinistra in longissimum dextrae digitum transferre, in aquam ferventem manus mergere. theophrastus senes laboriosius sternuere dicit.

venerem damnavit democritus, ut in qua homo alius exiliret ex homine. et, hercules, raritas eius utilior. athletae tamen torpentes restituuntur venere, vox revocatur, cum e candida declinat in fuscam. medetur et lumborum dolori, oculorum hebetationi, mente captis ac melancholicis.

adsidere gravidis vel, cum remedia alicui adhibeantur, digitis pectinatim inter se inplexis veneficium est, idque conpertum tradunt alcmena herculem pariente; peius, si circa unum ambove genua; item

poplites alternis genibus inponi. ideo haec in consiliis ducum potestatiumve fieri vetuere maiores velut omnem actum inpedientia, vetuere vero et sacris votisve simili modo interesse; capita autem aperiri aspectu magistratuum non venerationis causa iussere, sed, ut Varro auctor est, valetudinis, quoniam firmiora consuetudine ea fierent. - cum quid oculo inciderit, alterum conprimi prodest, cum aqua dextrae auriculae, sinistro pede exultari capite in dextrum umerum devexo, invicem e diversa aure; si tussim concitet saliva, in frontem ab alio adflari; si iaceat uva, verticem morsu alterius suspendi; in cervicium dolore poplites fricari aut cervicem in poplitum; pedes in humo deponi, si nervi in his cruribusve tendantur in lectulo, aut, si in laeva parte id accidat, sinistrae plantae pollicem dextra manu adprehendi, item e diverso; extremitates corporis velleribus perstringi contra horrores sanguinemve narium inmodicum, ... lino vel papyro principia genitalium, femur medium ad cohibenda urinae profluvia; in stomachi solutione pedes pressari aut manus in ferventem aquam demitti. - iam et sermoni parci multis de causis salutare est. triennio maecenatem melissum accepimus silentium sibi imperavisse a convolsione reddito sanguine. nam eversos scandentesque ac iacentes si quid ingruat contraque ictus spiritum cohibere singularis praesidii est, quod inventum esse animalis docuimus. - clavum ferreum defigere in quo loco primum caput fixerit corruens morbo comitiali, absolutorium eius mali dicitur. contra renium aut lumborum, vesicae cruciatus in balnearum soliis pronos urinam reddere mitigatorium habetur. - vulnera nodo herculis praeligare mirum quantum ocior medicina est, atque etiam cottidiani cinctus tali nodo vim quandam habere utilem dicuntur, quippe cum herculaneum prodiderit numerum quoque quaternarium demetrius condito volumine et quare quaterni cyathi sextariive non essent potandi. contra lippitudines retro aures fricare prodest et lacrimosis oculis frontem. - augurium ex homine ipso est non timendi mortem in aegritudine, quamdiu oculorum pupillae imaginem reddant.

magna et urinae non ratio solum, sed etiam religio apud auctores invenitur digestae in genera, spadonum quoque ad fecunditatis veneficia. verum ex iis, quae referre fas sit, inpubium puerorum contra salivas aspidum, quas ptyadas vocant, quoniam venena in

oculos hominum expuant, contra oculorum albugines, obscuritates, cicatrices, argema, palpebras et cum ervi farina contra adustiones, contra aurium pura vermiculosque, si decoquatur ad dimidias partes cum porro capitato novo fictili. vaporatio quoque ea menses feminarum ciet. salpe fovet illa cum ... oculos firmitatis causa, inlinit sole usta cum ovi albo, efficacius struthocameli, binis horis. hac et atramenti liturae abluuntur. virilis podagris medetur argumento fullonum, quos ideo temptari eo morbo negant. veteri miscetur cinis ostreorum adversus eruptiones in corpore infantium et omnia ulcera manantia. ea exesis, ambustis, sedis vitiis, rhagadiis et scorpionum ictibus inlinitur. obstetricum nobilitas non alio suco efficacius curari pronuntiavit corporum pruritus, nitro addito ulcera capitum, porrigines, nomas, praecipue genitalium. sua cuique autem, quod fas sit dixisse, maxime prodest, confestim perfuso canis morsu, echinorumque spinis inhaerentibus et in spongea lanisve inposita, aut adversus rabidi canis morsus cinere ex ea subacto, contraque serpentium ictus. nam contra scolopendras mirum proditur vertice tacto urinae suae gutta liberari protinus laesos. - auguria valetudinis ex ea traduntur, si mane candida, dein rufa sit; illo modo concoquere, hoc concoxisse significatur. mala signa rubrae, pessima nigrae, mala bullantis. crassa, in qua quod subsidit album est, significat circa articulos aut viscera dolorem inminere; eadem viridis morbum viscerum, pallida bilis, rubens sanguinis. mala et in qua veluti furfures atque nubeculae apparent. diluta quoque alba vitiosa est, mortifera vero crassa gravi odore et in pueris tenuis ac diluta. - magi vetant eius causa contra solem lunamque nudari aut umbram cuiusquam ab ipso respergi. hesiodus iuxta obstantia reddi suadet, ne deum aliquem nudatio offendat. osthanes contra mala medicamenta omnia auxiliari promisit matutinis suam cuique instillatam in pedem.

quae ex mulierum corporibus traduntur, ad portentorum miracula accedunt, ut sileamus divisa membratim scelera abortus, mensum piacula quaeque alia non obstetrices modo, verum etiam ipsae meretrices prodidere: capilli si crementur, odore serpentes fugari; eodem nidore vulvae morbo strangulatas respirare; cinere eo quidem, si in testa sint cremati vel cum spuma argenti, scabritias oculorum ac prurigines emendari, item verrucas et infantium ulcera, cum melle capitis quoque vulnera et omnium ulcerum sinus, addito melle ac

ture panos, podagras, cum adipe suillo sacrum ignem, sanguinem sisti inlito, item formicationes corporum.

de lactis usu convenit dulcissimum esse mollissimumque et in longa febri coeliacisque utilissimum, maxime eius, quae iam infantem removerit. et in malacia stomachi, in febribus, rosionibus efficacissimum experiuntur; item mammarum collectionibus cum ture, oculo ab ictu cruore suffuso et in dolore aut epiphora, si inmulgeatur, plurimum prodest, magisque cum melle et narcissi suco aut turis polline, superque in omni usu efficacius eius, quae marem enixa sit, multoque efficacissimum eius, quae geminos mares, et si vino ipsa cibisque acrioribus abstineat. mixto praeterea ovorum candido liquore madidaque lana frontibus inpositum fluctiones oculorum suspendit. etiam si rana saliva sua oculum asperserit, praecipuum est remedium, et contra morsum eiusdem bibitur instillaturque. eum, qui simul matris filiaeque lacte inunctus sit, liberari omni oculorum metu in totam vitam adfirmant. aurium quoque vitiis medetur admixto modice oleo aut, si ab ictu doleant, anserino adipe tepefactum. si sit odor gravior, ut plerumque fit longis vitiis, diluto melle lana includitur. et contra regium morbum in oculis relictum instillatur cum elaterio. peculiariter valet potum contra venena, quae data sint e marino lepore, bupresti aut etiam, ut aristoteles tradit, dorycnio, et contra insaniam, quae facta sit hyoscyami potu. podagris quoque iubent inlini cum cicuta, alii cum oesypo et adipe anserino, qualiter et vulvarum doloribus inponitur. alvum etiam sistit potu, ut rabirius scribit, et menses ciet. eius vero, quae feminam enixa sit, ad vitia tantum in facie sananda praevalet. pulmonum quoque incommoda lacte mulieris sanantur; cui si admisceatur inpubis pueri urina et mel atticum, omnia coclearium singulorum mensura, vermes quoque aurium eici invenio. eius, quae marem pepererit, lacte gustato canes rabiosos negant fieri.

mulieris quoque salivam ieiunam potentem diiudicant cruentatis oculis et contra epiphoras, si ferventes anguli oculorum subinde madefiant, efficacius, si cibo vinoque se pridie ea abstinuerit. invenio et fascia mulieris alligato capite dolores minui. post haec nullus est modus. iam primum abigi grandines turbinesque contra fulgura ipsa mense nudato; sic averti violentiam caeli, in navigando quidem tempestates etiam sine menstruis. ex ipsis vero mensibus,

monstrificis alias, ut suo loco indicavimus, dira et infanda vaticinantur, e quibus dixisse non pudeat, si in defectus lunae solisve congruat vis illa, inremediabilem fieri, non segnius et in silente luna, coitusque tum maribus exitiales esse atque pestiferos, purpuram quoque eo tempore ab iis pollui; tanto vim esse maiorem. quocumque autem alio menstruo si nudatae segetem ambiant, urucas et vermiculos scarabaeosque ac noxia alia decidere metrodorus scepsius in cappadocia inventum prodit ob multitudinem cantharidum; ire ergo per media arva retectis super clunes vestibus. alibi servatur, ut nudis pedibus eant capillo cinctuque dissoluto. cavendum ne id oriente sole faciant, sementiva enim arescere, item novella tactu in perpetuum laedi, rutam et hederam, res medicatissimas, ilico mori. multa diximus de hac violentia, sed praeter illa certum est, apes tactis alvariis fugere; lina, cum coquantur, nigrescere; aciem in cultris tonsorum hebetari; aes contactu grave virus odoris accipere et aeruginem, magis si decrescente luna id accidat; equas, si sint gravidae, tactas abortum pati, quin et aspectu omnino, quamvis procul visas, si purgatio illa post virginitatem prima sit aut in virgine aetatis sponte manet. bitumen in iudaea nascens sola hac vi superari filo vestis contactae docuimus. ne igni quidem vincitur, quo cuncta, cinisque etiam ille, si quis aspergat lavandis vestibus, purpuras mutat, florem coloribus adimit, ne ipsis quidem feminis malo suo inter se inmunibus: abortus facit inlitu aut si omnino praegnas supergradiatur. quae lais et elephantis inter se contraria prodidere de abortivo carbone e radice brassicae vel myrti vel tamaricis in eo sanguine extincto, itemque asinas tot annis non concipere, quot grana hordei contacta ederint, quaeque alia nuncupavere monstrifica aut inter ipsa pugnantia, cum haec fecunditatem fieri isdem modis, quibus sterilitatem illa, praenuntiaret, melius est non credere. bithus durrachinus hebetata aspectu specula recipere nitorem tradit isdem aversa rursus contuentibus, omnemque vim talem resolvi, si mullum piscem secum habeant; multi vero inesse etiam remedia tanto malo: podagris inlini, strumas et parotidas et panos, sacros ignes, furunculos, epiphoras tractatu mulierum earum leniri; lais et salpe canum rabiosorum morsus et tertianas quartanasque febres menstruo in lana arietis nigri argenteo bracchiali incluso, diotimus thebanus vel omnino vestis ita

infectae portiuncula ac vel licio bracchiali inserto. sotira obstetrix tertianis quartanisque efficacissimum dixit plantas aegri subterlini, multoque efficacius ab ipsa muliere et ignorantis; sic et comitiales excitari. icatidas medicus quartanas finiri coitu, incipientibus dumtaxat menstruis, spopondit. inter omnes vero convenit, si aqua potusque formidetur a morsu canis, supposita tantum calici lacinia tali statim metum eum discuti, videlicet praevalente sympathia illa graecorum, cum rabiem canum eius sanguinis gustatu incipere dixerimus. cinere eo iumentorum omnia ulcera sanari certum est addita caminorum farina et cera, maculas autem e veste eas non nisi eiusdem urina ablui, cinerem per se rosaceo mixtum feminarum praecipue capitis dolores sedare inlitum fronti, asperrimamque vim profluvii eius esse per se annis virginitate resoluta. id quoque convenit, quo nihil equidem libentius crediderim, tactis omnino menstruo postibus inritas fieri magorum artes, generis vanissimi, ut aestimare licet. ponam enim vel modestissimum e promissis eorum, ex homine siquidem resigmina unguium e pedibus manibusque cera permixta ita, ut dicatur tertianae, quartanae vel cotidianae febri remedium quaeri, ante solis ortum alienae ianuae adfigi iubent ad remedia in his morbis, quanta vanitate, si falsum est, quanta vero noxia, si transferunt morbos! innocentiores ex his omnium digitorum resigmina unguium ad cavernas formicarum abici iubent eamque, quae prima coeperit trahere, correptam subnecti collo; ita discuti morbum.

haec sunt quae retulisse fas sit, ac pleraque ex iis non nisi honore dicto, reliqua intestabilia, infanda, ut festinet oratio ab homine fugere. in ceteris claritates animalium aut operum sequemur.

elephanti sanguis, praecipue maris, fluctiones omnes, quas rheumatismos vocant, sistit. ramentis eboris cum melle attico, ut aiunt, nubeculae in facie, scobe paronychia tolluntur. proboscidis tactu capitis dolor levatur, efficacius si et sternuat. dextra pars proboscidis cum lemnia rubrica adalligata inpetus libidinum stimulat. sanguis et syntecticis prodest, iocurque comitialibus morbis.

leonis adipes cum rosaceo cutem in facie custodiunt a vitiis candoremque; sanant et adusta nivibus articulorumque tumores. magorum vanitas perunctis adipe eo faciliorem gratiam apud populos regesve promittit, praecipue tamen eo pingui, quod sit inter

supercilia, ubi esse nullum potest. similia dentis, maxime a dextera parte, villique e rostro inferiore promissa sunt. fel aqua addita claritatem oculis inunctis facit et cum adipe eiusdem comitiales morbos discutit levi gustu et ut protinus qui sumpsere cursu id digerant. cor in cibo sumptum quartanis medetur; adips cum rosaceo cotidianis febribus. perunctos eo bestiae fugiunt; resistere etiam insidiis videtur.

cameli cerebrum arefactum potumque ex aceto comitialibus morbis aiunt mederi, item fel cum melle potum, hoc et anginae; cauda arefacta solvi alvum, fimi cinere crispari capillum cum oleo. et dysintericis prodest inlitus cinis potusque, quantum iii digitis capiatur, et comitialibus morbis. urinam fullonibus utilissimam esse tradunt, itemque ulceribus manantibus barbaros servare eam quinquennio et heminis pota ciere alvum; saetas e cauda contortas et sinistro bracchio alligatas quartanis mederi.

hyaenam magi ex omnibus animalibus in maxima admiratione posuerunt, utpote cui et ipsi magicas artes dederint vimque, qua alliciat ad se homines mentes alienans. permutationes sexus annua vice diximus ceteraque monstrifica naturae eius; nunc persequemur quaecumque medicinis produntur. praecipue pantheris terrori esse traditur, ut ne conentur quidem resistere, et aliquid e corio eius habentem non adpeti, mirumque dictu, si pelles utriusque contrariae suspendantur, decidere pilos pantherae. cum fugiant venantem, declinare ad dexteram, ut praegressi hominis vestigia occupent; quod si successerit, alienari mentem ac vel ex equo hominem decidere; at si in laeva detorserit, deficientis argumentum esse celeremque capturam, facilius autem capi, si cinctus suos venator flagellumque inperitans equo septenis alligaverit nodis. mox, ut est sollers ambagibus vanitas magorum, capi iubent geminorum signum transeunte luna singulosque prope pilos servari; capitis dolori inligatam cutem prodesse, quae fuerit in capite eius; lippitudini fel inlitum frontibus aut, ne omnino lippiatur, decoctum cum mellis attici cyathis iii et croci uncia inunctum; sic et caligines discuti et suffusiones; claritatem excitari melius inveterato medicamento, adservari autem in cypria pyxide; eodem sanari argema, scabritias, excrescentia in oculis, item cicatrices, glaucomata vero iocineris recentis inassati sanie cum despumato melle inunctis. dentes eius

dentium doloribus tactu prodesse vel alligatos numeri ordine, umerorum et lacertorum doloribus; eiusdem dentes, sed e sinistra parte rostri, inligatos pecoris aut capri pelle stomachi cruciatibus; pulmones in cibo sumptos coeliacis vel ventriculi cinerem cum oleo inlitum; nervis medullas e dorso cum oleo vetere ac felle; febribus quartanis iocur degustatum ter ante accessiones; podagris spinae cinerem cum lingua et dextro pede vituli marini addito felle taurino, omnia pariter cocta atque inlita hyaenae pelle; in eodem morbo prodesse et fel cum lapide assio; tremulis, spasticis, exilientibus et quibus cor palpitet aliquid ex corde coctum mandendum ita, ut reliquae partis cinis cum cerebro hyaenae inlinatur; pilos etiam auferri hac conpositione inlita vel per se felle, evulsis prius qua renasci non libeat; sic et palpebris inutiles tolli; lumborum doloribus carnes e lumbis edendas inlinendasque cum oleo; sterilitatem mulierum emendari oculo cum glycyrrhiza et aneto sumpto in cibo, promisso intra triduum conceptu. contra nocturnos pavores umbrarumque terrorem unus e magnis dentibus lino alligatus succurrere narratur. suffiri furentes eodem et circumligari ante pectus suum cum adipe renium aut iocinere aut pelle praecipiunt. mulieri candida a pectore hyaenae caro et pili septeni et genitale cervi, si inligentur dorcadis pelle e collo suspensa, continere partus promittuntur; venerem stimulare genitalia ad sexus suos in melle sumpta, etiamsi viri mulierum coitus oderint; quin immo totius domus concordiam eodem genitali et articulo spinae cum adhaerente corio adservatis constare. hinc spinae articulum scite nodum atlantion vocant; est autem primus. in comitialium quoque remediis habent eum. adipe accenso serpentes fugari dicunt; maxilla comminuta in aneso et in cibo sumpta horrores sedari; eodem suffitu mulierum menses evocari. tantumque est vanitatis, ut, si ad bracchium alligetur superior e dextra parte rostri dens, iaculantium ictus deerraturos negent. palato eiusdem arefacto et cum alumine aegyptio calefacto ac ter in ore permutato faetores et ulcera oris emendari, eos vero, qui linguam in calciamento sub pede habeant, non latrari a canibus; sinistra parte cerebri naribus inlita morbos perniciosos mitigari sive hominum sive quadripedum; frontis corium fascinationibus resistere, cervicis carnes, sive mandantur sive arefactae bibantur, lumborum doloribus; nervis a dorso armisque

suffiendos nervorum dolores; pilos rostri admotos mulierum labris amatorium esse; iocur in potu datum torminibus et calculis mederi. nam cor in cibo potuve sumptum omnibus doloribus corporum auxiliari, lienem lienibus, omentum ulcerum inflammationibus cum oleo, medullas doloribus spinae et nervorum lassitudini; renium nervos potos in vino cum ture fecunditatem restituere ademptam veneficio; vulvam cum mali punici dulcis cortice in potu datam prodesse mulierum vulvae; adipe a lumbis suffiri parientes difficulter et statim parere; e dorso medullam adalligatam contra vanas species opitulari, spasticis genitale e maribus suffitu, item lippientibus, ruptis, et contra inflammationes adversos pedes tactu, laevos dexteris partibus, dexteros laevis; sinistrum pedem superlatum parturienti letalem esse, dextro inlato facile eniti. membranam, quae fel continuerit, cardiacis potam in vino vel in cibo sumptam contra ... succurrere; vesicam in vino potam contra urinae incontinentiam; quae autem in vesica inventa sit urina, additis oleo ac sesamis et melle haustam prodesse stomachi acrimoniae veteri. costarum primam et octavam suffitu ruptis salutarem esse; ex spina vero parturientibus ossa; sanguinem cum polenta sumptum torminibus; eodem tactis postibus ubicumque magorum infestari artes, non elici deos nec conloqui, sive lucernis sive pelvi sive aqua sive pila sive quo alio genere temptetur; carnes si edantur, contra rabidi canis morsus efficaces esse, etiamnum iocur efficacius. carnes vel ossa hominis, quae in ventriculo occisae inveniantur, suffitu podagricis auxiliari; si ungues inveniantur in iis, mortem alicuius capientium significari; excrementa sive ossa reddita, cum interematur, contra magicas insidias pollere; fimum, quod in intestinis inventum sit, arefactum ad dysintericos valere, potum inlitumque cum adipe anserino toto corpore opitulari laesis malo medicamento; a cane vero morsis adipem inlitum et corium substratum; rursus tali sinistri cinere decocto cum sanguine mustelae perunctos omnibus odio venire; idem fieri oculo decocto. super omnia est, quod extremam fistulam intestini contra ducum ac potestatium iniquitates commonstrant et ad successus petitionum iudiciorumque ac litium eventus, si omnino tantum aliquis secum habeat; eiusdem cavernam sinistro lacerto alligatam, si quis mulierem prospiciat, amatorium esse tam praesens, ut ilico sequatur; eiusdem loci pilorum cinerem ex

oleo inlitum viris, qui sint probrosae mollitiae, severos, non modo pudicos, mores induere.

proxime fabulosus est crocodilus, ingenio quoque ille, cui vita in aqua terraque communis. duo enim genera eorum. illius e dextra maxilla dentes adalligati dextro lacerto coitus, si credimus, stimulant; canini dentes febris statas arcent ture repleti - sunt enim cavi - ita ne diebus v ab aegro cernatur qui adalligaverit. idem pollere e ventre exemptos lapillos adversus febrium horrores venientes tradunt. eadem de causa aegypti perungunt adipe aegros suos. alter illi similis, multum infra magnitudine, in terra tantum odoratissimisque floribus vivit; ob id intestina eius diligenter exquiruntur iucundo nidore referta; crocodileam vocant, oculorum vitiis utilissimam cum porri suco inunctis et contra suffusiones vel caligines. inlita quoque ex oleo cyprino molestias in facie nascentes tollit, ex aqua vero morbos omnes, quorum natura serpit in facie, nitoremque reddit; lentigines tollit ac varos maculasque omnes. et contra comitiales morbos bibitur ex aceto mulso binis obolis. adposita menses ciet. optima quae candidissima et friabilis minimeque ponderosa, cum teratur inter digitos, fermentescens. lavatur ut cerussa. adulterant amylo aut cimolia, sed maxime sturnorum fimo qui captos oryza tantum pascunt. felle inunctis oculis ex melle contra suffusiones nihil utilius praedicant. intestinis et reliquo corpore eius suffiri vulva laborantes salutare tradunt, item velleribus circumdari vapore eiusdem infectis. corii utriusque cinis ex aceto inlitus iis partibus, quas secari opus sit, aut nidor cremati sensum omnem scalpelli aufert. sanguis utriusque claritatem visus inunctis excitat, cicatrices oculorum emendat. corpus ipsum excepto capite pedibusque elixum manditur ischiadicis tussimque veterem sanat, praecipue in pueris, item lumborum dolores. habent et adipem, quo tactus pilus defluit. hic perunctos a crocodilis tuetur instillaturque morsibus. cor adnexum in lana ovis nigrae, cui nullus alius colos incursaverit, et primo partu genitae quartanas abigere dicitur.

iungemus illis simillima et peregrina aeque animalia priusque chamaeleonem, peculiari volumine dignum existimatum democrito ac per singula membra desecratum, non sine magna voluptate nostra cognitis proditisque mendaciis graecae vanitatis. similis et magnitudine est supra dicto crocodilo, spinae tantum acutiore

curvatura et caudae amplitudine distans. nullum animal pavidius existimatur et ideo versicoloris esse mutationis. vis eius maxima contra accipitrum genus. detrahere enim supervolantem ad se traditur et voluntarium praebere lacerandum ceteris animalibus. caput eius et guttur, si roboreis lignis accendantur, imbrium et tonitruum concursus facere democritus narrat, item iocur in tegulis ustum. reliqua ad veneficia pertinentia quae dicit, quamquam falsa existimantes, omittemus, praeterquam ubi inrisu coarguent eum: dextro oculo, si viventi eruatur, albugines oculorum cum lacte caprino tolli, lingua adalligata pericula puerperii; eundem salutarem esse parturientibus, si sit domi, si vero inferatur, perniciosissimum. linguam, si viventi exempta sit, ad iudiciorum eventus pollere, cor adversus quartanas inligatum lana nigra primae tonsurae. pedem e prioribus dextrum pelle hyaenae adalligatum sinistro bracchio contra latrocinia terroresque nocturnos pollere, item dextram mamillam contra formidines pavoresque; sinistrum vero pedem torreri in furno cum herba, quae aeque chamaeleon vocetur, additoque unguento pastillos eos in ligneum vas conditos praestare, si credimus, ne cernatur ab aliis qui id habeat. armum dextrum ad vincendos adversarios vel hostes valere, utique si abiectos eiusdem nervos calcaverit; sinistrum vero quibus monstris consecret, qualiter somnia quae velis ac quibus velis mittantur, pudet referre: omnia ea dextro pede resolvi, sicut sinistro latere lethargos, quos fecerit dexter. set capitis dolores insperso vino, in quo latus alterutrum maceratum sit, sanari; si feminis sinistri vel pedis cinere misceatur lac suillum, podagricos fieri inlitis pedibus. felle glaucomata et suffusiones corrigi prope creditur tridui inunctione, serpentes fugari ignibus instillato, mustelas contrahi in aquam coiecto, corpori vero inlito detrahi pilos. idem praestare narrat iocur cum ranae rubetae pulmone inlitum; praeterea iocinere amatoria dissolvi, melancholicos autem sanari, si ex corio chamaeleonis sucus herbae heleniae bibatur; intestina et fartum eorum, cum animal id nullo cibo vivat, simiarum urina una inlita inimicorum ianuae odium omnium hominum his conciliare; cauda flumina et aquarum impetus sisti, serpentes soporari; eadem medicata cedro et murra inligataque gemino ramo palmae percussam aquam discuti, ut quae intus sint omnia appareant; utinamque eo ramo contactus esset democritus, quoniam ita

loquacitates inmodicas promisit inhiberi. palamque est virum alias sagacem et vitae utilissimum nimio iuvandi mortales studio prolapsum.

ex eadem similitudine est scincus - et quidam terrestrem crocodilum esse dixerunt - , candidior autem et tenuiore cute. praecipua tamen differentia dinoscitur a crocodilo, squamarum serie a cauda ad caput versa. maximus indicus, deinde arabicus. adferuntur salsi. rostrum eius et pedes in vino albo poti cupiditates veneris accendunt, utique cum satyrio et erucae semine singulis drachmis omnium ac piperis ii admixtis ita pastilli singularum drachmarum bibantur. per se laterum carnes obolis binis cum murra et pipere pari modo potae efficaciores ad idem creduntur. prodest et contra sagittarum venena, ut Apelles tradit, ante posteaque sumptus. in antidota quoque nobilia additur. sextius plus quam drachmae pondere in vini hemina potum perniciem adferre tradit, praeterea eiusdem decocti ius cum melle sumptum venerem inhibere.

est crocodilo cognatio quaedam amnis eiusdem geminique victus cum hippopotamio, repertore detrahendi sanguinis, ut diximus, plurimo autem super saiticam praefecturam. huius corii cinis cum aqua inlitus panos sanat, adips frigidas febres, item fimum suffitu, dentes e parte laeva dolorem dentium scariphatis gingivis. pellis eius e sinistra parte frontis inguini adalligata venerem inhibet, eiusdem cinis alopecias explet. testiculi drachma ex aqua contra serpentes bibitur. sanguine pictores utuntur.

peregrinae sunt et lynces, quae clarissime quadripedum omnium cernunt. ungues earum omnes cum corio exuri efficacissime in carpatho insula tradunt. hoc cinere poto propudia virorum, eiusdem aspersu feminarum libidines inhiberi, item pruritus corporum, urina stillicidia vesicae. itaque eam protinus terra pedibus adgesta obruere traditur. eadem autem et iugulorum dolori monstratur in remedio. hactenus de externis.

nunc praevertemur ad nostrum orbem, primumque communia animalium remedia atque eximia dicemus, sicuti e lactis usu. utilissimum cuique maternum. concipere nutrices exitiosum est; hi sunt enim infantes, qui colostrati appellantur, densato lacte in casei speciem. est autem colostra prima a partu spongea densitas lactis. maxime autem alit quodcumque humanum, mox caprinum, unde

fortassis fabulae iovem ita nutritum dixere. dulcissimum ab hominis camelinum, efficacissimum ex asinis. magnorum animalium et corporum facilius redditur. stomacho adcommodatissimum caprinum, quoniam fronde magis quam herba vescuntur, bubulum medicatius, ovillum dulcius et magis alit, stomacho minus utile, quoniam est pinguius. omne autem vernum aquatius aestivo et de novellis. probatissimum vero quod in ungue haeret nec defluit; innocentius decoctum, praecipue cum calculis marinis. alvus maxime solvitur bubulo, minus autem inflat quodcumque decoctum. usus lactis ad omnia intus exulcerata, maxime renes, vesicam, interanea, fauces, pulmones, foris pruritum cutis, eruptiones pituitae poti ab abstinentia nam ut in arcadia bubulum biberent phthisici, syntectici, cachectae, diximus in ratione herbarum. sunt inter exempla qui asininum bibendo liberati sint podagri chiragraque. medici speciem unam addidere lactis generibus, quod schiston appellavere. id fit hoc modo: fictili novo fervet, caprinum maxime, ramisque ficulneis recentibus miscetur additis totidem cyathis mulsi, quot sint heminae lactis. cum fervet, ne circumfundatur, praestat cyathus argenteus cum frigida aqua demissus ita, ne quid infundat. ablatum deinde igni refrigeratione dividitur et discedit serum a lacte. quidam et ipsum serum iam multo potentissimum decocunt ad tertias partes et sub diu refrigerant. bibitur autem efficacissime heminis per intervalla, satis, diebus quinae; melius a potu gestari. datur comitialibus, melancholicis, paralyticis, in lepris, elephantiasi, articulariis morbis. infunditur quoque lac contra rosiones a medicamentis factas et, si urat dysinteria, decoctum cum marinis lapillis aut cum tisana hordeacia. item ad intestinorum rosiones bubulum aut ovillum utilius. recens quoque dysintericis infunditur, ad colum autem crudum, item vulvae et propter serpentium ictus potisve pityocampis, bupresti, cantharidum aut salamandrae venenis, privatim bubulum iis, qui colchicum biberint aut cicutam aut dorycnium aut leporem marinum, sicut asininum contra gypsum et cerussam et sulpur et argentum vivum, item durae alvo in febri. gargarizatur quoque faucibus exulceratis. utilissime et bibitur ab imbecillitate vires recolligentibus, quos atrophos vocant, in febri etiam, quae careat dolore capitis. pueris ante cibum lactis asinini heminam dari aut si exitus cibi rosiones sentirent, antiqui in arcanis habuerunt, si hoc non

esset, caprini. bubuli serum orthopnoicis prodest ante cetera addito nasturtio. inunguntur etiam oculi in lactis heminas additis sesamae drachmis iiii tritis in lippitudine. caprino lienes sanantur, post bidui inediam tertio die hedera pastis capris, per triduum poto sine alio cibo. lactis usus alias contrarius capitis doloribus, hepaticis, splenicis, nervorum vitio, febres habentibus, vertigini praeterquam purgationis gratia, gravedini, tussientibus, lippis. ovillum utilissimum tenesmo, dysinteriae; nec non phthisicis hoc et mulieris saluberrimum qui dicerent fuerunt.

de generibus caseorum diximus, cum de uberibus singulisque membris animalium diceremus. sextius eosdem effectus equino quos bubulo tradit; hunc vocant hippacen. stomacho utiles qui non sunt salsi, id est recentes. veteres alvum sistunt corpusque minuunt, stomacho inutiliores; et in totum salsa minuunt corpus, alunt mollia. caseus recens cum melle suggillata emendat, mollis alvum sistit, sedat tormina pastillis in vino austero decoctis rursusque in patina tostis cum melle. saprum vocant qui cum sale et sorbis siccis e vino tritus potusque medetur coeliacis. genitalium carbunculis caprinus tritus inpositus, item acidus cum oxymelite maculis in balineo inlitus oleo interlinitur.

e lacte fit et butyrum, barbararum gentium lautissimus cibus et qui divites a plebe discernat. plurimum e bubulo - et inde nomen - , pinguissimum ex ovibus fit et caprino, sed hieme calefacto lacte, aestate expresso tantum, crebro iactatu in longis vasis angusto foramine spiritum accipientibus sub ipso ore alias praeligato. additur paulum aquae, ut acescat. quod est maxime coactum, in summo fluitat; id exemptum addito sale oxygala appellant. relicum decocunt in ollis; ibi quod supernatat, butyrum est, oleosum natura. quo magis virus resipit, hoc praestantius iudicatur. pluribus conpositionibus miscetur inveteratum. natura eius adstringere, mollire, replere, purgare.

oxygala fit et alio modo, acido lacte addito in recens, quod velint acescere, utilissimum stomacho. effectus dicemus suis locis.

proxima in communibus adipi laus est, sed maxime suillo, apud antiquos etiam religiosius. certe novae nuptae intrantes etiam nunc sollemne habent postes eo attingere. inveteratur duobus modis, cum sale aut sincerus; tanto fit utilior. axungiam graeci etiam appellavere

iam in voluminibus suis. neque est occulta virium causa, quoniam id animal herbarum radicibus vescitur; itaque etiam fimo innumeri usus. quam ob rem non de alia loquemur sue. multo efficacior e femina et quae non pepererit, multo vero praestantior in apris esse dicitur usus axungiae ad emollienda, excalfacienda, discutienda purgandaque. medicorum aliqui admixto anseris adipe taurorumque sebo et oesypo ad podagras uti iubent; si vero permaneat dolor, cum cera, myrto, resina, pice. sincera axungia medetur ambustis vel nive, pernionibus autem cum hordei cinere et galla pari modo. prodest et confricatis membris, itinerumque lassitudines et fatigationes levat. ad tussim veterem recens decoquitur quadrantis pondere in vini cyathis iii addito melle. vetus etiam phthisis pilulis sumpta sanat, quae sine sale inveterata est. omnino enim non nisi ad ea, quae purganda sint aut quae non sint exulcerata, salsa recipitur. quidam quadrantes axungiae et mulsi in vini cyathis ternis decocunt contra phthisis, quarto quoque die picem liquidam in ovo sumi iubent. circumligatur et lateribus, pectori, scapulis eorum, qui phthisim sentiunt, tantaque est vis, ut genibus etiam adalligata redeat in os sapor eamque expuere videantur. e sue, quae non pepererit, aptissime utuntur ad cutem mulieres, contra scabiem vero quivis admixto iumentorum sebo pro parte tertia et pice pariterque subfervefactis. sincera partus in abortum vergentes nutrit collyrii modo subdita. cicatrices concolores facit cerussa admixta vel argenti spuma, at cum sulpure unguium scrabritias emendat. medetur et capillo fluenti et ulceribus in capite mulierum cum gallae parte quarta et infumata pilis oculorum. datur et phthisicis unciatim cum vini veteris hemina decocta, donec iii unciae e toto restent; aliqui et mellis exiguum adiciunt. panis inlinitur cum calce, item furunculis duritiaeque mammarum. rupta et convulsa et spasmata et luxata sanat, clavos et rimas callique vitia cum helleboro albo, parotidas admixta farina salsamentariae testae, quo genere proficit et ad strumas. pruritus et papulas in balineo perunctis tollit, alioque etiamnum modo podagricis prodest mixto oleo vetere, contrito una sarcophago lapide et quinquefolio tuso in vino vel cum calce aut cum cinere. fit et peculiare emplastrum lxxv #1108 ponderi c spumae argenteae mixtis, utilissime contra ulcerum inflammationes adipe verrino. et inungui putant utile, quaeque serpant inlinere cum resina. antiqui axibus vehiculorum perunguendis maxime ad

faciliorem circumactum rotarum utebantur, unde nomen, sic quoque utili medicina cum illa ferrugine rotarum ad sedis vitia virilitatisque et per se axungia. medici antiqui maxime probabant renibus detractam exemptisque venis aqua caelesti fricabant crebro decoquebantque fictili novo saepius, tum demum adservantes. convenit salsam magis mollire, excalfacere, discutere, utilioremque esse vino lotam. masurius palmam lupino adipi dedisse antiquos tradidit. ideo novas nuptas illo perunguere postes solitas, ne quid mali medicamenti inferretur.

quae ratio adipis, eadem in iis, quae ruminant, sebi est, aliis modis, non minoris potentiae. perficitur omne exemptis venis aqua marina vel salsa lotum, mox in pila tusum aspersa marina crebro; postea coquitur, donec odor omnis aboleatur, mox adsiduo sole ad candorem reducitur. a renibus autem omne laudatissimum est. si vero vetus revocetur ad curam, liquefieri prius iubent, mox frigida aqua lavari saepius, dein liquefacere adfuso vino quam odoratissimo. eodemque modo iterum ac saepius cocunt, donec virus evanescat. multi privatim sic taurorum leonumque ac pantherarum et camelorum pinguia curari iubent. usus dicetur suis locis.

communis et medullarum est. omnes molliunt, explent, siccant, excalfaciunt. laudatissima e cervis, mox vitulina, dein hircina et caprina. curantur ante autumnum. recentes lotae siccataeque in umbra, per cribrum dein liquatae per lintea exprimuntur ac reponuntur in fictili locis frigidis.

inter omnia autem communia animalium vel praestantissimum effectu fel est. vis eius excalfacere, mordere, scindere, extrahere, discutere. minorum animalium subtilius intellegitur et ideo ad oculorum medicamenta utilius existimatur. taurino praecipua potentia, etiam in aere pelvibusque aureo colore obducendis. omne autem curatur recens praeligato ore lino crasso, demissum in ferventem aquam semihora, mox siccatum sine sole atque in melle conditum. damnatur equinum tantum inter venena. ideo flamini sacrorum equum tangere non licet, cum romae publicis sacris equus etiam immoletur.

quin et sanguis eorum septicam vim habet; item equarum, praeterquam virginum, erodit, emarginat ulcera. taurinus quidem recens inter venena est excepta aegira. ibi enim sacerdos terrae

vaticinatura sanguinem tauri bibit prius quam in specus descendat. tantum potest sympathia illa, de qua loquimur, ut aliquando religione aut loco fiat. drusus tribunus plebei traditur caprinum bibisse, cum pallore et invidia veneni sibi dati insimulare q. caepionem inimicum vellet. hircorum sanguini tanta vis est, ut ferramentorum subtilitas non aliter acrius induretur, scabritia poliatur vehementius quam lima. non igitur et sanguis animalium inter communia dici potest, et ideo suis quisque dicetur effectibus.

digeremus enim in mala singula usus primumque contra serpentes. exitio his esse cervos nemo ignorat ut, si quae sunt, extractas cavernis mandentes. nec vero ipsi spirantesque tantum adversantur, sed membratim quoque. fugari eas nidore cornus eorum, si uratur, dictum est; at e summo gutture ustis ossibus congregari dicuntur. pelles eiusdem animalis substratae securos praestant ab eo metu somnos, coagulum ex aceto potum ab ictu; et si omnino tractatum sit, eo die non ferit serpens. testes quoque eius inveterati vel genitale vetus maris salutariter dantur in vino; item venter, quem centipellionem vocant. fugiunt et omnino dentem cervi habentes aut medulla perunctos sebove cervi aut vituli. summis autem remediis praefertur hinnulei coagulum matris utero execti, ut indicavimus. sanguine cervino, si una urantur dracontion et cunilago et anchusa lentisci ligno, contrahi serpentes tradunt, dissipari deinde, si sanguine detracto adiciatur pyrethrum. invenio apud auctores graecos, animal cervo minus et pilo demum simile, quod ophion vocaretur, sardiniam tantum ferre solitam. hoc interisse arbitror et ideo medicinas ex eo omitto. - apri quoque cerebrum contra eas laudatur cum sanguine, iocur etiam inveteratum cum ruta potum ex vino, item adips cum melle resinaque, simili modo verrinum iocur et fellis dumtaxat fibra #1108 iiii pondere vel cerebrum in vino potum. - caprarum cornu vel pilis accensis fugari serpentes dicunt, cineremque e cornu potum vel inlitum contra ictus valere, item lactis haustus cum uva taminia vel urinae cum aceto scillite, caseum caprinum cum origano inpositum vel sebum cum cera. milia praeterea remediorum ex eo animali demonstrantur, sicut apparebit, quod equidem miror, cum febri negetur carere. amplior potentia feris eiusdem generis, quod numerosissimum esse diximus, alia vero et hircis. democritus etiamnum effectus auget eius, qui singularis natus sit. fimo quoque

caprarum in aceto decocto inlini ictus serpentium placet et recentis cinere in vino, atque in totum difficilius sese recolligentes a serpentium ictu in caprilibus optime convalescunt. qui efficacius volunt mederi, occisae caprae alvum dissectam cum fimo intus reperto inligant statim. alii carnem recentem haedorum cum pilo suffiunt eodemque nidore fugant serpentes. utuntur et pelle eorum recenti, ad plagas et carne et fimo equi in agro pasti, coagulo leporis ex aceto contraque scorpionem et murem araneum; aiunt non feriri leporis coagulo perunctos. a scorpione percussis fimum caprae efficacius aceto decoctum auxiliatur, lardum iusque decocti potum et iis, qui buprestim hauserint. quin etiam si quis asino in aurem percussum a scorpione se dicat, transire malum protinus tradunt, venenataque omnia accenso pulmone eius fugere. et fimo vituli suffiri percussos a scorpione prodest.

canis rabiosi morsu facta volnera circumcidunt ad vivas usque partes quidam carnemque vituli admovent et ius ex eodem carnis decoctae dant potui aut axungiam cum calce tusam, hirci iocur, quo inposito ne temptari quidem aquae metu adfirmant. laudant et caprae fimum ex vino inlitum, melis et cuculi et hirundinis decoctum et potum. ad reliquos bestiarum morsus caprinum caseum siccum cum origano inponunt et bibi iubent, ad hominis morsus carnem bubulam coctam, efficacius vituli, si non ante quintum diem solvant.

veneficiis rostrum lupi resistere inveteratum aiunt ob idque villarum portis praefigunt. hoc idem praestare et pellis e cervice solida manica existimatur, quippe tanta vis est animalis praeter ea, quae retulimus, ut vestigia eius calcata equis adferant torporem. - iis, qui argentum vivum biberint, lardum remedio est. - asinino lacte poto venena restinguntur, peculiariter si hyoscyamum potum sit aut viscum aut cicuta aut lepus marinus aut opocarpatum aut cerussa aut dorycnium et si coagulum alicui nocuerit, nam id quoque venenum est in prima lactis coagulatione. multos et alios usus eius dicemus, sed meminisse oportebit recenti utendum aut non multo postea tepefacto; nullum enim celerius evanescit. ossa quoque asini confracta et decocta contra leporis marini venenum dantur. omnia eadem onagris efficaciora. - de equiferis non scripserunt graeci, quoniam terrae illae non gignebant, verum tamen fortiora omnia eadem quam in equis intellegi debent. lacte equino venena leporis

marini et toxica expugnantur. nec uros aut bisontes habuerunt graeci in experimentis, quamquam bove fero refertis indiae silvis; pro portione tamen eadem efficaciora omnia ex his credi par est. sic quoque lacte bubulo cuncta venena expugnari tradunt, maxime supra dicta et si ephemerum inpactum sit aut si cantharides datae; omnia vomitione egeri, sic et caprino iure cantharidas. contra ea vero, quae exulceratione enecant, sebum vitulinum vel bubulum auxiliatur. nam contra sanguisugas potas butyrum remedio est cum aceto ferro calefacto, quod et per se prodest contra venena, nam si oleum non sit, vicem eius repraesentat. multipedae morsus cum melle sanat. omasi quoque iure poto venena supra dicta expugnari putant, privatim vero aconita et cicutas, itemque vitulino sebo. - caprinus caseus recens iis, qui viscum biberint, lac contra cantharidas remedio est, contra ephemeri potum cum taminia uva. sanguis caprinus decoctus cum medulla contra toxica venena sumitur, haedinus contra reliqua, coagulum haedi contra viscum et chamaeleonem album sanguinemque taurinum, contra quem et leporis coagulum est ex aceto, contra pastinacam vero et omnium marinorum ictus vel morsus coagulum leporis vel haedi vel agni drachmae pondere ex vino. leporis coagulum et contra venena additur antidotis. papilio quoque lucernarum luminibus advolans inter mala medicamenta numeratur; huic contrarium est iocur caprinum, sicut fel veneficiis ex mustella rustica factis. hinc deinde praevertemur ad genera morborum.

capilli defluvia ursinus adips admixto ladano et adianto continet alopeciasque emendat et raritatem superciliorum cum fungis lucernarum ac fuligine, quae est in rostris earum, porriginem cum vino. prodest ad hanc et cornus cervini cinis e vino utque non taedia animalium capillis increscant, item fel caprinum cum creta cimolia et aceto sic, uti paulum capiti inarescant, item fel scrofinum, urina tauri. si vero vetus sit, furfures etiam adiecto sulpure emendat. cinere genitalis asini spissari capillum putant et a canitie vindicari, si rasis inlinatur plumboque tritus cum oleo, densari et asinini pulli illitum urina; admiscent nardum fastidii gratia. alopecias felle taurino cum aegyptio alumine tepefacto inlinunt. ulcera capitis manantia urina tauri efficaciter sanat, item hominis vetus, si cyclaminum adiciatur et sulpur, efficacius tamen vitulinum fel, quo cum aceto calefacto et

lendes tolluntur. sebum vitulinum capitis ulceribus cum sale tritum utilissimum. laudatur et vulpium adips, sed praecipue felium fimum cum sinapis pari modo inlitum, caprini cornus farina vel cinis, magisque hircini, addito nitro et tamaricis semine et butyro oleoque, prius capite raso; mire continent ita fluentem capillum, sicuti carnis cinere ex oleo inlita supercilia nigrescunt. lacte caprino lendes tolli tradunt, fimo cum melle alopecias expleri, item ungularum cinere cum pice. fluentem capillum continet leporinus cinis cum oleo myrteo. - capitis dolorem sedat pota aqua, quae relicta est e bovis aut asini potu, et, si credimus, vulpis masculae genitale circumligatum, cornus cervini cinis inlitus ex aceto aut rosaceo aut ex irino. -

oculorum epiphoras bubulo sebo cum oleo cocto inlinunt; cervini cornus cinere scabritias ex eodem inunguunt, mucrones autem ipsos efficaciores putant. lupi excrementis circumlini suffusiones prodest, cinere eorum cum attico melle inungui obscuritates, item felle ursino, epinyctidas adipe apruno cum rosaceo. ungulae asininae cinis inunctus e suo lacte oculorum cicatrices et albugines tollit. medulla bubula e dextro crure priore trita cum fuligine pilis et palpebrarum vitiis angulorumque occurrit - calliblephari modo fuligo in hoc usu temperatur, optime ellychnio papyraceo oleoque sesamino fuligine in novum vas pinnis detersa - , efficacissime tamen evolsos ibi pilos coercet. felle tauri cum ovi albo collyria fiunt, aquaque dissoluta inungunt per quadriduum. sebum vituli cum anseris adipe et ocimi suco genarum vitiis aptissimum est. eiusdem medullae cum pari pondere cerae et olei vel rosacei addito ovo duritiae genarum inlinuntur. caseo molli caprino inposito ex aqua calida epiphorae sedantur; si tumor sit, ex melle; utrumque sero calido fovendum. sicca lippitudo lumbulis suum exustis atque contritis et inpositis tollitur. capras negant lippire, quoniam quasdam herbas edint, item dorcadas; ob id fimum earum cera circumdatum nova luna devorari iubent. et quoniam noctu quoque aeque cernant, sanguine hircino lusciosos sanari putant, nyctalopas a graecis dictos, caprae vero iocinere in vino austero decocto. quidam inassati iocineris sanie inungunt aut felle caprae, carnesque vesci eas et, dum coquantur, oculos vaporari iis praecipiunt; id quoque referre arbitrantur, ut rutili coloris fuerit. volunt et suffiri oculos iocinere in ollis decocto, quidam inassato. fel quidem caprinum pluribus modis adsumunt,

cum melle contra caligines, cum veratri candidi tertia parte contra glaucomata, cum vino contra cicatrices et albugines et caligines et pterygia et argema, ad palpebras vero evolso prius pilo cum suco oleris ita, ut unctio inarescat, contra ruptas tuniculas cum lacte mulieris. ad omnia inveteratum fel efficacius putant. nec abdicant fimum ex melle inlitum epiphoris, contraque dolores medullam, item pulmonem leporis, et ad caligines fel cum passo aut melle. lupino quoque adipe vel medulla suum fricari oculos contra lippitudines praecipiunt. nam vulpinam linguam habentes in armilla lippituros negant.

aurium dolori et vitiis medentur urina apri in vitreo servata, fel apri vel suis vel bubulum cum oleo cedrino et rosaceo aequis portionibus, praecipue vero taurinum cum porri suco tepidum vel cum melle, si suppurent, contraque odorem gravem per se, tepefactum in malicorio. rupta in ea parte cum lacte mulierum efficaciter sanat. quidam et in gravitate aures sic perluendas putant, alii cum senecta serpentium et aceto - includunt lana - collutas ante calida aqua aut, si maior sit gravitas, verrinum fel cum murra et ruta in malicorio excalfactum infundunt, lardum quoque pingue; item fimum asini recens cum rosaceo instillatur, omnia tepefacta. utilior equi spuma vel equini fimi recentis cinis cum rosaceo, butyrum recens, sebum bubulum cum adipe anserino, urina caprae vel tauri aut fullonia vetus, calfactae vapore per lagoenae collum subeunte - admiscent aceti tertiam partem et aliquid murrae - , vituli, qui nondum herbam gustaverit, fimum mixto felle eiusdem et cute, quam relincunt angues, excalefactis prius auribus; lana autem medicamina ea includuntur. prodest et sebum vituli cum anseris adipe et ocimi suco, eiusdem medulla admixto cumino trito infusa, virus verrinum e scrofa exceptum, priusquam terram attingat, contra dolores; auribus fractis glutinum e naturis vitulorum factum et in aqua liquatum; aliis vitiis adips vulpium, item fel caprinum cum rosaceo tepido aut porri suco aut, si rupta sint aliqua ibi, e lacte mulieris; si gravitas audiendi, fel bubulum cum urina caprae vel hirci, vel si pus sit. in quocumque autem usu putant efficaciora haec in cornu caprino per dies xx infumata. laudant et coagulum leporis tertia parte #1108 dimidiaque sacopenii in ammineo vino. - parotidas ursinus adips conprimit pari pondere cerae et taurini sebi - addunt quidam hypocisthidem - , et per

se butyrum inlitum, si prius foveantur feni graeci decocti suco, efficacius cum strychno. prosunt et vulpium testes et taurinus sanguis aridus tritus, urina caprae calefacta instillata auribus, fimum eiusdem cum axungia inlitum.

dentes mobiles confirmat cervini cornus cinis doloresque eorum mitigat, sive infricentur sive colluantur. quidam efficaciorem ad omnes eosdem usus crudi cornus farinam arbitrantur. dentifricia utroque modo fiunt. magnum remedium est et in luporum capitis cinere. certum est in excrementis eorum plerumque inveniri ossa; haec adalligata eundem effectum habent, item leporina coagula per aurem infusa contra dolores. et capitis eorum cinis dentifricium est adiectoque nardo mulcet graveolentiam oris. aliqui murinorum capitum cinerem miscuisse malunt. reperitur in latere leporis os acui simile; hoc scariphare dentes in dolore suadent. talus bubulus accensus eos, qui labent cum dolore, admotus confirmat; eiusdem cinis cum murra dentifricium est. ossa quoque ex ungulis suum combusta eundem usum praebent, item ossa ex acetabulis pernarum, circa quae coxendices vertuntur. isdem sanari demissis in fauces iumentorum verminationes notum est, sed et combustis dentes confirmari, asinino quoque lacte percussu vexatos aut dentium eiusdem cinere, item lichene equi cum oleo infuso per aurem. est autem hoc non hippomanes, quod alioqui noxium omitto, sed in equorum genibus ac super ungulas. praeterea in corde equorum invenitur os dentibus caninis maximis simile; hoc scariphari dolorem aut exempto dente mortui equi maxillis ad numerum eius, qui doleat, demonstrant. equarum virus a coitu in ellychniis accensum anaxilaus prodidit lichenis equinorum capitum vires repraesentare monstrifice, similiter ex asinis. nam hippomanes tantas in veneficio vires habet, ut adfusum aeris mixturae in effigiem equae olympiae admotos mares equos ad rabiem coitus agat. medetur dentibus et fabrile glutinum in aqua decoctum inlitum et mox paulo detractum ita, ut confestim conluantur vino, in quo decocti sint cortices mali punici dulcis. efficax habetur et caprino lacte conlui dentes vel felle taurino. talorum caprae recentium cinis dentifricio placet et omnium fere villaticarum quadrupedum, ne saepius eadem dicantur.

cutem in facie erugari et tenerescere candore lacte asinino putant, notumque est quasdam cottidie septies genas custodito numero

fovere. poppaea hoc neronis principis instituit, balnearum quoque solia sic temperans, ob hoc asinarum gregibus eam comitantibus. impetus pituitae in facie butyro inlito tolluntur, efficacius cum cerussa, sincero vero ea vitia, quae serpunt, superinposita farina hordeacia, ulcera in facie membrana e partu bovis madida. frivolum videatur, non tamen omittendum propter desideria mulierum, talum candidi iuvenci xl diebus noctibusque, donec resolvatur in liquorem, decoctum et inlitum linteolo candorem cutisque erugationem praestare. fimo taurino malas rubescere aiunt, non ut crocodileam inlini melius sit; foveri frigida et ante et postea iubent. testas et quae decolorem faciunt cutem fimum vituli cum oleo et cummi manu subactum emendat; ulcera oris ac rimas sebum vituli vel bovis cum adipe anserino et ocimi suco. est et alia mixtura sebo vituli cum medulla cervi et albae spinae foliis una tritis. idem praestat et medulla cum resina vel, si vaccina sit, et ius e carne vaccina. lichenas oris praestantissime vincit glutinum factum e genitalibus vitulorum, liquatum aceto cum sulpure vivo, ramo ficulneo permixtum, ita ut bis die recens inlinatur, item lepras ex melle et aceto decoctum, quas et iocur hirci calidum inlitum tollit, sicut elephantiasin fel caprinum; etiamnum lepras ac furfures tauri fel addito nitro, urina asini circa canis ortum; maculas in facie fel utriusque per sese aqua infractum evitatisque solibus ac ventis post detractam cutem. similis effectus et in taurino vitulinove felle cum semine cunilae, cinere e cornu cervino, si canicula exoriente conburatur. asinino sebo cicatricibus, a lichene leprisque maxime, color redditur. hirci fel et lentigines tollit admixto caseo cum vivo sulpure spongeaeque cinere, ut sit mellis crassitudo. aliqui inveterato felle maluere uti, mixtis calidis furfuribus pondere oboli unius iiiique mellis, prius defricatis maculis. efficax eiusdem et sebum cum melanthio et sulpure et iride, labrorum fissuris cum anserino adipe ac medulla cervina resinaque et calce. - invenio aput auctores iis, qui lentigines habeant, negari magices sacrificiorum usus. -

lacte bubulo aut caprino tonsillae et arteriae exulceratae iuvantur. gargarizatur tepidum, ut est usus, expressum aut calefactum. caprinum utilius cum malva decoctum et sale exiguo. linguae exulcerationi et arteriarum prodest ius omasi gargarizatum, tonsillis autem privatim renes vulpium aridi cum melle triti inlitique, anginae

fel taurinum vel caprinum cum melle, iocur melis ex aqua. oris gravitatem ulceraque butyrum emendat. spinam aliudve quid faucibus adhaerens felis extrinsecus fimo perfricatis aut reddi aut delabi tradunt. strumas discutit fel aprunum vel bubulum tepidum inlitum - nam coagulum leporis e vino in linteolo exulceratis dumtaxat inponitur - , discutit et ungulae asini vel equi cinis ex oleo vel aqua inlitus et urina calefacta et bovis ungulae cinis ex aqua, fimum quoque fervens ex aceto, item sebum caprinum cum calce aut fimum ex aceto decoctum, testes volpini. prodest et sapo, galliarum hoc inventum rutilandis capillis. fit ex sebo et cinere, optimus fagino et caprino, duobus modis, spissus ac liquidus, uterque apud germanos maiore in usu viris quam feminis.

cervicium dolores butyro aut adipe ursino perfricentur, rigores bubulo sebo, quod et strumis prodest cum oleo. dolorem inflexibilem - opisthotonum vocant - levat urina caprae auribus infusa aut fimum cum bulbis inlitum; ungues contusos fel cuiuscumque animalis circumligatum; pterygia digitorum fel tauri aridum aqua calida dissolutum. quidam adiciunt sulpur et alumen pari pondere omnium.

tussim iocur lupi ex vino tepido sanat, ursinum fel admixto melle aut ex cornus bubuli summis partibus cinis vel saliva equi triduo pota - ecum mori tradunt - , pulmo cervinus cum gula sua arefactus in fumo, dein tusus ex melle cottidiano ecligmate; efficacior ad id subulo cervorum generis. sanguinem expuentes cervini cornus cinis, coagulum leporis tertia parte denarii cum terra samia et vino myrteo potum sanat; eiusdem fimi cinis in vino vesperi potus nocturnas tussis, pili quoque leporis suffiti extrahunt pulmonibus difficiles excreationes. purulentas autem exulcerationes pectoris pulmonisque et a pulmone graveolentiam halitus butyrum efficacissime iuvat cum pari modo mellis attici decoctum, donec rufescat, et matutinis sumptum ad mensuram lingulae; quidam pro melle laricis resinam addere maluere. si sanguis reiciatur, efficacem tradunt bubulum sanguinem, modice et cum aceto sumptum. nam de taurino credere temerarium est; sed glutinum taurinum iii obolis cum calida aqua bibitur in vetere sanguinis excreatione.

stomachum exulceratum lactis asinini potus reficit, item bubuli; rosiones eius caro bubula mixto aceto et vino cocta; rheumatismos cornus cervini cinis; sanguinis excreationes haedinus sanguis recens

ad cyathos ternos cum aceto acri pari modo fervens potus, coagulum tertia parte ex aceto potum; iocineris dolores lupi iocur aridum ex mulso, asini iocur aridum cum petroselini partibus ii ac nucibus iii ex melle tritum et in cibo sumptum, sanguis hircinus cibo aptatus. suspiriosis ante omnia efficax est potus equiferorum sanguinis, proxime lactis asinini tepidi, bubuli decocti ita, ut serum ex eo bibatur, addito in iii heminas cyatho nasturtii albi perfusi aqua, dein melle diluti. iocur quoque vulpinum aut pulmo in vino nigro aut fel ursinum in aqua laxat meatus spirandi.

lumborum dolores et quaecumque alia molliri opus sit ursino adipe perfricari convenit, cinerem apruni aut suilli fimi inveterati aspergi potioni vini. - (adferunt et magi sua commenta: primum omnium rabiem hircorum, si mulceatur barba, mitigari, eadem praecisa non abire eos in alienum gregem). ischiadicis fimum bubulum inponunt calfactum in foliis cinere ferventi. huic admiscent fimum caprinum et subdito linteolo uncto cava manu, quantum pati possit, fervens sustineri iubent ita, ut si laeva pars doleat, haec medicina in dextera manu fiat aut e contrario, fimumque ad eum usum acus aereae punctu tolli iubent. modus est curationis, donec vapor ad lumbos pervenisse sentiatur; postea manum porro tuso inlinunt, item lumbos ipso fimo cum melle. suadent in eo dolore et testes leporis devorare. in renium dolore leporis renes crudos devorari iubent aut certe coctos ita, ne dente contingantur. ventris quidem dolore temptari negant talum leporis habentes.

lienem sedat fel apri vel suis potum, cervini cornus cinis in aceto, efficacissime tamen inveteratus lien asini ita, ut in triduo sentiatur utilitas. asinini pulli fimum, quod primum edidit - poleam vocant - , syri dant in aceto mulso. datur et equi lingua inveterata ex vino praesentaneo medicamento, ut didicisse se ex barbaris caecilius bion tradidit, et lien bubulus simili modo, recens autem assus vel elixus in cibo. in vesica quoque bovis alii capita xx tusa cum aceti sextario imponuntur ad lienis dolores. eadem ex causa emi lienem vituli, quanti indicatus sit, iubent magi nulla pretii cunctatione, quoniam hoc quoque religiose pertineat, divisumque per longitudinem adnecti tunicae utrimque et induentem pati decidere ad pedes, dein collectum arefacere in umbra. cum hoc fiat, simul residere lienem aegri vitiatum liberarique eum morbo dicitur. prodest et pulmo vulpium

cinere siccatus atque in aqua potus, item haedorum lien impositus.

alvum sistit cervi sanguis, item cornus cinis, iocur aprunum ex vino potum citra salem recensque, item assum, vel suillum, hircinum decoctum ad quintas hemina in vino, coagulum leporis in vino ciceris magnitudine aut, si febris sit, ex aqua - aliqui et gallam adiciunt, alii per se leporis sanguine contenti sunt - , lac coctum, equini fimi cinis in aquae potu, taurini cornus veteris e parte ima cinis inspersus potioni aquae, sanguis hircinus carbone decoctus, corium caprinum cum suo pilo decoctum suco epoto, coagulum equi et sanguis caprinus vel medulla vel iocur. - alvum solvit fel lupi cum elaterio umbilico inlitum vel lactis equini potus, item caprini cum sale et melle, caprae fel cum cyclamini suco et aluminis momento - aliqui et nitrum et aquam adiecisse malunt - , fel tauri cum absinthio tritum ac subditum pastillo, butyrum largius sumptum. - coeliacis et dysintericis medetur iocur vaccinum, cornus cervini cinis iii digitis captus in potione aquae, coagulum leporis subactum in pane, si vero sanguinem detrahant, in polenta, apruni vel suilli vel leporini fimi cinis inspersus potioni tepidi vini. vituli quoque ius vulgariter dari inter auxilia coeliacorum et dysintericorum tradunt. lactis asinini potus utilior addito melle, nec minus efficax fimi cinis ex vino utrique vitio, item polea supra dicta, equi coagulum, quod aliqui hippacen appellant, etiam si sanguinem detrahant, vel fimi cinis dentiumque eiusdem tusorum farina salutares et bubuli lactis decocti potus. dysintericis addi mellis exiguum praecipiunt et, si tormina sint, cornus cervini cinerem aut fel taurinum cumino mixtum et cucurbitae carnes umbilico inponere. caseus recens vaccinus inmittitur ad utrumque vitium, item butyrum heminis iiii cum resinae terebinthinae sextante aut cum malva decocta aut cum rosaceo. datur et sebum vitulinum aut bubulum, item medulla - et coquitur cum farinae ceraeque exiguo et oleo, ut sorberi possit, medulla et in pane subigitur - , lac caprinum ad dimidias partes decoctum; si sint et tormina, additur protropum. torminibus satis esse remedii in leporis coagulo poto e vino tepido vel semel arbitrantur aliqui; cautiores et sanguine caprino cum farina hordeacea et resina ventrem inlinunt. ad omnes epiphoras ventris inlini caseum mollem suadent, veterem autem in farinam tritum coeliacis et dysintericis dari, cyatho casei in cyathis vini cibarii iii. sanguis caprinus decoctus cum medulla

dysintericis, iocur assum caprae coeliacis subvenit, magisque etiam hirci, in vino austero decoctum potumque vel ex oleo myrteo umbilico inpositum. quidam decocunt a iii sextariis aquae ad heminam addita ruta. utuntur et liene asso caprae hircive et sebo hirci in pane, qui cinere coctus sit, caprae a renibus maxime, ut per se hauriatur protinusque modice frigida. sorberi iubent aliqui et in aqua decoctum sebum admixta polenta et cumino et aneto acetoque. inlinunt et ventrem coeliacis fimo cum melle decocto. utuntur ad utrumque vitium et coagulo haedi in vino myrtite fabae magnitudine poto et sanguine eiusdem in cibum formato, quem sanguiculum vocant. infundunt dysintericis et glutinum taurinum aqua calida resolutum. inflationes discutit vitulinum fimum in vino decoctum. - intestinorum vitiis magnopere prodest coagulum cervorum decoctum cum lente betaque atque ita in cibo sumptum, leporis pilorum cinis cum melle decoctus, lactis caprini potus decocti cum malva exiguo sale addito; si et coagulum addatur, maioribus emolumentis fiat. eadem vis est et in sebo caprino in sorbitione aliqua, uti protinus hauriatur frigida aqua. item feminum haedi cinis rupta intestina sarcire mire traditur, fimum leporis cum melle decoctum et cottidie fabae magnitudine sumptum ita, ut deploratos sanaverint. laudant et caprini capitis cum suis pilis discocti sucum.

tenesmos, id est crebra et inanis voluntas desurgendi, tollitur poto lacte asinino, item bubulo. - taenearum genera pellit cervini cornus cinis potus. - quae in excrementis lupi diximus inveniri ossa, si terram non attigerint, colo medentur adalligata bracchio. polea quoque supra dicta magnopere prodest decocta in sapa, item suilli fimi farina addito cumino in aqua rutae decoctae, cornus cervini teneri cinis cocleis africanis cum testa sua tusis mixtus in vini potione.

vesicae calculorumque cruciatibus auxiliatur urina apri et ipsa vesica pro cibo sumpta, efficacius, si prius fumo maceretur utrumque. vesicam elixam mandi oportet, et a muliere feminae suis. inveniuntur in iocineribus eorum lapilli aut duritiae lapillis similes, candidae, sicut in vulgari sue, quibus contritis atque in vino potis pelli calculos aiunt. ipsi apro tam gravis urina sua est, ut nisi egesta fugae non sufficiat ac velut devinctus opprimatur; exuri illa tradunt eos. leporis renes inveterati in vino poti calculos pellunt. in pernae suum articulo

os diximus, quod decoctum ius facit urinae utile. asini renes inveterati tritique ex vino mero dati vesicae medentur. calculos expellunt lichenes equini ex vino aut mulso poti diebus xl. prodest et ungulae equinae cinis in vino aut aqua, item fimum caprarum in mulso, efficacius silvestrium, pili quoque caprini cinis; verendorum carbunculis cerebrum apri vel suis sanguisque. vitia vero, quae in eadem parte serpunt, iocur eorum combustum, maxime iunipiri ligno, cum charta et arrhenico sanat, fimi cinis, fel bubulum cum alumine aegyptio ac murra ad crassitudinem mellis subactum, insuper beta ex vino cocta inposita, caro quoque; manantia vero ulcera sebum cum medulla vituli in vino decoctum, fel caprinum cum melle rubique suco, vel si serpant; fimum etiam prodesse cum melle dicunt aut cum aceto et per se butyrum. - testium tumor sebo vituli addito nitro cohibetur vel fimo eiusdem ex aceto decocto. - urinae incontinentiam cohibet vesica apruna, si assa mandatur, ungularum apri vel suis cinis potioni inspersus, vesica feminae suis combusta ac pota, item haedi, vel pulmo, cerebrum leporis in vino, eiusdem testiculi tosti vel coagulum cum anserino adipe in polenta, renes asini in mero triti potique. magi verrini genitalis cinere poto ex vino dulci demonstrant urinam facere in canis cubili ac verba adicere, ne ipse urinam faciat ut canis in suo cubili. rursus ciet urinam vesica suis, si terram non attigerit, inposita pubi.

sedis vitiis praeclare prodest fel ursinum cum adipe; quidam adiciunt spumam argenti ac tus. prodest et butyrum cum adipe anserino ac rosaceo; modum ipsae res statuunt, ut sint inlitu faciles. praeclare medetur et taurinum fel in linteolis concerptis rimasque perducit ad cicatricem. inflationibus in ea parte sebum vituli, maxime ab inguinibus, cum ruta; ceteris vitiis medetur sanguis caprinus cum polenta, item fel caprinum condylomatis per se, item fel lupinum ex vino. panos et apostemata in quacumque parte sanguis ursinus discutit, item taurinus aridus tritus. praecipuum tamen remedium traditur in calculo onagri, quem dicitur, cum interficiatur, reddere urina liquidiorem initio, sed in terra spissantem se; hic adalligatus femini omnes impetus discutit omnique suppuratione liberat. est autem rarus inventu nec ex omni onagro, sed mire celebrant remedio. prodest et urina asini cum melanthio et ungulae equinae cinis cum oleo et aqua inlitus, sanguis equi, praecipue admissarii, sanguis

bubulus, item fel. caro quoque eosdem effectus habet calida inposita et ungulae cinis ex aqua aut melle, urina caprarum, hircorum quoque carnes in aqua decoctae aut fimum ex iis cum melle decoctum, fel verrinum, urina suum in lana inposita. - femina adteri adurique equitatu notum est; utilissimum est ad omnes inde causas spumam equi ex ore inguinibus inlinere. - inguina et ex ulcerum causa intumescunt. remedio sunt equi saetae iii totidem nodis alligatae intra ulcus.

podagris medetur ursinus adips taurinumque sebum, pari pondere et cerae. addunt quidam hypocisthidem et gallam. alii hircinum praeferunt sebum cum fimo caprae et croco, sinapi, item caulibus hederae tritis ac perdicio vel flore cucumeris silvestris. item bovis fimum cum aceti faece magnificant et vituli, qui nondum herbam gustaverit, fimum aut per se sanguinem tauri, vulpem decoctam vivam, donec ossa tantum restent, lupumve vivum oleo cerati modo incoctum, sebum hircinum cum helxines parte aequa, sinapis tertia, fimi caprini cinerem cum axungia. quin et ischiadicos uri sub pollicibus pedum eo fimo fervente utilissime tradunt, articulorumque vitiis fel ursinum utilissimum esse et pedes leporis adalligatos, podagras quidem mitigari pede leporis viventi absciso, si quis secum adsidue habeat. - perniones ursinus adips rimasque pedum omnes sarcit, efficacius alumine addito, sebum caprinum, dentium equi farina, aprunum vel suillum fel cum adipe, pulmo inpositus et si subtriti sint contunsive offensatione, si vero adusti frigore, leporini pili cinis; eiusdem pulmo contusis dissectus aut pulmonis cinis. sole adusta sebo asinino aptissime curantur, item bubulo cum rosaceo. - clavos et rimas callique vitia fimum apri vel suis recens inlitum ac tertio die solutum sanat, talorum cinis, pulmo aprunus aut suillus aut cervinus; adtritus calciamentorum urina asini cum luto suo inlita; clavos sebum bubulum cum turis polline; perniones vero corium conbustum; melius, si ex vetere calciamento; iniurias e calceatu ex oleo corii caprini cinis. - varicum dolores sedat fimi vitulini cinis cum lilii bulbis decoctus addito melle modico, itemque omnia inflammata et suppurationes minantia. eadem res et podagris prodest et articulariis morbis, e maribus praecipue vitulis; articulorum adtritis fel aprorum vel suum linteo calefacto inpositum, vituli, qui nondum herbam gustaverit, fimum, item caprinum cum melle in aceto

decoctum. - ungues scabros sebum vituli emendat, item caprinum admixta sandaraca. - verrucas vero aufert fimi vitulini cinis ex aceto, asini urina et lutum.

comitiali morbo testes ursinos edisse prodest vel aprunos bibisse ex lacte equino aut ex aqua, item aprunam urinam ex aceto mulso, efficacius quae inaruerit in vesica sua. dantur et suum testiculi inveterati tritique in suis lacte, praecedente vini abstinentia et sequente continuis quinis diebus. dantur et leporis sale custoditi pulmones cum turis tertia parte in vino albo per dies xxx, item coagula eiusdem; asini cerebrum ex aqua mulsa, infumatum prius in foliis, semuncia per dies vii, ungularum eius cinis coclearibus binis toto mense potus, item testes sale adservati et inspersi potioni in asinarum maxime lacte vel ex aqua. membrana partus earum, praecipue si marem pepererint, olefactata accedente morbo comitialium resistit. sunt qui e mare nigroque cor edendum cum pane sub diu prima aut secunda luna praecipiant, alii carnem, aliqui sanguinem aceto dilutum per dies xl bibendum. quidam urinam aquae ferrariae ex officinis miscent eademque potione et lymphatis medentur. comitialibus datur et lactis equini potus, lichen equi in aceto mulso bibendus; dantur et carnes caprinae in rogo hominis tostae, ut volunt magi, sebum earum cum felle taurino pari pondere decoctum et in folliculo fellis reconditum ita, ne terram attingat, potum vero ex aqua sublime. morbum ipsum deprehendit caprini cornus vel cervini usti nidor. - sideratis urina pulli asinini nardo admixto perunctione prodesse dicitur.

regio morbo cornus cervini cinis, sanguis asini ex vino, item fimum asinini pulli, quod primum edidit a partu, datum fabae magnitudine e vino medetur intra diem tertium. eadem et ex equino pullo similiterque vis est.

fractis ossibus praesentaneus maxillarum apri cinis vel suis; item lardum elixum atque circumligatum mira celeritate solidat. costis quidem fractis laudatur unice caprinum fimum ex vino vetere: aperit, extrahit, persanat.

febres arcet cervorum caro, ut diximus; eas quidem, quae certo dierum numero redeunt, oculus lupi dexter salsus adalligatusque, si credimus magis. est genus febrium, quod amphemerinon vocant; hoc liberari tradunt, si quis e vena auris asini iii guttas sanguinis in ii

heminis aquae hauserit. quartanis magi excrementa felis cum digito bubonis adalligari iubent et, ne recidant, non removeri septeno circumitu. quis hoc, quaeso, invenire potuit quae est ista mixtura cur digitus potissimum bubonis electus est modestiores iocur felis decrescente luna occisae inveteratum sale ex vino bibendum ante accessiones quartanae dixere. iidem magi fimi bubuli cinere consperso puerorum urina inlinunt digitos pedum manuumque. leporis cor adalligant, coagulum ante accessiones propinant. datur et caseus caprinus recens cum melle diligenter sero expresso.

melancholicis fimum vituli in vino decoctum remedio est. - lethargicos excitat asini lichen naribus inlitus ex aceto, caprini cornus nidor aut pilorum, iocur aprunum; itaque et veternosis datur. - phthisicis medentur iocur lupi ex vino macro, suis feminae herbis pastae laridum, carnes asininae ex iure sumptae; hoc genere maxime in achaia curant id malum. fimi quoque aridi, sed pabulo viridi pasto bove, fumum harundine haustum prodesse tradunt bubulive cornus mucronem exustum ii coclearium mensura addito melle pilulis devoratis. caprae sebo in pulte alicacia et phthisim et tussim sanari vel recenti cum mulso liquefacto ita, ut uncia in cyathum addatur rutaeque ramo permisceatur, non pauci tradunt. rupicaprae sebi cyatho et lactis pari mensura deploratum phthisicum convaluisse certus auctor adfirmat. sunt qui et suum fimi cinerem profuisse scripserint in passo et cervi pulmonem, maxime subulonis, siccatum fumo tritumque in vino.

hydropicis auxiliatur urina e vesica apri paulatim data in potu, efficacius quae inaruerit cum vesica sua, fimi taurini maxime, sed et bubuli - de armentivis loquor - , quod bolbiton vocant, cinis coclearium iii in mulsi hemina, bovis feminae in mulieribus, ex altero sexu in viris, quod veluti mysterium occultarunt magi, fimum vituli masculi inlitum, fimi vitulini cinis cum semine staphylini aequa portione ex vino, sanguis caprinus cum medulla. efficaciorem putant hirci, utique si lentisco pascatur.

igni sacro ursinus adips inlinitur, maxime qui est ad renes, vitulinum fimum recens vel bubulum, caseus caprinus siccus cum porro, ramenta pellis cervinae delecta pumice ex aceto trita; rubori cum prurigine equi spuma aut ungulae cinis; eruptionibus pituitae asinini fimi cinis cum butyro; papulis nigris caseus caprinus siccus ex

melle et aceto in balneis, oleo remoto; pusulis suilli fimi cinis aqua inlitus vel cornus cervini cinis, luxatis recens fimum aprunum vel suillum, item vitulinum, verris spuma recens cum aceto, fimum caprinum cum melle, bubula caro inposita; ad tumores fimum suillum sub testo calefactum tritumque cum oleo. duritias corporum omnes mollit optime adips e lupis inlitus. in iis, quae rumpere opus sit, plurimum proficit fimum bubulum in cinere calefactum aut caprinum in vino vel aceto decoctum; in furunculis sebum bubulum cum sale aut, si dolores sint, cum oleo liquefactum sine sale, simili modo caprinum; in ambustis ursinus adips cum lilii radicibus, aprunum aut suillum fimum inveteratum, saetarum ex his e penicillis tectoriis cinis cum adipe tritus, tali bubuli cinis cum cera et medulla cervina, fel tauri, fimum leporis et caprarum fimum. sine cicatrice sanare dicitur glutinum. praestantissimum fit ex auribus taurorum et genitalibus, nec quicquam efficacius prodest ambustis, sed adulteratur nihil aeque, quibusvis pellibus inveteratis calciamentisque etiam decoctis. rhodiacum fidelissimum, eoque pictores et medici utuntur; id quoque quo candidius, eo probatius; nigrum et lignosum damnatur.

nervorum doloribus fimum caprinum decoctum in aceto cum melle utilissimum putant vel putrescente nervo. spasmata et percussu vitiata fimo apruno curant vere collecto et arefacto; sic et quadrigas agentes tractos rotave vulneratos et quoquo modo sanguine contuso, vel si recens inlinatur. sunt qui incoxisse aceto utilius putent. quin et in potu farinam eam ruptis convulsisque, eversis ex aceto salutarem promittunt. reverentiores cinerem eius ex aqua bibunt, feruntque et neronem principem hac potione recreari solitum, cum sic quoque se trigario adprobare vellet. proximam suillo fimo vim putant.

sanguinem sistit coagulum cervinum ex aceto, item leporis, huius quidem et pilorum cinis, item e fimo asini cinis inlitus - efficacior vis e maribus aceto admixto et in lana ad omne profluvium inposito - , similiter ex equino, capitis et feminum aut fimi vitulorum cinis inlitus ex aceto, item caprini cornus vel fimi ex aceto. hircini vero iocineris dissecti sanies efficacior, et cinis utriusque ex vino potus vel naribus ex aceto inlitus, hircini quoque utris, vinarii dumtaxat, cinis cum pari pondere resinae, quo genere sistitur sanguis et vulnus glutinatur. haedinum quoque coagulum ex aceto et feminum eius

combustorum cinis similiter pollere traduntur.

ulcera sanat in tibiis cruribusque ursinus adips admixta rubrica; quae vero serpant, fel aprunum cum resina et cerussa, maxillarum apri vel suum cinis, fimum suum inlitum siccum, item caprinum ex aceto subactum et subfervefactum. cetera purgantur et explentur butyro, cornus cervini cinere vel medulla cervi, felle taurino cum cyprino oleo aut irino. fimum recens suum vel inveterati farina inlinuntur vulneribus ferro factis. phagedaenis et fistulis inmittitur fel tauri cum suco porri aut lacte mulierum vel sanguis aridus cum cotyledone herba. carcinomata curat coagulum leporis cum pari pondere capparis adspersum vino, gangraenas ursinum fel pinna inlitum, asini ungularum cinis ea quae serpunt ulcera inspersus. sanguis equi adrodit carnes septica vi, item fimi equini inveterati favilla; ea vero, quae phagedaenas vocant in ulcerum genere, corii bubuli cinis cum melle. caro vituli recentia vulnera non patitur intumescere, fimum bubulum cum melle. fimi vitulini cinis sordida ulcera et quae cacoe+the vocant et lacte mulieris sanant; recentes plagas ferro inlatas glutinum taurinum liquefactum, tertio die solutum. caseus caprinus siccus ex aceto ac melle purgat ulcera; quae vero serpant, cohibet sebum cum cera, idem addita pice ac sulpure percurat. similiter proficit ad cacoe+the haedi feminum cinis e lacte mulieris, et adversus carbunculos suis feminae cerebrum tostum inlitumque.

scabiem hominis asininae medullae maxime abolent et urina eiusdem cum suo luto inlita, butyrum etiam, quod in iumentis proficit cum resina calida, glutinum taurinum in aceto liquefactum addita calce, fel caprinum cum aluminis cinere; bovas fimum bubulum, unde et nomen traxere. canum scabies sanatur bubulo sanguine recenti iterumque, cum inarescat, inlito et postero die abluto cinere lixivo.

spinae et similia corpori extrahuntur felis excrementis, item caprae ex vino, coagulo quocumque, sed maxime leporis, cum turis polline et oleo aut cum visci pari pondere aut cum propoli. - cicatrices nigras sebum asininum reducit ad colorem, fel vituli extenuat calefactum. medici adiciunt murram et mel et crocum aereaque pyxide condunt; aliqui et florem aeris admiscent.

mulierum purgationes adiuvat fel tauri in lana sucida adpositum -

olympias thebana addit oesypum et nitrum - , cornus cervini cinis potus, item vulva laborantes inlitus quoque et fel taurinum cum opio adpositum obolis binis. vulvas et pilo cervino suffire prodest. tradunt cervas, cum senserint se gravidas, lapillum devorare, quem in excrementis repertum aut in vulva - nam et ibi invenitur - custodire partus adalligatum. inveniuntur et ossicula in corde et in vulva perquam utilia gravidis parturientibusque. nam de pumice, qui in vaccarum utero simili modo invenitur, diximus in natura boum. lupi adips inlitus vulvas mollit, dolores earum iocur, carnes vero lupi edisse parituris prodest aut si incipientibus parturire sit iuxta qui ederit, adeo ut etiam contra inlatas noxias valeat. eundem supervenire perniciosum est. magnus et leporis usus mulieribus. vulvas adiuvat pulmo aridus potus, profluvia iocur cum samia terra ex aqua potum, secundas coagulum - caventur pridiana balnea - , inlitum quoque cum croco et porri suco; in vellere adpositum abortus mortuos expellit. si vulva leporum in cibis sumatur, mares concipi putant; hoc et testiculis eorum et coagulo profici; conceptum leporis utero exemptum iis, quae parere desierint, restibilem fecunditatem adferre. sic conceptus leporis saniem et viro magi propinant, item virgini viiii grana fimi, ut stent perpetuo mammae. coagulum quoque ob id cum melle inlinunt, sanguinem ubi evolsos pilos renasci nolunt. inflationi vulvae fimum aprunum suillumve cum oleo inlini prodest. efficacius sistit farina aridi, ut aspergatur potioni, vel si gravidae aut puerperae torqueantur. lacte suis poto cum mulso adiuvantur partus mulierum; per se vero potum deficientia ubera puerperarum replet. eadem circumlita sanguine feminae suis minus crescunt. si doleant, lactis asinini potu mulcentur, quod addito melle sumptum et purgationes earum adiuvat. sanat et vulvarum exulcerationes eiusdem animalis sebum inveteratum et in vellere adpositum duritias vulvarum emollit. per se vero recens vel inveteratum ex aqua inlitum psilotri vim optinet. eiusdem animalis lien inveteratus ex aqua inlitus mammis abundantiam facit, vulvas suffitu corrigit. ungulae asininae suffitio partum maturat, ut vel abortus evocetur, nec aliter adhibetur, quoniam viventem partum necat. eiusdem animalis fimum si recens inponatur, profluvia sanguinis mire sedare dicitur, nec non et cinis eiusdem fimi, qui et vulvae prodest inpositus. equi spuma inlita per dies xl, priusquam primum nascantur, pili restinguntur, item cornus

cervini decocto; melius, si recentia sint cornua. lacte equino iuvantur vulvae collutae. quod si mortuus partus sentiatur, lichen equae e dulci potus eicit, item ungula suffitu aut fimum aridum. vulvas procidentes butyrum infusum sistit. induratam vulvam aperit fel bubulum rosaceo admixto, foris vellere cum resina terebinthina inposito. aiunt et suffitu fimi e mare bove procidentes vulvas reprimi, partus adiuvari, conceptus vero vaccini lactis potu. sterilitatem a partus vexatione fieri certum est. hanc emendari olympias thebana adfirmat felle tauri et adipe serpentium et aerugine ac melle medicatis locis ante coitus. vitulinum quoque fel in purgationibus sub coitu adspersum vulvae etiam duritias veteres emollit et profluvium minuit umbilico peruncto atque in totum vulvae prodest. modum statuunt fellis pondere #1108, opii tertiam, admixto amygdalino oleo, quantum satis esse appareat; haec in vellere inponunt. masculi fel vituli cum mellis dimidio tritum servatur ad vulvas. carnem vituli si cum aristolochia inassatam edant circa conceptum, marem parituras promittunt. medulla vituli in vino et aqua decocta cum sebo exulcerationibus vulvarum inposita prodest, item adips vulpium excrementumque felium, hoc cum resina et rosaceo inpositum. caprino cornu suffiri vulvam utilissimum putant. silvestrium caprarum sanguis cum palma marina pilos detrahit; ceterarum vero fel callum vulvarum emollit inspersum et a purgatione conceptus facit. sic quoque psilotri vis efficitur; evulsis pilis triduo servatur inlitum. profluvium quamvis inmensum urinae caprae potu sisti obstetrices promittunt et si fimum inlinatur. membrana caprarum, in qua partus editur, inveterata potuque sumpta in vino secundas pellit. haedorum pilis suffiri vulvas utile putant et in profluvio sanguinis coagulum bibi aut cum hyoscyami semine inponi. e bove silvestri nigro si sanguine ricini lumbi perungantur mulieri, taedium veneris fieri dicit osthanes, idem amoris potu hirci urinae admixto propter fastidium nardo.

infantibus nihil butyro utilius per se et cum melle, privatim et in dentitione et ad gingivas et ad oris ulcera. dens lupi adalligatus infantium pavores prohibet dentiendique morbos, quod et pellis lupina praestat. dentes quidem eorum maximi equis quoque adalligati infatigabilem cursum praestare dicuntur. leporum coagulo ubere inlito sistitur infantium alvus. iocur asini admixta modice panace

instillatum in os a comitialibus morbis et aliis infantes tuetur; hoc xl diebus fieri praecipiunt. et pellis asini iniecta inpavidos infantes facit. dentes, qui equis primum cadunt, facilem dentitionem praestant adalligati infantibus; efficacius, si terram non attigere. lien bubulus in melle et datur et inlinitur ad lienis dolores; sedat ulcera manantia cum melle lien vituli, in vino decoctus tritusque et inlitus ulcuscula oris. cerebrum caprae magi per anulum aureum traiectum, priusquam lac detur, infantibus instillant contra comitiales ceterosque infantium morbos. caprinum fimum inquietos infantes adalligatum panno cohibet, maxime puellas. lacte caprino aut cerebro leporum perunctae gingivae faciles dentitiones faciunt.

somnos fieri lepore sumpto in cibis cato arbitrabatur, vulgus et gratiam corpori in viiii dies, frivolo quidem ioco, cui tamen aliqua debeat subesse causa in tanta persuasione. magi felle caprae, sacrificatae dumtaxat, inlito oculis vel sub pulvino posito somnum allici dicunt. - sudores inhibet cornus caprini cinis e myrteo oleo perunctis.

coitus stimulat fel aprunum inlitum, item medullae suum haustae, sebum asininum anseris masculi adipe admixto inlitum; item a coitu equi vergilio quoque descriptum virus et testiculi equini aridi, ut potioni interi possint, dexterve asini testis in vino potus portioneve adalligatus bracchiali; eiusdem a coitu spuma conlecta russeo panno et inclusa argento, ut osthanes tradit. salpe genitale id in oleum fervens mergi iubet septies eoque perungui pertinentes partes, dalion cinerem ex eodem bibi vel tauri a coitu urinam, luto ipso inlini pubem. at e diverso tauri fimo inlito cohibetur virorum venus. - ebrietatem arcet pulmo apri aut suis assus, ieiunis in cibo sumptus eo die, item haedinus.

mira praeterea traduntur in iisdem animalibus: vestigium equi excussum ungula, ut solet plerumque, si quis collectum reponat, singultus remedium esse recordantibus, quonam loco id reposuerint; iocur luporum equinae ungulae simile esse; rumpi equos, qui vestigia luporum sub equite sequantur; talis suum discordiae vim quandam inesse; in incendiis, si fimi aliquid egeratur e stabulis, facilius extrahi nec recurrere oves bovesque; hircorum carnes virus non resipere, si panem hordeacium eo die, quo interficiantur, ederint laserve dilutum biberint, nullas vero teredinem sentire luna decrescente induratas

sale. adeoque nihil omissum est, ut leporem surdum celerius pinguescere reperiamus, animalium vero medicinas: si sanguis profluat iumentis, suillum fimum ex vino infundendum, boum autem morbis sebum, sulpur vivum, alium silvestre, ovum crudum trita in vino danda aut vulpis adipem; carnem caballinam discoctam potu suum morbis mederi, omnium vero quadripedum morbis capram solidam cum corio et ranam rubetam discoctas; gallinaceos non attingi a vulpibus, qui iocur animalis eius aridum ederint, vel si pellicula ex eo collo induta galli inierint; similiter in felle mustelae; boves in cypro contra tormina hominum excrementis sibi mederi; non supteri pedes boum, si prius cornua ima pice liquida perunguantur; lupos in agrum non accedere, si capti unius pedibus infractis cultroque adacto paulatim sanguis circa fines agri spargatur atque ipse defodiatur in eo loco, ex quo coeperit trahi; aut si vomerem, quo primus sulcus eo anno in agro ductus sit, excussum aratro focus larum, quo familia conveniet, urat, lupum nulli animalium nociturum in eo agro, quam diu id fiat.

hinc deinde praevertemur ad animalia sui generis, quae aut placida non sunt aut fera.

LIBER XXIX

naturae remediorum atque multitudo instantium ac praeteritorum plura de ipsa medendi arte cogunt dicere, quamquam non ignaros, nulli ante haec latino sermone condita ancepsque, lubricum esse rerum omnium novarum exordium, utique tam sterilis gratiae tantaeque difficultatis in promendo. sed quaestionem occurrere verisimile est omnium, qui haec noscant, cogitationi, quonam modo exoleverint in medicinae usu quae iam parata atque pertinentia erant, mirumque et indignum protinus subit, nullam artium inconstantiorem fuisse aut etiamnunc saepius mutari, cum sit fructuosior nulla. dis primum inventores suos adsignavit et caelo dicavit, nec non et hodie multifariam ab oraculis medicina petitur. auxit deinde famam etiam crimine, ictum fulmine aesculapium fabulata, quoniam tyndareum revocavisset ad vitam - nec tamen cessavit narrare alios revixisse opera sua - , clara troianis temporibus, a quibus fama certior, vulnerum tamen dumtaxat remediis.

sequentia eius, mirum dictu, in nocte densissima latuere usque ad peloponnesiacum bellum. tunc eam revocavit in lucem hippocrates, genitus in insula coo in primis clara ac valida et aesculapio dicata. is, cum fuisset mos, liberatos morbis scribere in templo eius dei quid auxiliatum esset, ut postea similitudo proficeret, exscripsisse ea traditur atque, ut Varro apud nos credit, templo cremato iis instituisse medicinam hanc, quae clinice vocatur. nec fuit postea quaestus modus, quoniam prodicus, selymbriae natus, e discipulis eius instituit quam vocant iatralipticen et unctoribus quoque medicorum ac mediastinis vectigal invenit.

horum placita chrysippus ingenti garrulitate mutavit, plurimumque et ex chrysippo discipulus eius erasistratus, aristotelis filia genitus. hic antiocho rege sanato centum talentis donatus est a rege ptolemaeo filio eius, ut incipiamus et praemia artis ostendere.

alia factio ab experimentis se cognominans empiricen coepit in sicilia, acrone agragantino empedoclis physici auctoritate commendato, dissederuntque hae scholae, et omnes eas damnavit herophilus in musicos pedes venarum pulsu discripto per aetatum gradus. deserta deinde et haec secta est, quoniam necesse erat in ea

litteras scire; mutata et quam postea asclepiades, ut rettulimus, invenerat. auditor eius themison fuit seque inter initia adscripsit illi, mox procedente vita sua et placita mutavit, sed et illa antonius musa eiusdem auctoritate Divi Augusti, quem contraria medicina gravi periculo exemerat. multos praetereo medicos celeberrimosque ex iis cassios, carpetanos, arruntios, rubrios. [ccl] hs annuae iis mercedes fuere apud principes. q. stertinius inputavit principibus, quod sestertiis quingenis annuis contentus esset, sescena enim sibi quaestu urbis fuisse enumeratis domibus ostendebat. par et fratri eius merces a claudio caesare infusa est, censusque, quamquam exhausti operibus neapoli exornata, heredi hs [ccc] reliquere, quantum aetate eadem arruntius solus. exortus deinde est vettius valens, adulterio messalinae claudii caesaris nobilitatus, pariterque eloquentiae adsectatores et potentiae nanctus novam instituit sectam. eadem aetas neronis principatu ad thessalum transilivit, delentem cuncta placita et rabie quadam in omnis aevi medicos perorantem, quali prudentia ingenioque, aestimari vel uno argumento abunde potest, cum monumento suo, quod est appia via, iatronicen se inscripserit. nullius histrionum equorumque trigarii comitatior egressus in publico erat, cum crinas massiliensis arte geminata, ut cautior religiosiorque, ad siderum motus ex ephemeride mathematica cibos dando horasque observando auctoritate eum praecessit, nuperque hs [c] reliquit, muris patriae moenibusque aliis paene non minore summa extructis. hi regebant fata, cum repente civitatem charmis ex eadem massilia invasit damnatis non solum prioribus medicis, verum et balineis, frigidaque etiam hibernis algoribus lavari persuasit. mersit aegros in lacus. videbamus senes consulares usque in ostentationem rigentes, qua de re exstat etiam annaei senecae adstipulatio. nec dubium est omnes istos famam novitate aliqua aucupantes anima statim nostra negotiari. hinc illae circa aegros miserae sententiarum concertationes, nullo idem censente, ne videatur accessio alterius. hinc illa infelicis monumenti inscriptio: “turba se medicorum perisse.” mutatur ars cottidie totiens interpolis, et ingeniorum graeciae flatu inpellimur, palamque est, ut quisque inter istos loquendo polleat, imperatorem ilico vitae nostrae necisque fieri, ceu vero non milia gentium sine medicis degant nec tamen sine medicina, sicuti populus romanus ultra sexcentesimum annum, neque ipse in accipiendis artibus lentus,

medicinae vero etiam avidus, donec expertam damnavit.

etenim percensere insignia priscorum in his moribus convenit. cassius hemina ex antiquissimis auctor est primum e medicis venisse romam peloponneso archagathum lysaniae filium l. aemilio m. livio cos. anno urbis dxxxv, eique ius quiritium datum et tabernam in compito acilio emptam ob id publice. vulnerarium eum fuisse egregium, mireque gratum adventum eius initio, mox a saevitia secandi urendique transisse nomen in carnificem et in taedium artem omnesque medicos, quod clarissime intellegi potest ex m. catone, cuius auctoritati triumphus atque censura minimum conferunt; tanto plus in ipso est. quam ob rem verba eius ipsa ponemus:

“dicam de istis graecis suo loco, m. fili, quid athenis exquisitum habeam et quod bonum sit illorum litteras inspicere, non perdiscere. vincam nequissimum et indocile genus illorum, et hoc puta vatem dixisse: quandoque ista gens suas litteras dabit, omnia conrumpet, tum etiam magis, si medicos suos hoc mittet. iurarunt inter se barbaros necare omnes medicina, sed hoc ipsum mercede faciunt, ut fides iis sit et facile disperdant. nos quoque dictitant barbaros et spurcius nos quam alios Ὀπικῶν appellatione foedant. interdixi tibi de medicis.”

atqui hic cato sescentesimo quinto anno urbis nostrae obiit, octogensimo quinto suo, ne quis illi defuisse publice tempora aut privatim vitae spatia ad experiendum arbitretur. quid ergo damnatam ab eo rem utilissimam credimus minime, hercules. subicit enim qua medicina se et coniugem usque ad longam senectam perduxerit, his ipsis scilicet, quae nunc nos tractamus, profiteturque esse commentarium sibi, quo medeatur filio, servis, familiaribus, quem nos per genera usus sui digerimus. non rem antiqui damnabant, sed artem, maxime vero quaestum esse manipretio vitae recusabant. ideo templum aesculapii, etiam cum reciperetur is deus, extra urbem fecisse iterumque in insula traduntur et, cum graecos italia pellerent, diu etiam post catonem, excepisse medicos. augebo providentiam illorum. solam hanc artium graecarum nondum exercet romana gravitas, in tanto fructu paucissimi quiritium attigere, et ipsi statim ad graecos transfugae, immo vero auctoritas aliter quam graece eam tractantibus etiam apud inperitos expertesque linguae non est, ac minus credunt quae ad salutem suam pertinent, si intellegant. itaque,

hercules, in hac artium sola evenit, ut cuicumque medicum se professo statim credatur, cum sit periculum in nullo mendacio maius. non tamen illud intuemur; adeo blanda est sperandi pro se cuique dulcedo. nulla praeterea lex, quae puniat inscitiam capitalem, nullum exemplum vindictae. discunt periculis nostris et experimenta per mortes agunt, medicoque tantum hominem occidisse inpunitas summa est. quin immo transit convitium et intemperantia culpatur, ultroque qui periere arguuntur. sed decuriae pro more censuris principum examinantur, inquisitio per parietes agitur, et qui de nummo iudicet a gadibus columnisque herculis arcessitur, de exilio vero non nisi xlv electis viris datur tabella: at de iudice ipso quales in consiliumeunt statim occisuri! merito, dum nemini nostrum libet scire, quid saluti suae opus sit. alienis pedibus ambulamus, alienis oculis agnoscimus, aliena memoria salutamus, aliena et vivimus opera, perieruntque rerum naturae pretia et vitae argumenta. nihil aliud pro nostro habemus quam delicias. non deseram catonem tam ambitiosae artis invidiae a me obiectum aut senatum illum, qui ita censebat, idque non criminibus artis arreptis, ut aliquis exspectaverit. quid enim venenorum fertilius aut unde plures testamentorum insidiae iam vero et adulteria etiam in principum domibus, ut eudemi in livia drusi caesaris, item valentis in qua dictum est regina. non sint artis ista, sed hominum: non magis haec urbi timuit cato, ut equidem credo, quam reginas. ne avaritiam quidem arguam rapacesque nundinas pendentibus fatis et dolorum indicaturam ac mortis arram aut arcana praecepti, squamam in oculis emovendam potius quam extrahendam. per quae effectum est, ut nihil magis pro re videretur quam multitudo grassantium; neque enim pudor, sed aemuli pretia summittunt. notum est ab eodem charmide unum aegrum e provincialibus hs [cc] reconductum, alconti vulnerum medico hs [30c]30 damnato ademisse claudium principem, eidemque in gallia exulanti et deinde restituto adquisitum non minus intra paucos annos. et haec personis inputentur. ne faecem quidem aut inscitiam eius turpem arguamus: ipsorum procerum intemperantiam inmodicis aquarum calidarum deverticulis, imperiosa inedia et ab isdem deficientibus cibo saepius die ingesto, mille praeterea paenitentiae modis, culinarum etiam praeceptis et unguentorum mixturis, quando nullas omisere vitae inlecebras. invehi peregrinas merces

conciliarique externa pretia displicuisse maioribus crediderim equidem, non tamen hoc catonem providisse, cum damnaret artem. theriace vocatur excogitata compositio; luxuria finxit rebus sexcentis, cum tot remedia dederit natura, quae singula sufficerent. mithridatium antidotum ex rebus liiii componitur, inter nullas pondere aequali, et quarundam rerum sexagesima denarii unius imperatur, quo deorum, per fidem, ista monstrante! hominum enim subtilitas tanta esse non potuit; ostentatio artis et portentosa scientiae venditatio manifesta est. ac ne ipsi quidem illa novere, conperique volgo pro cinnabari indica in medicamenta minium addi inscitia nominis, quod esse venenum docebimus inter pigmenta. verum haec ad singulorum salutem pertinent; illa autem, quae timuit cato atque providit, innocentiora multo et parva opinatu, quae proceres artis eius de semet ipsi fateantur, illa perdidere imperii mores, illa, quae sani patimur, luctatus, ceromata ceu valitudinis causa instituta, balineae ardentes, quibus persuasere in corporibus cibos coqui, ut nemo non minus validus exiret, oboedientissimi vero efferrentur, potus deinde ieiunorum ac vomitiones et rursus perpotationes ac pilorum eviratio instituta resinis eorum, itemque pectines in feminis quidem publicati. ita est profecto: lues morum, nec aliunde maior quam e medicina, vatem prorsus cottidie facit catonem et oraculum: “satis esse ingenia graecorum inspicere, non perdiscere”.

haec fuerint dicenda pro senatu illo sescentisque p. r. annis adversus artem, in qua condicione insidiosissima auctoritatem pessimis boni faciunt, simul contra attonitas quorundam persuasiones, qui prodesse nisi pretiosa non putant. neque enim dubitaverim aliquis fastidio futura quae dicentur animalia, at non vergilio fuit nominare formicas nulla necessitate et curculiones ac “lucifugis congesta cubilia blattis,” non homero inter proelia deorum inprobitatem muscae describere, non naturae gignere ista, cum gignat hominem. proinde causas quisque et effectus, non res aestimet.

ordiemur autem confessis, hoc est lanis ovisque, ob id ut rebus praecipuis honos in primis perhibeatur. quaedam etiam sic alienis locis, tamen obiter, dici necesse erit. nec deerat materia pompae, si quicquam aliud intueri liberet quam fidem operis, quippe inter prima proditis etiam ex cinere phoenicis nidoque medicinis, ceu vero id certum esset atque non fabulosum. inridere est vitam remedia post

millensimum annum reditura monstrare.

lanis auctoritatem veteres romani etiam religiosam habuere, postes a nubentibus attingi iubentes; praeterque cultum et tutelam contra frigora sucidae plurima praestant remedia ex oleo vinoque aut aceto, prout quaeque mulceri morderive opus sit et adstringi laxarive, luxatis membris dolentibusque nervis inpositae et crebro suffusae. quidam et salem admiscent luxatis; alii cum lana rutam tritam adipemque inponunt, item contusis tumentibusque. halitus quoque oris gratiores facere traditur confricatis dentibus atque gingivis admixto melle. prodest et phreneticis suffitu. sanguinem in naribus sistit cum oleo rosaceo indita et alio modo auribus opturatis spissius. quin et ulceribus vetustis inponitur cum melle. vulnera ex vino vel aceto vel aqua frigida et oleo expressa sanat. arietis vellera luta frigida ex oleo madefacta in muliebribus malis inflammationes vulvae sedant et, si procidat, suffitu reprimunt. sucida lana inposita subditaque mortuos partus evocat; sistit etiam profluvia earum. et canis rabiosi morsibus inculcata post diem septimum solvitur. reduvias sanat ex aqua frigida. eadem nitro, sulpure, oleo, aceto, pice liquida ferventibus tincta quam calidissima inposita bis die lumborum dolores sedat. sistit et sanguinem ex ariete sucida articulos extremitatium praeligans. laudatissima omnis e collo, natione vero galatica, tarentina, attica, milesia. sucidam inponunt et desquamatis, percussis, lividis, incussis, conlisis, contritis, deiectis, capitis et aliis doloribus, stomachi inflammationi ex aceto et rosaceo. cinis eius inlinitur adtritis, vulneratis, ambustis. et in oculorum medicamenta additur, item in fistulas auresque suppuratas. ad hoc detonsam eam, alii evolsam, decisis summis partibus siccant carpuntque et in fictili crudo conponunt ac melle perfundunt uruntque. alii astulis taedae subiectis et subinde interstratis oleo adspersam accendunt cineremque in labellis aqua addita confricant manu et considere patiuntur, idque saepius mutantes aquam, donec linguam adstringat leniter nec mordeat; tum cinerem reponunt. vis eius septica est efficacissimeque genas purgat.

quin ipsae sordes pecudum sudorque feminum et alarum adhaerentes lanis - oesypum vocant - innumeros prope usus habent. in atticis ovibus genito palma. fit pluribus modis, sed probatissimum lana ab iis partibus recenti concerpta aut quibuscumque sordibus

sucidis primum collectis lento igni in ae+neo subfervefactis et refrigeratis pinguique, quod supernatet, collecto in fictile vas iterumque decocta priore materia; quae pinguitudo utraque frigida aqua lavatur et in linteo saccatur ac sole torretur, donec candida fiat ac tralucida; tum in stagnea pyxide conditur. probatio, ut sordium virus oleat et manu fricante ex aqua non liquetur, sed albescat ut cerussa. oculis utilissimum contra inflammationes genarumque callum. quidam in testa torrent, donec pinguitudinem amittat, utilius tale existimantes erosis et duris genis, angulis scabiosis et lacrimantibus. ulcera non oculorum modo sanat, sed oris etiam et genitalium cum anserino adipe. medetur et vulvae inflammationibus et sedis rhagadiis et condylomatis cum meliloto ac butyro. reliquos usus eius digeremus. sordes quoque caudarum concretae in pilulas siccatae per se tusaeque in farinam et inlitae dentibus mire prosunt, etiam labantibus, gingivisque, si carcinoma serpat; iam vero pura vellera aut per se inposita caecis doloribus aut accepto sulpure, et cinis eorum genitalium vitiis, tantumque pollent, ut medicamentis quoque superponantur. medentur ante omnia et pecori ipsi, si fastidio non pascantur. cauda enim quam artissime praeligata, evolsa inde lana, statim vescuntur, traduntque quod extra nodum sit e cauda praemori.

lanae habent et cum ovis societatem simul fronti inpositae contra epiphoras. non opus est eas in hoc usu radicula esse curatas neque aliud quam candidum ex ovo infundi ac pollinem turis.

ova per se infuso candido oculis epiphoras cohibent urentesque refrigerant - quidam cum croco praeferunt - et pro aqua miscentur collyriis; infantibus vero contra lippitudines, ut vix aliud, remedio sunt butyro admixto recenti. eadem cum oleo trita ignes sacros leniunt betae foliis superinligatis. candido ovorum in oculis et pili reclinantur hammoniaco trito admixtoque et vari in facie cum pineis nucleis ac melle modico. ipsa facies inlita sole non uritur. ambusta aquis si statim ovo occupentur, pusulas non sentiunt - quidam admiscent farinam hordeaciam et salis parum - , ulceribus vero ex ambusto cum candido ovorum tostum hordeum et suillo adipe mire prodest. eadem curatione ad sedis vitia utuntur, infantibus quidem etiam si quid ibi procidat; ad pedum rimas ovorum candido decocto cum cerussae denariorum ii pondere, pari spumae argenti, murrae

exiguo, dein vino; ad ignem sacrum candido ovorum ternum cum amylo. aiunt et vulnera candido glutinari calculosque pelli. - lutea ovorum cocta, ut indurescant, admixto croco modice, item melle, ex lacte mulieris inlita dolores oculorum mitigant, vel cum rosaceo et mulso lana oculis inposita, vel cum trito apii semine ac polenta in mulso inlita. prodest et tussientibus per se luteum devoratum liquidum ita, ut dentibus non attingatur, thoracis destillationibus, faucium scabritiae. privatim contra haemorrhoidas morsui inlinitur sorbeturque crudum. prodest et renibus, vesicae rosionibus exulcerationibusque. cruenta excreantibus v ovorum lutea in vini hemina cruda sorbentur, dysintericis cum cinere putaminis sui et papaveris suco ac vino. dantur coeliacis cum uvae passae pinguis pari pondere et malicorii per triduum aequis portionibus, et alio modo lutea ovorum iii, lardi veteris et mellis quadrantibus, vini veteris cyathis iii, trita ad crassitudinem mellis et, cum opus sit, abellanae nucis magnitudine ex aqua pota, item ex oleo fricta terna, totis ovis pridie maceratis in aceto; sic et lientericis, sanguinem autem reicientibus cum iii cyathis musti. utuntur isdem ad liventia, si vetustiora sint, cum bulbis ac melle. sistunt et menses mulierum cocta et e vino pota, inflationes quoque vulvae cruda cum oleo ac vino inlita. utilia sunt et cervicis doloribus cum anserino adipe et rosaceo, sedis etiam vitiis indurata igni, ut calore quoque prosint, et condylomatis cum rosaceo; item ambustis durata in aqua, mox in pruna putaminibus exustis, tum lutea ex rosaceo inlinuntur. fiunt et tota lutea, quae vocant sitista, cum triduo incubita tolluntur. stomachum dissolutum confirmant pulli ovorum cum gallae dimidio ita, ne ante ii horas alius cibus sumatur. dant et dysintericis pullos in ipso ovo decoctos admixta vini austeri hemina et pari modo olei polentaeque. - membrana putamini detracta sive crudo sive cocto labrorum fissuris medetur, putaminis cinis in vino potus sanguinis eruptionibus. comburi sine membrana oportet. sic fit et dentifricium. idem cinis et mulierum menses cum murra inlitus sistit. firmitas putaminum tanta est, ut recta nec vi nec pondere ullo frangantur nec nisi paulum inflexa rotunditate. - tota ova adiuvant partum cum ruta et aneto et cumino pota e vino. scabiem corporum ac pruritum oleo et cedria mixtis tollunt, ulcera quoque umida in capite cyclamino admixta. ad puris et sanguinis excreationes ovum crudum cum porri

sectivi suco parique mensura mellis graeci calefactum hauritur. dantur et tussientibus cocta et trita cum melle et cruda cum passo oleique pari modo. infunduntur et virilitatis vitiis singula cum ternis cyathis passi amylique semuncia a balneis; adversus ictus serpentium cocta tritaque adiecto nasturtio inlinuntur. - cibo quot modis iuvent, notum est, cum transmeent faucium tumorem calfactuque obiter foveant. nullus est alius cibus, qui in aegritudine alat neque oneret simulque vim potus et cibi habeat. maceratorum in aceto molliri diximus putamen; talibus cum farina in panem subactis coeliaci recreantur. quidam ita resoluta in patinis torrere utilius putant, quo genere non alvos tantum, sed et menses feminarum sistunt, aut, si maior sit impetus, cruda cum farina et aqua hauriuntur. et per se lutea ex iis decocuntur in aceto, donec indurescant, iterumque cum trito pipere torrentur ad cohibendas alvos. fit et dysintericis remedium singulare ovo effuso in fictile novum eiusdemque ovi mensura, ut paria sint omnia, melle, mox aceto, item oleo confusis crebroque permixtis; quo fuerint ea excellentiora, hoc praesentius remedium erit. alii eadem mensura pro oleo et aceto resinam adiciunt rubentem vinumque; et alio modo temperant, olei tantum mensura pari pineique corticis ii sexagensimis denarii, una eius quod rhum diximus, mellis obolis v simul decoctis, ita ut cibus alius post iiii horas sumatur. torminibus quoque multi medentur ova bina cum alii spicis iiii una terendo vinique hemina calefaciendo atque ita potui dando. et, ne quid desit ovorum gratiae, candidum ex iis admixtum calci vivae glutinat vitri fragmenta; vis vero tanta est, ut lignum perfusum ovo non ardeat ac ne vestis quidem contacta aduratur. de gallinarum autem ovis tantum locuti sumus, cum et reliquarum alitum restent, magnae utilitatis, sicut suis locis dicemus.

praeterea est ovorum genus in magna fama galliarum, omissum graecis. angues enim numerose convoluti salivis faucium corporumque spumis artifici conplexu glomerant; urinum appellatur. druidae sibilis id dicunt in sublime iactari sagoque oportere intercipi, ne tellurem attingat; profugere raptorem equo, serpentes enim insequi, donec arceantur amnis alicuius interventu; experimentum eius esse, si contra aquas fluitet vel auro vinctum; atque, ut est magorum sollertia occultandis fraudibus sagax, certa luna capiendum censent, tamquam congruere operationem eam serpentium humani sit

arbitrii. vidi equidem id ovum mali orbiculati modici magnitudine, crusta cartilagineis velut acetabulis bracchiorum polypi crebris insigne. druidis ad victorias litium ac regum aditus mire laudatur, tantae vanitatis, ut habentem id in lite in sinu equitem r. e vocontiis a divo claudio principe interemptum non ob aliud sciam. hic tamen conplexus anguium et frugifera eorum concordia in causa videtur esse, quare exterae gentes caduceum in pacis argumentis circumdata effigie anguium fecerint; neque enim cristatos esse in caduceo mos est.

de anserum ovis magnae utilitatis ipsoque ansere dicturi hoc in volumine debemus honorem et commageno, clarissimae rei. fit ex adipe anserum - alioqui celeberrimi usus, set ad hoc in commagene syriae parte - cum cinnamo, casia, pipere albo, herba quae commagene vocatur, obrutis nive vasis, odore iucundo, utilissimum ad perfrictiones, convulsiones, caecos aut subitos dolores omniaque, quae acopis curantur, unguentumque pariter et medicamentum est. fit et in syria alio modo, avium adipe curato ut dicemus, additis erysisceptro, xylobalsamo, phoenice, item tuso calamo singulorum pondere quod sit adipis, in vino bis aut ter subfervefacto. fit autem hieme, quoniam aestate non glaciat nisi accepta cera. multa praeterea remedia sunt ex ansere, quod miror aeque quam in capris, namque anser corvusque ab aestate in autumnum morbo conflictari dicuntur.

de anserum honore, quem meruere gallorum in capitolium ascensu deprehenso, diximus. eadem de causa supplicia annua canes pendunt, inter aedem iuventatis et summani vivi in furca sabucea armo fixi. sed plura de hoc animali dici cogunt priscorum mores.

catulos lactentes adeo puros existimabant ad cibum, ut etiam placandis numinibus hostiarum vice uterentur iis. genitae manae catulo res divina fit, et in cenis deum etiam nunc ponitur catulina. aditialibus quidem epulis celebrem fuisse plauti fabulae indicio sunt. sanguine canino contra toxica nihil praestantius putant; vomitiones quoque hoc animal monstrasse homini videtur, et alios usus ex eo mire laudatos referemus suis locis. nunc ad institutum ordinem pergemus.

adversus serpentium ictus efficacia habentur fimum pecudis recens in vino decoctum inlitumque, mures dissecti inpositi. quorum natura non est spernenda, praecipue in adsensu siderum, ut diximus, cum

lunae lumine fibrarum numero crescente atque decrescente. tradunt magi iocinere muris dato porcis in fico sequi dantem id animal, in homine quoque similiter valere, sed resolvi cyatho olei poto.

mustelarum duo genera; alterum silvestre, distans magnitudine, graeci vocant ictidas. harum fel contra aspidas dicitur efficax, cetero venenum. haec autem, quae in domibus nostris oberrat et catulos suos, ut auctor est cicero, cottidie transfert mutatque sedem, serpentes persequitur. ex ea inveterata sale denari pondus in cyathis iii datur percussis aut ventriculus coriandro fartus inveteratusque et in vino potus, et catulus mustelae etiam efficacius.

quaedam pudenda dictu tanta auctorum adseveratione commendantur, ut praeterire fas non sit, siquidem illa concordia rerum aut repugnantia medicinae gignuntur, veluti cimicum, animalis foedissimi et dictu quoque fastidiendi, natura contra serpentium morsus et praecipue aspidum valere dicitur, item contra venena omnia, argumento, quod dicant gallinas, quo die ederint, non interfici ab aspide, carnesque earum percussis plurimum prodesse. ex iis, quae tradunt, humanissimum est inlinere morsibus cum sanguine testudinis, item suffitu eorum abigere sanguisugas adhaerentes haustasque ab animalibus restinguere in potu datis. quamquam et oculos quidam his inungunt tritis cum sale et lacte mulierum auresque cum melle et rosaceo admixtis. eos, qui agrestes sint et in malva nascantur, crematos, cinere permixto rosaceo, infundunt auribus. cetera, quae de his tradunt vomitionum et quartanarum remedia aliorumque morborum, quamquam ovo aut cera aut faba inclusos censeant devorandos, falsa nec referenda arbitror. lethargi tantum medicinae cum argumento adhibent, quoniam vincatur aspidum somnifica vis, septenos in cyatho aquae dantes, puerilibus annis quaternos. et in stranguria fistulae inposuere. adeo nihil parens illa rerum omnium sine ingentibus causis genuit. quin et adalligatos laevo bracchio binos lana subrepta pastoribus resistere nocturnis febribus prodiderunt, diurnis in russeo panno. rursus his adversatur scolopendra suffituque enecat.

aspides percussos torpore et somno necant, omnium serpentium minime sanabiles. sed venenum earum, si sanguinem attigit aut recens vulnus, statim interemit; si inveteratum ulcus, tardius. de cetero potum quantalibet copia non nocet, non enim est tabifica vis;

itaque occisa morsu earum animalia cibis innoxia sunt. cunctarer in proferendo ex iis remedio, ni M. Varro lxxxiii vitae anno prodidisset aspidum ictus efficacissime sanari hausta a percussis ipsorum urina.

basilisci, quem etiam serpentes ipsae fugiunt alias olfactu necantem, qui hominem, vel si aspiciat tantum, dicitur interemere, sanguinem magi miris laudibus celebrant: coeuntem picis modo et colore, dilutum cinnabari clariorem fieri. attribuunt ei successus petitionum a potestatibus et a diis etiam precum, morborum remedia, veneficiorum amuleta. quidam et saturni sanguinem appellant.

draco non habet venena. caput eius limini ianuarum subditum propitiatis adoratione diis fortunatam domum facere promittitur, oculis eius inveteratis et cum melle tritis inunctos non expavescere ad nocturnas imagines etiam pavidos, cordis pingue in pelle dorcadum nervis cervinis adalligatum in lacerto conferre iudiciorum victoriae plurimum, spondylum aditus potestatium mulcere, dentes eius inligatos pellibus caprearum cervinis nervis mites praestare dominos potestatesque exorabiles. sed super omnia est compositio, qua invictos faciunt magorum mendacia: cauda draconis et capite, pilis leonis e fronte et medulla eiusdem, equi victoris spuma, canis ungue adalligatis cervino corio nervisque cervi alternatis et dorcadis. quae coarguisse non minus referet quam contra serpentes remedia demonstrasse, quoniam et haec illorum veneficia sunt. draconum adipem venenata fugiunt, item, si uratur ichneumonum; fugiunt et urticis tritis in aceto perunctos.

viperae caput inpositum, vel alterius quam quae percusserit, sine fine prodest, item si quis ipsam eam in vapore baculo sustineat - aiunt enim recanere - , item si quis exustae eiusdem cinerem inlinat. reverti autem ad percussum serpentem necessitate naturae nigidius auctor est. caput quidam dissecant scite inter aures ad eximendum lapillum, quem aiunt ab ea devorari territa; alii ipso toto capite utuntur. fiunt ex vipera pastilli, qui theriaci vocantur a graecis, ternis digitis mensura utrimque amputatis exemptisque interaneis et livore spinae adhaerente, reliquo corpore in patina ex aqua et aneto discocto spinisque exemptis et addita similagine atque ita in umbra siccatis pastillis, quibus ad multa medicamenta utuntur. significandum videtur e vipera tantum hoc fieri. quidam purgatae ut supra dictum est adipem cum olei sextario decocunt ad dimidias; ex eo, cum opus

sit, ternis stillis additis in oleum perunguntur, ut omnes bestiae fugiant eos.

praeterea constat contra omnium ictus quamvis insanabiles ipsarum serpentium exta inposita auxiliari, eosque, qui aliquando viperae iecur coctum hauserint, numquam postea feriri a serpente. neque anguis venenatus est nisi per mensem luna instigatus, et prodest vivus conprehensus et in aqua contusus, si foveantur ita morsus. quin et inesse ei remedia multa creduntur, ut digeremus, et ideo aesculapio dicatur. democritus quidem monstra quaedam ex his confingit, ut possint avium sermones intellegi. anguis aesculapius epidauro romam advectus est vulgoque pascitur et in domibus, ac nisi incendiis semina exurerentur, non esset fecunditati eorum resistere in orbe terrarum. pulcherrimum anguium genus est quod et in aqua vivit; hydri vocantur, nullo serpentium inferiores veneno. horum iecur servatum adversus percusso ab iis auxilium est. - scorpio tritus stelionum veneno adversatur. fit enim e stelionibus malum medicamentum; nam cum inmortuus est vino, faciem eorum, qui biberint, lentigine obducit. ob hoc in unguento necant eum insidiantes paelicum formae. remedium est ovi luteum et mel ac nitrum. fel stelionum tritum in aqua mustelas congregare dicitur.

inter omnia venenata salamandrae scelus maximum est. cetera enim singulos feriunt, nec plures pariter interimunt, ut omittam, quod perire conscientia dicuntur homine percusso neque amplius admitti a terra; salamandra populos pariter necare inprovidos potest. nam si arbori inrepsit, omnia poma inficit veneno et eos, qui ederint, necat frigida vi, nihil aconito distans; quin immo si contacto ab ea ligno, lapidi crusta panis inponatur, idem veneficium est vel si in puteum cadat, quippe cum saliva eius quacumque parte corporis, vel in pede imo, respersa omnis in toto corpore defluat pilus. tamen talis ac tanti veneni a quibusdam animalium, ut subus, manditur dominante eadem illa rerum dissidentia. venenum eius restingui primum omnium ab iis, quae vescantur illa, verisimile est, ex iis vero, quae produntur, cantharidum potu aut lacerta in cibo sumpta. cetera adversantia diximus dicemusque suis locis. ex ipsa quae magi tradunt contra incendia, quoniam ignes sola animalium extinguat, si forent vera, iam esset experta roma. sextius venerem accendi cibo earum, si detractis interaneis et pedibus et capite in melle serventur, tradit

negatque restingui ignem ab iis.

e volucribus in auxilio contra serpentes primus vultur est, adnotatumque minus virium esse nigris. pinnarum ex alis nidore, si urantur, fugari eas dicunt, item cor eius alitis habentes tutos esse ab impetu non solum serpentium, sed etiam ferarum latronumque et regum ira.

carnibus gallinaceorum ita, ut tepebunt avulsae, adpositis venena serpentium domantur, item cerebro in vino poto. parthi gallinae malunt cerebrum plagis inponere. ius quoque ex iis potum praeclare medetur, et in multis aliis usibus mirabile. pantherae, leones non attingunt perunctos eo, praecipue si et alium fuerit incoctum. alvum solvit validius e vetere gallinaceo, prodest et contra longinquas febres et torpentibus membris tremulisque et articulariis morbis et capitis doloribus, epiphoris, inflationibus, fastidiis, incipiente tenesmo, iocineri, renibus, vesicae, contra cruditates, suspiria. itaque etiam faciendi eius extant praecepta: efficacius coci cum olere marino aut cybio aut cappari aut apio aut herba mercuriali, polypodio aut aneto, utilissime autem in congiis iii aquae ad iii heminas cum supra dictis herbis et refrigeratum sub diu dari, tempestivius antecedente vomitione. non praeteribo miraculum, quamquam ad medicinam non pertinens: si auro liquescenti gallinarum membra misceantur, consumunt id in se; ita hoc venenum auri est. at gallinacei ipsi circulo e ramentis addito in collum non canunt.

auxiliatur contra serpentes et columbarum caro recens concerpta et hirundinum, bubonis pedes usti cum plumbagine herba. nec omittam in hac quoque alite exemplum magicae vanitatis, quippe praeter reliqua portentosa mendacia cor eius inpositum mammae mulieris dormientis sinistrae tradunt efficere, ut omnia secreta pronuntiet; praeterea in pugnam ferentes id fortiores fieri. eiusdem ovo ad capillum remedia demonstrant. quis enim, quaeso, ovum bubonis umquam visere potuit, cum ipsam avem vidisse prodigium sit quis utique experiri et praecipue in capillo sanguine quidem pulli bubonis etiam crispari capillum promittunt. cuius generis prope videri possint quae tradunt et de vespertilione, si ter circumlatus domui vivus super fenestram inverso capite adfigatur, amuletum esse, privatimque ovilibus circumlatum totiens et pedibus suspensum super limen. sanguinem quoque eius cum carduo contra serpentium

ictus inter praecipua laudant.

phalangium est italiae ignotum et plurium generum: unum simile formicae, sed multo maius, rufo capite, reliqua parte corporis nigra, albis guttis. acerbior huius quam vespae ictus. vivit maxime circa furnos et molas. in remedio est, si quis eiusdem generis alterum percusso ostendat, et ad hoc servantur mortui. inveniuntur et cortices eorum, qui triti et poti medentur; mustelae catuli ut supra. aeque phalangion graeci vocant inter genera araneorum, sed distingunt lupi nomine. tertium genus est eodem phalangi nomine araneus lanuginosus, grandissimo capite, quo dissecto inveniri intus dicuntur vermiculi duo adalligatique mulieribus pelle cervina ante solis ortum praestare, ne concipiant, ut caecilius in commentariis reliquit. vis ea annua est. quam solam ex omni atocio dixisse fas sit, quoniam aliquarum fecunditas plena liberis tali venia indiget. vocatur et rhox acino nigro similis, ore minimo sub alvo, pedibus brevissimis tamquam inperfectis. dolor a morsu eius qualis a scorpione, urina similis aranei textis. idem erat asterion, nisi distingueretur virgulis albis; huius morsus genua labefactat. peior utroque est caeruleus, lanugine nigra, caliginem concitans et vomitus araneosos. etiamnum deterior a crabrone pinna tantum differens; hic et ad maciem perducit. myrmecion, formicae similis capite, alvo nigra, guttis albis distinguentibus, vesparum dolore torquet. tetragnathii duo genera habent: peior medium caput distinguente linea alba et transversum altera; hic oris tumorem facit. at cinereus posteriore parte candicans lentior, minime autem noxius eodem colore qui telas muscis in parietibus latissime pandit. contra omnium morsus remedio est gallinaceum cerebrum cum piperis exiguo potum in posca, item formicae v potae, pecudum fimi cinis inlitus ex aceto et ipsi aranei quicumque in oleo putrefacti.

muris aranei morsus sanatur coagulo agni e vino poto, ungulae arietinae cinere cum melle, mustelae catulo ut in serpentibus dictum est. si iumenta momorderit, mus recens cum sale inponitur aut fel vespertilionis ex aceto. et ipse mus araneus contra se remedio est divulsus inpositus. nam si praegnans momordit, protinus dissilit. optimum, si is inponatur, qui momorderit, sed et alios ad hunc usum servant in oleo aut luto circumlitos. est et contra morsum eius remedio terra ex orbita; ferunt enim non transiri ab eo orbitam

torpore quodam naturae.

scorpionibus contrarius maxime invicem stelio traditur, ut visu quoque pavorem iis adferat et torporem frigidi sudoris. itaque in oleo putrefaciunt eum et ita vulnera perungunt. quidam oleo illo spumam argenteam decocunt ad emplastri genus atque ita inlinunt. hunc graeci coloten vocant et ascalaboten et galeoten; in italia non nascitur. est enim hic plenus lentigine, stridoris acerbi et araneis vescitur, quae omnia nostris stelionibus aliena sunt.

prodest et gallinarum fimi cinis inlitus, draconis iocur, lacerta divulsa, mus divulsus, scorpio ipse suae plagae inpositus aut assus in cibo sumptus aut potus in meri cyathis ii. proprium est scorpionum quod manus palmam non feriunt, nec visi pilos attingere. lapillus qualiscumque ab ea parte, qua in terra erat, adpositus plagae levat dolorem, item testa, sicut erat terra operta ex aliqua parte, inposita liberare dicitur - non debent respicere qui inponunt et cavere ne sol aspiciat - , vermes terreni triti inpositi. multa et alia ex his remedia sunt, propter quae in melle servantur.

noctua apibus contraria et vespis crabronibusque et sanguisugis; pici quoque martii rostrum secum habentes non feriuntur ab iis. adversantur et locustarum minimae sine pinnis, quas attelebos vocant.

est et formicarum genus venenatum, non fere in italia. solipugas cicero appellat, salpugas baetica. his cor vespertilionis contrarium omnibusque formicis.

salamandris cantharidas diximus resistere. sed in his magna quaestio, quoniam ipsae venena sunt potae vesicae cum cruciatu praecipuo. cossinum equitem romanum amicitia neronis principis notum, cum is lichene correptus esset, vocatus ex aegypto medicus ob hanc valetudinem eius a caesare, cum cantharidum potu praeparare voluisset, interemit. verum inlitas prodesse non dubium est cum suco taminiae uvae et sebo ovis vel caprae. ipsarum cantharidum venenum in qua parte sit, non constat inter auctores. alii in pedibus et in capite existimant esse, alii negant. convenit tantum pinnas earum auxiliari, in quacumque parte sit venenum. ipsae nascuntur ex vermiculo in spongea maxime cynorrhodi, quae fit in caule, sed fecundissime in fraxino, ceterae in alba rosa, minus efficaces. potentissimae inter omnes variae luteis lineis, quas in

pinnis transversas habent, pingues; multum inertiores minutae, latae, pilosae; inutilissimae vero unius coloris macrae. conduntur in calice fictili non picato et linteo conligato, coniecta et rosa matura, et suspenduntur super acetum cum sale fervens, donec per linteolum vaporentur, postea reponuntur. vis earum adurere corpus, crustas obducere. eadem pityocampis in picea nascentibus, eadem bupresti, similiterque praeparantur, efficacissimae omnes ad lepras, lichenas. dicuntur et menses ciere et urinam; ideo hippocrates et hydropicis dabat.

cantharides obiectae sunt catoni uticensi, ceu venenum vendidisset in auctione regia, quoniam eas hs lx addixerat. et sebum autem struthocamelinum tunc venisse hs xxx obiter dictum sit, efficacioris ad omnia usus, quam est anserinus adips.

diximus et mellis venenati genera. contra utuntur melle, in quo apes sint mortuae. idem potum in vino remedium est vitiorum, quae e cibo piscium gignuntur.

in canis rabiosi morsu tuetur a pavore aquae canini capitis cinis inlitus vulneri. oportet autem comburi omnia eodem modo, ut semel dicamus, in vase fictili novo argilla circumlito atque ita in furnum indito. idem et in potione proficit. quidam ob id edendum dederunt. aliqui et vermem e cadavere canino adalligavere menstruave canis in panno subdidere calici aut intus ipsius caudae pilos combustos inseruere vulneri. cor caninum habentem fugiunt canes; non latrant vero lingua canina in calciamento subdita pollici aut caudam mustelae, quae abscisa ea dimissa sit, habentes. est limus salivae sub lingua rabiosi canis, qui datus in potu hydrophobos fieri non patitur; multo tamen utilissime iocur eius, qui in rabie momorderit, datur, si fieri possit, crudum mandendum; sin minus, quoquo modo coctum, aut ius coctis carnibus. est vermiculus in lingua canum, qui vocatur a graecis lytta, quo exempto infantibus catulis nec rabidi fiunt nec fastidium sentiunt. idem ter igni circumlatus datur morsis a rabioso, ne rabidi fiant. et cerebello gallinaceo occurritur, sed id devoratum anno tantum eo prodest. aiunt et cristam galli contritam efficaciter inponi et anseris adipem cum melle. salliuntur et carnes eorum, qui rabidi fuerint, ad eadem remedia in cibo dandae. quin et necantur catuli statim in aqua ad sexum eius, qui momorderit, ut iocur crudum devoretur ex iis. prodest et fimum gallinaceum, dumtaxat rufum, ex

aceto inpositum et muris aranei caudae cinis ita, ut ipse, cui abscisa sit, vivus dimittatur, glaebula ex hirundinum nido inlita ex aceto, vel pulli hirundinis combusti, membrana sive senectus anguium vernatione exuta cum cancro masculo ex vino trita; hac etiam per se reposita in arcis armariisque tineas necant. mali tanta vis est, ut urina quoque calcata rabiosi canis noceat, maxime ulcus habentibus. remedio est fimum caballinum adspersum aceto et calefactum in fico inpositum. minus hoc miretur qui cogitet lapidem a cane morsum usque in proverbium discordiae venisse. qui in urinam canis suam egesserit, torporem lumborum sentire dicunt. - (lacerta, quam sepa, alii chalcidem vocant, in vino pota morsus suos sanat). -

veneficiis ex mustela silvestri factis contrarium est ius gallinacei veteris large haustum; peculiariter contra aconita addi parum salis oporteat. gallinarum fimum, dumtaxat candidum, in hysopo decoctum aut mulso contra venena fungorum boletorumque, item inflationes ac strangulationes, quod miremur, cum, si aliud animal gustaverit id fimum, torminibus et inflationibus adficiatur. sanguis anserinus contra lepores marinos valet cum olei aequa portione, idem contra mala medicamenta omnia adversatur cum lemnia rubrica et spinae albae suco, ut pastillorum drachmis quinis e cyathis ternis aquae bibatur. item mustelae catulus, ut supra diximus praeparatus, coagulum quoque agninum adversus omnia mala medicamenta pollet; item sanguis anatum ponticarum; itaque et spissatus servatur vinoque diluitur; quidam feminae anatis efficaciorem putant. simili modo contra venena omnia ciconiarum ventriculus valet, coagulum pecoris, ius ex carne arietum, privatim adversus cantharidas, item lac ovium calidum praeterque iis, qui buprestim aut aconitum biberint, columbarum silvestrium fimum privatim contra argenti vivi potum, contra toxica mustela vulgaris inveterata drachmis binis pota.

alopecias replet fimi pecudum cinis cum oleo cyprio et melle, item ungularum muli vel mulae ex oleo myrteo, praeterea, ut Varro noster tradit, murinum fimum, quod ille muscerdas appellat, aut muscarum capita recentia prius folio ficulneo asperatas. alii sanguine muscarum utuntur, alii x diebus cinerem earum inlinunt cum cinere chartae vel nucum ita, ut sit tertia portio e muscis; alii lacte mulierum cum brassica cinerem muscarum subigunt, quidam melle tantum. nullum animal minus docile existimatur minorisve intellectus; eo mirabilius

est olympiae sacro certamine nubes earum immolato tauro deo, quem myioden vocant, extra territorium id abire. alopecias cinis et e murium capitibus caudisque et totius muris emendat, praecipue si veneficio acciderit haec iniuria, item irenacei cinis cum melle aut corium combustum cum pice liquida. caput quidem eius ustum per se etiam cicatricibus pilos reddit, alopecias autem in ea curatione praeparari oportet novacula; et sinapi quidam ex aceto uti maluerunt. quae de irenaceo dicentur, omnia tanto magis valebunt in hystrice. lacertae quoque, ut docuimus combustae cum radice recentis harundinis, quae, ut una cremari possit, minutim findenda est, ita myrteo oleo permixto cinere, capillorum defluvia continent. efficacius virides lacertae omnia eadem praestant, etiamnum utilius admixto sale et adipe ursino et cepa tusa. quidam denas virides in x sextariis olei veteris discocunt, contenti semel in mense unguere. pellium viperinarum cinis alopecias celerrime explet, item gallinarum fimum recens inlitum. corvi ovum in aereo vase permixtum inlitumque deraso capite nigritiam capilli adfert, sed, donec inarescat, oleum in ore habendum est, ne et dentes simul nigrescant, idque in umbra faciendum neque ante quadriduum abluendum. alii sanguine et cerebro eius utuntur cum vino nigro; alii excocunt ipsum et nocte concubia in plumbeum vas condunt. aliqui alopecias cantharide trita inlinunt cum pice liquida, nitro praeparata cute - caustica vis earum, cavendumque ne exulcerent alte - , postea ad ulcera ita facta capita murium et fel murium et fimum cum helleboro et pipere inlini iubent.

lendes tolluntur adipe canino vel anguibus in cibo sumptis anguillarum modo aut eorum vernatione, quam exuunt, pota, porrigines felle ovillo cum creta cimolia inlito capite, donec inarescat.

capitis doloribus remedio sunt coclearum, quae nudae inveniuntur nondum peractae, ablata capita et his duritia lapidea exempta - est autem calculi latitudine, eaque adalligantur, set minutae fronti inlinuntur tritae, item oesypum - , ossa e capite vulturis adalligata aut cerebrum cum oleo et cedria, peruncto capite et intus naribus inlitis, cornicis cerebrum coctum in cibo sumptum vel noctuae, gallinaceus, si inclusus abstineatur die ac nocte, pari inedia eius, cuius doleat, evulsis collo plumis circumligatisque vel cristis, mustelae cinis

inlitus, surculus ex nido milui pulvino subiectus, murina pellis cremata ex aceto inlito cinere, limacis inter duas orbitas inventae ossiculum per aurum, argentum, ebur traiectum in pellicula canina adalligatum, quod remedium pluribus semperque prodest. fracto capiti aranei tela ex oleo et aceto inposita non nisi vulnere sanato abscedit. haec et vulneribus tonstrinarum sanguinem sistit, a cerebro vero profluentem anseris sanguis aut anatis infusus, adeps earundem alitum cum rosaceo. cocleae matutina pascentis harundine caput praecisum, maxime luna plena, lineo panno adalligant capitis doloribus liceo aut cera alba addita fronti inlinunt. et pilos caninos panno adalligant.

cerebrum cornicis in cibo sumptum palpebras gignere dicitur, oesypum cum murra calido specillo inlitum. idem praestare muscarum fimique murini cinerem aequis portionibus, ut efficiatur dimidium pondus denarii, promittitur, additis ii sextis denarii e stibi, ut omnia oesypo inlinantur; item murini catuli triti in vino vetere ad crassitudinem acopi. pilos in iis incommodos evulsos renasci non patitur fel irenacei, ovorum stelionis liquor, salamandrae cinis, lacertae viridis fel in vino albo sole coactum ad crassitudinem mellis in aereo vase, hirundinis pullorum cinis cum lacte tithymalli, spuma coclearum.

glaucomata dicunt magi cerebro catuli septem dierum emendari specillo demisso in dexteram partem, si dexter oculus curetur, in sinistram, si sinister, aut felle recenti axionis; noctuarum est id genus, quibus pluma aurium modo micat. suffusionem oculorum canino felle malebat quam hyaenae curari Apollonius pitanaeus cum melle, item albugines. murium capitum caudaeque cinere ex melle inunctis claritatem visus restitui dicunt, multoque magis gliris aut muris silvestris cinere aut aquilae cerebro vel felle cum attico melle. cinis e capite soricis cum stibi tritus lacrimosis oculis plurimum confert - stibi quid sit dicemus in metallis - , mustelae cinis suffusionibus, item lacertae, hirundinis cerebrum. cocleae tritae fronti inlitae epiphoras sedant sive per se sive cum polline sive cum ture; sic et solatis, id est sole correptis, prosunt. vivas quoque cremare et cinere earum cum melle cretico inunguere caligines utilissimum est. iumentorum oculis membrana aspidis, quam exuit vere, cum adipe eiusdem claritatem inunctis facit. viperam vivam in fictili novo

comburere addito feniculi suco ad cyathum unum et turis manna una atque ita suffusiones oculorum et caligines inunguere utilissimum est; medicamentum id echeon vocatur. fit et collyrium e vipera in olla putrefacta vermiculisque enatis cum croco tritis. et uritur in olla cum sale, quem lingendo claritatem oculorum consecuntur et stomachi totiusque corporis tempestivitates; hic sal et pecori datur salubritatis causa et in antidotum contra serpentes additur. quidam et ad oculos viperis utuntur in cibis. primum omnium occisae statim salem in os addi iubent, donec liquescat, mox iiii digitorum mensura utrimque praecisa exemptisque interaneis discoquunt in aqua, oleo, sale, aneto et aut statim vescuntur aut pane colligunt, ut saepius utantur. ius praeter supra dicta pediculos e toto corpore expellit pruritusque etiam summae cutis. effectum ostendit et per se capitis viperini cinis - utilissime eo oculos inungunt - itemque adips viperinus. de felle non audaciter suaserim quae praecipiunt, quoniam, ut suo loco docuimus, non aliud est serpentium venenum. anguium adeps aerugini mixtus ruptas oculorum partes sanat, et membrana sive senectus vernatione eorum exuta, si adfricetur, claritatem facit. boae quoque fel praedicatur ad albugines, suffusiones, caligines, adeps similiter ad claritatem.

aquilae, quam diximus pullos ad contuendum solem experiri, felle mixto cum melle attico inunguntur nubeculae et caligationes suffusionesque oculorum. eadem vis est et in vulturino felle cum porri suco et melle exiguo, item in gallinacei felle ad argema et albugines ex aqua diluto, item suffusiones oculorum, maxime candidi gallinacei. fimum quoque gallinaceorum, dumtaxat rubrum, lusciosis inlini monstrant. laudant et gallinae fel et praecipue adipem contra pusulas in pupillis, nec scilicet eius rei gratia saginant. adiuvat mirifice et ruptas oculorum tuniculas admixtis schisto et haematite lapidibus. fimum quoque earum, dumtaxat candidum, in oleo vetere corneisque pyxidibus adservant ad pupillarum albugines. qua in mentione significandum est pavones fimum suum resorbere tradi invidentes hominum utilitatibus. accipiter decoctus in rosaceo efficacissimus ad inunctiones omnium vitiorum putatur, item fimi eius cinis cum attico melle. laudatur et milui iocur, fimum columbarum ex aceto ad aegilopia, similiter ad albugines et cicatrices, fel anserinum, sanguis anatum contusis oculis ita, ut

postea oesypo et melle inunguantur, fel perdicum cum mellis aequo pondere, per se vero ad claritatem. ex hippocratis putant auctoritate adici, quod in argentea pyxide id servari iubent. ova perdicum in vase aereo decocta cum melle ulceribus oculorum et glaucomatis medentur. columbarum, palumbium, turturum, perdicum sanguis oculis cruore suffusis eximie prodest. in columbis masculae efficaciorem putant; vena autem sub ala ad hunc usum inciditur, quoniam suo calore utilior est. superinponi oportet splenium e melle decoctum lanamque sucidam ex oleo aut vino. earundem avium sanguis nyctalopas sanat et iocur ovium, ut in capris diximus, efficacius fulvae. decocto quoque eius oculos abluere suadent et medulla dolores tumoresque inlinere. bubonis oculorum cinis collyrio mixtus claritatem oculis facere promittitur. turturis fimum albugines extenuat, item coclearum cinis, fimum cenchridis; accipitrum generis hanc graeci faciunt. argema ex melle omnibus, quae supra scripta sunt, sanatur. mel utilissimum oculis, in quo apes sint inmortuae. ciconiae pullum qui ederit, negatur annis multis continuis lippiturus, item qui draconis caput habeat. huius adipe et melle cum oleo vetere incipientes caligines discuti tradunt. hirundinum pullos plena luna excaecant, restitutaque eorum acie capita comburuntur; cinere cum melle utuntur ad claritatem et dolores ac lippitudines et ictus.

lacertas quoque pluribus modis ad oculorum remedia adsumunt. alii viridem includunt novo fictili et lapillos, qui vocantur cinaedia, quae et inguinum tumoribus adalligari solent, novem signis signant et singulos detrahunt per dies; nono emittunt lacertam, lapillos servant ad oculorum dolores. alii terram substernunt lacertae viridi excaecatae et una in vitreo vase anulos includunt e ferro solido vel auro. cum recepisse visum lacertam apparuit per vitrum, emissa ea anulis contra lippitudinem utuntur, alii capitis cinere pro stibi ad scabritias. quidam viridem, collo longo, in sabulosis nascentem comburunt et incipientem epiphoram inungunt, item glaucomata. mustelae etiam oculis punctu erutis aiunt visum reverti, eademque quae in lacertis et anulis faciunt; serpentis oculum dextrum adalligatum contra epiphoras prodesse, si serpens viva dimittatur. lacrimantibus sine fine oculis cinis stelionum capitis cum stibi eximie medetur. aranei muscarii tela et praecipue spelunca ipsa inposita per

frontem ad duo tempora in splenio aliquo ita, ut a puero inpube et capiatur et inponatur nec is triduo se ostendat ei, cui medebitur, neve alter nudis pedibus terram attingat his diebus, mirabiliter epiphoris mederi dicitur; albugines quoque tollere inunctione araneus candidus, longissimis ac tenuissimis pedibus, contritus in oleo vetere. is etiam, cuius crassissimum textum est in contignationibus fere, adalligatus panno epiphoras sanare traditur. scarabaei viridis natura contuentium visum exacuit; itaque gemmarum scalptores contuitu eorum adquiescunt.

aures purgat fel pecudis cum melle, canini lactis instillatio sedat dolorem, gravitatem adeps cum absinthio et oleo vetere, item adeps anserinus. quidam adiciunt sucum cepae, alii pari modo. utuntur et per se ovis formicarum, namque et huic animali est medicina, constatque ursos aegros hoc cibo sanari. anserum omniumque avium adeps praeparatur ... exemptisque venis omnibus patina nova fictili operta in sole subdita aqua ferventi liquatus saccatusque lineis saccis et in fictili novo repositus loco frigido; minus putrescit addito melle. murium cinis cum melle instillatus aut cum rosaceo decoctus aurium dolores sedat. si aliquod animal intraverit, praecipuum remedium est murium fel aceto dilutum; si aqua intraverit, adeps anserinus cum cepae suco. gliris detracta pelle intestinisque exemptis discoquitur melle in vase novo. medici malunt e nardo decoqui usque ad tertias atque ita adservari, dein, cum opus sit, strigili tepefacta infundere. constat deplorata aurium vitia eo remedio sanari aut si terreni vermes cum adipe anseris decocti infundantur; item ex arboribus rubri cum oleo triti exulceratis et ruptis auribus praeclare medentur. lacertae inveteratae, in os pendentium addito sale, contusas et ab ictu miseras aures sanant, efficacissime autem ferrugineas maculas habentes, lineis etiam per caudam distinctae. milipeda, ab aliis centipeda aut multipeda dicta, animal est e vermibus terrae, pilosum, multis pedibus arcuatim repens tactuque contrahens se; oniscon graeci vocant, alii iulon. efficacem narrant ad aurium dolores in cortice punici mali decoctum et porri suco. addunt et rosaceum et in alteram aurem infundunt. illam autem, quae non arcuatur, sepa graeci vocant, alii scolopendram, minorem perniciosamque. cocleae, quae sunt in usu cibi, cum murra aut turis polline adpositae, item minutae, latae fracturis aurium inlinuntur cum melle. senectus serpentium fervente

testa usta instillatur rosaceo admixta, contra omnia quidem vitia efficax, sed contra graveolentiam praecipue ac, si purulenta sint, ex aceto, melius cum felle caprino vel bubulo aut testudinis marinae - vetustior anno eadem membrana non prodest, nec imbre perfusa, ut aliqui putant - , aranei sanies cum rosaceo aut per se in lana vel cum croco, gryllus cum sua terra effossus et inlitus. magnam auctoritatem huic animali perhibet nigidius, maiorem magi, quoniam retro ambulet terramque terebret, stridat noctibus. venantur eum formica circumligata capillo in cavernam eius coniecta, efflato prius pulvere, ne sese condat; ita formicae conplexu extrahitur. ventris gallinaceorum membrana, quae abici solet, inveterata et in vino trita auribus purulentis calida infunditur, gallinarum adeps. est quaedam pinguitudo blattae, si caput avellatur; hanc tritam una cum rosaceo auribus mire prodesse dicunt, sed lanam, qua incluserint, post paulum extrahendam; celerrime enim id pingue transire in animal fierique vermiculum. alii binas ternasve in oleo decoctas efficacissime auribus mederi scribunt et tritas in linteolo inponi contusis. hoc quoque animal inter pudenda est, sed propter admirationem naturae priscorumque curae totum in hoc loco explicandum. plura earum genera fecerunt: molles, quas in oleo decoctas verrucis efficaciter inlini experti sunt. alterum genus myloecon appellavere circa molas fere nascens; his capite detracto adtritas lepras sanasse musaeum pycten in exemplis reliquerunt. tertium genus et odoris taedio invisum, exacuta clune; cum pisselaeo sanare ulcera alias insanabilia, strumas, panos diebus xxi inpositas, percussa, contusa et cacoe+the, scabiem furunculosque detractis pedibus et pinnis. nos haec etiam audita fastidimus; at, hercules, diodorus et in morbo regio et orthopnoicis se dedisse tradit cum resina et melle. tantum potestatis habet ars ea pro medicamento dandi quidquid velit. humanissimi eorum cinerem crematarum servandum ad hos usus in cornea pyxide censuere aut tritas clysteribus infundendas orthopnoicis aut rheumaticis. infixa utique corpori inlitas extrahere constat. mel utilissimum auribus quoque est, in quo apes inmortuae sint. parotidas comprimit columbinum stercus vel per se vel cum farina hordeacea aut avenacea, noctuae cerebrum vel iocur cum oleo infusum auriculae a parotide, multipeda cum resinae parte tertia inlita, grylli sive inliti sive adalligati.

ad reliqua morborum genera medicinam ex isdem animalibus aut eiusdem generis sequenti dicemus volumine.

LIBER XXX

magicas vanitates saepius quidem antecedente operis parte, ubicumque causae locusque poscebant, coarguimus detegemusque etiamnum. in paucis tamen digna res est, de qua plura dicantur, vel eo ipso quod fraudulentissima artium plurimum in toto terrarum orbe plurimisque saeculis valuit. auctoritatem ei maximam fuisse nemo miretur, quandoquidem sola artium tres alias imperiosissimas humanae mentis complexa in unam se redegit. natam primum e medicina nemo dubitabit ac specie salutari inrepsisse velut altiorem sanctioremque medicinam, ita blandissimis desideratissimisque promissis addidisse vires religionis, ad quas maxime etiam nunc caligat humanum genus, atque, ut hoc quoque successerit, miscuisse artes mathematicas, nullo non avido futura de sese sciendi atque ea e caelo verissime peti credente. ita possessis hominum sensibus triplici vinculo in tantum fastigii adolevit, ut hodieque etiam in magna parte gentium praevaleat et in oriente regum regibus imperet.

sine dubio illic orta in perside a zoroastre, ut inter auctores convenit. sed unus hic fuerit an postea et alius, non satis constat. eudoxus, qui inter sapientiae sectas clarissimam utilissimamque eam intellegi voluit, zoroastren hunc sex milibus annorum ante platonis mortem fuisse prodidit; sic et aristoteles. hermippus, qui de tota ea arte diligentissime scripsit et viciens c milia versuum a zoroastre condita indicibus quoque voluminum eius positis explanavit, praeceptorem, a quo institutum diceret, tradidit agonacen, ipsum vero quinque milibus annorum ante troianum bellum fuisse. mirum hoc in primis, durasse memoriam artemque tam longo aevo, non commentariis intercedentibus, praeterea nec claris nec continuis successionibus custoditam. quotus enim quisque hominum auditu saltem cognitos habet, qui soli nominantur, apusorum et zaratum medos babyloniosque marmarum et arabantiphocum aut assyrium tarmoendam, quorum nulla exstant monumenta maxime tamen mirum est, in bello troiano tantum de arte ea silentium fuisse homero tantumque operis ex eadem in ulixis erroribus, adeo ut vel totum opus non aliunde constet, siquidem protea et sirenum cantus apud eum non aliter intellegi volunt, circe utique et inferum evocatione

hoc solum agi. nec postea quisquam dixit, quonam modo venisset telmesum, religiosissimam urbem, quando transisset ad thessalas matres, quarum cognomen diu optinuit in nostro orbe, aliena genti troianis utique temporibus chironis medicinis contentae et solo marte fulminanti. miror equidem achillis populis famam eius in tantum adhaesisse, ut menander quoque, litterarum subtilitati sine aemulo genitus, thessalam cognominaret famulam complexam ambages feminarum detrahentium lunam. orphea putarem e propinquo artem primum intulisse ad vicina usque superstitionis ac medicinae provectum, si non expers sedes eius tota thrace magices fuisset. primus, quod exstet, ut equidem invenio, commentatus est de ea osthanes xerxen regem persarum bello, quod is graeciae intulit, comitatus ac velut semina artis portentosae sparsit obiter infecto, quacumque commeaverat, mundo. diligentiores paulo ante hunc ponunt zoroastren alium proconnensium. quod certum est, hic maxime osthanes ad rabiem, non aviditatem modo scientiae eius, graecorum populos egit. quamquam animadverto summam litterarum claritatem gloriamque ex ea scientia antiquitus et paene semper petitam. certe pythagoras, empedocles, democritus, plato ad hanc discendam navigavere exiliis verius quam peregrinationibus susceptis, hanc reversi praedicavere, hanc in arcanis habuere. democritus apollobechen coptiten et dardanum e phoenice inlustravit voluminibus dardani in sepulchrum eius petitis, suis vero ex disciplina eorum editis. quae recepta ab ullis hominum atque transisse per memoriam aeque ac nihil in vita mirandum est; in tantum fides istis fasque omne deest, adeo ut qui cetera in viro probant, haec opera eius esse infitientur. sed frustra. hunc enim maxime adfixisse animis eam dulcedinem constat. plenumque miraculi et hoc, pariter utrasque artes effloruisse, medicinam dico magicenque, eadem aetate illam hippocrate, hanc democrito inlustrantibus, circa peloponnensiacum graeciae bellum, quod gestum est a trecentesimo urbis nostrae anno. est et alia magices factio a mose et ianne et lotape ac iudaeis pendens, sed multis milibus annorum post zoroastren. tanto recentior est cypria. non levem et alexandri magni temporibus auctoritatem addidit professioni secundus osthanes comitatu eius exornatus, planeque, quod nemo dubitet, orbem terrarum peragravit.

extant certe et apud italas gentes vestigia eius in xii tabulis nostris aliisque argumentis, quae priore volumine exposui. dclvii demum anno urbis cn. cornelio lentulo P. Licinio Crasso cos. senatusconsultum factum est, ne homo immolaretur, palamque fit, in tempus illut sacra prodigiosa celebrata. gallias utique possedit, et quidem ad nostram memoriam. namque tiberii caesaris principatus sustulit druidas eorum et hoc genus vatum medicorumque. sed quid ego haec commemorem in arte oceanum quoque transgressa et ad naturae inane pervecta britannia hodieque eam adtonita celebrat tantis caerimoniis, ut dedisse persis videri possit. adeo ista toto mundo consensere, quamquam discordi et sibi ignoto. nec satis aestimari potest, quantum romanis debeatur, qui sustulere monstra, in quibus hominem occidere religiosissimum erat, mandi vero etiam saluberrimum.

ut narravit osthanes, species eius plures sunt. namque ex aqua et sphaeris et ae+re et stellis et lucernis ac pelvibus securibusque et multis aliis modis divina promittit, praeterea umbrarum inferorumque colloquia. quae omnia aetate nostra princeps nero vana falsaque comperit. quippe non citharae tragicique cantus libido illi maior fuit, fortuna rerum humanarum summa gestiente in profundis animi vitiis, primumque imperare dis concupivit nec quicquam generosius voluit. nemo umquam ulli artium validius favit. ad hoc non opes ei defuere, non vires, non discentis ingenium, quae non alia patiente mundo! inmensum, indubitatum exemplum est falsae artis, quam dereliquit nero; utinamque inferos potius et quoscumque de suspitionibus suis deos consuluisset, quam lupanaribus atque prostitutis mandasset inquisitiones eas! nulla profecto sacra, barbari licet ferique ritus, non mitiora quam cogitationes eius fuissent. saevius sic nos replevit umbris. sunt quaedam magis perfugia, veluti lentiginem habentibus non obsequi numina aut cerni. an obstitit forte hoc in illo nihil membris defuit. nam dies eligere certos liberum erat, pecudes vero, quibus non nisi ater colos esset, facile; nam homines immolare etiam gratissimum. magus ad eum tiridates venerat armeniacum de se triumphum adferens et ideo provinciis gravis. navigare noluerat, quoniam expuere in maria aliisque mortalium necessitatibus violare naturam eam fas non putant. magos secum adduxerat, magicis etiam cenis eum initiaverat; non tamen, cum

regnum ei daret, hanc ab eo artem accipere valuit. proinde ita persuasum sit, intestabilem, inritam, inanem esse, habentem tamen quasdam veritatis umbras, sed in his veneficas artes pollere, non magicas. quaerat aliquis, quae sint mentiti veteres magi, cum adulescentibus nobis visus apion grammaticae artis prodiderit cynocephalian herbam, quae in aegypto vocaretur osiritis, divinam et contra omnia veneficia, sed si tota erueretur, statim eum, qui eruisset, mori, seque evocasse umbras ad percunctandum homerum, quanam patria quibusque parentibus genitus esset, non tamen ausus profiteri, quid sibi respondisse diceret.

peculiare vanitatis sit argumentum, quod animalium cunctorum talpas maxime mirantur tot modis a rerum natura damnatas, caecitate perpetua, tenebris etiamnum aliis defossas sepultisque similes. nullis aeque credunt extis, nullum religionum capacius iudicant animal, ut, si quis cor eius recens palpitansque devoret, divinationes et rerum efficiendarum eventus promittant. dente talpae vivae exempto sanari dentium dolores adalligato adfirmant. cetera ex eo animali placita eorum suis reddemus locis. nec quicquam probabilius invenietur quam muris aranei morsibus adversari eas, quoniam et terra orbitis, ut diximus, depressa adversatur.

cetero dentium doloribus, ut iidem narrant, medetur canum, qui rabie perierunt, capitum cinis crematorum sine carnibus instillatus ex oleo cyprio per aurem, cuius e parte doleant, caninus dens sinister maximus, circumscariphato qui doleat, aut draconis os e spina, item enhydridis; est autem serpens masculus et albus. huius maximo dente circumscariphant, aut in superiorum dolore duos superiores adalligant, e diverso inferiores. huius adipe perunguuntur qui crocodilum captant. dentes scariphant et ossibus lacertae e fronte luna plena exemptis ita, ne terram adtingant. colluunt dentibus caninis decoctis in vino ad dimidias partes. cinis eorum pueros tarde dentientes adiuvat cum melle. fit eodem modo et dentifricium. cavis dentibus cinis e murino fimo inditur vel iocur lacertarum aridum. anguinum cor, si mordeatur adalligeturve, efficax habetur. sunt inter eos qui murem bis in mense iubeant mandi doloresque ita cavere. vermes terreni decocti in oleo infusique auriculae, cuius a parte doleant, praestant levamentum. eorundem cinis exesis dentibus coniectus ex facili cadere eos cogit, integros dolentes inlitus iuvat;

comburi autem oportet in testo. prosunt et cum mori radice in aceto scillite decocti ita, ut colluantur dentes. is quoque vermiculus, qui in herba veneris labro appellata invenitur, cavis dentium inditus mire prodest. nam urucae e brassicae foliis contactu cadunt, et e malva cimices infunduntur auribus cum rosaceo. harenulae, quae inveniuntur in cornibus coclearum, cavis dentium inditae statim liberant dolore. coclearum inanium cinis cum murra gingivis prodest, serpentis cum sale in olla exustae cinis cum rosaceo in contrariam aurem infusus, anguinae vernationis membrana cum oleo taedaeque resina calefacta et auri alterutri infusa - adiciunt aliqui tus et rosaceum - ; eadem cavis indita, ut sine molestia cadant, praestat. vanum arbitror esse circa canis ortum angues candidos membranam eam exuere, quoniam ante ortum in italia visum est multoque minus credibile in tepidis regionum tam sero exui. hanc autem vel inveteratam cum cera celerrime evellere tradunt. et dens anguium adalligatus dolores mitigat. sunt qui et araneum animal ipsum sinistra manu captum tritumque in rosaceo et in aurem infusum, cuius a parte doleat, prodesse arbitrentur. ossiculi gallinarum in pariete servati fistula salva tacto dente vel gingiva scariphata proiectoque ossiculo statim dolorem abire tradunt, item fimo corvi lana adalligato vel passerum cum oleo calefacto et proximae auriculae infuso. pruritum quidem intolerabilem facit, et ideo utilius est passeris pullorum sarmentis crematorum cinerem ex aceto infricare.

oris saporem commendari adfirmant, murino cinere cum melle si fricentur dentes; admiscent quidam marathi radices. pinna vulturis si scalpantur dentes, acidum halitum faciunt. hoc idem hystricis spina fecisse ad firmitatem pertinet. linguae ulcera et labrorum hirundines in mulso decoctae sanant, adeps anseris aut gallinae rimas, oesypum cum galla, araneorum telae candidae et quae in trabibus parvae texuntur. si ferventia os intus exusserint, lacte canino statim sanabuntur.

maculas in facie oesypum cum melle corsico, quod asperrimum habetur, extenuat, item scobem cutis in facie cum rosaceo inpositum vellere - quidam et butyrum addunt - , si vero vitiligines sint, fel caninum prius acu conpunctas, liventia et suggillata pulmones arietum pecudumque in tenues consecti membranas calidi inpositi vel columbinum fimum. cutem in facie custodit adeps anseris vel

gallinae. lichenas et murino fimo ex aceto inlinunt et cinere irenacei ex oleo; in hac curatione prius nitro ex aceto faciem foveri praecipiunt. tollit ex facie vitia et coclearum, quae latae et minutae passim inveniuntur, cum melle cinis. omnium quidem coclearum cinis spissat, calfacit smectica vi et ideo causticis miscetur psorisque et lepris et lentigini inlinitur. invenio et formicas herculaneas appellari, quibus tritis adiecto sale exiguo talia vitia sanentur. buprestis animal est rarum in italia, simillimum scarabaeo longipedi; fallit inter herbas bovem maxime, unde et nomen invenit, devoratumque tacto felle ita inflammat, ut rumpat. haec cum hircino sebo inlita lichenas ex facie tollit septica vi, ut supra dictum est. vulturinus sanguis cum chamaeleontos albae, quam herbam esse diximus, radice et cedria tritus contectusque brassica lepras sanat, item pedes locustarum cum sebo hircino triti, varos adeps gallinaceus cum cepa subactus. utilissimum et in facie mel, in quo apes sint inmortuae, praecipue tamen faciem purgat atque erugat cygni adeps. stigmata delentur columbino fimo ex aceto.

gravedinem invenio finiri, si quis nares mulinas osculetur. uva et faucium dolor mitigatur fimo agnorum, priusquam herbam gustaverint, in umbra arefacto, uva suco cocleae acu transfossae inlita, ut coclea ipsa in fumo suspendatur, hirundinum cinere cum melle; sic et tonsillis succurritur. tonsillas et fauces lactis ovilli gargarizatio adiuvat, multipeda trita, fimum columbinum cum passo gargarizatum, etiam cum fico arida ac nitro inpositum extra. asperitatem faucium et destillationes leniunt cocleae - coqui debent inlotae demptoque tantum terreno conteri et in passo dari potui; sunt qui astypalaeicas efficacissimas putent et minimas earum - , gryllus infricatus aut si quis manibus, quibus eum contriverit, tonsillas attingat.

anginis felle anserino cum elaterio et melle citissime succurritur, cerebro noctuae, cinere hirundinis ex aqua calida poto. huius medicinae auctor est ovidius poeta. sed efficaciores ad omnia, quae ex hirundinibus monstrantur, pulli silvestrium - figura nidorum eas deprehendit - , multo tamen efficacissimi ripariarum pulli; ita vocant in riparum cavis nidificantes. multi cuiuscumque hirundinis pullum edendum censent, ut toto anno non metuatur id malum. strangulatos cum sanguine comburunt in vase et cinerem cum pane aut in potu

dant. quidam et mustelae cinerem pari modo admiscent; sic ad strumae remedia dant et comitialibus cotidie potui. in sale quoque servatae hirundines ad anginam drachma bibuntur, cui malo et nidus earum mederi dicitur potus. milipedam inlini anginis efficacissimum putant; alii xx tritas in aquae mulsae hemina dari per harundinem, quoniam dentibus tactis nihil prosint. tradunt et murem cum verbenaca excoctum, si bibatur is liquor, remedio esse, et corrigiam caninam ter collo circumdatam, fimum columbinum vino et oleo permixtum. cervicis nervis, opisthotono ex milui nido surculus viticis adalligatus auxiliari dicitur, strumis exulceratis mustelae sanguis, ipsa decocta in vino; non tamen sectis admovetur. aiunt et in cibo sumptam idem efficere vel cinerem eius sarmentis conbustae mixtum axungia. lacertus viridis adalligatur; oportet post dies xxx alium adalligatum. quidam cor eius in argenteo vasculo servant ad femineas strumas et viriles. cocleae cum testa sua tusae inlinuntur, maxime quae frutectis adhaerent, item cinis aspidum cum sebo taurino inponitur, anguinus adeps mixtus oleo, item anguium cinis ex oleo inlitus vel cum cera. edisse quoque eos medios abscisis utrimque extremis partibus adversus strumas prodest vel cinerem bibisse in novo fictili ita crematorum, efficacius multo inter duas orbitas occisorum. et gryllum inlinere cum sua terra effossum suadent, item fimum columbarum per sese vel cum farina hordeacia aut avenacia ex aceto, talpae cinerem ex melle inlinere. alii iocur eiusdem contritum inter manus inlinunt et triduo non abluunt. dextrum quoque pedum eius remedio esse strumis adfirmant. alii praecidunt caput et cum terra a talpis excitata tusum digerunt in pastillos pyxide stagnea et utuntur ad omnia, quae intumescant, et quae apostemata vocant quaeque in cervice sint; vesci suilla tunc vetant. tauri vocantur scarabaei terrestres ricino similes - nomen cornicula dedere - , alii pediculos terrae vocant; ab his quoque terram egestam inlinunt strumis et similibus vitiis et podagris, triduo non abluunt. prodest haec medicina in annum, omniaque his adscribunt, quae nos in gryllis rettulimus. quidam et a formicis terra egesta sic utuntur. alii vermes terrenos totidem, quot sint strumae, adalligant, pariterque cum iis arescunt. alii viperam circa canis ortum circumcidunt ut diximus, dein mediam comburunt, cinerem eum dant bibendum ter septenis diebus, quantum prenditur ternis digitis; sic strumis

medentur, aliqui vero circumligantes lino, quo praeligata infra caput vipera pependerit, donec exanimaretur. et milipedis utuntur addita resinae terebinthinae parte quarta, quo medicamento omnia apostemata curari iubent.

umeri doloribus mustelae cinis cum cera medetur. - ne sint alae hirsutae, formicarum ova pueris infricata praestant, item mangonibus, ut lanugo sit pubescentium, sanguis e testiculis agnorum, cum castrantur. qui evulsis pilis inlitus et contra virus proficit.

praecordia vocamus uno nomine exta in homine, quorum in dolore cuiuscumque partis si catulus lactens admoveatur adprimaturque his partibus, transire in eum dicitur morbus, idque exinterato perfusoque vino deprehendi vitiato viscere illo, quod doluerit homini, sed obrui tales religio est. ii quoque, quos melitaeos vocamus, stomachi dolorem sedant adplicati saepius; transire morbos aegritudine eorum intellegitur, plerumque et morte. pulmonum quoque vitiis medentur, item mures, maxime africani, detracta cute in oleo et sale decocti atque in cibo sumpti. eadem res et purulentis vel cruentis excreationibus medetur, praecipue vero coclearum cibus stomacho. in aqua eas subfervefieri intacto corpore earum oportet, mox in pruna torreri nihilo addito atque ita e vino garoque sumi, praecipue africanas. nuper hoc conpertum plurimis prodesse; id quoque observant, ut numero inpari sumantur. virus tamen earum gravitatem halitus facit. prosunt et sanguinem excreantibus dempta testa tritae in aqua potu. laudatissimae autem sunt africanae - ex iis iolitanae - , astypalaeicae, item siculae modicae, quoniam magnitudo duras facit et sine suco, baliaricae, quas cavaticas vocant, quoniam in speluncis nascuntur, laudatae ex insulis et caprearum, nullae autem cibis gratae neque veteres neque recentes. fluviatiles et albae virus habent, nec silvestres stomacho utiles, alvum solvunt, item omnes minutae. contra marinae stomacho utiliores, efficacissimae tamen in dolore stomachi e laudatis traduntur quaecumque vivae cum aceto devoratae. praeterea sunt quae ἀκέρατοι vocantur, latae, multifariam nascentes, de quarum usu dicemus suis locis. gallinaceorum ventris membrana, si inveterata est, inspersa potioni destillationes pectoris et umidam tussim vel recens tosta lenit. cocleae crudae tritae cum aquae tepidae cyathis iii si sorbeantur, tussim sedant. destillationes sedat et

canina cutis cuilibet digito circumdata. iure perdicum stomachus recreatur.

iocinerum doloribus medetur mustela silvestris in cibo sumpta vel iocinera eius, item viverra porcelli modo inassata, suspiriosis multipeda, ut ter septenae in attico melle diluantur et per harundinem bibantur; omne enim vas nigrescit contactu. quidam torrent sextarium in patina, donec candidae fiant, tunc melle miscent alii centipedam vocant et ex aqua calida dari iubent in cibo. cocleae iis, quos linquit animus aut quorum alienatur mens aut quibus vertigines fiunt, ex passi cyathis iii singulae contritae cum sua testa et calefactae in potu datae diebus plurimum viiii; aliqui singulas primo die dedere, sequenti binas, tertio ternas, quarto ii, quinto i; sic et suspiria emendant et vomicas. esse animal locustae simile sine pennis, quod trixallis graece vocetur, latinum nomen non habeat, aliqui arbitrantur, nec pauci auctores, hoc esse quod grylli vocentur; ex his xx torreri iubent ac bibi e mulso contra orthopnoeas. sanguinem expuentibus cocleae, si qui inlotis protropum infundat vel marina aqua ita decoquat et in cibo sumat aut si tritae cum testis suis sumantur cum protropo; sic et tussi medentur. vomicas privatim sanat mel, in quo apes sint demortuae. sanguinem reicientibus pulmo vulturinus vitigineis lignis conbustus, adiecto flore punici mali ex parte dimidia, item cotoneorum liliorumque isdem portionibus, potus mane atque vesperi e vino, si febres absint, si minus, ex aqua, in qua cotonea decocta sint.

pecudis lien recens magicis praeceptis super dolentem lienem extenditur dicente eo, qui medeatur, lieni se remedium facere. post hoc iubent in pariete dormitorii eius tectorio includi et obsignari anulo ter novies eademque dici. caninus si viventi eximatur et in cibo sumatur, liberat eo vitio. quidam recentem superinligant. alii duum dierum catuli ex aceto scillite dant ignoranti vel irenacei lienem, item coclearum cinerem cum semine lini et urticae addito melle, donec persanet. liberat et lacerta viridis viva in olla ante cubiculum dormitorium eius, cui medeatur, suspensa, ut egrediens revertensque attingat manu, cinis e capite bubonis cum unguento, mel, in quo apes sint mortuae, araneus et maxime qui lycos vocatur.

upupae cor lateris doloribus laudatur, coclearum cibus in tisana decoctarum; et per se inlinuntur. canis rabiosi calvariae cinis potioni

inspergitur. - lumborum dolori stelio transmarinus capite ablato et intestinis decoctus in vino cum papaveris nigri denarii pondere dimidio eo suco bibitur. lacertae virides decisis pedibus et capite in cibo sumuntur, cocleae iii contritae cum testis suis atque in vino decoctae cum piperis granis xv. aquilae pedes evellunt in aversum a suffragine ita, ut dexter dextrae partis doloribus adalligetur, sinister laevae. multipeda quoque, quam oniscon appellavimus, medetur denarii pondere ex vini cyathis ii pota. vermem terrenum catillo ligneo ante fisso et ferro vincto inpositum aqua excepta perfundere et defodere, unde effoderis, magi iubent, mox aquam bibere catillo, mire id prodesse ischiadicis adfirmantes.

dysintericos recreant femina pecudum decocta cum lini semine ea aqua pota, caseus ovillus vetus, sebum ovium decoctum in vino austero. hoc et ileo medetur et tussi veteri, dysintericis stelio transmarinus ablatis intestinis et capite pedibusque ac cute decoctus aeque et in cibo sumptus, cocleae ii cum ovo, utraque cum putamine contrita atque in vase novo addito sale et passi cyathis ii aut palmarum suco et aquae cyathis iii subfervefacta et in potu data. prosunt et combustae, ut cinis earum bibatur in vino, addito resinae momento. cocleae nudae, de quibus diximus, in africa maxime inveniuntur, utilissimae dysintericis, quinae combustae cum denarii dimidii pondere acaciae; ex eo cinere dantur cochlearia bina in vino myrtite aut quolibet austero cum pari modo caldae. quidam omnibus africanis ita utuntur, alii totidem africanas velatas infundunt potius et, si maior fluctio sit, addunt acaciam fabae magnitudine. senectus anguium dysinteriae et tenesmis in stagneo vase decoquitur cum rosaceo vel, si in alio, cum stagno inlinitur. ius ex gallinaceis isdem medetur, sed veteris gallinacei vehementius salsum ius alvum ciet. membrana gallinarum tosta et data in oleo ac sale coeliacorum dolores mulcet - abstineri autem frugibus ante et gallinam et hominem oporteat - , fimum columbinum tostum potumque. caro palumbis in aceto decocta dysintericis et coeliacis medetur, turdus inassatus cum myrti bacis dysintericis, item merulae, mel, in quo apes sint inmortuae, decoctum.

gravissimum vitium alvi ileos appellatur. huic resisti aiunt discerpti vespertilionis sanguine, etiam inlito ventre subveniri. sistit alvum coclea sicut diximus in suspiriosis temperata, item cinis

earum, quae vivae crematae sint, potus ex vino austero, gallinaceorum iocur assum aut ventriculi membrana, quae abici solet, inveterata admixto papaveris suco - alii recentem torrent ex vino bibendam - , ius perdicum et per se ventriculus contritus ex vino nigro, item palumbis ferus ex posca decoctus, lien pecudis tostus et in vino tritus, fimum columbinum cum melle inlitum, ossifragi venter arefactus et potus, iis, qui cibos non conficiant, utilissimus, vel si manu tantum teneant capientes cibum. quidam adalligant ex hac causa, sed continuare non debent, maciem enim facit. sistit et anatum mascularum sanguis. inflationes discutit coclearum cibus, tormina lien ovium tostus atque e vino potus, palumbis ferus ex posca decoctus, adips otidis ex vino, cinis ibide sine pennis cremata potus. quod praeterea traditur in torminibus, mirum est, anate adposita ventri transire morbum anatemque emori. tormina et melle curantur, in quo sint apes inmortuae, decocto. coli vitium efficacissime sanatur ave galerita assa in cibo sumpta. quidam in vase novo cum plumis exuri iubent conterique in cinerem, bibi ex aqua cochlearibus ternis per quadriduum, quidam cor eius adalligari femini; aliis recens tepensque adhuc devoratur. consularis asprenatum domus est, in qua alter e fratribus colo liberatus est ave hac in cibo sumpta et corde eius armilla aurea incluso, alter sacrificio quodam facto crudis laterculis ad formam camini atque, ut sacrum peractum est, obstructo sacello. unum est ossifrago intestinum mirabili natura omnia devorata conficienti; huius partem extremam adalligatam prodesse contra colum constat. - sunt occulti interaneorum morbi, de quibus mirum proditur. si catuli, priusquam videant, adplicentur triduo stomacho maxime ac pectori et ex ore aegri suctum lactis accipiant, transire vim morbi, postremo exanimari dissectisque palam fieri aegri causas; monent humari debere eos obrutos terra. magi quidem vespertilionis sanguine contacto ventre in totum annum caveri tradunt aut in dolore, si quis aquam ter pedes eluens haurire sustineat.

murino fimo contra calculos inlinere ventrem prodest. irenacei carnem iucundam esse aiunt, si capite percusso uno ictu interficiatur, priusquam in se urinam reddat. haec caro ad hunc modum occisi stillicidium vesicae emendat, item suffitus ex eodem. quod si urinam in se reddiderit, eos, qui carnem comederint, stranguriae morbum contrahere traditur. iubent et vermes terrenos bibi ex vino aut passo

ad comminuendos calculos vel cocleas decoctas ut in suspiriosis, easdem exemptas testis iii tritasque in vini cyatho bibi, sequenti die ii, tertio die i, ut stillicidium urinae emendent, testarum vero inanium cinerem ad calculos pellendos, item hydri iocur bibi vel scorpionum cinerem aut in pane sumi vel si quis ut locusta edit, lapillos, qui in gallinaceorum vesica aut in palumbium ventriculo inveniantur, conteri et potioni inspergi, item membranam e ventriculo gallinacei aridam vel, si recens sit, tostam, fimum quoque palumbinum in faba sumi contra calculos et alias difficultates vesicae, similiter plumarum cinerem palumbium ferorum ex aceto mulso et intestinorum ex his cinerem coclearibus iii, e nido hirundinum glaebam dilutam aqua calida, ossifragi ventrem arefactum, turturis fimum in mulso decoctum vel ipsius discoctae ius. turdos quoque edisse cum bacis myrti prodest urinae, cicadas tostas in patellis, milipedam oniscon bibisse et in vesicae doloribus decoctum agninorum pedum. alvum ciet gallinaceorum discoctorum ius et acria mollit, ciet et hirundinum fimum adiecto melle subditum.

sedis vitiis efficacissima sunt oesypum - quidam adiciunt pompholygem et rosaceum - , canini capitis cinis, senecta serpentis ex aceto, si rhagades sint, cinis fimi canini candidi cum rosaceo - aiunt inventum aesculapii esse eodemque et verrucas efficacissime tolli - , murini fimi cinis, adeps cygni, adeps bovae. procidentia ibi sucus coclearum punctis evocatus inlita repellit. adtritis medetur cinis muris silvatici cum melle, fel irenacei cum vespertilionis cerebro et canino lacte, adeps anserinus cum cerebro et alumine et oesypo, fimum columbinum cum melle, condylomatis privatim araneus dempto capite pedibusque infricatus, ne acria perurant, adeps anserinus cum cera punica, cerussa, rosaceo, adeps cygni. hic et haemorroidas sanare dicitur. ischiadicis cocleas crudas tritas cum vino ammineo et pipere potu prodesse dicunt, lacertam viridem in cibo ablatis pedibus, interaneis, capite; sic et stelionem adiectis huic papaveris nigri obolis iii; ruptis, convulsis fel ovium cum lacte mulierum. verendorum formicationibus verrucisque medetur arietini pulmonis inassati sanies, ceteris vitiis vellerum eius vel sordidorum cinis ex aqua, sebum ex omento pecudis, praecipue a renibus, admixto pumicis cinere et sale, lana sucida ex aqua frigida, carnes pecudis combustae ex aqua, mulae ungularum cinis, dentis caballini

contusi farina inspersa, testibus vero farina ex ossibus canini capitis sine carne tusis. si decidat testium alter, spumam coclearum inlitam in remedio esse tradunt. taetris ibi ulceribus et manantibus auxiliantur canini capitis recentes cineres, cocleae parvae, latae contritae ex aceto, senectus anguium ex aceto vel cinis eius, mel, in quo apes sint inmortuae, cum resina, cocleae nudae, quas in africa gigni diximus, tritae cum turis polline et ovorum albo; xxx die resolvunt; aliqui pro ture bulbum admiscent. hydrocelicis stelionis mire prodesse tradunt capite, pedibus, interaneis ademptis relicum corpus inassatum - in cibo id saepius datur - , sicut ad urinae incontinentiam caninum adipem cum alumine schisto fabae magnitudine, cocleas africanas cum sua carne et testa crematas poto cinere, anserum iii linguas inassatas in cibo. huius rei auctor est anaxilaus. at panos aperit sebum pecudum cum sale tosto, murinum fimum admixto turis polline et sandaraca discutit, lacertae cinis et ipsa divisa inposita, item multipeda contrita admixta resina terebinthina ex parte tertia - quidam et sinopidem admiscent - , cocleae contusae per se, cinis inanium coclearum cerae mixtus. discussoriam vim habet fimum columbarum per sese vel cum farina hordeacia aut avenacia inlitum. cantharides mixtae calce panos scalpelli vice auferunt, inguinum tumorem cocleae minutae cum melle inlitae leniunt.

varices ne nascantur, lacertae sanguine pueris crura ieiunis a ieiuno inlinuntur. podagras lenit oesypum cum lacte mulieris et cerussa, fimum pecudum, quod liquidum reddunt, pulmones pecudum, fel arietis cum sebo, mures dissecti inpositi, sanguis mustelae cum plantagine inlitus et vivae combustae cinis, ex aceto ac rosaceo si pinna inlinatur vel si cera et rosaceum admisceatur, fel caninum ita, ne manu attingatur, sed pinna inlinatur, fimum gallinarum, vermium terrenorum cinis cum melle ita, ut tertio die solvantur. aliqui ex aqua inlinere malunt, alii ipsos acetabuli mensura cum mellis cyathis iii, pedibus ante rosaceo perunctis. cocleae latae potae tollere dicuntur pedum et articulorum dolores; bibuntur autem binae in vino tritae. eaedem inlinuntur cum helxines herbae suco; quidam ex aceto intrivisse contenti sunt. sale, qui una cum vipera crematus sit in olla nova, saepius sumpto aiunt podagra liberari; utile esse et adipe viperino pedes perungui. et de miluo adfirmant, si

inveterato tritoque quantum iii digiti capiant bibatur ex aqua aut si pedes sanguine eius perunguantur. inlinuntur et columbarum sanguine cum urtica vel pennis earum, cum primum nascentur, tritis cum urtica. quin et fimum earum articulorum doloribus inlinitur, item cinis mustelae aut coclearum, et cum amylo vel tragacantha. incussos articulos aranei telae commodissime curant. sunt qui cinere earum uti malint, sicut fimi columbini cinere cum polenta et vino albo. articulis luxatis praesentaneum est sebum pecudis cum cinere e capillo mulierum. pernionibus quoque inponitur sebum pecudum cum alumine, canini capitis cinis aut fimi murini. quod si pura sint, ulcera cera addita ad cicatricem perducunt soricum vel glirium crematorum favilla ex oleo, item muris silvatici cum melle, vermium quoque terrenorum cum oleo vetere et cocleae, quae nudae inveniuntur. ulcera omnia pedum sanat cinis earum, quae vivae combustae sint, fimi gallinarum cinis exulcerationes, columbini fimi ex oleo. adtritus calciamentorum veteris soleae cinis, agninus pulmo et arietis sanant, dentis caballini contusi farina privatim subluviem, lacertae viridis sanguis subtritos et hominum et iumentorum pedes sublitus, clavos pedum urina muli mulaeve cum luto suo inlita, fimum ovium, iocur lacertae viridis vel sanguis flocco inpositus, vermes terreni ex oleo, stelionis caput cum viticis foliis pari modo tritum ex oleo, fimum columbinum decoctum ex aceto, verrucarum omnia genera urina canis recens cum suo luto inlita, fimi canini cinis cum cera, fimum ovium, sanguis recens murinus inlitus vel ipse mus divolsus, irenacei fel, caput lacertae vel sanguis vel cinis totius, membrana senectutis anguium, fimum gallinae cum oleo ac nitro. cantharides cum uva taminia intritae exedunt, sed ita erosas aliis, quae ad persananda ulcera demonstravimus, curari oportet.

nunc praevertemur ad ea, quae totis corporibus metuenda sunt.

fel canis nigri masculi amuletum esse dicunt magi domus totius suffitae eo purificataeve contra omnia mala medicamenta, item sanguinem canis respersis parietibus genitaleque eius sub limine ianuae defossum. minus mirentur hoc qui sciunt, foedissimum animalium in quantum magnificent, ricinum, quoniam uni nullus sit exitus saginae nec finis alia quam morte, diutius in fame viventi: septenis ita diebus durare tradunt, at in satietate paucioribus dehiscere; hunc ex aure sinistra canis omnes dolores sedare

adalligatum. et indicium in augurio vitalium habent, nam si aeger initio respondeat ei, qui intulerit, a pedibus stanti interrogantique de morbo, spem vitae certam esse, moriturum nihil respondere. adiciunt ut evellatur ex aure laeva canis, cui non sit alius quam niger colos. nigidius fugere toto die canes conspectum eius, qui e sue id animal evellerit, scriptum reliquit. rursus magi tradunt lymphatos sanguinis talpae adspersu resipiscere, eos vero, qui a nocturnis diis faunisque agitentur, draconis lingua et oculis et felle intestinisque in vino et oleo decoctis ac sub diu nocte refrigeratis perunctionibus matutinis vespertinisque liberari.

perfrictionibus remedio esse tradit nicander amphisbaenam serpentem mortuam adalligatam vel pellem tantum eius, quin immo arbori, quae caedatur, adalligata non algere caedentes, faciliusque succedere ita. quae sola serpentium frigori se committit, prima omnium procedens et ante cuculi cantum. aliud est cuculo miraculum: quo quis loco primum audiat alitem illam, si dexter pes circumscribatur ac vestigium id effodiatur, non gigni pulices, ubicumque spargatur.

paralysim caventibus pinguia glirium decoctorum et soricum utilissima tradunt esse, milipedas ut in angina diximus potas; phthisim sentientibus lacertam viridem decoctam in vini sextariis iii ad cyathum unum, singulis coclearibus sumptis per dies, donec convalescant, coclearum cinerem potum in vino; comitialibus morbis oesypum cum murrae momento et vini cyathis ii dilutum magnitudine nucis abellanae, a balineo potum, testiculos arietinos inveteratos tritosque dimidio denarii pondere in aquae vel lactis asinini hemina. interdicitur vini potus quinis diebus ante et postea. magnifice laudatur et sanguis pecudum potus, item fel cum melle, praecipue agninum, catulus lactens sumptus absciso capite pedibusque ex vino et murra, lichen mulae potus in oxymelite cyathis iii, stelionis transmarini cinis potus in aceto, tunicula stelionis, quam eodem modo ut anguis exuit, in potu. quidam et ipsum harundine exinteratum inveteratumque bibendum dederunt, alii in cibo ligneis veribus inassatum. operae pretium est scire, quo modo praeripiatur, cum exuerit, membrana hiberna alias devoranti eam, quoniam nullum animal fraudulentius invidere homini tradunt, inde stelionum nomine in maledictum translato. observant cubile eius aestatibus; est autem

in loricis ostiorum fenestrarumque aut camaris sepulchrisve. ibi vere incipiente fissis harundinibus textas opponunt ceu nassas, quarum angustiis etiam gaudet, eo facilius exuens circumdatum torporem; sed relicto non potest remeare. nihil ei remedio in comitialibus morbis praefertur. prodest et cerebrum mustelae inveteratum potumque et iocur eius, testiculi quoque volvaque aut ventriculus inveteratus cum coriandro, ut diximus, item cinis, silvestris vero tota in cibo sumpta. eadem omnia praedicantur ex viverra. lacerta viridis cum condimentis, quae fastidium abstergeant, ablatis pedibus ac capite, coclearum cinis addito semine lini et urticae cum melle inlitu sanant. magis placet draconis cauda in pelle dorcadis adalligata cervinis nervis vel lapilli e ventre hirundinum pullorum sinistro lacerto adnexi; dicuntur enim excluso pullo lapillum dare. quod si pullus is detur in cibo, quem primum pepererit, cum quis primum temptatus sit, liberatur eo malo; postea medetur hirundinum sanguis cum ture vel cor recens devoratum. quin et e nido earum lapillus inpositus recreare dicitur confestim, adalligatus in perpetuum tueri. praedicatur et iocur milui devoratum et senectus serpentium, iocur vulturis tritum cum suo sanguine ter septenis diebus potum, cor pulli vulturini adalligatum. sed et ipsum vulturem in cibo dari iubent et quidem satiatum humano cadavere. quidam pectus eius bibendum censent in cerrino calice, aut testes gallinacei ex aqua et lacte, antecedente v dierum abstinentia vini; ob id inveterant. fuere et qui muscas xxi rufas, et quidem a mortuo, in potu darent, infirmioribus pauciores.

morbo regio resistunt sordes aurium aut mammarum pecudis denarii pondere cum murrae momento et vini cyathis ii canini capitis cinis in mulso, multipeda in vini hemina, vermes terreni in aceto mulso cum murra, gallina, si sit luteis pedibus, prius aqua purificatis, dein collutis vino, quod bibatur, cerebrum perdicis aut aquilae in vini cyathis iii, cinis plumarum aut interaneorum palumbis in mulso ad coclearia iii, passerum cinis sarmentis crematorum coclearibus ii in aqua mulsa. avis icterus vocatur a colore; quae si spectetur, sanari id malum tradunt et avem mori. hanc puto latine vocari galgulum.

phreneticis prodesse videtur pulmo pecudum calidus circa caput alligatus. nam muris cerebrum dare potui ex aqua aut cinerem mustelae vel etiam inveteratas carnes irenacei quis possit furenti,

etiamsi certa sit medicina bubonis quidem oculorum cinerem inter ea, quibus prodigiose vitam ludificantur, acceperim, praecipueque febrium medicina placitis eorum renuntiat. namque et in duodecim signa digessere eam sole transmeante iterumque luna, quod totum abdicandum paucis e pluribus edocebo, siquidem crematis tritisque cum oleo perungui iubent aegros, cum geminos transeat sol, cristis et auribus et unguibus gallinaceorum; si luna, radiis barbisque eorum; si virginem alteruter, hordei granis; si sagittarium, vespertilionis alis; si leonem luna, tamaricis fronde, et adiciunt sativae; si aquarium, e buxo carbonibus tritis. ex istis confessa aut certe verisimilia ponemus, sicuti lethargum olfactoriis excitari et inter ea fortassis mustelae testiculis inveteratis aut iocinere usto. his quoque pulmonem pecudis calidum circa caput adalligari putant utile.

in quartanis medicina clinice propemodum nihil pollet. quam ob rem plura eorum remedia ponemus primumque ea, quae adalligari iubent: pulverem, in quo se accipiter volutaverit, lino rutilo in linteolo, canis nigri dentem longissimum. pseudosphecem vocant vespam, quae singularis volitat; hanc sinistra manu adprehensam subnectunt, alii vero quam quis eo anno viderit primam; viperae caput abscisum in linteolo vel cor viventi exemptum; muris rostellum auriculasque summas russeo panno ipsumque dimittunt; lacertae vivae dextrum oculum effossum, mox cum capite suo deciso in pellicula caprina scarabaeum, qui pilas volvit. propter hunc aegypti magna pars scarabaeos inter numina colit, curiosa apionis interpretatione, qua colligat solis operum similitudinem huic animali esse, ad excusandos gentis suae ritus. sed et alios adalligant magi: cui sunt cornicula reflexa, sinistra manu collectum; tertium, qui vocatur fullo, albis guttis, dissectum utrique lacerto adalligant, cetera sinistro: cor anguium sinistra manu exemptum viventibus, scorpionis caudae iiii articulos cum aculeo panno nigro ita, ut nec scorpionem dimissum nec eum, qui adalligaverit, videat aeger triduo, post tertium circuitum id condat. urucam in linteolo ter lino circumdant totidem nodis ad singulos dicente, quare faciat, qui medebitur, limacem in pellicula vel iiii limacum capita praecisa harundine, multipedam lana involutam, vermiculos, ex quibus tabani fiunt, antequam pennas germinent, alios e spinosis frutectis lanuginosos. quidam ex illis quaternos inclusos iuglandis nucis putamine adalligant. cocleas, quae

nudae inveniuntur, stelionem, cum incluserunt capsulis, subiciunt capiti et sub decessu febris emittunt. devorari autem iubent cor mergi marini sine ferro exemptum, inveteratumque conteri et in calida aqua bibi, hirundinum corda cum melle; alii fimum drachma una in lactis caprini vel ovilli vel passi cyathis iii ante accessiones; sunt qui totas censeant devorandas. aspidis cutem pondere sexta parte denarii cum piperis pari modo parthorum gentes in remedium quartanae bibunt. chrysippus philosophus tradidit phryganion adalligatum remedio esse quartanis. quod esset animal, neque ille descripsit nec nos invenimus qui novisset; demonstrandum tamen fuit a tam gravi auctore dictum, si cuius cura efficacior esset inquirendi. cornicis carnes esse et nidum inlinere in longis morbis utilissimum putant. - et in tertianis fiat potestas experiendi, quoniam miserias copia spei delectat, anne aranei, quem lycon vocant, tela cum ipso in spleniolo resinae ceraeque inposita utrisque temporibus et fronti prosit, aut ipse calamo adalligatus, qualiter et aliis febribus prodesse traditur, item lacerta viridis adalligata viva in eo vase, quod capiat, quo genere et recidivas frequenter abigi adfirmant.

hydropicis oesypum ex vino addita murra modice potui datur, nucis abellanae magnitudine. aliqui addunt et anserinum adipem ex vino myrteo. sordes ab uberibus ovium eundem effectum habent, item carnes inveteratae irenacei sumptae. vomitus quoque canum inlitus ventri aquam trahere promittitur.

igni sacro medetur oesypum cum pompholyge et rosaceo, ricini sanguis, vermes terreni ex aceto inliti, gryllus contritus in manibus, quo genere praestat, ut qui id fecerit, antequam incipiat vitium, toto ei anno non accidat - oportet autem eum ferro cum terra cavernae suae tolli - , anseris adeps, viperae caput aridum adservatum et combustum, dein ex aceto inpositum, senectus serpentium ex aqua inlita a balneo cum bitumine et sebo agnino.

carbunculus fimo columbino aboletur per se inlito vel cum lini semine ex aceto mulso, item apibus, quae in melle sint mortuae, inpositis polentaque inposita insuper. si in verendis sit, ceterisque ibi ulceribus occurrit ex melle oesypum cum plumbi squamis, item fimum pecudum incipientibus carbunculis. tubera et quaecumque molliri opus sit efficacissime anserino adipe curantur; idem praestat et gruum adeps.

furunculis mederi dicitur araneus, priusquam nominetur, inpositus et tertio die solutus, mus araneus pendens enecatus sic, ut terram ne postea attingat, ter circumlatus furunculo, totiens expuentibus medente et cui is medebitur, ex gallinaceo fimo, quod est rufum, maxime recens inlitum ex aceto, ventriculus ciconiae ex vino decoctus, muscae inpari numero infricatae digito medico, sordes ex pecudum auriculis, sebum ovium vetus cum cinere capilli mulierum, sebum arietis cum cinere pumicis et salis pari pondere.

ambustis canini capitis cinis medetur, item glirium cum oleo, fimum ovium cum cera, murium cinis, coclearum quoque sic, ut ne cicatrix quidem appareat, adips viperinus, fimi columbini cinis ex oleo inlitus; nervorum nodis capitis viperini cinis in oleo cyprino, terreni vermes cum melle inliti. dolores eorum ... adips, amphisbaena mortua adalligata, adips vulturinus cum ... , venter arefactus tritusque cum adipe suillo inveterato, cinis e capite bubonis in mulso potus cum lilii radice, si magis credimus. in contractione nervorum caro palumbina in cibis prodest et inveterata, irenacei spasticis, item mustelae cinis, serpentium senectus in pelle taurina adalligata. spasmos fieri prohibet et opisthotonos milui iocur aridum iii obolis in aquae mulsae cyathis iii potum.

reduvias et quae in digitis nascuntur pterygia tollunt canini capitis cinis aut vulva decocta in oleo, superinlito butyro ovillo cum melle, item folliculus cuiuslibet animalium fellis; unguium scabritiam cantharides cum pice tertio die solutae aut locustae frictae cum sebo hircino, pecudum sebum. aliqui miscent viscum et porcillacam, alii aeris florem et viscum ita, ut tertio die solvant.

sanguinem sistit in naribus sebum ex omento pecudum inditum, item coagulum ex aqua, maxime agninum, subductum vel infusum, etiam si alia non prosint, adips anserinus cum butyro pari pondere pastillis ingestus, coclearum terrena, sed et ipsae extractae testis; e naribus fluentem cocleae contritae fronti inlitae, aranei tela; gallinacei cerebellum vel sanguis profluvia ex cerebro, item columbinus ob id servatus concretusque. si vero ex vulnere inmodice fluat, fimi caballini cum putaminibus ovorum cremati cinis inpositus mire sistit.

ulceribus medetur oesypum cum hordei cinere et aerugine aequis partibus, ad carcinomata quoque ac serpentia valet. erodit et ulcerum

margines, carnesque exscrescentes ad aequalitatem redigit; explet quoque et ad cicatricem perducit. magna vis et in cinere pecudum fimi ad carcinomata, addito nitro, aut in cinere ex ossibus feminum agninorum, praecipue in iis ulceribus, quae cicatricem non trahant. magna et pulmonibus, praecipue arietum: carnes excrescentes in ulceribus ad aequalitatem efficacissime reducunt; fimo quoque ipso ovium sub testo calefacto et subacto tumor vulnerum sedatur, fistulae purgantur sananturque, item epinyctides. summa vero in canini capitis cinere: excrescentia omnia spodii vice erodit ac persanat. et murino fimo eroduntur, item mustelae fimi cinere. duritias in alto ulcerum et carcinomata persequitur multipeda trita admixta resina terebinthina et sinopide. eadem utilissima sunt in iis ulceribus, quae vermibus periclitentur. quin et vermium ipsorum genera mirandos usus habent. cosses, qui in ligno nascuntur, sanant ulcera omnia, nomas vero combusti cum pari pondere anesi ex oleo inliti. vulnera recentia conglutinant terreni adeo, ut nervos quoque abscisos inlitis solidari intra septimum diem persuasio sit; itaque in melle servandos censent. cinis eorum margines ulcerum duriores absumit cum pice liquida vel symphyto et melle. quidam arefactis in sole ad vulnera ex aceto utuntur nec solvunt nisi biduo intermisso. eadem ratione et coclearum terrena prosunt, totaeque exemptae recentia vulnera tusae inpositae conglutinant et nomas sistunt. - (herpes quoque animal a graecis vocatur, quo praecipue sanantur quaecumque serpunt). - cocleae prosunt et cum testis suis tusae; cum murra quidem et ture etiam praecisos nervos sanare dicuntur. draconum quoque adeps siccatus in sole magnopere prodest, item gallinacei cerebrum recentibus plagis. sale viperino in cibo sumpto tradunt et ulcera tractabiliora fieri ac celerius sanari. antonius quidem medicus, cum incidisset insanabilia ulcera, viperas edendas dabat miraque celeritate persanabat. trixallidum cinis margines ulcerum duros aufert cum melle, item fimi columbini cum arrhenico et melle, eademque erodentia sunt. bubonis cerebrum cum adipe anserino mire vulnera dicitur glutinare; quae vero vocantur cacoe+the, cinis feminum arietis cum lacte muliebri, diligenter prius elutis linteolis, ulula avis cocta in oleo, cui liquato miscetur butyrum ovillum et mel. ulcerum labra duriora apes in melle mortuae emolliunt, et elephantiasin sanguis et cinis mustelae. verberum vulnera atque vibices pellibus

ovium recentibus inpositis obliterantur.

articulorum fracturis cinis feminum pecudis peculiariter medetur cum cera - efficacius idem medicamentum fit maxillis simul ustis cornuque cervino et cera mollita rosaceo - ; ossibus fractis caninum cerebrum linteolo inlito, superpositis lanis, quae subinde oleo subfundantur; fere xiiii diebus solidat, nec tardius cinis silvestris muris cum melle aut vermium terrenorum, qui et ossa extrahit.

cicatrices ad colorem reducit pecudum pulmo, praecipue ex ariete, sebum ex nitro, lacertae viridis cinis, vernatio anguium ex vino decocta, fimum columbinum cum melle, item vitiligines albas ex vino, vitiliginem et cantharides cum rutae foliorum ii partibus. in sole, donec formicet cutis, tolerandae sunt, postea fovere oleoque perunguere necessarium iterumque inlinere, idque pluribus diebus facere, caventes exulcerationem altam. ad easdem vitiligines et muscas inlini iubent cum radice eupatoriae, gallinarum fimi candidum servatum in oleo vetere cornea pyxide, vespertilionis sanguinem, fel irenacei ex aqua. scabiem vero bubonis cerebrum cum aphronitro, sed ante omnia sanguis caninus sedat, pruritum cocleae minutae, latae contritae inlitae.

harundines et tela quaeque alia extrahenda sunt corpori evocat mus dissectus inpositus, praecipue vero lacerta dissecta et vel caput tantum eius contusum cum sale inpositum, cocleae ex iis, quae gregatim folia sectantur, contusae inpositae cum testis et eae, quae manduntur, exemptae testis, sed cum leporis coagulo efficacissime. ossa anguium eundem cum coagulo cuiuscumque quadripedis intra tertium diem adprobant effectum. laudantur et cantharides tritae cum farina hordei.

in muliebribus malis membranae e partu ovium proficiunt, sicut in capris rettulimus. fimum quoque pecudum eosdem usus habet. locustarum suffitu stranguriae maxume mulierum iuvantur. gallinaceorum testes si subinde a conceptu edat mulier, mares in utero fieri dicuntur. partus conceptos hystricum cinis potus continet, maturat caninum lacte potum, evocat membrana e secundis canum, si terram non attigerit, lumbis parturientium tactis. fimum murinum aqua pluvia dilutum mammas mulierum a partu tumentes reficit. cinis irenaceorum cum oleo perunctarum custodit partus contra abortus. facilius enituntur quae ... um anserinum cum aquae ii cyathis

sorbuere aut ex utriculo mustelino per genitale effluentes aquas. - vermes terreni inliti, ne cervicis scapularumque nervi doleant, praestant. graves secundas pellunt in passo poti. iidem per se inpositi mammarum suppurationes concocunt et aperiunt extrahuntque et ad cicatricem perducunt. lac devocant poti cum mulso. inveniuntur et in gramine vermiculi, qui adalligati collo continent partum; detrahuntur autem sub partu, alias eniti non patiuntur; cavendum et ne in terra ponantur. conceptus quoque causa dantur in potu quini aut septeni. - cocleae in cibo sumptae adcelerant partum, item conceptum inpositae cum croco. eaedem ex amylo et tragacantha inlitae profluvia sistunt. prosunt et purgationibus sumptae in cibo et vulvam aversam corrigunt cum medulla cervina ita, ut uni cocleae denarii pondus addatur et cypri. inflationes quoque vulvarum discutiunt exemptae testis tritae cum rosaceo. ad haec astypalaeicae maxime eliguntur. alio modo africanae binae tritae cum feni graeci quod iii digitis capiatur, addito melle coclearibus iiii, inlinuntur alvo prius irino suco perunctae. sunt et minutae loricaeque candidae cocleae passim oberrantes; hae arefactae sole in tegulis tusaeque in farinam miscentur lomento aequis partibus candoremque et levorem corpori adferunt. scabendi desideria tollunt minutae et latae cum polenta. - viperam mulier praegnans si transcenderit, abortum faciet, item amphisbaenam, mortuam dumtaxat, nam vivam habentes in pyxide inpune transeunt; etiam si mortua sit atque adservata, partus faciles praestat. in mortua mirum, si sine adservata transcenderit gravida, innoxium fieri, si protinus transcendat adservatam. - anguis inveterati suffitu menstrua adiuvant. anguium senectus adalligata lumbis faciliores partus facit, protinus a puerperio removenda. dant et in vino bibendam cum ture; aliter sumpta abortum facit. baculum, quo angui rana excussa sit, parturientes adiuvat; trixallidum cinis inlitus cum melle purgationes, item araneus: qui filum deducit ex alto, capi debet manu cava tritusque admoveri, quod, si redeuntem prenderit, inhibebit idem purgationes. - lapis ae+tites in aquilae repertus nido custodit partus contra omnes abortuum insidias. penna vulturina subiecta pedibus adiuvat parturientes. ovum corvi cavendum gravidis constat, quoniam transgressis abortum per os faciat. fimum accipitris in mulso potum videtur fecundas facere. vulvarum duritias, collectiones adeps anserinus aut cygni emollit. mammas a partu

custodit adeps anseris cum rosaceo et araneo. phryges et lycaones mammis puerperio vexatis invenerunt otidum adipem utilem esse. iis, quae vulva strangulentur, et blattas inlinunt. ovorum perdicis putaminum cinis cadmiae mixtus et cerae stantes mammas servat. putant et ter circumductas ovo perdicis aut ... non inclinari et, si sorbeantur, eadem fecunditatem facere, lactis quoque copiam, cum anserino adipe perunctis mammis dolores minuere, molas uteri rumpere, scabiem vulvarum sedare, si cum cimice trito inlinantur.

vespertilionum sanguis psilotri vim habet, sed alis puerorum inlitus non satis proficit, nisi aerugo vel cicutae semen postea inducatur; sic enim aut in totum tolluntur pili aut non excedunt lanuginem. idem et cerebro eorum profici putant; est autem duplex, rubens utique et candidum. aliqui sanguinem et iocur eiusdem admiscent. quidam in iii heminis olei discocunt viperam exemptis ossibus, psilotri vice utuntur, evolsis prius pilis, quos renasci nolunt. fel irenacei psilotrum est, utique mixtum vespertilionis cerebro et lacte caprino, item per se cinis. lacte canis primiparae, prius evolsis pilis vel nondum natis, perunctae partes alios non sufficiunt. idem evenire traditur sanguine ricini evulsi cani, item hirundinino sanguine vel felle, ovis formicarum. supercilia denigrari muscis tritis tradunt; si vero oculi nigri nascentium placeant, soricem praegnanti edendum; capilli ne canescant, vermium terrenorum cinere praestari admixto oleo.

infantibus, qui lacte concreto vexantur, praesidio est agninum coagulum ex aqua potum, aut si coagulato lacte acciderit, discutitur coagulo ex aceto dato. ad dentitiones cerebrum pecoris utilissimum est. ossibus in canino fimo inventis adustio infantium, quae vocatur siriasis, adalligatis emendatur, ramex infantium lacertae viridis admotae dormientibus morsu. postea harundini inligant et suspendunt in fumo traduntque pariter cum expirante ea sanari infantem. coclearum saliva inlita infantium oculis palpebras corrigit gignitque. ramicosis coclearum cinis cum ture ex ovi albo specillo inlitus per dies xxx medetur. inveniuntur in corniculis coclearum harenaceae duritiae; hae dentitionem facilem praestant adalligatae. coclearum inanium cinis cerae mixtus procidentium interaneorum partes extremas prohibet; oportet autem cineri misceri saniem punctis emissam ante. cerebrum viperae inligatum pellicula dentitiones

adiuvat. idem valent et grandissimi dentes serpentium. fimum corvi lana adalligatum infantium tussi medetur. - vix est serio conplecti quaedam, non omittenda tamen, quia sunt prodita. ramici infantium lacerta mederi iubent. marem hanc prendi; intellegi eo, quod sub cauda unam cavernam habeat. id agendum, ut per aureum vel argenteum claustrum mordeat vitium; tum in calice novo inligatam in fumo poni. urina infantium cohibetur muribus elixis in cibo datis. scarabaeorum cornua grandia denticulata adalligata iis amuleti naturam obtinent. bovae capiti lapillum inesse tradunt, quem ab ea expui, si necem timeat; inopinantis praeciso capite exemptum adalligatumque mire prodesse dentitioni. item cerebrum eiusdem ad eundem usum adalligari iubent et limacis lapillum sive ossiculum; invenitur in dorso. magnifice iuvat et ovis cerebrum gingivis inlitum, sicut aures adeps anserinus cum ocimi suco inpositus. sunt vermiculi in spinosis herbis asperi, lanuginosi; hos adalligatos protinus mederi tradunt infantibus, si quid ex cibo haereat.

somnos adlicit oesypum cum murrae momento in vini cyathis ii dilutum vel cum adipe anserino et vino myrtite, avis cuculus leporina pelle adalligatus, ardiolae rostrum in pelle asinina fronti adalligatum. putant et per se rostrum effectus eiusdem esse vino collutum. e diverso somnum arcet vespertilionis caput aridum adalligatum.

in urina virili enecata lacerta venerem eius, qui fecerit, inhibet; nam inter amatoria esse magi dicunt. inhibent et cocleae, fimum columbinum cum oleo et vino potum. pulmonis vulturini dextrae partes venerem concitant viris adalligatae gruis pelle, item si lutea ex ovis quinis columbarum admixta adipis suilli denarii pondere ex melle sorbeantur, passeres in cibo vel ova eorum, gallinacei dexter testis arietina pelle adalligatus. ibium cinere cum adipe anseris et irino perunctis sic conceptos partus contineri, contra inhiberi venerem pugnatoris galli testiculis anserino adipe inlitis adalligatisque pelle arietina tradunt, item cuiuscumque galli, si cum sanguine gallinacei lecto subiciantur. cogunt concipere invitas saetae ex cauda mulae, si iunctis evellantur, inter se conligatae in coitu. qui in urinam canis suam egesserit, dicitur ad venerem pigrior fieri. mirum et de stelionis cinere, si verum est, linamento involutum in sinistra manu venerem stimulare, si transferatur in dextram, inhibere, item vespertilionis sanguinem collectum flocco subpositumque capiti

mulierum libidinem movere aut anseris linguam in cibo vel potione sumptam.

phthiriasim et totius corporis pota membrana senectutis anguium triduo necat, serum exempto caseo potum cum exiguo sale. - caseos, si cerebrum mustelae coagulo addatur, negant corrumpi vetustate aut a muribus attingi. eiusdem mustelae cinis si detur in offa gallinaceis et columbinis, tutos esse a mustelis. - iumentorum urinae tormina vespertilione adalligato finiuntur, verminatio ter circumlato mediis palumbe. mirum dictu, palumbis emissus moritur iumentumque liberatur confestim.

ebriosis ova noctuae per triduum data in vino taedium eius adducunt. ebrietatem arcet pecudum assus pulmo praesumptus. hirundinis rostri cinis cum murra tritus et vino, quod bibetur, inspersus securos praestabit a temulentia. invenit orus assyriorum rex.

praeter haec sunt notabilia animalium ad hoc volumen pertinentium: gromphenam, avem in sardinia narratam grui similem, ignotam iam etiam sardis existimo. in eadem provincia ophion, cervis tantum pilo similis nec alibi nascens. iidem auctores sirulugum nec quale esset animal nec ubi nasceretur tradiderunt. fuisse quidem non dubito, cum et medicinae ex eo sint demonstratae. m. cicero tradit animalia biuros vocari, qui vites in campania erodant.

reliqua mirabilia ex iis, quae diximus: non latrari a cane membranam e secundis canis habentem aut leporis fimum vel pilos tenentem. in culicum genere muliones ... non amplius quam uno die vivere, eosque, qui arborarii pici rostrum habeant et mella eximant, ab apibus non attingi; porcos sequi eum, a quo cerebrum corvi acceperint in offa. pulverem, in quo se mula volutaverit, corpori inspersum mitigare ardores amoris. sorices fugere, si unus castratus emittatur. anguina pelle et sale et farre, serpyllo contritis una deiectisque cum vino in fauces boum uva maturescente, toto anno eos valere, vel si hirundinum pulli terni ternis offis dentur. pulvere e vestigio anguium collecto sparso apes in alvos reverti. arietis dextro teste praeligato oves tantum gigni. non lassescere in ullo labore qui nervos ex alis et cruribus gruis habeant. mulas non calcitrare, cum vinum biberint. ungulas tantum mularum repertas, neque aliam ullam materiam, quae non perroderetur a veneno stygis aquae, cum id

dandum alexandro magno antipater mitteret, memoria dignum est, magna aristotelis infamia excogitatum.

nunc ad aquatilia praevertemur.

aquatilium secuntur in medicina beneficia, opifice natura ne in illis quidem cessante et per undas fluctusque ac reciprocos aestus amniumque rapidos cursus inprobas exercente vires, nusquam potentia maiore, si verum fateri volumus, quippe hoc elementum ceteris omnibus imperat. terras devorant aquae, flammas necant, scandunt in sublime et caelum quoque sibi vindicant ac nubium obtentu vitalem spiritum strangulant, quae causa fulmina elidit, ipso secum discordante mundo. quid esse mirabilius potest aquis in caelo stantibus at illae, ceu parum sit in tantam pervenire altitudinem, rapiunt eo secum piscium examina, saepe etiam lapides, subeuntque portantes aliena pondera. eaedem cadentes omnium terra enascentium causa fiunt, prorsus mirabili natura, si quis velit reputare, ut fruges gignantur, arbores fruticesque vivant, in caelum migrare aquas animamque etiam herbis vitalem inde deferre, iusta confessione, omnes terrae quoque vires aquarum esse beneficii. quapropter ante omnia ipsarum potentiae exempla ponemus. cunctas enim enumerare quis mortalium queat

emicant benigne passimque in plurimis terris alibi frigidae, alibi calidae, alibi iunctae, sicut in tarbellis aquitanica gente et in pyrenaeis montibus tenui intervallo discernente, alibi tepidae, egelidae, atque auxilia morborum profitentes et e cunctis animalibus hominum tantum causa erumpentes augent numerum deorum nominibus variis urbesque condunt, sicut puteolos in campania, statiellas in liguria, sextias in narbonensi provincia. nusquam tamen largius quam in baiano sinu nec pluribus auxiliandi generibus: aliae sulpuris vi, aliae aluminis, aliae salis, aliae nitri, aliae bituminis, nonnullae etiam acida salsave mixtura, vapore ipso aliquae prosunt, tantaque est vis, ut balneas calefaciant ac frigidam etiam in soliis fervere cogant. quae in baiano posidianae vocantur, nomine accepto a claudii caesaris liberto, obsonia quoque percocunt. vaporant et in mari ipso quae Licinii Crassi fuere, mediosque inter fluctus existit aliquid valetudini salutare.

iam generatim nervis prosunt pedibusve aut coxendicibus, aliae luxatis fractisve, inaniunt alvos, sanant vulnera, capiti, auribus

privatim medentur, oculis vero ciceronianae. dignum memoratu, villa est ab averno lacu puteolos tendentibus inposita litori, celebrata porticu ac nemore, quam vocabat m. cicero academiam ab exemplo athenarum, ibi compositis voluminibus eiusdem nominis, in qua et monumenta sibi instauraverat, ceu vero non et in toto terrarum orbe fecisset. huius in parte prima exiguo post obitum ipsius antistio vetere possidente eruperunt fontes calidi perquam salubres oculis, celebrati carmine laureae tulli, qui fuit e libertis eius, ut protinus noscatur etiam ministeriorum haustus ex illa maiestate ingenii. ponam enim ipsum carmen, ut ubique et non ibi tantum legi queat: “quo tua, romanae vindex clarissime linguae,

silva loco melius surgere iussa viret atque academiae celebratam nomine villam

nunc reparat cultu sub potiore vetus, hoc etiam apparent lymphae non ante repertae,

languida quae infuso lumina rore levant. nimirum locus ipse sui ciceronis honori

hoc dedit, hac fontes cum patefecit ope, ut, quoniam totum legitur sine fine per orbem,

sint plures oculis quae medeantur aquae.”

in eadem campaniae regione sinuessanae aquae sterilitatem feminarum et virorum insaniam abolere produntur, in aenaria insula calculosis mederi et quae vocatur acidula ab teano sidicino [iiii] p. - haec frigida - , item in stabiano quae dimidia vocatur et in venafrano ex fonte acidulo. idem contingit in velino lacu potantibus, item in syriae fonte iuxta taurum montem auctor est M. Varro et in phrygiae gallo flumine callimachus. sed ibi in potando necessarius modus, ne lymphatos agat, quod in aethiopia accidere iis, qui e fonte rubro biberint, ctesias scribit. iuxta romam albulae aquae volneribus medentur, egelidae hae, sed cutiliae in sabinis gelidissimae suctu quodam corpora invadunt, ut prope morsus videri possit, aptissimae stomacho, nervis, universo corpori. thespiarum fons conceptus mulieribus repraesentat, item in arcadia flumen elatum, custodit autem linus fons in eadem arcadia abortusque fieri non patitur. e diverso in pyrrha flumen, quod aphrodisium vocatur, steriles facit. lacu alphio vitiligines tolli Varro auctor est titiumque praetura functum marmorei signi faciem habuisse propter id vitium. cydnus

ciliciae amnis podagricis medetur, sicut apparet epistula cassi parmensis ad m. antonium. contra aquarum culpa in troezene omnium pedes vitia sentiunt. tungri civitas galliae fontem habet insignem plurimis bullis stillantem, ferruginei saporis, quod ipsum non nisi in fine potus intellegitur. purgat hic corpora, tertianas febres discutit, calculorum vitia. eadem aqua igne admoto turbida fit ac postremo rubescit. leucogaei fontes inter puteolos et neapolim oculis et vulneribus medentur. cicero in admirandis posuit reatinis tantum paludibus ungulas iumentorum indurari.

eudicus in hestiaeotide fontes duos tradit esse, ceronam, ex quo bibentes oves nigras fieri, nelea, ex quo albas, ex utroque varias, theophrastus thuriis crathim candorem facere, sybarim nigritiam bubus ac pecori, quin et homines sentire differentiam eam; nam qui e sybari bibant, nigriores esse durioresque et crispo capillo, qui e crathi candidos mollioresque ac porrecta coma. item in macedonia qui velint sibi candida nasci, ad haliacmonem ducere, qui nigra aut fusca, ad axium. idem omnia fusca nasci quibusdam in locis dicit et fruges quoque, sicut in messapis, at in lusis arcadiae quodam fonte mures terrestres vivere et conversari. erythris aleos amnis pilos gignit in corporibus.

in boeotia ad trophonium deum iuxta flumen hercynnum e duobus fontibus alter memoriam, alter oblivionem adfert, inde nominibus inventis. in cilicia apud oppidum cescum rivus fluit nuus, ex quo bibentium subtiliores sensus fieri M. Varro tradit, at in cea insula fontem esse, quo hebetes fiant, zamae in africa, ex quo canorae voces. - vinum taedio venire iis, qui ex clitorio lacu biberint, ait eudoxus, set theopompus inebriari fontibus iis, quos diximus, mucianus andri e fonte liberi patris statis diebus septenis eius dei vinum fluere, si auferatur e conspectu templi, sapore in aquam transeunte, polyclitus lipari iuxta solos ciliciae ungui, theophrastus hoc idem in aethiopia eiusdem nominis fonte, lycos in indis oratis fontem esse, cuius aqua lucernae luceant; idem ecbatanis traditur. theopompus in scotusaeis lacum esse dicit, qui volneribus medeatur, iuba in trogodytis lacum insanum malefica vi appellatum ter die fieri amarum salsumque ac deinde dulcem totiensque et nocte, scatentem albis serpentibus vicenum cubitorum; idem in arabia fontem exilire tanta vi, ut nullum non pondus inpactum respuat; theophrastus

marsyae fontem in phrygia ad celaenarum oppidum saxa egerere. non procul ab eo duo sunt fontes claeon et gelon ab effectu graecorum nominum dicti. cyzici fons cupidinis vocatur, ex quo potantes amorem deponere mucianus credit.

cranone est fons calidus citra summum fervorem, qui vino addito triduo calorem potionis custodit in vasis. sunt et mattiaci in germania fontes calidi trans rhenum, quorum haustus triduo fervet, circa margines vero pumicem faciunt aquae.

quod si quis fide carere ex his aliqua arbitratur, discat in nulla parte naturae maiora esse miracula, quamquam inter initia operis abunde multa rettulimus. ctesias tradit silan vocari stagnum in indis, in quo nihil innatet, omnia mergantur; caelius apud nos in averno etiam folia subsidere, Varro aves, quae advolaverint, emori. contra in africae lacu apuscidamo omnia fluitant, nihil mergitur, item in siciliae fonte phinthia, ut apion tradit, et in medorum lacu puteoque saturni. item fluvii fons limyrae transire solet in loca vicina portendens aliquid; mirum quoque quod cum piscibus transit. responsa ab his petunt incolae cibo, quem rapiunt adnuentes, si vero eventum negent, caudis abigunt. amnis alcas in bithynia bryazum adluit - hoc est et templo et deo nomen - , cuius gurgitem periuri negantur pati velut flammam urentem. et in cantabria fontes tamarici in auguriis habentur. tres sunt octonis pedibus distantes, in unum alveum coeunt vasto amne. singuli siccantur duodenis diebus, aliquando vicenis, citra suspicionem ullam aquae, cum sit vicinus illis fons sine intermissione largus. dirum est non profluere eos aspicere volentibus, sicut proxime larcio licinio legato pro praetore post septem dies accidit. in iudaea rivus sabbatis omnibus siccatur.

e diverso miracula alia dira. ctesias in armenia fontem esse scribit, ex quo nigros pisces ilico mortem adferre in cibis. quod et circa danuvii exortum audivi, donec veniatur ad fontem alveo adpositum, ubi finitur id genus piscium, ideoque ibi caput amnis eius intellegit fama. hoc idem et in lydia in stagno nympharum tradunt. in arcadia ad pheneum aqua profluit e saxis styx appellata, quae ilico necat, ut diximus, sed esse pisces parvos in ea tradit theophrastus, letales et ipsos, quod non in alio genere mortiferorum fontium. necare aquas theopompus et in thracia apud cichros dicit, lycos in leontinis tertio die quam quis biberit, Varro ad soracten in fonte, cuius sit latitudo

quattuor pedum; sole oriente eum exundare ferventi similem; aves, quae degustaverint, iuxta mortuas iacere. namque et haec insidiosa condicio est, quod quaedam etiam blandiuntur aspectu, ut ad nonacrim arcadiae, omnino nulla deterrent qualitate. hanc putant nimio frigore esse noxiam, utpote cum profluens ipsa lapidescat. aliter circa thessalica tempe, quoniam virus omnibus terrori est, traduntque ae+na etiam ac ferrum erodi illa aqua. profluit, ut indicavimus, brevi spatio, mirumque, siliqua silvestris amplecti radicibus fontem eum dicitur, semper florens purpura. et quaedam sui generis herba in labris fontis viret. in macedonia non procul euripidis poetae sepulchro duo rivi confluunt, alter saluberrimi potus, alter mortiferi.

in perperenis fons est, quamcumque rigat, lapideam faciens terram, item calidae aquae in euboeae aedepso. nam quae adit rivus saxa in altitudinem crescunt. in eurymenis deiectae coronae in fontem lapideae fiunt. in colossis flumen est, quo lateres coniecti lapidei extrahuntur. in scyretico metallo arbores, quaecumque flumine adluuntur, saxeae fiunt cum ramis. destillantes quoque guttae lapide durescunt in antris, conchatis ideo, nam miezae in macedonia etiam pendentes in ipsis camaris, at in corycio cum cecidere, in quibusdam speluncis utroque modo columnasque faciunt, ut in phausia cherrhonesi adversae rhodo in antro magno, etiam discolori aspectu. et hactenus contenti simus exemplis.

quaeritur inter medicos, cuius generis aquae sint utilissimae. stagnantes pigrasque merito damnant, utiliores quae profluunt existimantes, cursu enim percussuque ipso extenuari atque proficere; eoque miror cisternarum ab aliquis maxime probari. sed hi rationem adferunt, quoniam levissima sit imbrium, ut quae subire potuerit ac pendere in ae+re. ideo et nives praeferunt nivibusque etiam glaciem, velut ad infinitum coacta subtilitate; leviora enim haec esse et glaciem multo leviorem aqua. horum sententiam refelli interest vitae. in primis enim levitas illa deprehendi aliter quam sensu vix potest, nullo paene momento ponderis aquis inter se distantibus. nec levitatis in pluvia aqua argumentum est subisse eam in caelum, cum etiam lapides subire appareat cadensque inficiatur halitu terrae, quo fit ut pluviae aquae sordium plurimum inesse sentiatur citissimeque ideo calefiat aqua pluvia. nivem quidem glaciemque subtilissimum

elementi eius videri miror adposito grandinum argumento, e quibus pestilentissimum potum esse convenit. nec vero pauci inter ipsos e contrario ex gelu ac nivibus insaluberrimos potus praedicant, quoniam exactum sit inde quod tenuissimum fuerit. minui certe liquorem omnem congelatione deprehenditur et rore nimio scabiem fieri, pruina uredinem, cognatis et nivis causis. pluvias quidem aquas celerrime putrescere convenit minimeque durare in navigatione. epigenes autem aquam, quae septies putrefacta purgata sit, ait amplius non putrescere. nam cisternas etiam medici confitentur inutiles alvo duritia faucibusque, etiam limi non aliis inesse plus aut animalium, quae faciunt taedium. item confitendum habent nec statim amnium utilissimas esse, sicuti nec torrentium ullius, lacusque plurimos salubres. quaenam igitur et cuius generis aptissimae aliae alibi. parthorum reges ex choaspe et eulaeo tantum bibunt; eae quamvis in longinqua comitantur illos. sed horum placere, non quia sint amnes, apparet, quoniam neque e tigri neque euphrate neque e multis aliis bibunt.

limus aquarum vitium est. si tamen idem amnis anguillis scateat, salubritatis indicium habetur, sicuti frigoris taenias in fonte gigni. ante omnia autem damnantur amarae et quae sorbentem statim implent, quod evenit troezene. nam nitrosas atque salmacidas in desertis rubrum mare petentes addita polenta utiles intra duas horas faciunt ipsaque vescuntur polenta. damnantur in primis quae fonte caenum faciunt quaeque malum colorem bibentibus, refert et si vasa aerea inficiant aut si legumina tarde percocant, si liquatae leniter terram relinquant decoctaeque crassis obducant vasa crustis. est etiamnum vitium non fetidae modo, verum omnino quicquam resipientis, iucundum sit illud licet gratumque et, ut saepe, ad viciniam lactis accedens. aquam salubrem ae+ri quam simillimam esse oportet. unus in toto orbe traditur fons aquae iucunde olentis in mesopotamia chabura; fabulae rationem adferunt, quoniam eo iuno perfusa sit. de cetero aquarum salubrium sapor odorve nullus esse debet.

quidam statera iudicant de salubritate, frustrante diligentia, quando perrarum est ut levior sit aliqua. certior subtilitas, inter pares meliorem esse quae calefiat refrigereturque celerius. quin et haustam vasis portatis, ne manu pendeant, depositisque in humum tepescere

adfirmant. ex quonam ergo genere maxime probabilis continget puteis nimirum, ut in oppidis video constare, sed iis, quibus et exercitationis ratio crebro haustu continget et illa tenuitas colante terra. salubritati haec satis sunt; frigori et opacitas necessaria utque caelum videant. super omnia una observatio - eadem et ad perennitatem pertinet - , ut illa e vado exiliat vena, non e lateribus. nam ut tactu gelida sit, etiam arte contingit, si expressa in altum aut e sublimi deiecta verberatum corripiat ae+ra. in natando quidem spiritum continentibus frigidior sentitur eadem. neronis principis inventum est decoquere aquam vitroque demissam in nives refrigerare; ita voluptas frigoris contingit sine vitiis nivis. omnem utique decoctam utiliorem esse convenit, item calefactam magis refrigerari, subtilissimo invento. vitiosae aquae remedium est, si decoquatur ad dimidias partes. aqua frigida ingesta sistitur sanguis. aestus in balineis arcetur, si quis ore teneat. quae sint haustu frigidissimae, non perinde et tactu esse, alternante hoc bono, multi familiari exemplo colligunt.

clarissima aquarum omnium in toto orbe frigoris salubritatisque palma praeconio urbis marcia est, inter reliqua deum munera urbi tributa. vocabatur haec quondam aufeia, fons autem ipse pitonia. oritur in ultimis montibus paelignorum, transit marsos et fucinum lacum, romam non dubie petens. mox in specus mersa in tiburtina se aperit, ita novem milibus passuum fornicibus structis perducta. primus eam in urbem ducere auspicatus est ancus marcius, unus e regibus, postea q. marcius rex in praetura, rursusque restituit m. agrippa. idem et virginem adduxit ab octavi lapidis diverticulo duo milia passuum praenestina via. iuxta est herculaneus rivus, quem refugiens virginis nomen obtinuit. horum amnium comparatione differentia supra dicta deprehenditur, cum quantum virgo tactu praestat, tantum praestet marcia haustu, quamquam utriusque iam pridem urbi periit voluptas, ambitione avaritiaque in villas ac suburbana detorquentibus publicam salutem.

non ab re sit quaerendi aquas iunxisse rationem. reperiuntur in convallibus maxime et quodam convexitatis cardine aut montium radicibus. multi septentrionales ubique partes aquosas existimavere, qua in re varietatem naturae aperuisse conveniat. in hyrcanis montibus a meridiano latere non pluit; ideo silvigeri ab aquilonis

tantum parte sunt. at olympus, ossa, parnasus, appenninus, alpes undique vestiuntur amnibusque perfunduntur, aliqui ab austro, sicut in creta albi montes. nihil ergo in his perpetuae observationis iudicabitur.

aquarum sunt notae iuncus et herba, de qua dictum est, multumque alicui loco pectore incubans rana. salix enim erratica et alnus aut vitex aut harundo aut hedera sponte proveniunt et conrivatione aquae pluviae in locum humiliorem e superioribus defluentis, augurio fallaci, certiore multo nebulosa exhalatione ante ortum solis longius intuentibus, quod quidam ex edito speculantur proni terram adtingente mento. est et peculiaris aestimatio peritis tantum nota, quam ferventissimo aestu secuntur dieique horis ardentissimis, qualis ex quoque loco repercussus splendeat. nam si terra sitiente umidior sit ille, indubitata spes promittitur. sed tanta oculorum intentione opus est, ut indolescant. quod fugientes ad alia experimenta decurrunt. loco in altitudinem pedum quinque defosso ollisque e figlino opere crudis aut peruncta pelvi aerea lanae vellere cooperto lucernaque ardente concamarata frondibus, dein terra, si figlinum umidum ruptumve aut in aere sudor vel lucerna sine defectu olei restincta aut etiam vellus lanae madidum reperiatur, non dubie promittunt aquas. quidam et igni prius excocunt locum, tanto efficaciore vasorum argumento.

terra vero ipsa promittit candicantibus maculis aut tota glauci coloris. in nigra enim scaturigines non fere sunt perennes. figularis creta semper adimit spes, nec amplius puteum fodiunt coria terrae observantes, ut a nigra descendat ordo supra dictus. aqua semper dulcis in argillosa terra, frigidior in tofo. namque et hic probatur, dulces enim levissimasque facit et colando continet sordes. sabulum exiles limosasque promittit, glarea incertas venas, sed boni saporis, sabulum masculum et harena carbunculus certas stabilesque et salubres, rubra saxa optimas speique certissimae, radices montium saxosae et silex hoc amplius rigentes. oporteat autem fodientibus umidiores adsidue respondere glaebas faciliusque ferramenta descendere. depressis puteis sulpurata vel aluminosa occurrentia putearios necant. experimentum huius periculi est demissa ardens lucerna si extinguatur; tunc secundum puteum lextra ac sinistra fodiuntur aestuaria, quae graviorem illum halitum recipiant. fit et

sine his vitiis altitudine ipsa gravior ae+r, quem emendant adsiduo linteorum iactatu eventilando. cum ad aquam ventum est, sine harenato opus surgit, ne venae obstruantur.

quaedam aquae vere statim incipiente frigidiores sunt, quarum non in alto origo est - hibernis enim constant imbribus - , quaedam a canis ortu, sicut in macedoniae pella utrumque. ante oppidum enim incipiente aestate frigida est palustris, dein maximo aestu in excelsioribus oppidi riget. hoc et in chio evenit simili ratione portus et oppidi. athenis enneacrunos nimbosa aestate frigidior est quam puteus in iovis horto, at ille siccitatibus riget. maxime autem putei circa arcturum, non ipsa aestate, deficiunt omnesque quatriduo eo subsidunt, iam vero multi hieme tota, ut circa olynthum, vere primum aquis redeuntibus. in sicilia quidem circa messanam et mylas hieme in totum inarescunt fontes, aestate exundant amnemque faciunt. apolloniae in ponto fons iuxta mare aestate tantum superfluit et maxime circa canis ortum, parcius, si frigidior sit aestas. quaedam terrae imbribus sicciores fiunt, velut in narniensi agro, quod admirandis suis inseruit m. cicero, siccitate lutum fieri prodens, imbre pulverem. - omnis aqua hieme dulcior est, aestate minus, autumno minime, minusque per siccitates. neque aequalis amnium plerumque gustus est magna alvei differentia. quippe tales sunt aquae, qualis terra, per quam fluunt, qualesve herbarum, quas lavant, suci. ergo iidem amnes parte aliqua reperiuntur insalubres. mutant saporem et influentes rivi, ut borysthenen, victique diluuntur. aliqui vero et imbre mutantur. ter accidit in bosporo, ut salsi deciderent necarentque frumenta, totiens et nili rigua pluviae amara fecere, magna pestilentia aegypti.

nascuntur fontes decisis plerumque silvis, quos arborum alimenta consumebant, sicut in haemo obsidente gallos cassandro, cum valli gratia silvas cecidissent. plerumque vero damnosi torrentes conrivantur detracta collibus silva continere nimbos ac digerere consueta. et coli moverique terram callumque summae cutis solvi aquarum interest. proditur certe in creta expugnato oppido, quod vocabatur arcadia, cessasse fontes amnesque, qui in eo situ multi erant, rursus condito post sex annos emersisse, ut quaeque coepissent partes coli. terrae quoque motus profundunt sorbentque aquas, sicut circa pheneum arcadiae quinquies accidisse constat. sic et in coryco

monte amnis erupit posteaque coeptus est coli. illa mutatio mira, cuius causa nulla evidens apparet, sicut in magnesia e calida facta frigida, salis non mutato sapore, et in caria, ubi neptuni templum est, amnis, qui fuerat ante dulcis, mutatus in salem est. et illa miraculi plena, arethusam syracusis fimum redolere per olympia, verique simile, quoniam alpheus in eam insulam sub maria permeet. rhodiorum fons in cherroneso nono anno purgamenta egerit. mutantur et colores aquarum, sicut babylone lacus aestate rubras habet diebus xi et borysthenes statis temporibus caeruleus fertur, quamquam omnium aquarum tenuissimus ideoque innatans hypani, in quo et illud mirabile, austris flantibus superiorem hypanim fieri. sed tenuitatis argumentum et aliud est, quod nullum halitum, non modo nebulam, emittat. qui volunt diligentes circa haec videri, dicunt aquas graviores post brumam fieri.

ceterum a fonte duci fictilibus tubis utilissimum est crassitudine binum digitorum, commissuris pyxidatis ita, ut superior intret, calce viva ex oleo levigatis. libramentum aquae in centenos pedes sicilici minimum erit, si cuniculo veniet, in binos actus lumina esse debebunt. quam surgere in sublime opus fuerit, plumbo veniat. subit altitudinem exortus sui. si longiore tractu veniet, subeat crebro descendatque, ne libramenta pereant. fistulas denum pedum longitudinis esse legitimum est et, si quinariae erunt, sexagena pondo pendere, si octonariae, centena, si denariae, centena vicena ac deinde ad has portiones. denaria appellatur cuius lamnae latitudo, antequam curvetur, digitorum x est, dimidioque eius quinaria. in anfractu omni collis quinariam fieri, ubi dometur impetus, necessarium est, item castella, prout res exiget.

homerum calidorum fontium mentionem non fecisse demiror, cum alioqui lavari calida frequenter induceret, videlicet quia medicina tunc non erat haec, quae nunc aquarum perfugio utitur. est autem utilis sulpurata nervis, aluminata paralyticis aut simili modo solutis, bituminata aut nitrosa, qualis cutilia est, bibendo itaque purgationibus. plerique in gloria ducunt plurimis horis perpeti calorem earum, quod est inimicissimum, namque paulo diutius quam balineis uti oportet ac postea frigida dulci, nec sine oleo discedentes, quod vulgus alienum arbitratur, idcirco non alibi corporibus magis obnoxiis, quippe et vastitate odoris capita replentur et frigore

infestantur sudantia, reliqua corporum parte mersa. similis error quam plurimo potu gloriantium, vidique iam turgidos bibendo in tantum, ut anuli integerentur cute, cum reddi non posset hausta multitudo aquae. nec hoc ergo fieri convenit sine crebro salis gustu. utuntur et caeno fontium ipsorum utiliter, sed ita, si inlitum sole inarescat. nec vero omnes, quae sint calidae, medicatas esse credendum, sicut in segesta siciliae, larisa troade, magnesia, melo, lipara. nec decolor species aeris argentive, ut multi existimavere, medicaminum argumentum est, quando nihil eorum in patavinis fontibus, ne odoris quidem differentia aliqua deprehendetur.

medendi modus idem et in marinis erit, quae calefiunt ad nervorum dolores, feruminanda a fracturis ossa, contusa, item corpora siccanda, qua de causa et frigido mari utuntur. praeterea est alius usus multiplex, principalis vero navigandi phthisi adfectis, ut diximus, aut sanguine egesto, sicut proxime annaeum gallionem fecisse post consulatum meminimus. neque enim aegyptus propter se petitur, sed propter longinquitatem navigandi. quin et vomitiones ipsae instabili volutatione commotae plurimis morbis capitis, oculorum, pectoris medentur omnibusque, propter quae helleborum bibitur. aquam vero maris per sese efficaciorem discutiendis tumoribus putant medici, si illa decoquatur hordeacia farina, ad parotidas. emplastris etiam, maxime albis, et malagmatis miscent; prodest et infusa crebro ictu. bibitur quoque, quamvis non sine iniuria stomachi, ad purganda corpora bilemque atram aut sanguinem concretum reddendum alterutra parte. quidam et in quartanis dedere eam bibendam et in tenesmis articulariisque morbis adservatam in hoc ut vetustate virus deponentem, aliqui decoctam, omnes ex alto haustam nullaque dulcium mixtura corruptam. in quo usu praecedere vomitum volunt. tunc quoque acetum aut vinum et aquam miscent. qui puram dedere, raphanos supermandi ex mulso aceto iubent, ut ad vomitiones revocent. clysteribus quoque marinam infundunt tepefactam. testium quidem tumores fovendo non aliud praeferunt, item pernionum vitio ante ulcera, simili modo pruritibus, psoris et lichenum curationi. lendes quoque et taetra capitis animalia hac curantur. et liventia reducit eadem ad colorem. in quibus curationibus post marinam aceto calido fovere plurimum prodest. quin et ad ictus venenatos salutaris intellegitur, ut phalangiorum et scorpionum, et

ptyade aspide respersis; calida autem in his adsumitur. suffitur eadem cum aceto capitis doloribus. tormina quoque et choleras calida infusa clysteribus sedant. difficilius perfrigescunt marina calefacta. mammas sororientes, praecordia maciemque corporis piscinae maris corrigunt, aurium gravitatem, capitis dolores cum aceto ferventium vapor. rubiginem ferro marinae celerrime exterunt, pecorum quoque scabiem sanant lanasque emolliunt.

nec ignoro haec mediterraneis supervacua videri posse. verum et hoc cura providit inventa ratione, qua sibi quisque aquam maris faceret. illud in ea ratione mirum, si plus quam sextarius salis in iiii sextarios aquae mergatur, vinci aquam salemque non liquari. cetero sextarius salis cum iiii aquae sextariis salsissimi maris vim et naturam implet. moderatissimum autem putant supra dictam aquae mensuram octonis cyathis salis temperari, quoniam ita et nervos excalefaciat et corpus non exasperet.

inveteratur et quod vocant thalassomeli aequis portionibus maris, mellis, imbris. ex alto et ad hunc usum advehunt fictilique vaso et picato condunt. prodest ad purgationes maxime sine stomachi vexatione et sapore grato et odore. - hydromeli quoque ex imbre puro cum melle temperabatur quondam, quod daretur adpetentibus vini aegris veluti innocentiore potu, damnatum iam multis annis, isdem vitiis quibus vinum nec isdem utilitatibus. - quia saepe navigantes defectu aquae dulcis laborant, haec quoque subsidia demonstrabimus. expansa circa navem vellera madescunt accepto halitu maris, quibus dulcis umor exprimitur, item demissae reticulis in mare concavae e cera pilae vel vasa inania opturata dulcem intra se colligunt umorem. nam in terra marina aqua argilla percolata dulcescit.

luxata corpora et hominum et quadrupedum natando in cuius libeat generis aqua facillime in artus redeunt. - est et in metu peregrinantium ut temptent valitudinem aquae ignotae. hoc cavent e balineis egressi statim frigidam suspectam hauriendo. - muscus, qui in aqua fuerit, podagris inlitus prodest, idem oleo admixto talorum dolori tumorique. spuma aquae adfrictu verrucas tollit, nec non harena litorum maris, praecipue tenuis et sole candens; in medicina est siccandis corporibus coopertis hydropicorum aut rheumatismos sentientium.

et hactenus de aquis, nunc de aquatilibus. ordiemur autem, ut in

reliquis, a principalibus eorum, quae sunt salsa ac spongea.

sal omnis aut fit aut gignitur, utrumque pluribus modis, sed causa gemina, coacto umore vel siccato. siccatur in lacu tarentino aestivis solibus, totumque stagnum in salem abit, modicum alioqui, altitudine genua non excedens, item in sicilia in lacu, qui cocanicus vocatur, et alio iuxta gelam. horum extremitates tantum inarescunt, sicut in phrygia, cappadocia, aspendi, ubi largius coquitur et usque ad medium. aliud etiam in eo mirabile, quod tantundem nocte subvenit, quantum die auferas. omnis e stagnis sal minutus atque non glaeba est. aliud genus ex aquis maris sponte gignitur spuma in extremis litoribus ac scopulis relicta. hic omnis rore densatur, et est acrior qui in scopulis invenitur. sunt etiamnum naturales differentiae tres. namque in bactris duo lacus vasti, alter ad scythas versus, alter ad arios, sale exaestuant, sicut ad citium in cypro et circa memphin extrahunt e lacu, dein sole siccant. sed et summa fluminum densantur in salem, amne reliquo veluti sub gelu fluente, ut apud caspias portas quae salis flumina appellantur, item circa mardos et armenios. praeterea et apud bactros amnes ochus et oxus ex adpositis montibus deferunt salis ramenta. sunt et in africa lacus, et quidem turbidi, salem ferentes. ferunt quidem et calidi fontes, sicut pagasaei. et hactenus habent se genera ex aquis sponte provenientia. sunt et montes nativi salis, ut in indis oromenus, in quo lapicidinarum modo caeditur renascens, maiusque regum vectigal ex eo est quam ex auro atque margaritis. effoditur et e terra, ut palam est umore densato, in cappadocia. ibi quidem caeditur specularium lapidum modo; pondus magnum glaebis, quas micas vulgus appellat. gerris arabiae oppido muros domosque massis salis faciunt aqua feruminantes. invenit et iuxta pelusium ptolemaeus rex, cum castra faceret. quo exemplo postea inter aegyptum et arabiam etiam squalentibus locis coeptus est inveniri detractis harenis, qualiter et per africae sitientia usque ad hammonis oraculum, is quidem crescens cum luna noctibus. nam et cyrenaici tractus nobilitantur hammoniaco et ipso, quia sub harenis inveniatur, appellato. similis est colore alumini, quod schiston vocant, longis glaebis neque perlucidis, ingratus sapore, sed medicinae utilis. probatur quam maxime perspicuus, rectis scissuris. insigne de eo proditur, quod levissimus intra specus suos in lucem universam prolatus vix credibili pondere ingravescat. causa evidens,

cuniculorum spiritu madido sic adiuvante molientes, ut adiuvant aquae. adulteratur siculo, quem cocanicum appellavimus, nec non et cyprio mire simili. in hispania quoque citeriore egelestae caeditur glaebis paene translucentibus, cui iam pridem palma a plerisque medicis inter omnia salis genera perhibetur. omnis locus, in quo reperitur sal, sterilis est nihilque gignit. et in totum sponte nascens intra haec est.

facticii varia genera. volgaris plurimusque in salinis mari adfuso non sine aquis dulcibus riguis, sed imbre maxime iuvante ac super omnia sole multo ... que, aliter non inarescens. africa circa uticam construit acervos salis ad collium speciem, qui ubi sole lunaque induruere, nullo umore liquescunt vixque etiam ferro caeduntur. fit tamen et in creta sine riguis mare in salinas infundentibus et circa aegyptum ipso mari influente in solum, ut credo, nilo sucosum. fit et puteis in salinas ingestis. prima densatio babylone in bitumen liquidum cogitur oleo simile, quo et in lucernis utuntur. hoc detracto subest sal. et in cappadocia e puteis ac fonte aquam in salinas ingerunt. in chaonia excocunt aquam e fonte refrigerandoque salem faciunt inertem nec candidum. galliae germaniaeque ardentibus lignis aquam salsam infundunt; hispaniae quadam sui parte e puteis hauriunt muriam appellantes. illi quidem et lignum referre arbitrantur. quercus optima, ut quae per se cinere sincero vim salis reddat, alibi corylus laudatur. ita infuso liquore salso arbor etiam in salem vertitur. quicumque ligno confit sal niger est. apud theophrastum invenio umbros harundinis et iunci cinerem decoquere aqua solitos, donec exiguum superesset umoris. quin et e muria salsamentorum recoquitur iterumque consumpto liquore ad naturam suam redit, vulgo e menis iucundissimus.

marinorum maxume laudatur cyprius a salamine, at e stagnis tarentinus ac phrygius, qui tattaeus vocatur. hi duo oculis utiles. e cappadocia qui in laterculis adfertur, cutis nitorem dicitur facere. magis tamen extendit is, quem citium appellavimus, itaque a partu ventrem eo cum melanthio inlinunt. salsissimus sal qui siccissimus, suavissimus omnium tarentinus atque candidissimus, set de cetero fragilis qui maxime candidus. pluvia dulcescit omnis, suaviorem tamen rores faciunt, sed copiosum aquilonis flatus. austro non nascitur. flos salis non fit nisi aquilonibus. in igni nec crepitat nec

exilit tragasaeus neque acanthius, ab oppido appellatus, nec ullius spuma aut ramentum tenuius. agrigentinus ignium patiens ex aqua exilit. sunt et colorum differentiae. rubet memphi, rufus est circa oxum, centuripis purpureus, circa gelam in eadem sicilia tanti splendoris, ut imaginem recipiat. in cappadocia crocinus effoditur, tralucidus et odoratissimus. ad medicinae usus antiqui tarentinum maxime laudabant, ab hoc quemcumque e marinis, ex eo genere spumeum praecipue, iumentorum vero et boum oculis tragasaeum et baeticum. ad opsonium et cibum utilior quisquis facile liquescit, item umidior, minorem enim amaritudinem habent, ut atticus et euboicus. servandis carnibus aptior acer et siccus, ut megaricus. conditur etiam odoribus additis et pulmentarii vicem implet, excitans aviditatem invitansque in omnibus cibis ita, ut sit peculiaris ex eo intellectus inter innumera condimenta, item in mandendo quaesitus garo. quin et pecudes armentaque et iumenta sale maxime sollicitantur ad pastus, multo tum largiore lacte multoque gratiore etiam in caseo dote. ergo, hercules, vita humanior sine sale non quit degere, adeoque necessarium elementum est, uti transierit intellectus ad voluptates animi quoque eximias. sales appellantur, omnisque vitae lepos et summa hilaritas laborumque requies non alio magis vocabulo constat. honoribus etiam militiaeque interponitur salariis inde dictis, magna apud antiquos et auctoritate, sicut apparet ex nomine salariae viae, quoniam illa salem in sabinos portari convenerat. ancus marcius rex salis modios [vi] in congiario dedit populis et salinas primus instituit. Varro etiam pulmentarii vice usos veteres auctor est, et salem cum pane esitasse eos proverbio apparet. maxime tamen in sacris intellegitur auctoritas, quando nulla conficiuntur sine mola salsa.

salinarum sinceritas summam fecit suam differentiam quadam favilla salis, quae levissima ex eo est et candidissima. appellatur et flos salis, in totum diversa res umidiorisque naturae et crocei coloris aut rufi, veluti rubigo salis, odore quoque ingrato ceu gari dissentiens a sale, non modo a spuma. aegyptus invenit, videturque nilo deferri. et fontibus tamen quibusdam innatat. optimum ex eo quod olei quandam pinguitudinem reddit; est enim etiam in sale pinguitudo, quod miremur. adulteratur autem tinguiturque rubrica aut plerumque testa trita, qui fucus aqua deprehenditur diluente facticium colorem,

cum verus ille non nisi oleo resolvatur et unguentarii propter colorem eo maxime utantur. canitia in vasis summa est, media vero pars umidior, ut diximus. floris natura aspera, excalfactoria, stomacho inutilis, sudorem ciet, alvum solvit in vino et aqua, acopis et zmecticis utilis. detrahit et ex palpebris pilos. ima faecis concutiuntur, ut croci color redeat.

praeter haec etiamnum appellatur in salinis salsugo, ab aliis salsilago, tota liquida, a marina aqua salsiore vi distans. - aliud etiamnum liquoris exquisiti genus, quod garum vocavere, intestinis piscium ceterisque, quae abicienda essent, sale maceratis, ut sit illa putrescentium sanies. hoc olim conficiebatur ex pisce, quem graeci garon vocabant, capite eius usto suffitu extrahi secundas monstrantes, nunc e scombro pisce laudatissimum in carthaginis spartariae cetariis - sociorum id appellatur - , singulis milibus nummum permutantibus congios fere binos. nec liquor ullus paene praeter unguenta maiore in pretio esse coepit, nobilitatis etiam gentibus. scombros et mauretania baeticaeque etiam carteia ex oceano intrantes capiunt, ad nihil aliud utiles. laudantur et clazomenae garo pompeique et leptis, sicut muria antipolis ac thurii, iam vero et delmatia. - vitium huius est allex atque inperfecta nec colata faex. coepit tamen et privatim ex inutili pisciculo minimoque confici. apuam nostri, aphyen graeci vocant, quoniam is pisciculus e pluvia nascatur. foroiulienses piscem, ex quo faciunt, lupum appellant. transiit deinde in luxuriam, creveruntque genera ad infinitum, sicuti garum ad colorem mulsi veteris adeoque suavitatem dilutum, ut bibi possit. aliud vero est castimoniarum superstitioni etiam sacrisque iudaeis dicatum, quod fit e piscibus squama carentibus. sic allex pervenit ad ostreas, echinos, urticas maris, mullorum iocinera, innumerisque generibus ad sapores gulae coepit sal tabescere.

haec obiter indicata sint desideriis vitae. et ipsa tamen non nullius usus in medendo. namque et allece scabies pecoris sanatur infusa per cutem incisam, et contra canis morsus draconisve marini prodest, in linteolis autem concerptis inponitur, et garo ambusta recentia sanantur, si quis infundat ac non nominet garum. contra canum quoque morsus prodest maximeque crocodili et ulceribus, quae serpunt, aut sordidis. oris quoque et aurium ulceribus aut doloribus mirifice prodest. muria quoque sive illa salsugo spissat, mordet,

extenuat, siccat, dysintericis utilis, etiam si nome intestina corripiat, ischiadicis, coeliacis veteribus infunditur. fotu quoque apud mediterraneos aquae marinae vicem pensat.

salis natura per se ignea est et inimica ignibus, fugiens eos, omnia erodens, corpora vero adstringens, siccans, adligans, defuncta etiam a putrescendi tabe vindicans, ut durent ea per saecula, in medendo vero mordens, adurens, repurgans, extenuans, dissolvens, stomacho tantum inutilis, praeterquam ad excitandam aviditatem. adversus serpentium morsus cum origano, melle, hysopo, contra cerasten cum origano et cedria aut pice aut melle auxiliatur, contra scolopendras ex aceto potus, adversus scorpionum ictus cum quarta parte lini seminis et oleo vel aceto inlitus, adversus crabrones vero et vespas similiaque ex aceto, ad heterocranias capitisque ulcera et pusulas papulasve et incipientes verrucas cum sebo vitulino, item oculorum remediis et ad excrescentes ibi carnes totiusque corporis pterygia, sed in oculis peculiariter, ob id collyriis emplastrisque additus - ad haec maxime probatur tattaeus aut caunites - , ex ictu vero suffusis cruore oculis suggillatisque cum murra pari pondere ac melle aut cum hysopo ex aqua calida, utque foveantur salsugine - ad haec hispaniensis eligitur - , contraque suffusiones oculorum cum lacte in coticulis teritur, privatim suggillationibus in linteolo involutus crebroque ex aqua ferventi inpositus, ulceribus oris manantibus in linteolo concerpto, gingivarum tumori infricatus et contra scabritiem linguae fractus comminutusque. aiunt dentes non erodi nec putrescere, si quis cotidie mane ieiunus salem contineat sub lingua, donec liquescat. lepras idem et furunculos et lichenas et psoras emendat cum passa uva exempto eius ligno et sebo bubulo atque origano ac fermento vel pane; maxime thebaicus ad haec et pruritus eligitur. tonsillis et uvis cum melle prodest quicumque, ad anginas hoc amplius cum oleo et aceto eodem tempore extra faucibus inlitus cum pice liquida. emollit et alvum vino mixto, innoxie et taeniarum genera pellit in vino potus, aestus balnearum convalescentes ut tolerare possint, linguae subditus praestat. nervorum dolores, maxime circa umeros et renes, in saccis aqua ferventi crebro candefactus levat, colum torminaque et coxarum dolores potus et in isdem saccis inpositus candens, podagras cum farina ex melle et oleo tritus, ibi maxime usurpanda observatione, quae totis corporibus nihil esse utilius sale et sole dixit. utique cornea

videmus corpora piscatorum, sed hoc praecipuum iudicatur in podagris. tollit et clavos pedum, item perniones. ambustis ex oleo inponitur aut commanducatus pusulasque reprimit, ignibus vero sacris, ulceribus, quae serpant, ex aceto aut hysopo, carcinomatis cum uva taminia, phagedaenis ulcerum tostus cum farina hordei, superinposito linteolo madente vino. morbo regio laborantes, donec sudent ad ignem, contra pruritus, quos sentiunt, ex oleo et aceto infricatus iuvat, fatigatos ex oleo. multi et hydropicos sale curavere fervoresque febrium cum oleo perunxere et tussim veterem linctu eius discussere, clysteribus infudere ischiadicis, ulcerum excrescentibus vel putrescentibus inposuere, crocodilorum morsibus ex aceto in linteolis ita, ut battuerentur ante his ulcera. bibitur et contra opium ex aceto mulso, luxatis inponitur cum farina et melle, item extuberationibus. dentium dolori cum aceto fotus et inlitus cum resina prodest. ad omnia autem spuma salis iucundior utiliorque. sed quicumque sal acopis additur ad excalfactiones, item zmegmatis ad extendendam cutem levandamque. pecorum quoque scabiem et boum inlitus tollit datusque lingendus et oculis iumentorum inspuitur. haec de sale dicta sint.

non est differenda et nitri natura, non multum a sale distans et eo diligentius dicenda, quia palam est medicos, qui de eo scripserunt, ignorasse naturam nec quemquam theophrasto diligentius tradidisse.

exiguum fit apud medos canescentibus siccitate convallibus, quod vocant halmyraga, minus etiam in thracia iuxta philippos, sordidum terra, quod appellant agrium. nam quercu cremata numquam multum factitatum est et iam pridem in totum omissum. aquae vero nitrosae plurimis locis reperiuntur, sed sine viribus densandi. optimum copiosumque in clitis macedoniae, quod vocant chalestricum, candidum purumque, proximum sali. lacus est nitrosus exiliente e medio dulci fonticulo. ibi fit nitrum circa canis ortum novenis diebus totidemque cessat ac rursus innatat et deinde cessat. quo apparet soli naturam esse, quae gignat, quoniam compertum est nec soles proficere quicquam, cum cesset, nec imbres. mirum et illud, scatebra fonticuli semper emicante lacum neque augeri neque effluere. iis autem diebus, quibus gignitur, si fuere imbres, salsius nitrum faciunt, aquilones deterius, quia validius commovent limum.

et hoc quidem nascitur, in aegypto autem conficitur, multo

abundantius, sed deterius, nam fuscum lapidosumque est. fit paene eodem modo quo sal, nisi quod salinis mare infundunt, nilum autumno nitrariis. hae accedente nilo rigantur, decedente madent suco nitri xl diebus continuis, non ut in macedonia statis. si etiam imbres adfuerunt, minus e flumine addunt, statimque ut densari coeptum est, rapitur, ne resolvatur in nitrariis. hic quoque olei natura intervenit, ad scabiem animalium utilis. ipsum autem conditum in acervis durat. mirum in lacu ascanio et quibusdam circa chalcida fontibus summas aquas dulces esse potarique, inferiores nitrosas. - in nitro optimum quod tenuissimum, et ideo spuma melior, ad aliqua tamen sordidum, tamquam ad inficiendas purpuras tincturasque omnes. magnus et vitro usus, qui dicetur suo loco. - nitrariae aegypti circa naucratim et memphin tantum solebant esse, circa memphin deteriores. nam et lapidescit ibi in acervis, multique sunt cumuli ea de causa saxei. faciunt ex his vasa nec non et frequenter liquatum cum sulpure coquentes. in carnibus quoque, quas inveterari volunt, illo nitro utuntur. sunt ibi nitrariae, in quibus et rufum exit a colore terrae.

spumam nitri, quae maxime laudatur, antiqui negabant fieri, nisi cum ros cecidisset praegnantibus nitrariis, sed nondum parientibus; itaque non fieri incitatis, etiamsi caderet. alii acervorum fermento gigni existimavere. proxima aetas medicorum aphronitrum tradidit in asia colligi in speluncis molibus destillans - specus eos colligas vocant - , dein siccari sole. optimum putatur lydium; probatio, ut sit minime ponderosum et maxime friabile, colore paene purpureo. hoc in pastillis adfertur, aegyptium in vasis picatis, ne liquescat; vasa quoque ea sole inarescentia perficiuntur.

nitri probatio, ut sit tenuissimum et quam maxime spongeosum fistulosumque. adulteratur in aegypto calce, deprehenditur gustu. sincerum enim statim resolvitur, adulteratum pungit calce et aspersum reddit odorem vehementer. uritur in testa opertum, ne exultet. alias igni non exilit nitrum, nihilque gignit aut alit, cum in salinis herbae gignantur et in mari tot animalia, tantum algae. sed maiorem esse acrimoniam nitri apparet non hoc tantum argumento, sed et illo, quod nitrariae calciamenta protinus consumunt, alias salubres oculorumque claritati utiles. in nitrariis non lippiunt; ulcera allata eo celerrime sanantur, ibi facta tarde. ciet et sudores cum oleo

perunctis corpusque emollit. in pane salis vice utuntur chalestraeo, ad raphanos aegyptio; teneriores eos facit, sed obsonia alba et deteriora, olera viridiora. in medicina autem calfacit, extenuat, mordet, spissat, siccat, exulcerat, utile iis, quae evocanda sint aut discutienda et lenius mordenda atque extenuanda, sicut in papulis pusulisque. quidam in hoc usu accensum vino austero restingunt atque ita trito in balneis utuntur sine oleo. sudores nimios inhibet cum iride arida adiecto oleo viridi. extenuat et cicatrices oculorum et scabritias genarum cum fico inlitum aut decoctum in passo ad dimidias partes - item contra argema - , oculorum ungues decoctum in passo cum mali punici calyce; adiuvat claritatem visus cum melle inunctum. prodest dentium dolori, ex vino si cum pipere colluantur; item cum porro decoctum nigrescentes dentes, crematum dentifricio, ad colorem reducit. capitis animalia et lendes necat cum samia terra inlitum ex oleo. auribus purulentis vino liquatum infunditur, sordes eiusdem partis erodit ex aceto, sonitus et tinnitus discutit siccum additum. vitiligines albas cum creta cimolia aequo pondere ex aceto in sole inlitum emendat. furunculos admixtum resinae extrahit; cum uva alba passa nucleis eius simul tritis testium inflammationi occurrit, item eruptionibus pituitae in toto corpore cum axungia, contraque canis morsus addita et resina inlitis. cum aceto inlinitur sic et serpentium morsibus; phagedaenis et ulceribus, quae serpunt aut putrescunt, cum calce ex aceto. hydropicis cum fico tusum datur inliniturque. discutit et tormina, si decoctum bibatur pondere drachmae cum ruta vel aneto vel cumino. reficit lassitudines cum oleo et aceto perunctorum, et contra algores horroresque prodest manibus pedibusque confricatis cum oleo. conprimit et pruritus suffusorum felle, maxime cum aceto instillatum. succurrit et venenis fungorum ex posca potum aut, si buprestis hausta sit, ex aqua, vomitionesque evocat. iis, qui sanguinem tauri biberint, cum lasere datur. in facie quoque exulcerationes sanat cum melle et lacte bubulo. ambustis tostum, donec nigrescat, tritumque inlinitur. infunditur vesicae et renium dolori aut rigori corporum nervorumve doloribus. paralysi in lingua cum pane inponitur. suspiriosis in tisana sumitur. tussim veterem sanat flore mixto galbano, resinae terebinthinae pari pondere omnium ita, ut fabae magnitudo devoretur. coquitur dilutumque postea cum pice liquida sorbendum

in angina datur.

flos eius cum oleo cypreo et articulorum doloribus in sole iucundus est. regium quoque morbum extenuat in potione vini et inflationes discutit, sanguinis profluvium e naribus sistit ex ferventi aqua vapore naribus rapto. porriginem alumine permixto tollit, alarum virus ex aqua cottidiano fotu, ulcera ex pituita nata cera permixtum, quo genere nervis quoque prodest. coeliacis infunditur. perungui ante accessiones frigidas nitro et oleo multi praecepere, sicut adversus lepras, lentigines; podagris in balneis uti. solia nitri prosunt atrophis, opisthotonis, tetanis. - sal nitrum sulpuri concoctum in lapidem vertitur.

spongearum genera diximus in naturis aquatilium marinorum. quidam ita distingunt: alias ex his mares tenui fistula spissioresque, persorbentes, quae et tinguntur in deliciis, aliquando et purpura; alias feminas maioribus fistulis ac perpetuis; maribus alias duriores, quas appellant tragos, tenuissimis fistulis atque densissimis. candidae cura fiunt: e mollissimis recentes per aestatem tinctae salis spuma ad lunam et pruinas sternuntur inversae, hoc est qua parte adhaesere, ut candorem bibant. animal esse docuimus, etiam cruore inhaerente. aliqui narrant et auditu regi eas contrahique ad sonum, exprimentes abundantiam umoris, nec avelli petris posse, ideo abscidi ac saniem remittere, quin et ... eas, quae ab aquilone sint genitae, praeferunt ceteris, nec usquam diutius durare spiritum medici adfirmant. sic et prodesse corporibus, quia nostro suum misceant, et ideo magis recentes magisque umidas, sed minus in calida aqua minusque unctas aut unctis corporibus inpositas et spissas minus adhaerescentes. mollissimum genus earum penicilli. oculorum tumores sedant ex mulso inpositi, iidem abstergendae lippitudini, utilissime ex aqua; tenuissimos esse mollissimosque oportet. inponuntur et spongeae ipsae epiphoris ex posca et ex aceto calido ad capitis dolores. de cetero recentes discutiunt, mitigant, molliunt, veteres non glutinant vulnera. usus earum ad abstergenda, fovenda, operienda a fotu, dum aliud inponatur. ulcera quoque umida et senilia inpositae siccant. fracturae et vulnera spongeis utilissime foventur. sanguis rapitur in secando, ut curatio perspici possit. et ipsae vulnerum inflammationibus inponuntur nunc siccae, nunc aceto adspersae nunc vino, nunc ex aqua frigida; ex aqua vero caelesti inpositae secta

recentia non patiuntur intumescere. inponuntur et integris partibus, sed fluctione occulta laborantibus, quae discutienda sit, et iis, quae apostemata vocant, melle decocto perunctis, item articulis alias aceto salso madidae, alias e posca; si ferveat impetus, ex aqua, eaedem callo e salsa, at contra scorpionum ictus ex aceto. in vulnerum curatione et sucidae lanae vicem implent ex eadem; differentia haec, quod lanae emolliunt, spongeae coercent rapiuntque vitia ulcerum. circumligantur et hydropicis siccae vel ex aqua tepida poscave, utcumque blandiri opus est operireve aut siccare cutem. inponuntur et iis morbis, quos vaporari oporteat, ferventi aqua perfusae expressaeque inter duas tabulas. sic et stomacho prosunt et in febri contra nimios ardores, sed splenicis e posca, ignibus sacris ex aceto efficaciores quam aliud; inponi oportet sic, ut sanas quoque partes spatiose operiant. sanguinis profluvium sistunt ex aceto aut frigida, livorem ab ictu recentem ex aqua salsa calida saepius mutata tollunt, testium tumorem doloremque ex posca. ad canum morsus utiliter concisae inponuntur ex aceto aut frigida aut melle, abunde subinde umectandae. africanae cinis cum porri sectivi suco sanguinem reicientibus haustus, aliis ex frigida, prodest. idem cinis vel cum oleo vel cum aceto fronti inlitus tertianas tollit. privatim africanae ex posca tumorem discutit, omnium autem cinis cum pice crematarum sanguinem sistit vulnerum; aliqui raras tantum ad hoc cum pice urunt. et oculorum causa comburuntur in cruda olla figulini operis, plurimum proficiente eo cinere contra scabritias genarum excrescentesque carnes et quicquid opus sit ibi destringere, spissare, explere. utilius in eo usu lavare cinerem. praestant et strigilium vicem linteorumque adfectis corporibus. et contra solem apte protegunt capita. medici inscitia ad duo nomina eas redegere, africanas, quarum firmius sit robur, rhodiacasque ad fovendum molliores. nunc autem mollissimae circa muros antiphelli urbis reperiuntur. trogus auctor est circa lyciam penicillos mollissimos nasci in alto, unde ablatae sint spongeae, polybius super aegrum suspensos quietiores facere noctes.

nunc praevertemur ad marina animalia.

LIBER XXXII

ventum est ad summa naturae exemplorumque per rerum ordinem, et ipsum sua sponte occurrit inmensum potentiae occultae documentum, ut prorsus neque aliud ultra quaeri debeat nec par ac simile possit inveniri, ipsa se vincente natura, et quidem numerosis modis. quid enim violentius mari ventisve et turbinibus ac procellis quo maiore hominum ingenio in ulla sui parte adiuta est quam velis remisque addatur his et reciproci aestus inenarrabilis vis versumque totum mare in flumen. tamen omnia haec pariterque eodem inpellentia unus ac parvus admodum pisciculus, echenais appellatus, in se tenet. ruant venti licet, saeviant procellae: imperat furori viresque tantas compescit et cogit stare navigia, quod non vincula ulla, non ancorae pondere inrevocabili iactae. infrenat impetus et domat mundi rabiem nullo suo labore, non renitendo aut alio modo quam adhaerendo. hoc tantulo satis est, contra tot impetus ut vetet ire navigia. sed armatae classes inponunt sibi turrium propugnacula, ut in mari quoque pugnetur velut e muris. heu vanitas humana, cum rostra illa aere ferroque ad ictus armata semipedalis inhibere possit ac tenere devincta pisciculus! fertur actiaco marte tenuisse praetoriam navem antoni properantis circumire et exhortari suos, donec transiret in aliam, ideoque caesariana classis impetu maiore protinus venit. tenuit et nostra memoria gai principis ab astura antium renavigantis - ut res est, etiam auspicalis pisciculus, siquidem novissime tum in urbem reversus ille imperator suis telis confossus est - , nec longa fuit illius morae admiratio, statim causa intellecta, cum e tota classe quinqueremis sola non proficeret, exilientibus protinus qui quaererent circa navem. invenere adhaerentem gubernaculo ostenderuntque gaio indignanti hoc fuisse, quod se revocaret quadringentorumque remigum obsequio contra se intercederet. constabat peculiariter miratum, quomodo adhaerens tenuisset nec idem polleret in navigium receptus. qui tunc posteaque videre eum, limaci magnae similem esse dicunt. nos plurium opiniones posuimus in natura aquatilium, cum de eo diceremus, nec dubitamus idem valere omnia ea genera, cum celebri et consecrato etiam exemplo apud cnidiam venerem conchas quoque esse eiusdem

potentiae credi necesse sit. e nostris quidam latine moram appellavere eum, mirumque, e graecis alii lubricos partus atque procidentes continere ad maturitatem adalligatum, ut diximus, prodiderunt, alii sale adservatum adalligatumque gravidis partus solvere, ob id alio nomine odinolyten appellari. quocumque modo ista se habent, quis ab hoc tenendi navigia exemplo de ulla potentia naturae vique et effectu in remediis sponte nascentium rerum dubitet

quid non et sine hoc exemplo per se satis esset ex eodem mari torpedo etiam procul et e longinquo, vel si hasta virgave attingatur, quamvis praevalidos lacertos torpescere, quamlibet ad cursum veloces alligari pedes quod si necesse habemus fateri hoc exemplo esse vim aliquam, quae odore tantum et quadam aura corporis sui adficiat membra, quid non de remediorum omnium momentis sperandum est

non sunt minus mira quae de lepore marino traduntur. venenum est aliis in potu aut cibo datus, aliis etiam visu, siquidem gravidae, si omnino adspexerint feminam ex eo genere dumtaxat, statim nausiant et redundatione stomachi vitium fatentur ac deinde abortum faciunt. remedio est mas ob id induratus sale, ut in bracchialibus habeant. eadem res in mari ne tactu quidem nocet. vescitur eo unum tantum animalium, ut non intereat, mullus piscis; tenerescit tantum et inertior viliorque fit. homines, quibus inpactus est, piscem olent; hoc primo argumento veneficium id deprehenditur. cetero moriuntur totidem in diebus, quot vixerit lepus, incertique temporis veneficium id esse auctor est licinius macer. in india adfirmant non capi viventem invicemque ibi hominem illi pro veneno esse ac vel digito omnino in mari tactum mori, esse autem multo ampliorem, sicuti reliqua animalia.

iuba in iis voluminibus, quae scripsit ad c. caesarem aug. f. de arabia, tradit mitulos ternas heminas capere, cetos sescentorum pedum longitudinis et trecentorum sexaginta latitudinis in flumen arabiae intrasse, pinguique eius mercatores negotiatos, et omnium piscium adipe camelos perungui in eo situ, ut asilos ab iis fugent odore.

mihi videntur mira et quae ovidius prodidit piscium ingenia in eo volumine, quod halieuticon inscribitur: scarum inclusum nassis non fronte erumpere nec infestis viminibus caput inserere, sed aversum

caudae ictibus crebris laxare fores atque ita retrorsum repere, quem luctatum eius si forte alius scarus extrinsecus videat, adprehensa mordicus cauda adiuvare nisus erumpentis; lupum rete circumdatum harenas arare cauda atque ita condi, dum transeat rete; murenam maculas adpetere ipsas consciam teretis ac lubrici tergi, tum multiplici flexu laxare, donec evadat; polypum hamos adpetere bracchiisque complecti, non morsu, nec prius dimittere, quam escam circumroserit, aut harundine levatum extra aquam. scit et mugil esse in esca hamum insidiasque non ignorat, aviditas tamen tanta est, ut cauda verberando excutiat cibum. minus in providendo lupus sollertiae habet, sed magnum robur in paenitendo. nam is, ut haesit in hamo, tumultuoso discursu laxat volnera, donec excidant insidiae. murenae amplius devorant quam hamum, admovent dentibus lineas atque ita erodunt. anthias tradit idem infixo hamo invertere se, quoniam sit in dorso cultellata spina, eaque liniam praesecare.

licinius macer murenas feminini tantum sexus esse tradit et concipere e serpentibus, ut diximus - ob id sibilo a piscatoribus tamquam a serpentibus evocari et capi - et pinguescere, iactato fusti non interemi, easdem ferula protinus. animam in cauda habere certum est eaque icta celerrime exanimari, ad capitis ictum difficulter. novacula pisce qui attacti sunt, ferrum olent. durissimum esse piscium constat qui orbis vocetur; rotundus est, sine squamis totusque capite constat. - (lolligo quotiens cernatur extra aquam volitans, tempestates nuntiari). - trebius niger xiphian, id est gladium, rostro mucronato esse, ab hoc naves perfossas mergi; in oceano ad locum mauretaniae, qui cottae vocetur, non procul lixo flumine idem lolligines evolare ex aqua tradit tanta multitudine, ut navigia demergant.

e manu vescuntur pisces in pluribus quidem caesaris villis, sed - quae veteres prodidere in stagnis, non piscinis, admirati - in heloro siciliae castello non procul syracusis, item in labrayndi iovis fonte anguillae et inaures additas gerunt, similiter in chio iuxta senum delubrum, in mesopotamiae quoque fonte chabura, de quo diximus, pisces. nam in lycia myris in fonte apollinis, quem curium appellant, ter fistula vocati veniunt ad augurium. diripere eos carnes abiectas laetum est consultantibus, caudis abigere dirum. hieropoli syriae in lacu veneris aedituorum vocibus parent, vocati veniunt exornati auro,

adulantes scalpuntur, ora hiantia manibus inserendis praebent. in stabiano campaniae ad herculis petram melanuri in mari panem abiectum rapiunt, iidem ad nullum cibum, in quo hamus sit, accedunt.

nec illa in novissimis mira, amaros esse pisces ad pelen insulam et ad clazomenas, contra scopulum siciliae ac leptim africae et euboeam et durrachium, rursus ita salsos, ut possint salsamenta existumari, circa cephallaniam et ampelon, paron et deli petras, in portu eiusdem insulae dulces. quam differentiam pabulo constare non est dubium. apion piscium maxime mirum esse tradit porcum, quem lacedaemoni orthagoriscum vocent; grunnire eum, cum capiatur. esse vero illam naturae accedentiam - quod magis miremur - etiam in locis quibusdam, adposito occurret exemplo, siquidem salsamenta omnium generum in italia beneventi refici constat.

pisces marinos in usu fuisse protinus a condita roma auctor est cassius hemina, cuius verba de ea re subiciam: “numa constituit ut pisces, qui squamosi non essent, ni pollucerent, parsimonia commentus, ut convivia publica et privata cenaeque ad pulvinaria facilius compararentur, ni qui ad polluctum emerent pretio minus parcerent eaque praemercarentur.”

quantum apud nos indicis margaritis pretium est, de quis suo loco satis diximus, tantum apud indos curalio; namque ista persuasione gentium constant. gignitur et in rubro quidem mari, sed nigrius, item in persico - vocatur lace - , laudatissimum in gallico sinu circa stoechadas insulas et in siculo circa aeolias ac drepana. nascitur et apud graviscas et ante neapolim campaniae maximeque rubens, sed molle et ideo vilissimum erythris. forma est ei fruticis, colos viridis. bacae eius candidae sub aqua ac molles, exemptae confestim durantur et rubescunt qua corna sativa specie atque magnitudine. aiunt tactu protinus lapidescere, si vivat; itaque occupari evellique retibus aut acri ferramento praecidi, qua de causa curalium vocitatum interpretantur. probatissimum quam maxime rubens et quam ramosissimum nec scabiosum aut lapideum aut rursus inane et concavum. auctoritas bacarum eius non minus indorum viris quoque pretiosa est quam feminis nostris uniones indici. harispices eorum vatesque inprimis religiosum id gestamen amoliendis periculis arbitrantur. ita et decore et religione gaudent. prius quam hoc

notesceret, galli gladios, scuta, galeas adornabant eo. nunc tanta paenuria est vendibili merce, ut perquam raro cernatur in suo orbe. surculi infantiae adalligati tutelam habere creduntur contraque torminum ac vesicae et calculorum mala in pulverem igni redacti potique cum aqua auxiliantur, simili modo ex vino poti aut, si febris sit, ex aqua somnum adferunt - ignibus diu repugnat - , sed eodem medicamine saepius poto tradunt lienem quoque absumi. sanguinem reicientibus excreantibusve medetur cinis eorum; miscetur oculorum medicamentis, spissat enim ac refrigerat, ulcerum cava explet, cicatrices extenuat.

quod ad repugnantiam rerum attinet, quam graeci antipathian vocant, nihil est usquam venenatius quam in mari pastinaca, utpote cum radio eius arbores necari dixerimus. hanc tamen persequitur galeos, idem et alios quidem pisces, sed pastinacas praecipue, sicut in terra mustela serpentes - tanta est aviditas ipsius veneni - , percussis vero ab ea medentur et hic quidem, sed et mullus ac laser, spectabili naturae potentia, in iis quoque, quibus et in terris victus est, sicut fibris, quos castoras vocant et castorea testes eorum. amputari hos ab ipsis, cum capiantur, negat sextius diligentissimus medicinae, quin immo parvos esse substrictosque et adhaerentes spinae, nec adimi sine vita animalis posse; adulterari autem renibus eiusdem, qui sint grandes, cum veri testes parvi admodum reperiantur; praeterea ne vesicas quidem esse, cum sint geminae, quod nulli animalium; in iis folliculis inveniri liquorem et adservari sale; itaque inter probationes falsi esse folliculos geminos ex uno nexu dependentes, quod ipsum corrumpi fraude conicientium cummim cum sanguine aut hammoniacum, quoniam hammoniaci coloris esse debeant circumdati, liquore veluti mellis cerosi, odore graves, gustu amaro et acri, friabiles. efficacissimi e ponto galatiaque, mox africa. sternumenta olfactu movent. somnum conciliant cum rosaceo et peucedano peruncto capite et per se poti ex aqua, ob id phreneticis utiles; iidem lethargicos odoris suffitu excitant volvarumque exanimationes vel subditu, ac menses et secundas cient ii drachmis cum puleio ex aqua poti. medentur et vertigini, opisthotono, tremulis, spasticis, nervorum vitiis, ischiadicis, stomachicis, paralyticis, perunctis omnibus, vel triti ad crassitudinem mellis cum semine viticis ex aceto ac rosaceo. sic et contra

comitiales sumpti, poti vero contra inflationes, tormina, venena. differentia tantum contra genera est mixturae, quippe adversus scorpiones ex vino bibuntur, adversus phalangia et araneos ex mulso ita, ut vomitione reddantur aut ut contineantur cum ruta, adversus chalcidas cum myrtite, adversus cerasten et presteras cum panace aut ruta ex vino, adversus ceteras serpentes cum vino. dari binas drachmas satis; eorum, quae adiciantur, singulas. auxiliantur privatim contra viscum ex aceto, adversus aconitum ex lacte aut aqua, adversus helleborum album ex aqua mulsa nitroque. medentur et dentibus infusi cum oleo triti in aurem, a cuius parte doleant, aurium dolori melius, si cum meconio. claritatem visus faciunt cum melle attico inunctis. cohibent singultus ex aceto. urina quoque fibri resistit venenis et ob id in antidota additur. adservatur autem optume in sua vesica, ut aliqui existumant.

geminus similiter victus in aquis terraque et testudinum effectusque par, honore habendo vel propter excellens in usu pretium figuraeque proprietatem. sunt ergo testudinum genera terrestres, marinae, lutariae et quae in dulci aqua vivunt. has quidam e graecis emydas appellant.

terrestrium carnes suffitionibus propriae magicisque artibus refutandis et contra venena salutares produntur. plurimae in africa. hae ibi amputato capite pedibusque pro antidoto dari dicuntur et e iure in cibo sumptae strumas discutere, lienes tollere, item comitiales morbos. sanguis earum claritatem visus facit, discutit suffusiones oculorum. et contra serpentium omnium et araneorum ac similium et ranarum venena auxiliatur servato sanguine in farina pilulis factis et, cum opus sit, in vino datis. felle testudinum cum attico melle glaucomata inungui prodest. scorpionum plagae instillant. tegimenti cinis vino et oleo subactus pedum rimas ulceraque sanat. squamae e summa parte derasae et in potu datae venerem cohibent. eo magis hoc mirum, quoniam totius tegimenti farina accendere traditur libidinem. urinam aliter earum quam in vesica dissectarum inveniri posse non arbitror et inter ea esse hoc quoque, quae portentose magi demonstrant, adversus aspidum ictus singularem, efficaciorem tamen, ut aiunt, cimicibus admixtis. ova durata inlinuntur strumis et ulceribus frigore aut adustione factis. sorbentur in stomachi doloribus.

marinarum carnes admixtae ranarum carnibus contra salamandras praeclare auxiliantur, neque est testudine aliud salamandrae adversius. sanguine alopeciarum inanitas et porrigo omniaque capitis ulcera curantur; inarescere eum oportet lenteque ablui. instillatur et dolori aurium cum lacte mulierum. adversus morbos comitiales manditur cum polline frumenti, miscetur autem sanguinis heminis iii aceti hemina. datur et suspiriosis, sed tum hemina vini additur; his et cum hordeacea farina, aceto quoque admixto, ut sit quod devoretur fabae magnitudine; et haec singula et matutina et vespera dantur, dein post aliquot dies bina vespera. comitialibus instillatur ore diducto; iis, qui modice corripiantur spasmo, cum castoreo clystere infunditur. quod si dentes ter annis colluantur testudinum sanguine, immunes a dolore fiant. et anhelitus discutit quasque orthopnoeas vocant; ad has in polenta datur. fel testudinum claritatem oculorum facit, cicatrices extenuat, tonsillas sedat et anginas et omnia oris vitia, privatim nomas ibi, item testium. naribus inlitum comitiales erigit attollitque. idem cum vernatione anguium aceto admixto unice purulentis auribus prodest. quidam bubulum fel admiscent decoctarum carnium testudinis suco, addita aeque vernatione anguium; sed vino testudinem excocunt. oculorum utique vitia omnia fel inunctum cum melle emendat, suffusiones etiam marinae fel cum fluviatilis sanguine et lacte. capillus mulierum inficitur felle. contra salamandras vel sucum decoctae bibisse satis est.

tertium genus testudinum est in caeno et paludibus viventium. latitudo his et in dorso pectori similis nec convexo curvata calice, ingrata visu. ex hac quoque tamen aliqua contingunt auxilia. tres namque in succensa sarmenta coiectae dividentibus se tegumentis rapiuntur, tum evolsae carnes earum cocuntur in congio aquae sale modice addito; ita decoctarum ad tertias partes sucus paralysim et articularios morbos sentientibus bibitur. detrahit idem fel pituitas sanguinemque vitiatum. sistitur ab eo remedio alvus aquae frigidae potu.

e quarto genere testudinum, quae sunt in amnibus, divolsarum pinguia cum aizoo herba tunsa admixto unguento et semine lili, si ante accessiones perunguantur aegri praeter caput, mox convoluti calidam aquam bibant, quartanis liberare dicuntur. hanc testudinem xv luna capi oportere, ut plus pinguium reperiatur, verum aegrum xvi

luna perungui. ex eodem genere testudinum sanguis instillatus cerebro capitis dolores sedat, item strumas. sunt qui testudinum sanguinem cultro aereo supinarum capitibus praecisis excipi novo fictili iubeant, ignem sacrum cuiuscumque generis sanguine inlini, item capitis ulcera manantia, verrucas. iidem promittunt testudinum omnium fimo panos discuti; et, quod incredibile dictu sit, aliqui tradunt tardius ire navigia testudinis pedem dextrum vehentia.

hinc deinde in morbos digeremus aquatilia, non quia ignoremus gratiorem esse universitatem animalium maiorisque miraculi, sed hoc utilius est vitae, contributa habere remedia, cum aliud alii prosit, aliud alibi facilius inveniatur.

venenatum mel diximus ubi nasceretur. auxilio est piscis aurata in cibo. vel si ex melle sincero fastidium cruditasve, quae fit gravissima, incidat, testudinem circumcisis pedibus, capite, cauda decoctam antidotum esse auctor est pelops, scincum Apelles. quid esset scincus diximus, saepius vero quantum veneficii in menstruis mulierum. contra ea omnia auxiliatur, ut diximus, mullus, item contra pastinacam et scorpiones terrestres marinosque et dracones, phalangia inlitus sumptusve in cibo, eiusdem recentis e capite cinis contra omnia venena, privatim contra fungos. mala medicamenta inferri negant posse aut certe nocere stella marina volpino sanguine inlita et adfixa limini superiori aut clavo aereo ianuae. draconis marini scorpionumque ictus carnibus earum inpositis, item araneorum morsus sanantur. in summa contra omnia venena vel potu vel ictu vel morsu noxia sucus earum e iure decoctarum efficacissimus habetur.

sunt et servatis piscibus medicinae, salsamentorumque cibus prodest a serpente percussis et contra bestiarum ictus mero subinde hausto ita, ut per satiem cibus vomitione reddatur, peculiariter a chalcide, ceraste aut quas sepas vocant aut elope, dipsade percussis. contra scorpionem largius sumi, sed non evomi, salsamenta prodest ita, ut sitis toleretur; et inponere plagis eadem convenit. contra crocodilorum quidem morsus non aliud praesentius habetur. privatim contra presteris morsum sarda prodest. inponuntur salsamenta et contra canis rabiosi; vel si non sint ferro ustae plagae corporaque clysteribus exinanita, hoc per se sufficit. et contra draconem marinum ex aceto inponuntur. idem et cybio effectus. draco quidem marinus

ad spinae suae, qua ferit, venenum ipse inpositus vel cerebro poto prodest.

ranarum marinarum ex vino et aceto decoctarum sucus contra venena bibitur, et contra ranae rubetae venenum et contra salamandras vel e fluviatilibus; si carnes edantur iusve decoctarum sorbeatur, prosunt et contra leporem marinum et contra serpentes supra dictos, contra scorpiones ex vino. democritus quidem tradit, si quis extrahat ranae viventi linguam, nulla alia corporis parte adhaerente, ipsaque dimissa in aquam inponat supra cordis palpitationem mulieri dormienti, quaecumque interrogaverit, vera responsuram. addunt etiamnum alia magi, quae si vera sint, multo utiliores vitae existumentur ranae quam leges; namque harundine transfixis a natura per os si surculus in menstruis defigatur a marito, adulterorum taedium fieri. carnibus earum vel in hamum additis praecipue purpuras adlici certum est. iocur ranae geminum esse dicunt abicique formicis oportere; eam partem, quam adpetant, contra venena omnia esse pro antidoto. sunt quae in vepribus tantum vivunt, ob id rubetarum nomine, ut diximus, quas graeci φρύνους vocant, grandissimae cunctarum, geminis veluti cornibus, plenae veneficiorum. mira de iis certatim tradunt auctores: inlatis in populum silentium fieri; ossiculo, quod sit in dextro latere, in aquam ferventem deiecto refrigerari vas nec postea fervere nisi exempto, id inveniri abiecta rana formicis carnibusque erosis, singula in oleum addi; esse in sinistro latere quo deiecto fervere videatur, apocynon vocari, canum impetus eo cohiberi, amorem concitari et iurgia addito in potionem, venerem adalligato stimulari, rursus e dextro latere refrigerari ferventia; hoc et quartanas sanari adalligato in pellicula agnina recenti aliasque febris, amorem inhiberi. ex isdem his ranis lien contra venena, quae fiant ex ipsis, auxiliatur, iocur vero etiam efficacius.

est colubra in aqua vivens. huius adipem et fel habentes qui crocodilos venentur mire adiuvari dicunt, nihil contra belua audente, efficacius etiamnum, si herba potamogiton misceatur. - cancri fluviatiles triti potique ex aqua recentes seu cinere adservato contra venena omnia prosunt, privatim contra scorpionum ictus cum lacte asinino, si non sit, caprino aut quocumque; addi et vinum oportet. necant eos triti cum ocimo admoti. eadem vis contra venenatorum

omnium morsus, privatim scytalen et angues et contra leporem marinum ac ranam rubetam. cinis eorum servatus prodest pavore potus periclitantibus ex canis rabiosi morsu. quidam adiciunt gentianam et dant in vino, et si iam pavor occupaverit, pastillos vino subactos devorandos ita praecipiunt. decem vero cancris cum ocimi manipulo adligatis omnes, qui ibi sint, scorpiones ad eum locum coituros magi dicunt, et cum ocimo ipsos cineremve eorum percussis inponunt. minus in omnibus his marini prosunt. thrasyllus auctor est nihil aeque adversari serpentibus quam cancros; sues percussas hoc pabulo sibi mederi; cum sol sit in cancro, serpentes torqueri. - ictibus scorpionum carnes et fluviatilium coclearum resistunt crudae vel coctae. quidam ob id salsas quoque adservant. inponunt et plagis ipsis. - coracini pisces nilo quidem peculiares sunt, sed nos haec omnibus terris demonstramus. carnes eorum adversus scorpiones valent inpositae. - inter venena piscium sunt porci marini spinae in dorso, cruciatu magno laesorum. remedio est limus ex reliquiis piscium eorum corporis.

canis rabidi morsibus potum expavescentibus faciem perungunt adipe vituli marini, efficacius, si medulla hyaenae et oleum e lentisco et cera misceantur. murenae morsus ipsarum capitis cinere sanantur. et pastinaca contra suum ictum remedio est cinere suo ex aceto inlito vel alterius. cibi causa extrahi debet ex dorso eius quidquid croco simile est caputque totum; et hanc autem et omnia testacea modice colluunt cibis, quia saporis gratia perit. e lepore marino veneficium restingunt poti hippocampi. contra dorycnium echini maxime prosunt, et iis, qui sucum carpathi biberint, praecipue e iure sumpti. et cancri marini decocti ius contra dorycnium efficax habetur, peculiariter vero contra leporis marini venena.

et ostrea adversantur isdem, nec potest videri satis dictum esse de iis, cum palma mensarum diu iam tribuatur illis. gaudent dulcibus aquis et ubi plurumi influant amnes; ideo pelagia parva et rara sunt. gignuntur tamen et in petrosis carentibusque aquarum dulcium adventu, sicut circa grynium et myrinam. grandescunt sideris quidem ratione maxime, ut in natura aquatilium diximus, sed privatim circa initia aestatis multo lacte praegnatia atque ubi sol penetret in vada. haec videtur causa, quare minora in alto reperiantur; opacitas cohibet incrementum, et tristitia minus adpetunt cibos. variantur coloribus,

rufa hispaniae, fusca illyrico, nigra et carne et testa cerceis, praecipua vero habentur in quacumque gente spissa nec saliva sua lubrica, crassitudine potius spectanda quam latitudine, neque in lutosis capta neque in harenosis, sed solido vado, spondylo brevi atque non carnoso, nec fibris laciniosa ac tota in alvo. addunt peritiores notam ambiente purpureo crine fibras, eoque argumento generosa interpretantur calliblephara ea appellantes. gaudent et peregrinatione transferrique in ignotas aquas. sic brundisina in averno compasta et suum retinere sucum et a lucrino adoptare creduntur.

haec sint dicta de corpore; dicemus et de nationibus, ne fraudentur gloria sua litora, sed dicemus aliena lingua quaeque peritissima huius censurae in nostro aevo fuit. sunt ergo muciani verba, quae subiciam: “cyzicena maiora lucrinis, dulciora brittannicis, suaviora medullis, acriora ephesis, pleniora iliciensibus, sicciora coryphantenis, teneriora histricis, candidiora cerceiensibus. sed his neque dulciora neque teneriora ulla esse compertum est.” in indico mari alexandri rerum auctores pedalia inveniri prodidere, nec non inter nos nepotis cuiusdam nomenclatura tridacna appellavit, tantae amplitudinis intellegi cupiens, ut ter mordenda essent.

dos eorum medica hoc in loco tota dicetur: stomachum unice reficiunt, fastidiis medentur, addiditque luxuria frigus obrutis nive, summa montium et maris ima miscens. emolliunt alvum leniter. eademque cocta cum mulso tenesmo, qui sine exulceratione sit, liberant. vesicarum ulcera quoque repurgant. cocta in conchis suis, uti clusa invenerint, mire destillationibus prosunt. testae ostreorum cinis uvam sedat et tonsillas admixto melle, eodem modo parotidas, panos mammarumque duritias, capitum ulcera ex aqua cutemque mulierum extendit; inspergitur et ambustis. et dentifricio placet. pruritibus quoque et eruptionibus pituitae ex aceto medetur. crudae si tundantur, strumas sanant et perniones pedum.

purpurae quoque contra venena prosunt. et algam maris theriacen esse nicander tradit. plura eius genera, ut diximus, longo folio et rubente, latiore alia vel crispo. laudatissima quae in creta insula iuxta terram in petris nascitur, tinguendis etiam lanis, ita colorem alligans, ut elui postea non possit. e vino iubet eam dari.

alopecias replet hippocampi cinis nitro et adipe suillo mixtus aut sincerus ex aceto, praeparat autem saepiarum crustae farina

medicamentis cutem; replet et muris marini cinis cum oleo, item echini cum carnibus suis cremati, fel scorpionis marini, ranarum quoque iii, si vivae in olla concrementur, cinis cum melle, melius cum pice liquida. capillum denigrant sanguisugae, quae in vino nigro diebus xxxx computuere. alii in aceti sextariis ii sanguisugarum sextarium in vase plumbeo putrescere iubent totidem diebus, mox inlini in sole. sornatius tantam vim hanc tradit, ut, nisi oleum ore contineant qui tinguent, dentes quoque suco earum denigrari dicat. - capitis ulceribus muricum vel purpurarum testae cinis cum melle utiliter inlinitur, conchyliorum vel, si non uratur, farina ex aqua, doloribus castoreum cum peucedano et rosaceo.

omnium piscium fluviatilium marinorumque adipes liquefacti sole admixto melle oculorum claritati plurimum conferunt, item castoreum cum melle. callionymi fel cicatrices sanat et carnes oculorum supervacuas consumit. nulli hoc piscium copiosius, ut existumavit menander quoque in comoediis. idem piscis et uranoscopos vocatur ab oculo, quem in capite habet. et coracini fel excitat visum, et marini scorpionis rufi cum oleo vetere aut melle attico incipientes suffusiones discutit; inungui ter oportet intermissis diebus. eadem ratio albugines oculorum tollit. mullorum cibo aciem oculorum hebetari tradunt. lepus marinus ipse quidem venenatus est, sed cinis eius in palpebris pilos inutiles evolsos cohibet. ad hunc usum utilissimi minimi, item pectunculi salsi triti cum cedria, ranae, quas diopetas et calamitas vocant; earum sanguis cum lacrima vitis evolso pilo palpebris inlinatur. tumorem oculorum ruboremque saepiae cortex cum lacte mulieris inlitus sedat et per se scabritias emendat; invertunt ita genas et medicamentum auferunt post paulum rosaceoque inungunt et pane inposito mitigant. eodem cortice et nyctalopes curantur, in farinam trito ex aceto inlito. extrahit et squamas eius cinis. cicatrices oculorum cum melle sanat, pterygia cum sale et cadmia singulis drachmis, emendat et albugines iumentorum. aiunt et ossiculo eius genas, si terantur, sanari. echini ex aceto epinyctidas tollunt. eundem comburi cum viperinis pellibus ranisque et cinerem aspergi potionibus iubent magi, claritatem visus promittentes. ichthyocolla appellatur piscis, cui glutinosum est corium. idem nomen glutino eius; hoc epinyctidas tollit. quidam ex ventre, non e corio, fieri dicunt ichthyocollam, ut glutinum taurinum.

laudatur pontica, candida et carens venis squamisque et quae celerrime liquescit. madescere autem debet concisa in aqua aut aceto nocte ac die, mox tundi marinis lapidibus, ut facilius liquescat. utilem eam et capitis doloribus adfirmant et tetanis. ranae dexter oculus dextri, sinister laevi, suspensi e collo nativi coloris panno lippitudines sanant; quod si per coitum lunae eruantur, albuginem quoque, adalligati similiter in putamine ovi. reliquae carnes inpositae suggillationem rapiunt. cancri etiam oculos adalligatos collo mederi lippitudini dicunt. est parva rana in harundinetis et herbis maxime vivens, muta ac sine voce, viridis, si forte hauriatur, ventres boum distendens. huius corporis umorem derasum specillis claritatem oculis inunctis narrant adferre. et ipsas carnes doloribus oculorum superponunt. ranas xv coiectas in fictile novum iuncis configunt quidam sucoque earum, qui ita effluxerit, admiscent vitis albae lacrimam atque ita palpebras emendant, inutilibus pilis exemptis acu instillantes hunc sucum in vestigia evolsorum. meges psilotrum palpebrarum faciebat in aceto enecans putrescentes et ad hoc utebatur multis variisque per aquationes autumni nascentibus. idem praestare sanguisugarum cinis ex aceto inlitus putatur - comburi eas oportet in novo vaso - , idem thynni iocur siccatum pondere #1108 iiii cum oleo cedrino perunctis pilis viiii mensibus.

auribus utilissimum batiae piscis fel recens, sed et inveteratum nitro, item bacchi, quem quidam mizyenem vocant, item callionymi cum rosaceo infusum vel castoreum cum papaveris suco. vocant et in mari peduculos eosque tritos instillari ex aceto auribus iubent. et per se et conchylio infecta lana magnopere prodest; quidam aceto et nitro madefaciunt. sunt qui praecipue contra omnia aurium vitia laudent gari excellentis cyathum, mellis dimidio amplius, aceti cyathum in calice novo leni pruna decoquere subinde spuma pinnis detersa et, postquam desierit spumare, tepidum infundere. si tumeant aures, coriandri suco prius mitigandas iidem praecipiunt. ranarum adips instillatus statim dolores tollit. cancrorum fluviatilium sucus cum farina hordeacea aurium volneribus efficacissime prodest. parotides muricum testae cinere cum melle vel conchyliorum ex mulso curantur.

dentium dolores sedantur ossibus draconis marini scariphatis gingivis, cerebro caniculae in oleo decocto adservatoque, ut ex eo

dentes semel anno colluantur. pastinacae quoque radio scariphari gingivas in dolore utilissimum. contritus is et cum helleboro albo inlitus dentes sine vexatione extrahit. salsamentorum etiam in fictili vase combustorum cinis addita farina marmoris inter remedia est. et cybia vetera eluta in novo vase, dein trita prosunt doloribus. aeque prodesse dicuntur omnium salsamentorum spinae combustae tritaeque et inlitae. decocuntur et ranae singulae in aceti heminis, ut dentes ita colluantur contineaturque in ore sucus. si fastidium obstaret, suspendebat pedibus posterioribus eas sallustius dionysius, ut ex ore virus deflueret in acetum fervens, idque e pluribus ranis; fortioribus stomachis ex iure mandendas dabat. maxillaresque ita sanari praecipue dentes putant, mobiles vero supra dicto aceto stabiliri. ad hoc quidam ranarum corpora binarum praecisis pedibus in vini hemina macerant et ita collui dentium labantes iubent. aliqui totas adalligant maxillis. alii denas in sextariis iii aceti decoxere ad tertias partes, ut mobiles dentium stabilirent. nec non xlvi ranarum corda in olei veteris sextario sub aereo testo discoxere, ut infunderent per aurem dolentis maxillae. alii iocur ranae decoctum et tritum cum melle inposuere dentibus. omnia supra scripta ex marina efficaciora. si cariosi et faetidi sint, cetum in furno arefieri per noctem praecipiunt, postea tantundem salis addi atque ita fricari. enhydris vocatur graecis colubra in aqua vivens. huius iiii dentibus superioribus in dolore superiorum gingivas scariphant, inferiorum inferioribus; aliqui canino tantum earum contenti sunt. utuntur et cancrorum cinere, nam muricum cinis dentifricium est.

lichenas et lepras tollit adips vituli marini, menarum cinis cum mellis obolis ternis, iocur pastinacae in oleo coctum, hippocampi aut delphini cinis ex aqua inlitus. exulcerationem sequi debet curatio, quae perducit ad cicatricem. quidam delphini in fictili torrent, donec pinguitudo similis oleo fluat; hac perungunt. muricum vel conchyliorum testae cinis maculas in facie mulierum purgat cum melle inlitus cutemque erugat et extendit septenis diebus inlitus ita, ut octavo candido ovorum foveantur. muricum generis sunt quae vocant graeci coluthia, alii coryphia, turbinata aeque, sed minora, multo efficaciora, etiam oris halitum custodientia. ichthyocolla erugat cutem extenditque in aqua decocta horis iiii, dein contusa et subacta ad liquorem usque mellis. ita praeparata in vase novo conditur et in

usu iiii drachmis eius binae sulpuris et anchusae totidem, viii spumae argenteae adduntur aspersaque aqua teruntur una. sic inlita facies post iiii horas abluitur. medetur et lentigini ceterisque vitiis ex ossibus saepiarum cinis. idem et carnes excrescentes tollit et umida ulcera. psoras tollit rana decocta in heminis v aquae marinae; excoqui debet, donec sit lentitudo mellis. - fit in mari alcyoneum appellatum, e nidis, ut aliqui existumant, alcyonum et ceycum, ut alii, sordibus spumarum crassescentibus, alii e limo vel quadam maris lanugine. quattuor eius genera: cinereum, spissum, odoris asperi, alterum molle, lenius odore et fere algae, tertium candidioris vermiculi, quartum pumicosius, spongeae putri simile. paene purpureum quod optimum; hoc et milesium vocatur. quo candidius autem, hoc minus probabile est. vis eorum ut exulcerent, purgent. usus tostis et sine oleo. mire lepras, lichenas, lentigines tollunt cum lupino et sulpuris ii obolis. alcyoneo utuntur et ad oculorum cicatrices. - andreas ad lepras cancri cinere cum oleo usus est, attalus thynni adipe recenti.

oris ulcera menarum muria et capitum cinis cum melle sanat. strumas pungi piscis eius, qui rana in mari appellatur, ossiculo e cauda ita, ut non volneret, prodest. faciendum id cotidie, donec percurentur. eadem vis est pastinacae radio et lepori marino inposito ita, ut celeriter removeatur, echini testis contusis et ex aceto inlitis, item scolopendrae marinae e melle, cancro fluviatili contrito vel combusto ex melle. mirifice prosunt et saepiae ossa cum axungia vetere contusa et inlita. sic et ad parotidas utuntur, et sauri piscis marini iocineribus, quin et testis cadi salsamentarii tusis cum axungia vetere, muricum cinere ex oleo ad parotidas strumasque. - rigor cervicis mollitur et marinis, qui pediculi vocantur, drachma pota, castoreo poto cum pipere ex mulso mixto, ranis decoctis ex oleo et sale, ut sorbeatur sucus. sic et opisthotono medentur et tetano, spasticis vero pipere adiecto. - anginas menarum salsarum e capitibus cinis ex melle inlitus abolet, ranarum decoctarum aceto sucus; hic et contra tonsillas prodest. cancri fluviatiles triti singuli in hemina aquae anginis medentur gargarizati, aut e vino et calida aqua poti. uvae medetur garum coclearibus subditum. vocem siluri recentes salsive in cibo sumpti adiuvant.

vomitiones mulli inveterati tritique in potione concitant. - suspiriosis castorea cum hammoniaci exigua portione ex aceto mulso

ieiunis utilissima potu. eadem potio spasmos stomachi sedat ex aceto mulso caldo. - tussim sanare dicuntur piscium modo e iure decoctae in patinis ranae. suspensae autem pedibus, cum destillaverit in patinas saliva earum, exinterari iubentur abiectisque interaneis condiri. est rana parva arborem scandens atque ex ea vociferans; in huius os si quis expuat ipsamque dimittat, tussi liberari narratur. praecipiunt et cocleae crudae carnem tritam bibere ex aqua calda in tussi cruenta.

iocineris doloribus ... scorpio marinus in vino necatus, ut inde bibatur, conchae longae carnes ex mulso potae cum aquae pari modo aut, si febres sint, ex aqua mulsa. - lateris dolores leniunt hippocampi tosti sumpti tetheaque similis ostreo in cibo sumpta, ischiadicorum muria siluri clystere infusa. dantur autem conchae ternis obolis dilutis in vini sextariis ii per dies xv.

alvum emollit silurus e iure et torpedo in cibo et olus marinum simile sativo - stomacho inimicum alvum facillime purgat, sed propter acrimoniam cum pingui carne coquitur - et omnium piscium ius. idem et urinas ciet, e vino maxime. optimum e scorpionibus et iulide et saxatilibus nec virus resipientibus nec pinguibus. coci debent cum aneto, apio, coriandro, porro, additis oleo, sale. purgant et cybia vetera privatimque cruditates; pituitas, bilem trahunt.

purgant et myaces, quorum natura tota in hoc loco dicetur. acervantur muricum modo vivuntque in algosis, gratissimi autumno et ubi multa dulcis aqua miscetur mari, ob id in aegypto laudatissimi. procedente hieme amaritudinem trahunt coloremque rubrum. horum ius traditur alvum et vesicas exinanire, interanea destringere, omnia adaperire, renes purgare, sanguinem adipemque minuere. itaque utilissimi sunt hydropicis, mulierum purgationibus, morbo regio, articulario, inflationibus, item obesis, fellis pituitae quoque, pulmonis, iocineris, lienis vitiis, rheumatismis. fauces tantum vexant vocemque obtundunt. ulcera, quae serpant aut sint purganda, sanant, item carcinomata cremati ut murices; et morsus canum hominumque cum melle, lepras, lentigines. cinis eorum lotus emendat caligines, scabritias, albugines, gingivarum et dentium vitia, eruptiones pituitae; et contra dorycnium aut opocarpathum antidoti vicem optinent. degenerant in duas species: mitulos, qui salem virusque resipiunt, myiscas quae rotunditate differunt, minores aliquanto atque

hirtae, tenuioribus testis, carne dulciores. mituli quoque ut murices cinere causticam vim habent et ad lepras, lentigines, maculas. lavantur quoque plumbi modo ad genarum crassitudines et oculorum albugines caliginesque atque in aliis partibus sordida ulcera capitisque pusulas. carnes eorum ad canis morsus inponuntur.

at pelorides emolliunt alvum, item castorea in aqua mulsa drachmis binis. qui vehementius volunt uti, addunt cucumeris sativi radicis siccae drachmam et aphronitri ii. tethea torminibus et inflationibus occurrunt. inveniuntur haec in foliis maris sugentia, fungorum verius generis quam piscium. eadem et tenesmum dissolvunt reniumque vitia. nascitur et in mari apsinthium, quod aliqui seriphum vocant, circa taposirim maxime aegypti, exilius terrestri. alvum solvit et noxiis animalibus intestina liberat - solvunt et saepiae - ; in cibo datur cum oleo et sale et farina coctum. menae salsae cum felle taurino inlitae umbilico alvum solvunt. piscium ius in patina coctorum cum lactucis tenesmum discutit. cancri fluviatiles triti et ex aqua poti alvum sistunt, urinam cient in vino albo. ademptis bracchiis calculos pellunt iii obolis cum murra et iride singulis earum drachmis, ileos et inflationes castorea cum dauci semine et petroselino quantum ternis digitis sumatur, ex mulsi calidi cyathis iiii, tormina vero cum aneto ex vino mixto. erythini in cibo sumpti sistunt alvum. dysentericis medentur ranae cum scilla decoctae ita, ut pastilli fiant, vel cor earum cum melle tritum, ut tradit niceratus, morbo regio salsamentum cum pipere ita, ut reliqua carne abstineatur.

lieni medetur solea piscis inpositus, item torpedo, item rhombus; vivus dein remittitur in mare. scorpio marinus necatus in vino vesicae vitia et calculos sanat, lapis, qui invenitur in scorpionis marini cauda, pondere oboli potus, enhydridis iecur, blendiorum cinis cum ruta. inveniuntur et in bacchi piscis capite ceu lapilli; hi poti ex aqua calculosis praeclare medentur. aiunt et urticam marinam in vino potam prodesse, item pulmonem marinum decoctum in aqua. ova saepiae urinam movent reniumque pituitas extrahunt. rupta, convolsa cancri fluviatiles triti in asinino maxime lacte sanant, echini vero cum spinis suis contusi et e vino poti calculos - modus singulis hemina; bibitur, donec prosit - et alias in cibis ad hoc proficiunt. purgatur vesica et pectinum cibo. ex iis mares alii δόνακας vocant,

alii αὐλούς, feminas ὄνυχας. urinam mares movent. dulciores feminae sunt et unicolores. saepiae quoque ova urinam movent et renes purgant.

enterocelicis lepus marinus inlinitur tritus cum melle. iecur aquaticae colubrae, item hydri tritum potumque calculosis prodest. ischiadicos liberant salsamenta e siluro infusa clysterio, evacuata prius alvo, sedis attritus cinis e capite mugilum et mullorum; comburuntur autem in fictili vase, inlini cum melle debent. item capitis menarum cinis et ad rhagadas et ad condylomata utilis, sicut pelamydum salsarum capitum cinis vel cybiorum cum melle. torpedo adposita procidentis interanei morbum ibi coercet. cancrorum fluviatilium cinis ex oleo et cera rimas in eadem parte emendat, idem et marini cancri pollent.

panos salsamenta coracinorum discutiunt, sciaenae interanea et squamae combustae, scorpio in vino decoctus ita, ut foveantur ex illo. at echinorum testae contusae et ex aqua inlitae incipientibus panis resistunt, muricum vel purpurarum cinis utroque modo, sive discutere opus sit incipientes sive concoctos emittere. quidam ita componunt medicamentum: cerae et turis drachmas xx, spumae argenti xxxx, cineris muricum x, olei veteris heminam. prosunt per se salsamenta cocta, cancri fluviatiles triti; ad verendorum pusulas cinis e capite menarum, item carnes decoctae et inpositae, similiter percae salsae e capite cinis melle addito, pelamydum capitis cinis aut squatinae cutis combustae. haec est qua diximus lignum poliri, quoniam et a mari fabriles usus exeunt. prosunt et zmarides inlitae, item muricum vel purpurarum testae cinis cum melle, efficacius crematarum cum carnibus suis. carbunculos verendorum privatim salsamenta cocta cum melle restingunt. testem, si descenderit, coclearum spuma inlini volunt.

urinae incontinentiam hippocampi tosti et in cibo saepius sumpti emendant, ophidion pisciculus congro similis cum lili radice, pisciculi minuti ex ventre eius, qui devoraverit, exempti cremati ita, ut cinis eorum bibatur ex aqua. iubent et cocleas africanas cum sua carne comburi cineremque ex vino signino dari.

podagris articulariisque morbis utile est oleum, in quo decocta sint ranarum intestina, et rubetae cinis cum adipe vetere. quidam et hordei cinerem adiciunt trium rerum aequo pondere. iubent et lepore

marino recenti podagram fricari, fibrinis quoque pellibus calceari, maxime pontici fibri, item vituli marini, cuius et adips prodest isdem, nec non et bryon, de quo diximus, lactucae simile, rugosioribus foliis, sine caule. natura ei styptica, inpositumque lenit impetus podagrae. item alga, de qua et ipsa dictum est. observatur in ea, ne arida inponatur. - perniones emendat pulmo marinus, cancri marini cinis ex oleo, item fluviatiles triti ustique, cinere et ex oleo subacto, siluri adips. - in articulis morborum impetus sedant ranae subinde recentes inpositae; quidam dissectas iubent inponi. - corpus auget ius mitulorum et concharum.

comitiales, ut diximus, coagulum vituli marini bibunt cum lacte equino asinaeve aut cum punici suco, quidam ex aceto mulso. nec non aliqui per se pilulas devorant. castoreum in aceti mulsi cyathis iii ieiunis datur, iis vero, qui saepius corripiantur, clystere infusum mirifice prodest. castorei drachmae ii esse debebunt, mellis et olei sextarius et aquae tantundem. ad praesens vero correptis olfactu subvenit cum aceto. datur et mustelae marinae iocur, item muris, vel testudinum sanguis.

febrium circuitus tollit iocur delphini gustatum ante accessiones. hippocampi necantur in rosaceo, ut perunguantur aegri frigidis febribus, et ipsi adalligantur aegris. item ex asello pisce lapilli, qui plena luna inveniuntur in capite, alligantur in linteolo. phagri fluviatilis longissimus dens capillo adalligatus ita, ut v diebus eum, qui adalligaverit, non cernat aeger, ranae in trivio decoctae oleo abiectis carnibus perunctos liberant quartanis. sunt qui strangulatas in oleo ipsas clam adalligent oleoque eo perunguant. cor earum adalligatum frigora febrium minuit et oleum, in quo intestina decocta sint. maxime autem quartanis liberant ablatis unguibus ranae aeque adalligatae et rubeta, si iocur eius vel cor adalligetur in panno leucophaeo. cancri fluviatiles triti in oleo et aqua perunctis ante accessiones in febribus prosunt; aliqui et piper addunt. alii decoctos ad quartas in vino e balineo egressis bibere suadent in quartanis, aliqui vero sinistrum oculum devorare. magi oculis eorum ante solis ortum adalligatis aegro ita, ut caecos dimittant in aquam, tertianas abigi promittunt. eosdem oculos cum carnibus lusciniae in pelle cervina inligatos praestare vigiliam somno fugato tradunt. in lethargum vergentibus coagulo ballaenae aut vituli marini ad

olfactum utuntur. alii sanguinem testudinis lethargicis inlinunt. tertianis mederi dicitur et spondylus percae adalligatus, quartanis cocleae fluviatiles in cibo recentes; quidam ob id adservant sale, ut dent tritas in potu.

strombi in aceto putrefacti lethargicos excitant odore. prosunt et cardiacis. cachectis, quorum corpus macie conficitur, tethea utilia sunt cum ruta ac melle. - hydropicis medetur adips delphini liquatus et cum vino potus. gravitati saporis occurritur tactis naribus unguento aut odoribus vel quoquo modo opturatis. strombi quoque carnes tritae et in mulsi iii heminis pari modo aquae aut, si febres sint, ex aqua mulsa datae proficiunt, item sucus cancrorum fluviatilium cum melle, rana quoque aquatica in vino vetere et farre decocta ac pro cibo sumpta ita, ut bibatur ex eodem vase, vel testudo decisis pedibus, capite, cauda et intestinis exemptis, reliqua carne ita condita, ut citra fastidium sumi possit. - cancri fluviatiles ex iure sumpti et phthisicis prodesse traduntur.

adusta sanantur cancri marini vel fluviatilis cinere ex oleo; ichthyocolla, ranarum cinere ea, quae ferventi aqua combusta sint; haec curatio etiam pilos restituit. item cancrorum fluviatilium cinere putant utendum cum cera et adipe ursino. prodest et fibrinarum pellium cinis. - ignes sacros restingunt ranarum viventium ventres inpositi, pedibus posterioribus pronas adalligari iubent, ut crebriore anhelitu prosint. utuntur et silurorum salsamenti capitum cinere ex aceto. - pruritum scabiemque non hominum modo, sed et quadripedum efficacissime sedat iecur pastinacae decoctum in oleo.

nervos vel praecisos purpurarum callum, quo se operiunt, tusum glutinat. tetanicos coagulum vituli adiuvat ex vino potum oboli pondere, item ichthyocolla, tremulos castoreum, si ex oleo perunguantur. mullos in cibo inutiles nervis invenio.

sanguinem fieri piscium cibo putant, sisti polypo tuso inlito, de quo et haec traduntur: muriam ipsum ex sese emittere et ideo non debere addi in coquendo, secari harundine, ferro enim infici vitiumque trahere natura dissidente. ad sanguinem sistendum et ranarum inlinunt cinerem vel sanguinem arefactum. quidam ex ea rana, quam graeci calamiten vocant, quoniam inter harundines fruticesque vivat, minima omnium et viridissima, sanguinem cineremve fieri iubent, aliqui et nascentium ranarum in aqua, quibus

adhuc cauda est, in calice novo combustarum cinerem, si per nares fluat, inferciendum. diversus hirudinum, quas sanguisugas vocant, ad extrahendum sanguinem usus est. quippe eadem ratio earum, quae cucurbitarum medicinalium, ad corpora levanda sanguine, spiramenta laxanda iudicatur, sed vitium, quod admissae semel desiderium faciunt circa eadem tempora anni semper eiusdem medicinae. multi podagris quoque admittendas censuere. decidunt satiatae et pondere ipso sanguinis detractae aut sale adspersae; aliquando tamen relinquunt adfixa capita, quae causa volnera insanabilia facit et multos interemit, sicut messalinum e consularibus patriciis, cum ad genu admisisset, in veneni virus remedio verso. maxime rufae ita formidantur; ergo sugere orsas forficibus praecidunt, ac velut siphonibus defluit sanguis, paulatimque morientium capita se contrahunt, nec relinquuntur. natura earum adversatur cimicibus, suffitu necat eos. - fibrinarum pellium cum pice liquida combustarum cinis narium profluvia sistit suco porri mollitus.

extrahit corpori tela inhaerentia saepiarum testae cinis, item purpurarum testae ex aqua, salsamentorum carnes, cancri fluviatiles triti, siluri fluviatilis, qui et alibi quam in nilo nascitur, carnes inpositae, recentis sive salsi. eiusdem cinis extrahit, adips et cinis spinae eius vicem spodii praebet.

ulcera, quae serpunt, et quae in iis excrescunt capitis menarum cinis vel siluri coercet, carcinomata percarum capita salsarum, efficacius si cinere earum misceatur sal et cunila capitata oleoque subigantur. cancri marini cinis usti cum plumbo carcinomata compescit. ad hoc et fluviatilis sufficit cum melle lineaque lanugine; aliqui malunt alumen melque misceri cineri. phagedaenae siluro inveterato et cum sandaraca trito, cacoe+the et nomae et putrescentia cybio vetere sanantur; vermes innati ranarum felle tolluntur. fistulae aperiuntur siccanturque salsamentis cum linteolo inmissis, intraque alterum diem callum omnem auferunt et putrescentia ulcerum quaeque serpant emplastri modo subacta et inlita. et allex purgat ulcera in linteolis concerptis, item echinorum testae cinis. carbunculos coracinorum salsamenta inlita discutiunt, item mullorum salsamenti cinis - quidam capite tantum utuntur cum melle - vel coracinorum carnes. muricum cinis cum oleo tumores tollit, cicatrices fel scorpionis marini.

verrucas tollit glani iocur inlitum, capitis menarum cinis cum alio tritus - ad thymia crudis utuntur - , fel scorpionis marini rufi, zmarides tritae inlitae, allex defervefacta. unguium scabritiam cinis e capite menarum extenuat.

mulieribus lactis copiam facit glauciscus e iure sumptus et zmarides cum tisana sumptae vel cum feniculo decoctae. mammas ipsas muricum vel purpurae testarum cinis cum melle efficaciter sanat, item cancri inliti fluviatiles vel marini. pilos in mamma muricum carnes inpositae tollunt. squatinae inlitae crescere mammas non patiuntur. delphini adipe linamenta inlita accensa excitant volva strangulata oppressas, item strombi in aceto putrefacti. percarum vel menarum capitis cinis sale admixto et cunila oleoque volvae medetur, suffitione quoque secundas detrahit. item vituli marini adips instillatur igni naribus intermortuarum volvae vitio, coagulo eiusdem in vellere inposito. pulmo marinus alligatus purgat egregie profluvia, echini viventes tusi et in vino dulci poti sistunt et cancri fluviatiles triti in vino potique. item siluri suffitu, praecipue africi, faciliores partus facere dicuntur, cancri ex aqua poti profluvia sistere, ex hysopo purgare. et si partus strangulet, similiter poti auxiliantur. eosdem recentes vel aridos bibunt ad partus continendos. hippocrates et ad purgationes mortuosque partus utitur illis, cum quinis lapathi radice rutaeque et fuligine trita et in mulso data potui. iidem in iure cocti cum lapatho et apio menstruas purgationes expediunt lactisque ubertatem faciunt, iidem in febri, quae sit cum capitis doloribus et oculorum palpitatione, mulieribus in vino austero dati prodesse dicuntur. castoreum ex mulso potum purgationibus prodest contraque volvam olfactum cum aceto et pice aut subditum pastillis. ad secundas etiam uti eodem prodest cum panace in iiii cyathis vini et a frigore laborantibus ternis obolis. sed si castoreum fibrumve supergrediatur gravida, abortum facere dicitur et periclitari partu, si superferatur. mirum est et quod de torpedine invenio, si capiatur, cum luna in libra sit, triduoque adservetur sub diu, faciles partus facere postea, quotiens inferatur. adiuvare et pastinacae radius adalligatus umbilico existumatur, si viventi ablatus sit, ipsa in mare dimissa. invenio apud quosdam ostraceum vocari quod aliqui onychen vocent; hoc suffitum volvae poenis mire resistere; odorem esse castorei, meliusque cum eo ustum proficere; vetera quoque

ulcera et cacoe+the eiusdem cinere sanari. nam carbunculos et carcinomata in muliebri parte praesentissimo remedio sanari tradunt cancro femina cum salis flore contuso post plenam lunam et ex aqua inlito.

psilotrum est thynni sanguis, fel, iocur, sive recentia sive servata, iocur etiam tritum mixtoque cedrio plumbea pyxide adservatum. ita pueros mangonicavit salpe obstetrix. eadem vis pulmonis marini, leporis marini sanguine et felle vel si in oleo lepus hic necetur. ... cancri, scolopendrae marinae cinis cum oleo, urtica marina trita ex aceto scillite, torpedinis cerebrum cum alumine inlitum xvi luna. ranae parvae, quam in oculorum curatione descripsimus, sanies efficacissimum psilotrum est, si recens inlinatur, et ipsa arefacta ac tusa, mox decocta iii heminis ad tertias vel in oleo decocta aereis vasis. eadem mensura alii ex xv ranis conficiunt psilotrum, sicut in oculis diximus. sanguisugae quoque tostae in vase fictili et ex aceto inlitae eundem contra pilos habent effectum. hic suffitus urentium eas necat cimices. inuncto castoreo quoque cum melle pro psilotro usi pluribus diebus reperiuntur. in omni autem psilotro evellendi prius sunt pili.

infantium gingivis dentitionibusque plurimum confert delphini cum melle dentium cinis et si ipso dente gingivae tangantur. adalligatus idem pavores repentinos tollit. idem effectus et caniculae dentis. ulcera vero, quae in auribus aut ulla parte corporis fiant, cancrorum fluviatilium sucus cum farina hordeacea sanat. et ad reliquos morbos triti in oleo perunctis prosunt. siriasim infantium spongea frigida cerebro umefacto rana inversa adalligata efficacissime sanat. aridam inveniri adfirmant.

mullus in vino necatus vel piscis rubellio vel anguillae ii, item uva marina in vino putrefacta iis, qui inde biberint, taedium vini adfert.

venerem inhibet echeneis, hippopotamii frontis e sinistra parte pellis in agnina adalligata, fel torpedinis vivae genitalibus inlitum. concitant coclearum fluviatilium carnes sale adservatae et in potu ex vino datae, erythini in cibo sumpti, iocur ranae diopetis vel calamitis in pellicula gruis adalligatum vel dens crocodili maxillaris adnexus bracchio vel hippocampus vel nervi rubetae dextro lacerto adalligati. amorem finit in pecoris recenti corio rubeta adalligata.

equorum scabiem ranae decoctae in aqua extenuant, donec inlini

possint. aiunt ita curatos non repeti postea. - salpe negat canes latrare, quibus in offa rana viva data sit.

inter aquatilia dici debet et calamochnus, latine adarca appellata. nascitur circa harundines tenues e spuma aquae dulcis ac marinae, ubi se miscent. vim habet causticam, ideo acopis utilis et contra perfrictionum vitia. tollit et mulierum lentigines in facie. et calami simul dici debent: phragmitis radix recens tusa luxatis medetur et spinae doloribus ex aceto inlita, cyprii vero, qui et donax vocatur, cortex alopeciis medetur ustus et ulceribus veteratis, folia extrahendis quae infixa sint corpori et igni sacro. paniculae flos aures si intravit, exsurdat.

sepiae atramento tanta vis est, ut in lucernam addito aethiopas videri ablato priore lumine anaxilaus tradat. - rubeta excocta aqua potui data suum morbis medetur vel cuiuscumque ranae cinis. - pulmone marino si confricetur lignum, ardere videtur adeo, ut baculum ita praeluceat. -

peractis aquatilium dotibus non alienum videtur indicare per tot maria, tam vasta et tot milibus passuum terrae infusa extraque circumdata mensura, paene ipsius mundi quae intellegatur, animalia centum quadraginta quattuor omnino generum esse eaque nominatim complecti, quod in terrestribus volucribusque fieri non quit. neque enim omnis indiae aethiopiaeque aut scythiae desertorumve novimus feras aut volucres, cum hominum ipsorum multo plurimae sint differentiae, quas invenire potuimus. accedat his taprobane insulaeque aliae atque aliae oceani fabulose narratae. profecto conveniet non posse omnia genera in contemplationem universam vocari. at, hercules, in tanto mari oceanoque quae nascuntur certa sunt, notioraque, quod miremur, quae profundo natura mersit.

ut a beluis ordiamur, arbores, physeteres, ballaenae, pistrices, tritones, nereides, elephanti, homines qui marini vocantur, rotae, orcae, arietes, musculi et alii piscium forma arietes, delphini celebresque homero vituli, luxuriae vero testudines et medicis fibri - quorum generis lutras nusquam mari accepimus mergi, tantum marina dicentes - , iam caniculae, drinones, cornutae, gladii, serrae, communesque terrae, mari, amni hippopotami, crocodili, et amni tantum ac mari thynni, thynnides, siluri, coracini, percae.

peculiares autem maris acipenser, aurata, asellus, acharne, aphye,

alopex, anguilla, araneus, boca, batia, bacchus, batrachus, belonae, quos aculeatos vocamus, balanus, corvus, citharus, rhomborum generis pessimus, chalcis, cobio, callarias, asellorum generis, ni minor esset, coliae sive parianus sive sexitanus a patria baetica, lacertorum minimi, ab iis nostrates, cybium - ita vocatur concisa pelamys, quae post xl dies a ponto in maeotim revertitur - , cordyla - et haec pelamys pusilla; cum in pontum a maeotide exit, hoc nomen habet - , cantharus, callionymus sive uranoscopos, cinaedi, soli piscium lutei, cnide, quam nos urticam vocamus, cancrorum genera, chemae striatae, chemae leves, chemae peloridum generis, varietate distantes et rotunditate, chemae glycymarides, quae sunt maiores quam pelorides, coluthia sive coryphia, concharum genera, inter quae et margaritiferae, cochloe, quorum generis pentadactyli, item helices (ab aliis actinophoroe dicuntur), quibus radii; ... cantant - extra haec sunt rotundae in oleario usu cocleae - , cucumis, cynops, cammarus, cynosdexia, draco - quidam aliud volunt esse dracunculum; est autem gerriculae amplae similis, aculeos in branchiis habet ad caudam spectantes; sic ut scorpio laedit, dum manu tollitur - erythinus, echenais, echinus, elephanti locustarum generis nigri, pedibus quaternis bisulcis - praeterea bracchia iis ii binis articulis singulisque forcipibus denticulatis - , fabri sive zaei, glauciscus, glanis, gonger, gerres, galeos, garos, hippos, hippuros, hirundo, halipleumon, hippocampos, hepar, ictinus, iulis, lacertorum genera, lolligo volitans, locustae, lucerna, lelepris, lamirus, lepus, leones, quorum bracchia cancris similia sunt - reliqua pars locustae - , mullus, merula inter saxatiles laudata, mugil, melanurus, mena, maeotes, murena, mys, mitulus, myiscus, murix, oculata, ophidion, ostreae, otia, orcynus - hic est pelamydum generis maximus neque ipse redit in maeotim, similis tritomi, vetustate melior - , orbis, orthagoriscus, phager, phycis saxatilium quaedam, pelamys - earum generis maxima apolectum vocatur, durius tritomo - , porcus, phthir, passer, pastinaca, polyporum genera, pectines - maximi et in his nigerrimi aestate laudatissimi, hi autem mytilenis, tyndaride, salonis, altini, chia in insula, alexandriae in aegypto - , pectunculi, purpurae, pegrides, pina, pinoteres, rhine, quem squatum vocamus, rhombus, scarus, principalis hodie, solea, sargus, squilla, sarda - ita vocatur pelamys longa ex oceano veniens - , scomber, salpa, sorus,

scorpaena, scorpio, salax, sciaena, sciadeus, scolopendra, smyrus, sepia, strombus, solen sive aulos sive donax sive onyx sive dactylus, spondyli, smarides, stellae, spongeae, turdus, inter saxatiles nobilis, thynnis, thranis, quem alii xiphian vocant, thrissa, torpedo, tethea, tritomum pelamydum generis magni, ex quo terna cybia fiunt, veneria, uva, xiphias.

his adiciemus ab ovidio posita animalia, quae apud neminem alium reperiuntur, sed fortassis in ponto nascentia, ubi id volumen supremis suis temporibus inchoavit: bovem, cercyrum in scopulis viventem, orphum rubentemque erythinum, iulum, pictas mormyras aureique coloris chrysophryn, praeterea percam, tragum et placentem cauda melanurum, epodas lati generis. praeter haec insignia piscium tradit: channen ex se ipsam concipere, glaucum aestate numquam apparere, pompilum, qui semper comitetur navium cursus, chromin, qui nidificet in aquis. helopem dicit esse “nostris incognitum undis,” ex quo apparet falli eos, qui eundem acipenserem existimaverint. helopi palmam saporis inter pisces multi dedere.

sunt praeterea a nullo auctore nominati. sudis latine appellatur, graece sphyraena, rostro similis nomini, magnitudine inter amplissimos; rarus is et non degenerat. appellantur et pernae concharum generis, circa pontias insulas frequentissimae. stant velut suillum crus e longo in harena defixae hiantesque, qua latitudo est, pedali non minus spatio cibum venantur; dentes circuitu marginum habent pectinatim spissatos; intus spondyli grandis caro est. et hyaenam piscem vidi in aenaria insula captum. - exeunt praeter haec et purgamenta aliqua relatu indigna et algis potius adnumeranda quam animalibus.

LIBER XXXIII

metalla nunc ipsaeque opes et rerum pretia dicentur, tellurem intus exquirente cura multiplici modo, quippe alibi divitiis foditur quaerente vita aurum, argentum, electrum, aes, alibi deliciis gemmas et parietum lignorumque pigmenta, alibi temeritati ferrum, auro etiam gratius inter bella caedesque. persequimur omnes eius fibras vivimusque super excavatam, mirantes dehiscere aliquando aut intremescere illam, ceu vero non hoc indignatione sacrae parentis exprimi possit. imus in viscera et in sede manium opes quaerimus, tamquam parum benigna fertilique qua calcatur. et inter haec minimum remediorum gratia scrutamur, quoto enim cuique fodiendi causa medicina est quamquam et hoc summa sui parte tribuit ut fruges, larga facilisque in omnibus, quaecumque prosunt. illa nos peremunt, illa nos ad inferos agunt, quae occultavit atque demersit, illa, quae non nascuntur repente, ut mens ad inane evolans reputet, quae deinde futura sit finis omnibus saeculis exhauriendi eam, quo usque penetratura avaritia. quam innocens, quam beata, immo vero etiam delicata esset vita, si nihil aliunde quam supra terras concupisceret, breviterque, nisi quod secum est!

eruitur aurum et chrysocolla iuxta, ut pretiosior videatur, nomen ex auro custodiens. parum enim erat unam vitae invenisse pestem, nisi in pretio esset auri etiam sanies. quaerebat argentum avaritia; boni consuluit interim invenisse minium rubentisque terrae excogitavit usum. heu prodiga ingenia, quot modis auximus pretia rerum! accessit ars picturae, et aurum argentumque caelando carius fecimus. didicit homo naturam provocare. auxere et artem vitiorum inritamenta; in poculis libidines caelare iuvit ac per obscenitates bibere. abiecta deinde sunt haec ac sordere coepere, ut auri argentique nimium fuit. murrina ex eadem tellure et crystallina effodimus, quibus pretium faceret ipsa fragilitas. hoc argumentum opum, haec vera luxuriae gloria existimata est, habere quod posset statim perire totum. nec hoc fuit satis. turba gemmarum potamus et zmaragdis teximus calices, ac temulentiae causa tenere indiam iuvat. aurum iam accessio est, utinamque posset e vita in totum abdicari sacrum fame, ut celeberrimi auctores dixere proscissum conviciis ab

optimis quibusque et ad perniciem vitae repertum, quanto feliciore aevo, cum res ipsae permutabantur inter sese, sicut et troianis temporibus factitatum homero credi convenit! ita enim, ut opinor, commercia victus gratia invecta. alios coriis boum, alios ferro captivisque res emptitasse tradit. quare, quamquam ipse iam mirator auri, pecore aestimationes rerum ita fecit, ut c boum arma aurea permutasse glaucum diceret cum diomedis armis viiii boum. ex qua consuetudine multa legum antiquarum pecore constat etiam romae.

pessimum vitae scelus fecit qui primus induit digitis, nec hoc quis fecerit traditur. nam de prometheo omnia fabulosa arbitror, quamquam illi quoque ferreum anulum dedit antiquitas vinculumque id, non gestamen, intellegi voluit. midae quidem anulum, quo circumacto habentem nemo cerneret, quis non etiam fabulosiorem fateatur manus et prorsus sinistrae maximam auctoritatem conciliavere auro, non quidem romanae, quarum in more ferrei erant ut virtutis bellicae insigne. de regibus romanis non facile dixerim. nullum habet romuli in capitolio statua nec praeter numae serviique tullii alia ac ne Lucii quidem Bruti. hoc in tarquiniis maxime miror, quorum e graecia fuit origo, unde hic anulorum usus venit, quamquam etiam nunc lacedaemone ferreo utuntur. sed a prisco tarquinio omnium primo filium, cum in praetextae annis occidisset hostem, bulla aurea donatum constat, unde mos bullae duravit, ut eorum, qui equo meruissent, filii insigne id haberent, ceteri lorum; et ideo miror tarquinii eius statuam sine anulo esse. quamquam et de nomine ipso ambigi video. graeci a digitis appellavere, apud nos prisci ungulum vocabant, postea et graeci et nostri symbolum. longo certe tempore ne senatum quidem romanum habuisse aureos manifestum est, siquidem iis tantum, qui legati ad exteras gentes ituri essent, anuli publice dabantur, credo, quoniam ita exterorum honoratissimi intellegebantur. neque aliis uti mos fuit quam qui ex ea causa publice accepissent, volgoque sic triumphabant et, cum corona ex auro etrusca sustineretur a tergo, anulus tamen in digito ferreus erat aeque triumphantis et servi prae se coronam sustinentis. sic triumphavit de iugurtha c. marius aureumque non ante tertium consulatum sumpsisse traditur. ii quoque, qui ob legationem acceperant aureos, in publico tantum utebantur iis, intra domos vero ferreis, quo argumento etiam nunc sponsae muneris vice ferreus

anulus mittitur, isque sine gemma. equidem nec iliacis temporibus ullos fuisse anulos video. nusquam certe homerus dicit, cum et codicillos missitatos epistularum gratia indicet et conditas arcis vestes ac vasa aurea argenteaque et eas colligatas nodi, non anuli, nota. sortiri quoque contra provocationes duces non anulis tradit, fabricae etiam deum fibulas et alia muliebris cultus, sicut inaures, in primordio factitasse, sine mentione anulorum. et quisquis primus instituit, cunctanter id fecit: laevis manibus latentibusque induit, cum, si honos securus fuisset, dextra fuerit ostentandus. quodsi inpedimentum potuit in eo aliquod intellegi, etiam serioris usus argumentum esset: maius in laeva fuisset, qua scutum capitur. est quidem apud eundem homerum virorum crinibus aurum inplexum; ideo nescio an prior usus feminis coeperit.

romae ne fuit quidem aurum nisi admodum exiguum longo tempore. certe cum a gallis capta urbe pax emeretur, non plus quam mille pondo effici potuere. nec ignoro mm pondo auri perisse pompeii iii consulatu e capitolini iovis solio a camillo ibi condita, et ideo a plerisque existimari mm pondo collata. sed quod accessit, ex gallorum praeda fuit detractumque ab iis in parte captae urbis delubris - gallos cum auro pugnare solitos torquatus indicio est - ; apparet ergo gallorum templorumque tantundem nec amplius fuisse. quod quidem in augurio intellectum est, cum capitolinus duplum reddidisset. illud quoque obiter indicari convenit - etiam de anulis sermonem repetivimus - , aedituum custodiae eius conprehensum fracta in ore anuli gemma statim expirasse et indicium ita extinctum. ergo ut maxime mm tantum pondo, cum capta est roma, anno ccclxiiii fuere, cum iam capitum liberorum censa essent [clii] dlxxiii. in eadem post annos cccvii, quod ex capitolinae aedis incendio ceterisque omnibus delubris c. marius filius praeneste detulerat, [xiiii] pondo, quae sub eo titulo in triumpho transtulit sulla et argenti [vi]. idem ex reliqua omni victoria pridie transtulerat auri pondo [xv], argenti p. [cxv].

frequentior autem usus anulorum non ante cn. flavium anni filium deprehenditur. hic namque publicatis diebus fastis, quos populus a paucis principum cotidie petebat, tantam gratiam plebei adeptus est - libertino patre alioqui genitus et ipse scriba appi caeci, cuius hortatu exceperat eos dies consultando adsidue sagaci ingenio

promulgaratque - , ut aedilis curulis crearetur cum q. anicio praenestino, qui paucis ante annis hostis fuisset, praeteritis c. poetilio et domitio, quorum patres consules fuerant. additum flavio, ut simul et tribunus plebei esset, quo facto tanta indignatio exarsit, ut “anulos abiectos” in antiquissimis reperiatur annalibus. fallit plerosque quod tum et equestrem ordinem id fecisse arbitrantur; etenim adiectum hoc quoque “sed et phaleras positas” propterque nomen equitum adiectum est, anulosque depositos a nobilitate in annales relatum est, non a senatu universo. hoc actum p. sempronio l. sulpicio cos. flavius vovit aedem concordiae, si populo reconciliasset ordines, et, cum ad id pecunia publice non decerneretur, ex multaticia faeneratoribus condemnatis aediculam aeream fecit in graecostasi, quae tunc supra comitium erat, inciditque in tabella aerea factam eam aedem cciiii annis post capitolinam dedicatam. id a. ccccxxxxviiii a condita urbe gestum est et primum anulorum vestigium extat; promiscui autem usus alterum secundo punico bello, neque enim aliter potuisset trimodia anulorum illa carthaginem ab Hannibale mitti. inter caepionem quoque et drusum ex anulo in auctione venali inimicitiae coepere, unde origo socialis belli et exitia rerum. ne tunc quidem omnes senatores habuere, utpote cum memoria avorum multi praetura quoque functi in ferreo consenuerint - sicut calpurnium et manilium, qui legatus c. marii fuerit iugurthino bello, fenestella tradit, et multi l. fufidium illum, ad quem Scaurus de vita sua scripsit — , in quintiorum vero familia aurum ne feminas quidem habere mos fuerit, nullosque omnino maior pars gentium hominumque, etiam qui sub imperio nostro degunt, hodieque habeat. non signat oriens aut aegyptus etiam nunc litteris contenta solis.

multis hoc modis, ut cetera omnia, luxuria variavit gemmas addendo exquisiti fulgoris censuque opimo digitos onerando, sicut dicemus in gemmarum volumine, mox et effigies varias caelando, ut alibi ars, alibi materia esset in pretio. alias dein gemmas violari nefas putavit ac, ne quis signandi causam in anulis esse intellegeret, solidas induit. quasdam vero neque ab ea parte, qua digito occultantur, auro clusit aurumque millis lapillorum vilius fecit. contra vero multi nullas admittunt gemmas auroque ipso signant. id claudii caesaris principatu repertum. nec non et servitia iam ferrum auro cingunt - alia per sese mero auro decorant - , cuius licentiae origo nomine ipso

in samothrace id institutum declarat.

singulis primo digitis geri mos fuerat, qui sunt minimis proximi. sic in numae et servi tullii statuis videmus. postea pollici proximo induere, etiam in deorum simulacris, dein iuvit et minimo dare. galliae brittanniaeque medio dicuntur usae. hic nunc solus excipitur, ceteri omnes onerantur, atque etiam privatim articuli minoribus aliis. sunt qui uni tantum minimo congerant, alii vero et huic tantum unum, quo signantem signent. conditus ille, ut res rara et iniuria usus indigna, velut e sacrario promitur, ut et unum in minimo digito habuisse pretiosioris in recondito supellectilis ostentatio sit. iam alii pondera eorum ostentant. aliis plures quam unum gestare labor est, alii bratteas infercire leviore materia propter casum tutius gemmarum sollicitudini putant, alii sub gemmis venena cludunt, sicut demosthenes summus graeciae orator, anulosque mortis gratia habent. denique vel plurima opum scelera anulis fiunt. quae fuit illa vita priscorum, qualis innocentia, in qua nihil signabatur! nunc cibi quoque ac potus anulo vindicantur a rapina. hoc profecere mancipiorum legiones, in domo turba externa ac iam servorum quoque causa nomenclator adhibendus. aliter apud antiquos singuli marcipores luciporesve dominorum gentiles omnem victum in promiscuo habebant, nec ulla domi a domesticis custodia opus erat. nunc rapiendae conparantur epulae pariterque qui rapiant eas, et claves quoque ipsas signasse non est satis. gravatis somno aut morientibus anuli detrahuntur, maiorque vitae ratio circa hoc instrumentum esse coepit. incertum a quo tempore, videmur tamen posse in externis auctoritatem eius rei intellegere circa polycraten sami tyrannum, cui dilectus ille anulus in mare abiectus capto relatus est pisce, ipso circiter ccxxx urbis nostrae annum interfecto. celebratior quidem usus cum faenore coepisse debet. argumento est consuetudo volgi, ad sponsiones etiamnum anulo exiliente, tracta ab eo tempore, quo nondum erat arra velocior, ut plane adfirmare possimus nummos ante apud nos, mox anulos coepisse. de nummis paulo post dicetur.

anuli distinxere alterum ordinem a plebe, ut semel coeperant esse celebres, sicut tunica ab anulis senatum. quamquam et hoc sero, vulgoque purpura latiore tunicae usos invenimus etiam praecones, sicut patrem l. aelii stilonis praeconini ob id cognominati. sed anuli

plane tertium ordinem mediumque plebei et patribus inseruere, ac quod antea militares equi nomen dederant, hoc nunc pecuniae indices tribuunt. nec pridem id factum. Divo Augusto decurias ordinante maior pars iudicum in ferreo anulo fuit iique non equites, sed iudices vocabantur. equitum nomen subsistebat in turmis equorum publicorum. iudicum quoque non nisi quattuor decuriae fuere primo, vixque singula milia in decuriis inventa sunt, nondum provinciis ad hoc munus admissis, servatumque in hodiernum est, ne quis e novis civibus in iis iudicaret. decuriae quoque ipsae pluribus discretae nominibus fuere, tribunorum aeris et selectorum et iudicum. praeter hos etiamnum nongenti vocabantur ex omnibus electi ad custodiendas suffragiorum cistas in comitiis. et divisus hic quoque ordo erat superba usurpatione nominum, cum alius se nongentum, alius selectum, alius tribunum appellaret.

tiberii demum principatu nono anno in unitatem venit equester ordo, anulorumque auctoritati forma constituta est c. asinio pollione c. antistio vetere cos. anno urbis conditae dcclxxv, quod miremur, futtili paene de causa, cum c. sulpicius galba, iuvenalem famam apud principem popinarum poenis aucupatus, questus esset in senatu, volgo institores eius culpae defendi anulis. hac de causa constitutum, ne cui ius esset nisi qui ingenuus ipse, patre, avo paterno hs [cccc] census fuisset et lege iulia theatrali in quattuordecim ordinibus sedisset. postea gregatim insigne id adpeti coeptum. propter haec discrimina c. princeps decuriam quintam adiecit, tantumque enatum est fastus, ut, quae sub Divo Augusto impleri non potuerant, decuriae non capiant eum ordinem, passimque ad ornamenta ea etiam servitute liberati transiliant, quod antea numquam erat factum, quoniam ferreo anulo et equites iudicesque intellegebantur. adeoque id promiscuum esse coepit, ut apud claudium caesarem in censura eius unus ex equitibus flavius proculus cccc ex ea causa reos postularet. ita dum separatur ordo ab ingenuis, communicatus est cum servitiis. iudicum autem appellatione separare eum ordinem primi omnium instituere gracchi discordi popularitate in contumeliam senatus, mox debellata auctoritas nominis vario seditionum eventu circa publicanos substitit et aliquamdiu tertiae sortis viri publicani fuere. m. cicero demum stabilivit equestre nomen in consulatu suo catilinianis rebus, ex eo ordine profectum se

celebrans eiusque vires peculiari popularitate quaerens. ab illo tempore plane hoc tertium corpus in re p. factum est, coepitque adici senatui populoque romano et equester ordo. qua de causa et nunc post populum scribitur, quia novissime coeptus est adici.

equitum quidem etiam nomen ipsum saepe variatum est, in iis quoque, qui id ab equitatu trahebant. celeres sub romulo regibusque sunt appellati, deinde flexuntes, postea trossuli, cum oppidum in tuscis citra volsinios p. [viiii] sine ullo peditum adiumento cepissent eius vocabuli, idque duravit ultra c. gracchum. iunius certe, qui ab amicitia eius gracchanus appellatus est, scriptum reliquit his verbis: "quod ad equestrem ordinem attinet, antea trossulos vocabant, nunc equites vocant ideo, quia non intellegunt trossulos nomen quid valeat, multosque pudet eo nomine appellari." et causam, quae supra indicata est, exponit invitosque etiamnum tamen trossulos vocari.

sunt adhuc aliquae non omittendae in auro differentiae. auxilia quippe et externos torquibus aureis donavere, at cives non nisi argenteis, praeterque armillas civibus dedere, quas non dabant externis.

iidem, quo magis miremur, coronas ex auro dedere et civibus. quis primus donatus sit ea, non inveni equidem; quis primus donaverit, a l. pisone traditur: a. postumius dictator apud lacum regillum castris latinorum expugnatis eum, cuius maxime opera capta essent. hanc coronam ex praeda is dedit ii l., item l. lentulus consul servio cornelio merendae samnitum oppido capto, sed hic quinque librarum; trium piso frugi filium ex privata pecunia donavit eamque coronam testamento ei praelegavit.

deorum honoris causa in sacris nihil aliud excogitatum est quam ut auratis cornibus hostiae, maiores dumtaxat, immolarentur. sed in militia quoque in tantum adolevit haec luxuria, ut M. Bruti e philippicis campis epistulae reperiantur frementis fibulas tribunicias ex auro geri. ita, hercules idem enim tu, Brute, mulierum pedibus aurum gestatum tacuisti. et nos sceleris arguimus illum, qui primus auro dignitatem per anulos fecit! habeant in lacertis iam quidem et viri, quod ex dardanis venit - itaque et dardanium vocabatur; viriolae celtice dicuntur, viriae celtiberice - ; habeant feminae in armillis digitisque totis, collo, auribus, spiris; discurrant catenae circa latera et in secreto margaritarum sacculi e collo dominarum auro pendeant,

ut in somno quoque unionum conscientia adsit: etiamne pedibus induetur atque inter stolam plebemque hunc medium feminarum equestrem ordinem faciet honestius viri paedagogiis id damus, balineasque dives puerorum forma convertit. iam vero et harpocraten statuasque aegyptiorum numinum in digitis viri quoque portare incipiunt. fuit et alia claudii principatu differentia insolens iis, quibus admissiones liberae ius dedissent imaginem principis ex auro in anulo gerendi, magna criminum occasione, quae omnia salutaris exortus vespasiani imperatoris abolevit aequaliter publicando principem. de anulis aureis usuque eorum hactenus sit dictum.

proximum scelus fuit eius, qui primus ex auro denarium signavit, quod et ipsum latet auctore incerto. populus romanus ne argento quidem signato ante pyrrhum regem devictum usus est. libralis - unde etiam nunc libella dicitur et dupondius - adpendebatur assis; quare aeris gravis poena dicta, et adhuc expensa in rationibus dicuntur, item inpendia et dependere, quin et militum stipendia, hoc est stipis pondera, dispensatores, libripendes, qua consuetudine in iis emptionibus, quae mancipi sunt, etiam nunc libra interponitur. servius rex primus signavit aes. antea rudi usos romae timaeus tradit. signatum est nota pecudum, unde et pecunia appellata. maximus census [cxx] assium fuit illo rege, et ideo haec prima classis. - argentum signatum anno urbis cccclxxxv, q. ogulnio c. fabio cos., quinque annis ante primum punicum bellum. et placuit denarium pro x libris aeris valere, quinarium pro v, sestertium pro dupondio ac semisse. librale autem pondus aeris inminutum est bello punico primo, cum inpensis res p. non sufficeret, constitutumque ut asses sextantario pondere ferirentur. ita quinque partes lucri factae, dissolutumque aes alienum. nota aeris eius fuit ex altera parte ianus geminus, ex altera rostrum navis, in triente vero et quadrante rates. quadrans antea teruncius vocatus a tribus unciis. postea Hannibale urguente q. fabio maximo dictatore asses unciales facti, placuitque denarium xvi assibus permutari, quinarium octonis, sestertium quaternis. ita res p. dimidium lucrata est, in militari tamen stipendio semper denarius pro x assibus datus est. notae argenti fuere bigae atque quadrigae; inde bigati quadrigatique dicti. mox lege papiria semunciarii asses facti. livius drusus in tribunatu plebei octavam partem aeris argento miscuit. is, qui nunc victoriatus appellatur, lege

clodia percussus est; antea enim hic nummus ex illyrico advectus mercis loco habebatur. est autem signatus victoria, et inde nomen. - aureus nummus post annos li percussus est quam argenteus ita, ut scripulum valeret sestertios vicenos, quod efficit in libram ratione sestertii, qui tunc erat, [v]dcclx. postea placuit #1108 xxxx signari ex auri libris, paulatimque principes inminuere pondus, et novisissime nero ad xxxxv.

sed a nummo prima origo avaritiae faenore excogitato quaestuosaque segnitia, nec paulatim: exarsit rabie quadam non iam avaritia, sed fames auri, utpote cum septumuleius, c. gracchi familiaris, auro rependendum caput eius abscisum ad opimium tulerit plumboque in os addito parricidio suo rem p. etiam circumscripserit; nec iam quiritium aliquis, sed universo nomine romano infami rex mithridates aquilio duci capto aurum in os infudit. haec parit habendi cupido! pudet intuentem nomina ista, quae subinde nova graeco sermone excogitantur insperso argenteis vasis auro et incluso, quibus deliciis pluris veneunt inaurata quam aurea, cum sciamus interdixisse castris suis spartacum, ne quis aurum haberet aut argentum. tanto plus fuit animi fugitivis nostris! messalla orator prodidit antonium triumvirum aureis usum vasis in omnibus obscenis desideriis, pudendo crimine etiam cleopatrae. summa apud exteros licentiae fuerat philippum regem poculo aureo pulvinis subdito dormire solitum, hagnonem teium, alexandri magni praefectum, aureis clavis suffigere crepidas: antonius solus contumelia naturae vilitatem auro fecit. o dignum proscriptione, sed spartaci!

equidem miror populum romanum victis gentibus in tributo semper argentum imperasse, non aurum, sicut carthagini cum Hannibale victae octingenta milia, [xvi] pondo annua in quinquaginta annos, nihil auri. nec potest videri paenuria mundi id evenisse. iam midas et croesus infinitum possederant, iam Cyrus devicta asia pondo [xxiiii] invenerat praeter vasa aurumque factum et in eo solium, platanum, vitem. qua victoria argenti [d] talentorum reportavit et craterem semiramidis, cuius pondus xv talentorum colligebat. talentum aegyptium pondo lxxx patere M. Varro tradit. iam regnaverat in colchis saulaces aeetae subolis, qui terram virginem nactus plurimum auri argentique eruisse dicitur in suanorum gente, et alioqui velleribus aureis incluto regno. et illius aureae camarae,

argenteae trabes et columnae atque parastaticae narrantur victae sesostri, aegypti regi tam superbo, ut prodatur annis quibusque sorte reges singulos e subiectis iungere ad currum solitus atque ita triumphare!

et nos fecimus quae posteri fabulosa arbitrentur. caesar, qui postea dictator fuit, primus in aedilitate munere patris funebri omni apparatu harenae argenteo usus est, ferasque etiam argenteis vasis incessivere tum primum noxii, quod iam etiam in municipiis aemulantur. c. antonius ludos scaena argentea fecit, item l. murena; gaius princeps in circo pegma duxit, in quo fuere argenti pondo [cxxiiii]. claudius successor eius, cum de brittannia triumpharet, inter coronas aureas [vii] pondo habere quam contulisset hispania citerior, [viiii] quam gallia comata, titulis indicavit. huius deinde successor nero pompei theatrum operuit auro in unum diem, quo tiridati armeniae regi ostenderet. et quota pars ea fuit aureae domus ambientis urbem!

auri in aerario populi r. fuere sex. iulio l. aurelio cos., septem annis ante bellum punicum tertium, pondo [xvii] ccccx, argenti [xxii] lxx, et in numerato [30lxi]30 [xxxv] cccc, sexto iulio l. marcio cos., hoc est belli socialis initio, auri ... [30xvi]30 [xx] dcccxxxi. c. caesar primo introitu urbis civili bello suo ex aerario protulit laterum aureorum [xv], argenteorum [xxx], et in numerato [30ccc]30. nec fuit aliis temporibus res p. locupletior. intulit et aemilius paulus perseo rege victo e macedonica praeda [30mmm]30, a quo tempore populus romanus tributum pendere desiit.

laquearia, quae nunc et in privatis domibus auro teguntur, post carthaginem eversam primo in capitolio inaurata sunt censura l. mummi. inde transiere in camaras quoque et parietes, qui iam et ipsi tamquam vasa inaurantur, cum varie sua aetas de catulo existimaverit, quod tegulas aereas capitoli inaurasset.

primos inventores auri, sicut metallorum fere omnium, septimo volumine diximus. praecipuam gratiam huic materiae fuisse arbitror non colore, qui clarior in argento est magisque diei similis, ideo militaribus signis familiarior, quoniam longius fulget, manifesto errore eorum, qui colorem siderum placuisse in auro arbitrantur, cum in gemma aliisque rebus non sit praecipuus. nec pondere aut facilitate materiae praelatum est ceteris metallis, cum cedat per utrumque plumbo, sed quia rerum uni nihil igne deperit, tuto etiam in incendiis

rogisque. quin immo quo saepius arsit, proficit ad bonitatem, aurique experimentum ignis est, ut simili colore rubeat ignescatque et ipsum; obrussam vocant. primum autem bonitatis argumentum quam difficillime accendi. praeterea mirum, prunae violentissimi ligni indomitum palea citissime ardescere atque, ut purgetur, cum plumbo coqui. altera causa pretii maior, quod minimum usus deterit, cum argento, aere, plumbo lineae praeducantur manusque sordescant decidua materia. nec aliud laxius dilatatur aut numerosius dividitur, utpote cuius unciae in septingenas quinquagenas pluresque bratteas quaternum utroque digitorum spargantur. crassissimae ex iis praenestinae vocantur, etiamnum retinente nomen fortunae inaurato fidelissime ibi simulacro. proxima brattea quaestoria appellatur. hispania striges vocat auri parvolas massas. super omnia solum in massa aut ramento capitur. cum cetera in metallis reperta igni perficiantur, hoc statim aurum est consummatamque materiam suam protinus habet, cum ita invenitur. haec enim inventio eius naturalis est; alia, quam dicemus, coacta. super cetera non robigo ulla, non aerugo, non aliud ex ipso, quod consumat bonitatem minuatve pondus. iam contra salis et aceti sucos, domitores rerum, constantia superat omnia, superque netur ac texitur lanae modo vel sine lana. tunica aurea triumphasse tarquinium priscum verrius docet; nos vidimus agrippinam claudi principis, edente eo navalis proelii spectaculum, adsidentem et indutam paludamento aureo textili sine alia materia. attalicis vero iam pridem intexitur, invento regum asiae.

marmori et iis, quae candefieri non possunt, ovi candido inlinitur, ligno glutini ratione conposita; leucophorum vocant. quid sit hoc aut quemadmodum fiat, suo loco docebimus. aes inaurari argento vivo aut certe hydrargyro legitimum erat, de quis dicemus illorum naturam reddentes. excogitata fraus est, namque aes cruciatur in primis accensumque restinguitur sale, aceto, alumine, postea exharenatur, an satis recoctum sit, splendore deprehendente, iterumque exhalatur igni, ut possit edomitum mixtis pumice, alumine, argento vivo inductas accipere bratteas. alumen et in purgando vim habet qualem esse diximus plumbo.

aurum invenitur in nostro orbe, ut omittamus indicum a formicis aut apud scythas grypis erutum, tribus modis: fluminum ramentis, ut in tago hispaniae, pado italiae, hebro thraciae, pactolo asiae, gange

indiae, nec ullum absolutius aurum est, ut cursu ipso attrituque perpolitum. alio modo puteorum scrobibus effoditur aut in ruina montium quaeritur; utraque ratio dicatur.

aurum qui quaerunt, ante omnia segutilum tollunt; ita vocatur indicium. alveus hic est harenae, quae lavatur, atque ex eo, quod resedit, coniectura capitur. invenitur aliquando in summa tellure protinus rara felicitate, ut nuper in delmatia principatu neronis singulis diebus etiam quinquagenas libras fundens. cum ita inventum est in summo caespite, talutium vocant, si et aurosa tellus subest. cetero montes hispaniarum, aridi sterilesque et in quibus nihil aliud gignatur, huic bono fertiles esse coguntur.

quod puteis foditur, canalicium vocant, alii canaliense, marmoris glareae inhaerens, non illo modo, quo in oriente sappiro atque thebaico aliisque in gemmis scintillat, sed micas amplexum marmoris. vagantur hi venarum canales per latera puteorum et huc illuc, inde nomine invento, tellusque ligneis columnis suspenditur. quod effossum est, tunditur, lavatur, uritur, molitur. farinam a pila scudem vocant; argentum, quod exit a fornace, sudorem. quae e camino iactatur spurcitia in omni metallo scoria appellatur. haec in auro tunditur iterumque coquitur. catini fiunt ex tasconio; hoc est terra alba similis argillae, neque enim alia flatum ignemque et ardentem materiam tolerat.

tertia ratio opera vicerit gigantum. cuniculis per magna spatia actis cavantur montes lucernarum ad lumina; eadem mensura vigiliarum est, multisque mensibus non cernitur dies. arrugias id genus vocant. siduntque rimae subito et opprimunt operatos, ut iam minus temerarium videatur e profundo maris petere margaritas atque purpuras. tanto nocentiores fecimus terras! relinquuntur itaque fornices crebri montibus sustinendis. occursant in utroque genere silices; hos igne et aceto rumpunt, saepius vero, quoniam id cuniculos vapore et fumo strangulat, caedunt fractariis cl libras ferri habentibus egeruntque umeris noctibus ac diebus per tenebras proximis tradentes; lucem novissimi cernunt. si longior videtur silex, latus sequitur fossor ambitque. et tamen in silice facilior existimatur opera; est namque terra ex quodam argillae genere glarea mixta - gangadiam vocant - prope inexpugnabilis. cuneis eam ferreis adgrediuntur et isdem malleis nihilque durius putant, nisi quod inter

omnia auri fames durissima est. peracto opere cervices fornicum ab ultimo caedunt. dat signum ruina, eamque solus intellegit in cacumine eius montis vigil. hic voce, nutu evocari iubet operas pariterque ipse devolat. mons fractus cadit ab sese longe fragore qui concipi humana mente non possit, aeque et flatu incredibili. spectant victores ruinam naturae. nec tamen adhuc aurum est nec sciere esse, cum foderent, tantaque ad pericula et inpendia satis causae fuit sperare quod cuperent. alius par labor ac vel maioris inpendii: flumina ad lavandam hanc ruinam iugis montium obiter duxere a centesimo plerumque lapide; corrugos vocant, a conrivatione credo. mille et hic labores: praeceps esse libramentum oportet, ut ruat verius quam fluat; itaque altissimis partibus ducitur. convalles et intervalla substructis canalibus iunguntur. alibi rupes inviae caeduntur sedemque trabibus cavatis praebere coguntur. qui caedit, funibus pendet, ut procul intuenti species ne ferarum quidem, sed alitum fiat. pendentes maiore ex parte librant et lineas itineri praeducunt, quaque insistentis vestigiis hominis locus non est, amnes trahuntur ab homine. vitium lavandi est, si fluens amnis lutum inportet; id genus terrae urium vocant. ergo per silices calculosve ducunt et urium evitant. ad capita deiectus in superciliis montium piscinae cavantur ducenos pedes in quasque partes et in altitudinem denos. emissaria in iis quina pedum quadratorum ternum fere relinquuntur, ut repleto stagno excussis opturamentis erumpat torrens tanta vi, ut saxa provolvat. alius etiamnum in plano labor. fossae, per quas profluat, cavantur - agogas vocant - ; hae sternuntur gradatim ulice. frutex est roris marini similis, asper aurumque retinens. latera cluduntur tabulis, ac per praerupta suspenduntur canales. ita profluens terra in mare labitur ruptusque mons diluitur, ac longe terras in mare his de causis iam promovit hispania. in priore genere quae exhauriuntur inmenso labore, ne occupent puteos, in hoc rigantur. aurum arrugia quaesitum non coquitur, sed statim suum est. inveniuntur ita massae, nec non in puteis, et denas excedentes libras; palagas, alii palacurnas, iidem quod minutum est balucem vocant. ulex siccatur, uritur, et cinis eius lavatur substrato caespite herboso, ut sidat aurum. vicena milia pondo ad hunc modum annis singulis asturiam atque callaeciam et lusitaniam praestare quidam prodiderunt, ita ut plurimum asturia gignat. neque in alia terrarum parte tot saeculis

perseverat haec fertilitas. italiae parci vetere interdicto patrum diximus; alioqui nulla fecundior metallorum quoque erat tellus. extat lex censoria victumularum aurifodinae in vercellensi agro, qua cavebatur, ne plus quinque milia hominum in opere publicani haberent.

aurum faciendi est etiamnum una ratio ex auripigmento, quod in syria foditur pictoribus in summa tellure, auri colore, sed fragile lapidum specularium modo. invitaveratque spes gaium principem avidissimum auri; quam ob rem iussit excoqui magnum pondus et plane fecit aurum excellens, sed ita parvi ponderis, ut detrimentum sentiret propter avaritiam expertus, quamquam auripigmenti librae #1108 iiii permutarentur. nec postea temptatum ab ullo est.

omni auro inest argentum vario pondere, aliubi decuma parte, aliubi octava. in uno tantum callaeciae metallo, quod vocant albucrarense, tricensima sexta portio invenitur; ideo ceteris praestat. ubicumque quinta argenti portio est, electrum vocatur. scobes hae reperiuntur in canaliensi. fit et cura electrum argento addito. quod si quintam portionem excessit, incudibus non resistit. vetusta et electro auctoritas homero teste, qui menelai regiam auro, electro, argento, ebore fulgere tradit. minervae templum habet lindos insulae rhodiorum, in quo helena sacravit calicem ex electro; adicit historia, mammae suae mensura. electri natura est ad lucernarum lumina clarius argento splendere. quod est nativum, et venena deprehendit. namque discurrunt in calicibus arcus caelestibus similes cum igneo stridore et gemina ratione praedicunt.

aurea statua prima omnium nulla inanitate et antequam ex aere aliqua modo fieret, quam vocant holosphyraton, in templo anaetidis posita dicitur quo situ terrarum nomen hoc signavimus, numine gentibus illis sacratissimo. direpta ea est antonii parthicis rebus, scitumque narratur veteranorum unius bononiae hospitali Divi Augusti cena, cum interrogatus esset, sciretne eum, qui primus violasset id numen, oculis membrisque captum exspirasse; respondit enim cum maxime Augustum e crure eius cenare seque illum esse totumque sibi censum ex ea rapina. hominum primus et auream statuam et solidam lxx circiter olympiade gorgias leontinus delphis in templo posuit sibi. tantus erat docendae artis oratoriae quaestus.

aurum pluribus modis pollet in remediis volneratisque et

infantibus adplicatur, ut minus noceant quae inferantur veneficia. est et ipsi superlato vis malefica, gallinarum quoque et pecuariorum feturis. remedium abluere inlatum et spargere eos, quibus mederi velis. torretur et cum salis gemino pondere, triplici misyis ac rursus cum ii salis portionibus et una lapidis, quem schiston vocant. ita virus trahit rebus una crematis in fictili vase, ipsum purum et incorruptum. reliquus cinis servatus in fictili olla ex aqua inlitus lichenas in facie - lomento eo convenit ablui - , fistulas etiam sanat et quae vocantur haemorroides. quodsi tritus pumex adiciatur, putria ulcera et taetri odoris emendat, ex melle vero decoctum cum melanthio inlitum umbilico leniter solvit alvum. auro verrucas curari M. Varro auctor est.

chrysocolla umor est in puteis, quos diximus, per venam auri defluens crassescente limo rigoribus hibernis usque in duritiam pumicis. laudatiorem eandem in aerariis metallis et proximam in argentariis fieri conpertum est. invenitur et in plumbariis, vilior etiam auraria. in omnibus autem his metallis fit et cura multum infra naturalem illam inmissis in venam aquis leniter hieme tota usque in iunium mensem, dein siccatis iunio et iulio, ut plane intellegatur nihil aliud chrysocolla quam vena putris. nativa duritia maxime distat; uvam vocant. et tamen illa quoque herba, quam lutum appellant, tinguitur. natura est, quae lino lanaeve, ad sucum bibendum. tunditur in pila, dein tenui cribro cernitur, postea molitur ac deinde tenuius cribratur. quidquid non transmeat, repetitur in pila, dein molitur. pulvis semper in catinos digeritur et ex aceto maceratur, ut omnis duritia solvatur, ac rursus tunditur, dein lavatur, in conchis siccatur, tum tinguitur alumine schisto et herba supra dicta pingiturque, antequam pingat. refert quam bibula docilisque sit. nam nisi rapuit colorem, adduntur et scytanum atque turbistum; ita vocant medicamenta sorbere cogentia.

cum tinxere pictores, orobitin vocant eiusque duo genera faciunt: elutam, quae servatur in lomentum, et liquidam globulis sudore resolutis. haec utraque genera in cypro fiunt. laudatissima autem est in armenia, secunda in macedonia, largissima in hispania; summa commendationis, ut colorem in herba segetis laete virentis quam simillime reddat. visumque iam est neronis principis spectaculis harenam circi chrysocolla sterni, cum ipse concolori panno

aurigaturus esset. indocta opificum turba tribus eam generibus distinguit: asperam, quae taxatur in libras #1108 vii, mediam quae #1108 v, attritam, quam et herbaceam vocant, #1108 iii. sublinunt autem harenosam, priusquam inducant, atramento et paraetonio. haec sunt tenacia eius, colore blanda. paraetonium, quoniam est natura pinguissimum et propter levorem tenacissimum, atramento aspergitur, ne paraetonii candor pallorem chrysocollae adferat. luteam putant a luto herba dictam, quam ipsam caeruleo subtritam pro chrysocolla inducunt, vilissimo genere atque fallacissimo.

usus chrysocollae et in medicina est ad purganda volnera cum cera atque oleo. eadem per se arida siccat et contrahit. datur et in angina orthopnoeave lingenda cum melle. concitat vomitiones, miscetur et collyriis ad cicatrices oculorum ac viridibus emplastris ad dolores mitigandos, cicatrices trahendas. hanc chrysocollam medici acesim appellant, quae non est orobitis. chrysocollam et aurifices sibi vindicant adglutinando auro, et inde omnes appellatas similiter virentes dicunt. temperatur autem cypria aerugine et pueri inpubis urina addito nitro teriturque cyprio aere in cypriis mortariis; santernam vocant nostri. ita feruminatur aurum, quod argentosum vocant. signum est, si addita santerna nitescit. e diverso aerosum contrahit se hebetaturque et difficulter feruminatur. ad id glutinum fit auro et septima argenti parte ad supra dicta additis unaque tritis.

contexique par est reliqua circa hoc, ut universa naturae contingat admiratio. auro glutinum est tale, argilla ferro, cadmea aeris massis, alumen lamnis, resina plumbo et marmori, at plumbum nigrum albo iungitur ipsumque album sibi oleo, item stagnum aeramentis, stagno argentum. - pineis optume lignis aes ferrumque funditur, sed et aegyptio papyro, paleis aurum. - calx aqua accenditur et thracius lapis, idem oleo restinguitur, ignis autem aceto maxime et visco et ovo. - terra minime flagrat, carboni vis maior exusto iterumque flagranti.

ab his argenti metalla dicantur, quae sequens insania est. non nisi in puteis reperitur nullaque spe sui nascitur, nullis, ut in auro, lucentibus scintillis. terra est alias rubra, alias cineracea. excoqui non potest, nisi cum plumbo nigro aut cum vena plumbi - galenam vocant - , quae iuxta argenti venas plerumque reperitur. et eodem opere ignium discedit pars in plumbum, argentum autem innatat superne, ut

oleum aquis. reperitur in omnibus paene provinciis, sed in hispania pulcherrimum, id quoque in sterili solo atque etiam montibus, et ubicumque una inventa vena est, non procul invenitur alia. hoc quidem et in omni fere materia, unde metalla graeci videntur dixisse. mirum, adhuc per hispanias ab Hannibale inchoatos durare puteos. sua nomina ab inventoribus habent, ex quis baebelo appellatur hodie, qui ccc pondo Hannibali subministravit in dies, ad md passus iam cavato monte, per quod spatium aquitani stantes noctibus diebusque egerunt aquas lucernarum mensura amnemque faciunt. argenti vena in summo reperta crudaria appellatur. finis antiquis fodiendi solebat esse alumen inventum; ultra nihil quaerebatur. nuper inventa aeris vena infra alumen nullam finem spei fecit. odor ex argenti fodinis inimicus omnibus animalibus, sed maxime canibus. - aurum argentumque quo mollius, eo pulchrius. lineas ex argento nigras praeduci plerique mirantur.

est et lapis in iis venis, cuius vomica liquoris aeterni argentum vivum appellatur. venenum rerum omnium est perrumpitque vasa permanans tabe dira. omnia ei innatant praeter aurum; id unum ad se trahit. ideo et optime purgat, ceteras eius sordes expuens crebro iactatu fictilibus in vasis. ita vitiis eiectis ut et ipsum ab auro discedat, in pelles subactas effunditur, per quas sudoris vice defluens purum relinquit aurum. ergo et cum aera inaurentur, sublitum bratteis pertinacissime retinet, verum pallore detegit simplices aut praetenues bratteas. quapropter id furtum quaerentes ovi liquore candido usum eum adulteravere, mox et hydrargyro, de quo dicemus suo loco. et alias argentum vivum non largum inventu est.

in isdem argenti metallis invenitur, ut proprie dicatur, spumae lapis candidae nitentisque, non tamen tralucentis; stimi appellant, alii stibi, alii alabastrum, aliqui larbasim. duo eius genera, mas ac femina. magis probant feminam, horridior est mas scabriorque et minus ponderosus minusque radians et harenosior, femina contra nitet, friabilis fissurisque, non globis, dehiscens.

vis eius adstringere ac refrigerare, principalis autem circa oculos, namque ideo etiam plerique platyophthalmon id appellavere, quoniam in calliblepharis mulierum dilatet oculos, et fluctiones inhibet oculorum exulcerationesque farina eius ac turis cummi admixto. sistit et sanguinem e cerebro profluentem, efficacissime et

contra recentia volnera et contra veteres canum morsus inspersa farina et contra ambusta igni cum adipe ac spuma argenti cerussaque et cera. uritur autem offis bubuli fimi circumlitum in clibanis, dein restinguitur mulierum lacte teriturque in mortariis admixta aqua pluvia; ac subinde turbidum transfunditur in aereum vas emundatum nitro. faex eius intellegitur plumbosissima, quae subsedit in mortario abiciturque. dein vas, in quod turbida transfusa sint, opertum linteo per noctem relinquitur et postero die quidquid innatet effunditur spongeave tollitur. quod ibi subsedit, flos intellegitur ac linteo interposito in sole siccatur, non ut perarescat, iterumque in mortario teritur et in pastillos dividitur. ante omnia autem urendi modus necessarius est, ne plumbum fiat. quidam non fimo utuntur coquentes, sed adipe. alii tritum in aqua triplici linteo saccant faecemque abiciunt idque, quod defluxit, transfundunt, quidquid subsidat colligentes. emplastris quoque et collyriis miscent.

scoriam in argento graeci vocant helcysma. vis eius adstringere et refrigerare corpora, ac remedio est addita emplastris ut molybdaena, de qua dicemus in plumbo, cicatricibus maxime glutinandis, et contra tenesmos dysenteriasque infusa clysteribus cum myrteo oleo. addunt et in medicamenta, quae vocant liparas, ad excrescentia ulcerum aut ex attritu facta aut in capite manantia.

fit in isdem metallis et quae vocatur spuma argenti. genera eius tria: optima quam chrysitim vocant, sequens quam argyritim, tertia quam molybditim. et plerumque omnes hi colores in isdem tubulis inveniuntur. probatissima est attica, proxima hispaniensis. chrysitis ex vena ipsa fit, argyritis ex argento, molybditis e plumbi ipsius fusura - quae fit puteolis - et inde habet nomen. omnis autem fit excocta sua materia ex superiore catino defluens in inferiorem et ex eo sublata vericulis ferreis atque in ipsa flamma convoluta vericulo, ut sit modici ponderis. est autem, ut ex nomine intellegi potest, fervescentis et futurae materiae spuma. distat a scoria quo potest spuma a faece distare: alterum purgantis se materiae, alterum purgatae vitium est. quidam duo genera faciunt spumae, quae vocant scirerytida et peumenen, tertium molybdaenam in plumbo dicendam. spuma, ut sit utilis, iterum coquitur confractis tubulis ad magnitudinem anulorum. ita accensa follibus ad separandos carbones cineremque abluitur aceto aut vino simulque restinguitur. quodsi sit

argyritis, ut candor ei detur, magnitudine fabae confracta in fictili coqui iubetur ex aqua addito in linteolis tritico et hordeo novis, donec ea purgentur. postea vi diebus terunt in mortariis, ter die abluentes aqua frigida et, cum dies desinat, calida, addito sale fossili in libram spumae obolo. novissimo die dein condunt in plumbeo vase. alii cum faba candida et tisana cocunt siccantque sole, alii in lana candida cum faba, donec lanam non denigret. tunc salem fossilem adiciunt subinde aqua mutata siccantque diebus xl calidissimis aestatis. nec non in ventre suillo in aqua coquunt exemptamque nitro fricant et ut supra terunt in mortariis cum sale. sunt qui non coquant, sed cum sale terant et adiecta aqua abluant. usus eius ad collyria et cuti mulierum cicatricum foeditates tollendas maculasque, abluendum capillum. vis autem siccare, mollire, refrigerare, temperate purgare, explere ulcera, tumores lenire; talibusque emplastris additur et liparis supra dictis. ignes etiam sacros tollit cum ruta myrtisque et aceto, item perniones cum myrtis et cera.

in argentariis metallis invenitur minium quoque, et nunc inter pigmenta magnae auctoritatis et quondam apud romanos non solum maximae, sed etiam sacrae. enumerat auctores verrius, quibus credere necesse sit iovis ipsius simulacri faciem diebus festis minio inlini solitam triumphantiumque corpora; sic camillum triumphasse; hac religione etiamnum addi in unguenta cenae triumphalis et a censoribus in primis iovem miniandum locari. cuius rei causam equidem miror, quamquam et hodie id expeti constat aethiopum populis totosque eo tingui proceres, hunc ibi deorum simulacris colorem esse. quapropter diligentius persequemur omnia de eo.

theophrastus lxxxx annis ante praxibulum atheniensium magistratum - quod tempus exit in urbis nostrae cccxlviiii annum - tradit inventum minium a callia atheniense initio sperante aurum excoqui posse harenae rubenti in metallis argenti; hanc fuisse originem eius, reperiri autem iam tum in hispania, sed durum et harenosum, item apud colchos in rupe quadam inaccessa, ex qua iaculantes decuterent; id esse adulterum, optimum vero supra ephesum cilbianis agris harena cocci colorem habente, hanc teri, dein lavari farinam et quod subsidat iterum lavari; differentiam artis esse, quod alii minium faciant prima lotura, apud alios id esse dilutius, sequentis autem loturae optimum.

auctoritatem colori fuisse non miror. iam enim troianis temporibus rubrica in honore erat homero teste, qui naves ea commendat, alias circa pigmenta picturasque rarus. milton vocant graeci miniumque cinnabarim. unde natus error inscitia nominum. sic enim appellant illi saniem draconis elisi elephantorum morientium pondere permixto utriusque animalis sanguine, ut diximus, neque est alius colos, qui in pictura proprie sanguinem reddat. illa cinnabaris antidotis medicamentisque utilissima est. at, hercules, medici, quia cinnabarim vocant, utuntur hoc minio, quod venenum esse paulo mox docebimus.

cinnabari veteres quae etiam nunc vocant monochromata pingebant. pinxerunt et ephesio minio, quod derelictum est, quia curatio magni operis erat. praeterea utrumque nimis acre existimabatur. ideo transiere ad rubricam et sinopidem, de quibus suis locis dicam. cinnabaris adulteratur sanguine caprino aut sorvis tritis. pretium sincerae nummi l.

iuba minium nasci et in carmania tradit, timagenes et in aethiopia, sed neutro ex loco invehitur ad nos nec fere aliunde quam ex hispania, celeberrimo sisaponensi regione in baetica miniario metallo vectigalibus populi romani, nullius rei diligentiore custodia. non licet ibi perficere id, excoctique romam adfertur vena signata, ad bina milia fere pondo annua, romae autem lavatur, in vendendo pretio statuta lege, ne modum excederet hs lxx in libras. sed adulteratur multis modis, unde praeda societati. namque est alterum genus omnibus fere argentariis itemque plumbariis metallis, quod fit exusto lapide venis permixto, non ex illo, cuius vomicam argentum vivum appellavimus - is enim et ipse in argentum excoquitur - , sed ex aliis simul repertis. steriles etiam plumbi micae. deprehenduntur solo colore nec nisi in fornacibus rubescentes exustique tunduntur in farinam. hoc est secundarium minium perquam paucis notum, multum infra naturales illas harenas. hoc ergo adulteratur minium in officinis sociorum, et vilius syrico. quonam modo syricum fiat suo loco docebimus; sublini autem syrico minium compendi ratio demonstrat. et alio modo pingentium furto opportunum est, plenos subinde abluentium penicillos. sidit autem in aqua constatque furantibus. sincero cocci nitor esse debet, secundarii autem splendor in parietibus sentit plumbaginem. quamquam hoc robigo quaedam

metalli est. sisaponensibus autem miniariis sua vena harenae sine argento. excoquitur auri modo; probatur auro candente, fucatum enim nigrescit, sincerum retinet colorem. invenio et calce adulterari, ac simili ratione ferri candentis lamna, si non sit aurum, deprehendi. inlito solis atque lunae contactus inimicus. remedium, ut pariete siccato cera punica cum oleo liquefacta candens saetis inducatur iterumque admotis gallae carbonibus inuratur ad sudorem usque, postea candelis subigatur ac deinde linteis puris, sicut et marmora nitescunt. qui minium in officinis poliunt, faciem laxis vesicis inligant, ne in respirando pernicialem pulverem trahant et tamen super illas spectent. minium in voluminum quoque scriptura usurpatur clarioresque litteras vel in muro vel in marmore, etiam in sepulchris, facit.

ex secundario invenit vita et hydrargyrum in vicem argenti vivi, paulo ante dilatum. fit autem duobus modis: aereis mortariis pistillisque trito minio ex aceto aut patinis fictilibus inpositum ferrea concha, calice coopertum, argilla superinlita, dein sub patinis accenso follibus continuis igni atque ita calici sudore deterso, qui fit argenti colore et aquae liquore. idem guttis dividi facilis et lubrico umore confluere. quod cum venenum esse conveniat, omnia, quae de minio in medicinae usu traduntur, temeraria arbitror, praeterquam fortassis inlito capiti ventrive sanguinem sisti, dum ne qua penetret in viscera ac volnus attingat. aliter utendum non equidem censeam.

hydrargyro argentum inauratur solum nunc prope, cum et in aerea simili modo duci debeat. sed eadem fraus, quae in omni parte vitae ingeniosissima est, viliorem excogitavit materiam, ut docuimus.

auri argentique mentionem comitatur lapis, quem coticulam appellant, quondam non solitus inveniri nisi in flumine tmolo, ut auctor est theophrastus, nunc vero passim. alii heraclium, alii lydium vocant. sunt autem modici, quaternas uncias longitudinis binasque latitudinis non excedentes. quod a sole fuit in iis, melius quam quod a terra. his coticulis periti cum e vena ut lima rapuerunt experimentum, protinus dicunt, quantum auri sit in ea, quantum argenti vel aeris, scripulari differentia, mirabili ratione non fallente.

argenti duae differentiae. vatillis ferreis candentibus ramento inposito, quod candidum permaneat, probatur. proxima bonitas rufo, nulla nigro. sed experimento quoque fraus intervenit. servatis in

urina virorum vatillis inficitur ita ramentum obiter, dum uritur candoremque mentitur. est aliquod experimentum politi et in halitu hominis, si sudet protinus nubemque discutiat. lamnas duci in speciem vitri non nisi ex optimo posse creditum. fuerat id integrum, sed id quoque iam fraude corrumpitur.

est natura mira imagines reddendi, quod repercusso ae+re atque in oculos regesto fieri convenit. eadem vi sic in speculi usu polita crassitudine paulumque propulsa dilatatur in inmensum magnitudo imaginum. tantum interest, repercussum illum excipiat an respuat. quin etiam pocula ita figurantur expulsis intus crebris ceu speculis, ut vel uno intuente totidem populus imaginum fiat. excogitantur et monstrifica, ut in templo zmyrnae dicata. id evenit figura materiae. plurimum refert concava sint et poculi modo an parmae threcidicae, media depressa an elata, transversa an obliqua, supina an infesta, qualitate excipientis figurae torquente venientes umbras; neque enim est aliud illa imago quam digesta claritate materiae accipientis umbra. atque ut omnia de speculis peragantur in hoc loco, optima aput maiores fuerant brundisina, stagno et aere mixtis. praelata sunt argentea; primus fecit pasiteles magni pompei aetate. nuper credi coeptum certiorem imaginem reddi auro opposito aversis.

tinguit aegyptus argentum, ut in vasis anubim suum spectet, pingitque, non caelat, argentum. unde transiit materia et ad triumphales statuas; mirumque, crescit pretium fulgoris excaecati. id autem fit hoc modo: miscentur argento tertiae aeris cyprii tenuissimi, quod coronarium vocant, et sulpuris vivi quantum argenti; conflantur ita in fictili circumlito argilla; modus coquendi, donec se ipsa opercula aperiant. nigrescit et ovi indurati luteo, ut tamen aceto et creta deteratur.

miscuit denario triumvir antonius ferrum, miscent aera falsae monetae, alii et ponderi subtrahunt, cum sit iustum lxxxiiii e libris signari. igitur ars facta denarios probare, tam iucunda plebei lege, ut mario gratidiano vicatim totas statuas dicaverit. mirumque, in hac artium sola vitia discuntur et falsi denarii spectatur exemplar pluribusque veris denariis adulterinus emitur.

non erat apud antiquos numerus ultra centum milia; itaque et hodie multiplicantur haec, ut decies centena aut saepius dicantur. faenus hoc fecit nummusque percussus, et sic quoque aes alienum

etiam nunc appellatur. postea divites cognominati, dummodo notum sit eum, qui primus hoc cognomen acceperit, decoxisse creditoribus suis. ex eadem gente M. Crassus negabat locupletem esse nisi qui reditu annuo legionem tueri posset. in agris hs [30mm]30 possedit quiritium post sullam divitissimus, nec fuit satis nisi totum parthorum usurpasset aurum; atque ut memoriam quidem opum occupaverit - iuvat enim insectari inexplebilem istam habendi cupidinem - : multos postea cognovimus servitute liberatos opulentiores, pariterque tres claudii principatu paulo ante callistum, pallantem, narcissum. atque ut hi omittantur, tamquam adhuc rerum potiantur, c. asinio gallo c. marcio censorino cos. a. d. vi kal. febr. c. caecilius c. l. isidorus testamento suo edixit, quamvis multa bello civili perdidisset, tamen relinquere servorum [iiii] cxvi, iuga boum [iii] dc, reliqui pecoris [cclvii], in numerato hs [30dc]30, funerari se iussit hs [30x]30. congerant excedentes numerum opes, quota tamen portio erunt ptolemaei, quem Varro tradit pompeio res gerente circa iudaeam octona milia equitum sua pecunia toleravisse, mille convivas totidem aureis potoriis, mutantem ea vasa cum ferculis, saginasse! quota vero ille ipse - neque enim de regibus loquor - portio fuerit Pythis bithyni, qui platanum auream vitemque nobiles illas dario regi donavit, xerxis copias, hoc est [30vii]30 [lxxxviii] hominum, excepit epulo, stipendium quinque mensum frumentumque pollicitus, ut e quinque liberis in dilectu senectuti suae unus saltem concederetur! hunc quoque ipsum aliquis comparet croeso regi! quae, malum, amentia est id in vita cupere, quod aut et servis contigerit aut ne in regibus quidem invenerit finem!

populus r. stipem spargere coepit sp. postumio q. marcio cos.; tanta abundantia pecuniae erat, ut eam conferret l. scipioni, ex qua is ludos fecit. nam quod agrippae menenio sextantes aeris in funus contulit, honoris id necessitatisque propter paupertatem agrippae, non largitionis esse duxerim.

vasa ex argento mire inconstantia humani ingenii variat nullum genus officinae diu probando. nunc furniana, nunc clodiana, nunc gratiana - etenim tabernas mensis adoptamus - , nunc anaglypta asperitatemque exciso circa liniarum picturas quaerimus, iam vero et mensas repositoriis inponimus ad sustinenda opsonia, interradimus alia, ut quam plurimum lima perdiderit. vasa cocinaria ex argento

fieri calvus orator quiritat; at nos carrucas argento caelare invenimus, nostraque aetate poppaea coniunx neronis principis soleas delicatioribus iumentis suis ex auro quoque induere iussit.

triginta duo libras argenti africanus sequens heredi reliquit idemque, cum de poenis triumpharet, [iiii] ccclxx pondo transtulit. hoc argenti tota carthago habuit illa terrarum aemula, quot mensarum postea apparatu victa! numantia quidem deleta idem africanus in triumpho militibus #1108 vii dedit. o viros illo imperatore dignos, quibus hoc satis fuit! frater eius allobrogicus primus omnium pondo mille habuit, at drusus livius in tribunatu plebei x. nam propter quinque pondo notatum a censoribus triumphalem senem fabulosum iam videtur, item catum aelium, cum legati aetolorum in consulatu prandentem in fictilibus adissent, missa ab iis vasa argentea non accepisse neque aliud habuisse argenti ad supremum vitae diem quam duo pocula, quae l. paulus socer ei ob virtutem devicto perseo rege donavisset. invenimus legatos carthaginiensium dixisse nullos hominum inter sese benignius vivere quam romanos. eodem enim argento apud omnes cenitavisse ipsos. at, hercules, pompeium paulinum, arelatensis equitis romani filium paternaque gente pellitum, [xii] pondo argenti habuisse apud exercitum ferocissimis gentibus oppositum scimus; lectos vero iam pridem mulierum totos operiri argento, quaedam et triclinia. quibus argentum addidisse primus traditur carvilius pollio eques romanus, non ut operiret aut deliaca specie faceret, sed punicana; eadem et aureos fecit, nec multo post argentei deliacos imitati sunt. quae omnia expiavit bellum civile sullanum.

paulo enim ante haec factae sunt lances e centenis libris argenti, quas tunc super cl numero fuisse romae constat multosque ob eas proscriptos dolo concupiscentium. erubescant annales, qui bellum civile illud talibus vitiis inputavere; nostra aetas fortior fuit. claudii principatu servus eius drusilianus nomine rotundus, dispensator hispaniae citerioris, quingenariam lancem habuit, cui fabricandae officina prius exaedificata fuerat, et comites eius octo ad ccl libras, quaeso, ut quam multi eas conservi eius inferrent, aut quibus cenantibus cornelius nepos tradit ante sullae victoriam duo tantum triclinia romae fuisse argentea, repositoriis argentum addi sua memoria coeptum. fenestella, qui obiit novissimo tiberii caesaris

principatu, ait et testudinea tum in usum venisse, ante se autem paulo lignea, rotunda, solida nec multo maiora quam mensas fuisse, se quidem puero quadrata et conpacta aut acere operta aut citro coepisse, mox additum argentum in angulos lineasque per commissuras, tympana vero se iuvene appellata, tum a stateris et lances, quas antiqui magides vocaverant.

nec copia argenti tantum furit vita, sed valdius paene manipretiis, idque iam pridem, ut ignoscamus nobis. delphinos quinis milibus sestertium in libras emptos c. gracchus habuit, L. vero Crassus orator duos scyphos mentoris artificis manu caelatos hs [c], confessus tamen est numquam iis uti propter verecundiam ausum. scimus eundem hs [vi] in singulas libras vasa empta habuisse. asia primum devicta luxuriam misit in italiam, siquidem l. scipio in triumpho transtulit argenti caelati pondo mille et cccc et vasorum aureorum pondo md anno conditae urbis dlxv. at eadem asia donata multo etiam gravius adflixit mores, inutiliorque victoria illa hereditas attalo rege mortuo fuit. tum enim haec emendi romae in auctionibus regiis verecundia exempta est urbis anno dcxxii, mediis lvii annis erudita civitate amare etiam, non solum admirari, opulentiam externam, inmenso et achaicae victoriae momento ad inpellendos mores, quae et ipsa in hoc intervallo anno urbis dcviii parta signa et tabulas pictas invexit. ne quid deesset, pariter quoque luxuria nata est et carthago sublata, ita congruentibus fatis, ut et liberet amplecti vitia et liceret. petiere et dignationem hinc aliqui veterum. c. marius post victoriam cimbricam cantharis potasse liberi patris exemplo traditur, ille arator arpinas et manipularis imperator.

argenti usum in statuas primum Divi Augusti temporum adulatione transisse falso existimatur. iam enim triumpho magni pompei reperimus translatam pharnacis, qui primus regnavit in ponto, argenteam statuam, item mithridatis eupatoris et currus aureos argenteosque. argentum succedit aliquando et auro luxu feminarum plebis compedes sibi facientium, quas induere aureas mos tritior vetet. vidimus et ipsi arellium fuscum motum equestri ordine ob insignem calumniam, cum celebritatem adsectarentur adulescentium scholae, argenteos anulos habentem. et quid haec attinet colligere, cum capuli militum ebore etiam fastidito caelentur argento, vaginae catellis, baltea lamnis crepitent, iam vero paedagogia in transitu

virilitatis custodiantur argento, feminae laventur et nisi argentea solia fastidiant, eademque materia et cibis et probris serviat videret haec fabricius et stratas argento mulierum balineas ita, ut vestigio locus non sit, cum viris lavantium! fabricius, qui bellicos imperatores plus quam pateram et salinum habere ex argento vetabat, videret hinc dona fortium fieri aut in haec frangi! heu mores, fabrici nos pudet!

mirum auro caelando neminem inclaruisse, argento multos. maxime tamen laudatus est mentor, de quo supra diximus. quattuor paria ab eo omnino facta sunt, ac iam nullum extare dicitur ephesiae dianae templi aut capitolini incendiis. Varro se et aereum signum eius habuisse scribit. proximi ab eo in admiratione acragas et boe +thus et mys fuere. exstant omnium opera hodie in insula rhodiorum, boe+thi apud lindiam minervam, acragantis in templo liberi patris in ipsa rhodo centauros bacchasque caelati scyphi, myos in eadem aede silenos et cupidines. acragantis et venatio in scyphis magnam famam habuit. post hos celebratus est calamis, et antipatro qui satyrum in phiala gravatum somno conlocavisse verius quam caelasse dictus est ... , stratonicus mox cyzicenus, Tauriscus. item ariston et eunicus mitylenaei laudantur et hecataeus et circa pompei magni aetatem pasiteles, posidonius ephesius hedys, thracides, qui proelia armatosque caelavit, zopyrus, qui areopagitas et iudicium orestis in duobus scyphis hs [30xii]30 aestimatis. fuit et pytheas, cuius ii unciae #1108 [x] venierunt: ulixes et diomedes erant in phialae emblemate palladium subripientes. fecit idem et cocos magiriscia appellatos parvolis potoriis et e quibus ne exemplaria quidem liceret exprimere; tam opportuna iniuriae subtilitas erat. habuit et teucer crustarius famam, subitoque ars haec ita exolevit, ut sola iam vetustate censeatur usuque attritis caelaturis sic, ne figura discerni possit, auctoritas constet. - (argentum medicatis aquis inficitur atque adflatu salso, sicut in mediterraneis hispaniae.) -

in argenti et auri metallis nascuntur etiamnum pigmenta, sil et caeruleum. sil proprie limus est. optimum ex eo quod atticum vocatur, pretium in pondo libras #1108 ii; proximum marmorosum dimidio attici pretio. tertium genus est pressum, quod alii scyricum vocant, ex insula scyro, iam et ex achaia, quo utuntur ad picturae umbras, pretium in libras hs bini; dupondiis vero detractis quod lucidum vocant, e gallia veniens. hoc autem et attico ad lumina

utuntur, ad abacos non nisi marmoroso, quoniam marmor in eo resistit amaritudini calcis. effoditur et ad xx ab urbe lapidem in montibus; postea uritur pressum appellantibus qui adulterant. sed esse falsum exustumque, amaritudine apparet et quoniam resolutum in pulverem est. sile pingere instituere primi polygnotus et micon, attico dumtaxat. secuta aetas hoc ad lumina usa est, ad umbras autem scyrico et lydio. lydium sardibus emebatur, quod nunc omittunt.

caeruleum harena est. huius genera tria fuere antiquitus: aegyptium maxime probatur; scythicum mox diluitur facile et, cum teritur, in quattuor colores mutatur, candidiorem nigrioremve et crassiorem tenuioremve; praefertur huic etiamnum cyprium. accessit his puteolanum et hispaniense, harena ibi confici coepta. tinguitur autem omne et in sua coquitur herba bibitque sucum. reliqua confectura eadem quae chrysocollae.

ex caeruleo fit quod vocatur lomentum, perficitur id lavando terendoque. hoc est caeruleo candidius. pretia eius #1108 x in libras, caerulei #1108 viii. usus in creta; calcis inpatiens. nuper accessit et vestorianum, ab auctore appellatum. fit ex aegyptii levissima parte; pretium eius in libras #1108 i. idem et puteolani usus, praeterque ad fenestras; cylon vocant. - non pridem adportari et indicum coeptum est, cuius pretium #1108 vii. ratio in pictura ad incisuras, hoc est umbras dividendas ab lumine. - est et vilissimum genus lomenti, quod tritum vocant, quinis assibus aestimatum.

caerulei sinceri experimentum in carbone ut flagret; fraus viola arida decocta in aqua sucoque per linteum expresso in cretam eretriam. vis in medicina ut purget ulcera; itaque et emplastris adiciunt, item causticis. teritur autem difficillime. - sil in medendo leniter mordet adstringitque et explet ulcera. uritur in fictilibus, ut prosit.

pretia rerum, quae usquam posuimus, non ignoramus alia aliis locis esse et omnibus paene mutari annis, prout navigatione constiterint aut ut quisque mercatus sit aut aliquis praevalens manceps annonam flagellet, non obliti demetrium a tota seplasia neronis principatu accusatum apud consules; poni tamen necessarium fuit quae plerumque erant romae, ut exprimeretur auctoritas rerum.

proxime dicantur aeris metalla, cui et in usu proximum est pretium, immo vero ante argentum ac paene etiam ante aurum corinthio, stipis quoque auctoritas, ut diximus. hinc aera militum, tribuni aerarii et aerarium, obaerati, aere diruti. docuimus quamdiu populus romanus aere tantum signato usus esset: et alia re vetustas aequalem urbi auctoritatem eius declarat, a rege numa collegio tertio aerarium fabrum instituto.

vena quo dictum est modo foditur ignique perficitur. fit et e lapide aeroso, quem vocant cadmean, celebri trans maria et quondam in campania, nunc et in bergomatium agro extrema parte italiae; ferunt nuper etiam in germania provincia repertum. fit et ex alio lapide, quem chalcitim appellant in cypro, ubi prima aeris inventio, mox vilitas praecipua reperto in aliis terris praestantiore maximeque aurichalco, quod praecipuam bonitatem admirationemque diu optinuit nec reperitur longo iam tempore effeta tellure. proximum bonitate fuit sallustianum in ceutronum alpino tractu, non longi et ipsum aevi, successitque ei livianum in gallia. utrumque a metallorum dominis appellatum, illud ab amico Divi Augusti, hoc a coniuge. velocis defectus livianum quoque; certe admodum exiguum invenitur. summa gloriae nunc in marianum conversa, quod et cordubense dicitur. hoc a liviano cadmean maxime sorbet et aurichalci bonitatem imitatur in sestertiis dupondiariisque, cyprio suo assibus contentis. et hactenus nobilitas in aere naturalis se habet.

reliqua genera cura constant, quae suis locis reddentur, summa claritate ante omnia indicata. quondam aes confusum auro argentoque miscebatur, et tamen ars pretiosior erat; nunc incertum est, peior haec sit an materia, mirumque, cum ad infinitum operum pretia creverint, auctoritas artis extincta est. quaestus enim causa, ut omnia, exerceri coepta est quae gloriae solebat - ideo etiam deorum adscripta operi, cum proceres gentium claritatem et hac via quaererent - , adeoque exolevit fundendi aeris pretiosi ratio, ut iam diu ne fortuna quidem in ea re ius artis habeat.

ex illa autem antiqua gloria corinthium maxime laudatur. hoc casus miscuit corintho, cum caperetur, incensa, mireque circa id

multorum adfectatio furit, quippe cum tradatur non alia de causa verrem, quem m. cicero damnaverat, proscriptum cum eo ab antonio, quoniam corinthiis cessurum se ei negavisset. ac mihi maior pars eorum simulare eam scientiam videtur ad segregandos sese a ceteris magis quam intellegere aliquid ibi suptilius; et hoc paucis docebo. corinthus capta est olympiadis clviii anno tertio, nostrae urbis dcviii, cum ante haec saecula fictores nobiles esse desissent, quorum isti omnia signa hodie corinthia appellant. quapropter ad coarguendos eos ponemus artificum aetates; nam urbis nostrae annos ex supra dicta comparatione olympiadum colligere facile erit. sunt ergo vasa tantum corinthia, quae isti elegantiores modo ad esculenta transferunt, modo in lucernas aut trulleos nullo munditiarum dispectu. eius tria genera: candidum argento nitore quam proxime accedens, in quo illa mixtura praevaluit; alterum, in quo auri fulva natura; tertium, in quo aequalis omnium temperies fuit. praeter haec est cuius ratio non potest reddi, quamquam hominis manu est; at fortuna temperatur in simulacris signisque illud suo colore pretiosum ad iocineris imaginem vergens, quod ideo hepatizon appellant, procul a corinthio, longe tamen ante aegineticum atque deliacum, quae diu optinuere principatum.

antiquissima aeris gloria deliaco fuit, mercatus in delo celebrante toto orbe, et ideo cura officinis. tricliniorum pedibus fulcrisque ibi prima aeris nobilitas, pervenit deinde et ad deum simulacra effigiemque hominum et aliorum animalium.

proxima laus aeginetico fuit, insula et ipsa eo, nec quod ibi gigneretur, sed officinarum temperatura, nobilitata. bos aereus inde captus in foro boario est romae. hoc erit exemplar aeginetici aeris, deliaci autem iuppiter in capitolio in iovis tonantis aede. illo aere Myron usus est, hoc polycletus, aequales atque condiscipuli; sic aemulatio et in materia fuit.

privatim aegina candelabrorum superficiem dumtaxat elaboravit, sicut tarentum scapos. in iis ergo iuncta commendatio officinarum est. nec pudet tribunorum militarium salariis emere, cum ipsum nomen a candelarum lumine inpositum appareat. accessio candelabri talis fuit theonis iussu praeconis clesippus fullo gibber et praeterea et alio foedus aspectu, emente id gegania hs [l]. eadem ostentante in convivio empta ludibrii causa nudatus atque inpudentia libidinis

receptus in torum, mox in testamentum, praedives numinum vice illud candelabrum coluit et hanc corinthiis fabulam adiecit, vindicatis tamen moribus nobili sepulchro, per quod aeterna supra terras geganiae dedecoris memoria duraret. sed cum esse nulla corinthia candelabra constet, nomen id praecipue in his celebratur, quoniam mummi victoria corinthum quidem diruit, sed e compluribus achaiae oppidis simul aera dispersit.

prisci limina etiam ac valvas in templis ex aere factitavere. invenio et a cn. octavio, qui de perseo rege navalem triumphum egit, factam porticum duplicem ad circum flaminium, quae corinthia sit appellata a capitulis aereis columnarum, vestae quoque aedem ipsam syracusana superficie tegi placuisse. syracusana sunt in pantheo capita columnarum a m. agrippa posita. quin etiam privata opulentia eo modo usurpata est. camillo inter crimina obiecit spurius carvilius quaestor, ostia quod aerata haberet in domo. nam triclinia aerata abacosque et monopodia cn. manlium asia devicta primum invexisse triumpho suo, quem duxit anno urbis dlxvii, l. piso auctor est, antias quidem heredes L. Crassi oratoris multa etiam triclinia aerata vendidisse. ex aere factitavere et cortinas tripodum, nomine et delphicas, quoniam donis maxime apollini delphico dicabantur. placuere et lychnuchi pensiles in delubris aut arborum mala ferentium modo lucentes, quale est in templo apollinis palatini quod alexander magnus thebarum expugnatione captum in cyme dicaverat eidem deo.

transiit deinde ars vulgo ubique ad effigies deorum. romae simulacrum ex aere factum cereri primum reperio ex peculio sp. cassi, quem regnum adfectantem pater ipsius interemerit. transiit et a diis ad hominum statuas atque imagines multis modis. bitumine antiqui tinguebant eas, quo magis mirum est placuisse auro integere. hoc nescio an romanum fuerit inventum; certe etiam nomen non habet vetustum. effigies hominum non solebant exprimi nisi aliqua inlustri causa perpetuitatem merentium, primo sacrorum certaminum victoria maximeque olympiae, ubi omnium, qui vicissent, statuas dicari mos erat, eorum vero, qui ter ibi superavissent, ex membris ipsorum similitudine expressa, quas iconicas vocant. athenienses nescio an primis omnium harmodio et aristogitoni tyrannicidis publice posuerint statuas. hoc actum est eodem anno, quo et romae

reges pulsi. excepta deinde res est a toto orbe terrarum humanissima ambitione, et in omnium municipiorum foris statuae ornamentum esse coepere propagarique memoria hominum et honores legendi aevo basibus inscribi, ne in sepulcris tantum legerentur. mox forum et in domibus privatis factum atque in atriis: honos clientium instituit sic colere patronos.

togatae effigies antiquitus ita dicabantur. placuere et nudae tenentes hastam ab epheborum e gymnasiis exemplaribus; quas achilleas vocant. graeca res nihil velare, at contra romana ac militaris thoraces addere. caesar quidem dictator loricatam sibi dicari in foro suo passus est. nam lupercorum habitu tam noviciae sunt quam quae nuper prodiere paenulis indutae. mancinus eo habitu sibi statuit, quo deditus fuerat. notatum ab auctoribus et l. accium poetam in camenarum aede maxima forma statuam sibi posuisse, cum brevis admodum fuisset. equestres utique statuae romanam celebrationem habent, orto sine dubio a graecis exemplo. sed illi celetas tantum dicabant in sacris victores, postea vero et qui bigis vel quadrigis vicissent; unde et nostri currus nati in iis, qui triumphavissent. serum hoc, et in iis non nisi a Divo Augusto seiuges, sicut elephanti.

non vetus et bigarum celebratio in iis, qui praetura functi curru vecti essent per circum; antiquior columnarum, sicuti c. maenio, qui devicerat priscos latinos, quibus ex foedere tertias praedae populus romanus praestabat, eodemque in consulatu in suggestu rostra devictis antiatibus fixerat anno urbis ccccxvi, item c. duillio, qui primus navalem triumphum egit de poenis, quae est etiam nunc in foro, item l. minucio praefecto annonae extra portam trigeminam unciaria stipe conlata - nescio an primo honore tali a populo, antea enim a senatu erat - , praeclara res, ni frivolis coepisset initiis. namque et atti navi statua fuit ante curiam - basis eius conflagravit curia incensa p. clodii funere - ; fuit et hermodori ephesii in comitio, legum, quas decemviri scribebant, interpretis, publice dicata. alia causa, alia auctoritas m. horati coclitis statuae - quae durat hodieque - , cum hostes a ponte sublicio solus arcuisset. equidem et sibyllae iuxta rostra esse non miror, tres sint licet: una quam sextus pacuius taurus aed. pl. restituit; duae quas m. messalla. primas putarem has et atti navi, positas aetate tarquinii prisci, ni regum antecedentium essent in capitolio, ex iis romuli et tatii sine tunica, sicut et camilli in

rostris. et ante aedem castorum fuit q. marci tremuli equestris togata, qui samnites bis devicerat captaque anagnia populum stipendio liberaverat. inter antiquissimas sunt et tulli cloeli, l. rosci, sp. nauti, c. fulcini in rostris, a fidenatibus in legatione interfectorum. hoc a re p. tribui solebat iniuria caesis, sicut aliis et p. iunio, ti. coruncanio, qui ab teuta illyriorum regina interfecti erant. non omittendum videtur, quod annales adnotavere, tripedaneas iis statuas in foro statutas; haec videlicet mensura honorata tunc erat. non praeteribo et cn. octavium ob unum sc. verbum. hic regem antiochum daturum se responsum dicentem virga, quam tenebat forte, circumscripsit priusque, quam egrederetur circulo illo, responsum dare coegit. in qua legatione interfecto senatus statuam poni iussit "quam oculatissimo loco," eaque est in rostris. invenitur statua decreta et taraciae gaiae sive fufetiae virgini vestali, "ut poneretur ubi vellet," quod adiectum non minus honoris habet quam feminae esse decretam. meritum eius ipsis ponam annalium verbis: "quod campum tiberinum gratificata esset ea populo." invenio et pythagorae et Alcibiadi in cornibus comitii positas, cum bello samniti apollo pythius iussisset fortissimo graiae gentis et alteri sapientissimo simulacra celebri loco dicari. eae stetere, donec sulla dictator ibi curiam faceret. mirumque est, illos patres socrati cunctis ab eodem deo sapientia praelato pythagoran praetulisse aut tot aliis virtute Alcibiaden et quemquam utroque themistocli.

columnarum ratio erat attolli super ceteros mortales, quod et arcus significant novicio invento. primus tamen honos coepit a graecis, nullique arbitror plures statuas dicatas quam phalereo demetrio athenis, siquidem ccclx statuere, nondum anno hunc numerum dierum excedente, quas mox laceravere. statuerunt et romae in omnibus vicis tribus mario gratidiano, ut diximus, easdemque subvertere sullae introitu.

pedestres sine dubio romae fuere in auctoritate longo tempore; et equestrium tamen origo perquam vetus est, cum feminis etiam honore communicato cloeliae statua equestri, ceu parum esset toga eam cingi, cum lucretiae ac Bruto, qui expulerant reges, propter quos cloelia inter obsides fuerat, non decernerentur. hanc primam cum coclitis publice dicatam crediderim - atto enim ac sibyllae tarquinium, ac reges sibi ipsos posuisse verisimile est - , nisi cloeliae

quoque piso traderet ab iis positam, qui una opsides fuissent, redditis a porsina in honorem eius. e diverso annius fetialis equestrem, quae fuerit contra iovis statoris aedem in vestibulo superbi domus, valeriae fuisse, publicolae consulis filiae, eamque solam refugisse tiberimque transnatavisse ceteris opsidibus, qui porsinae mittebantur, interemptis tarquinii insidiis.

l. piso prodidit m. aemilio c. popilio iterum cos. a censoribus p. cornelio scipione m. popilio statuas circa forum eorum, qui magistratum gesserant, sublatas omnes praeter eas, quae populi aut senatus sententia statutae essent, eam vero, quam apud aedem telluris statuisset sibi sp. cassius, qui regnum adfectaverat, etiam conflatam a censoribus. nimirum in ea quoque re ambitionem providebant illi viri. exstant catonis in censura vociferationes mulieribus statuas romanis in provinciis poni; nec tamen potuit inhibere, quo minus romae quoque ponerentur, sicuti corneliae gracchorum matri, quae fuit africani prioris filia. sedens huic posita soleisque sine ammento insignis in metelli publica porticu, quae statua nunc est in octaviae operibus. - publice autem ab exteris posita est romae c. aelio tr. pl. lege perlata in sthennium stallium lucanum, qui thurinos bis infestaverat. ob id aelium thurini statua et corona aurea donarunt. iidem postea fabricium donavere statua liberati obsidione, passimque gentes in clientelas ita receptae, et adeo discrimen omne sublatum, ut Hannibalis etiam statuae tribus locis visantur in ea urbe, cuius intra muros solus hostium emisit hastam.

fuisse autem statuariam artem familiarem italiae quoque et vetustam, indicant hercules ab euandro sacratus, ut produnt, in foro boario, qui triumphalis vocatur atque per triumphos vestitur habitu triumphali, praeterea ianus geminus a numa rege dicatus, qui pacis bellique argumento colitur digitis ita figuratis, ut ccclxv dierum nota aut per significationem anni temporis et aevi esse deum indicent. signa quoque tuscanica per terras dispersa quin in etruria factitata sint, non est dubium. deorum tantum putarem ea fuisse, ni metrodorus scepsius, cui cognomen a romani nominis odio inditum est, propter mm statuarum volsinios expugnatos obiceret. mirumque mihi videtur, cum statuarum origo tam vetus italiae sit, lignea potius aut fictilia deorum simulacra in delubris dicata usque ad devictam asiam, unde luxuria.

similitudines exprimendi quae prima fuerit origo, in ea, quam plasticen graeci vocant, dici convenientius erit; etenim prior quam statuaria fuit. sed haec ad infinitum effloruit, multorum voluminum opere, si quis plura persequi velit; omnia enim quis possit M. Scauri aedilitate signorum mmm in scaena tantum fuere temporario theatro. mummius achaia devicta replevit urbem, non relicturus filiae dotem; cur enim non cum excusatione ponatur multa et luculli invexere. rhodi etiamnum [iii] signorum esse mucianus ter cos. prodidit, nec pauciora athenis, olympiae, delphis superesse creduntur. quis ista mortalium persequi possit aut quis usus noscendi intellegatur insignia maxime et aliqua de causa notata voluptarium sit attigisse artificesque celebratos nominavisse, singulorum quoque inexplicabili multitudine, cum lysippus md opera fecisse prodatur, tantae omnia artis, ut claritatem possent dare vel singula: numerum apparuisse defuncto eo, cum thesaurum effregisset heres; solitum enim ex manipretio cuiusque signi denarios seponere aureos singulos.

evecta supra humanam fidem ars est successu, mox et audacia. in argumentum successus unum exemplum adferam, nec deorum hominumve similitudinis expressae. aetas nostra vidit in capitolio, priusquam id novissime conflagraret a vitellianis incensum, in cella iunonis canem ex aere volnus suum lambentem, cuius eximium miraculum et indiscreta veri similitudo non eo solum intellegitur, quod ibi dicata fuerat, verum et satisdatione; nam quoniam summa nulla par videbatur, capite tutelarios cavere pro ea institutum publice fuit. audaciae innumera sunt exempla. moles quippe excogitatas videmus statuarum, quas colossaeas vocant, turribus pares. talis est in capitolio apollo, tralatus a m. lucullo ex apollonia ponti urbe, xxx cubitorum, d talentis factus; talis in campo martio iuppiter, a claudio caesare dicatus, qui devoratur pompeiani theatri vicinitate; talis et tarenti factus a lysippo, xl cubitorum. mirum in eo quod manu, ut ferunt, mobilis ea ratio libramenti est, ut nullis convellatur procellis. id quidem providisse et artifex dicitur modico intervallo, unde maxime flatum opus erat frangi, opposita columna. itaque magnitudinem propter difficultatemque moliendi non attigit eum fabius verrucosus, cum herculem, qui est in capitolio, inde transferret. ante omnes autem in admiratione fuit solis colossus rhodi, quem fecerat chares lindius, lysippi supra dicti discipulus. lxx

cubitorum altitudinis fuit hoc simulacrum, post lxvi annum terrae motu prostratum, sed iacens quoque miraculo est. pauci pollicem eius amplectuntur, maiores sunt digiti quam pleraeque statuae. vasti specus hiant defractis membris; spectantur intus magnae molis saxa, quorum pondere stabiliverat eum constituens. duodecim annis tradunt effectum ccc talentis, quae contigerant ex apparatu regis demetrii relicto morae taedio obsessa rhodo. sunt alii centum numero in eadem urbe colossi minores hoc, sed ubicumque singuli fuissent, nobilitaturi locum, praeterque hos deorum quinque, quos fecit Bryaxis.

factitavit colossos et italia. videmus certe tuscanicum apollinem in bibliotheca templi Augusti quinquaginta pedum a pollice, dubium aere mirabiliorem an pulchritudine. fecit et sp. carvilius iovem, qui est in capitolio, victis samnitibus sacrata lege pugnantibus e pectoralibus eorum ocreisque et galeis. amplitudo tanta est, ut conspiciatur a latiari iove. e reliquiis limae suam statuam fecit, quae est ante pedes simulacri eius. habent in eodem capitolio admirationem et capita duo, quae p. lentulus cos. dicavit, alterum a charete supra dicto factum, alterum fecit ... dicus comparatione in tantum victus, ut artificum minime probabilis videatur. verum omnem amplitudinem statuarum eius generis vicit aetate nostra zenodorus mercurio facto in civitate galliae arvernis per annos decem, hs [30cccc]30 manipretii, postquam satis artem ibi adprobaverat, romam accitus a nerone, ubi destinatum illius principis simulacro colossum fecit cxixs pedum in longitudinem, qui dicatus soli venerationi est damnatis sceleribus illius principis. mirabamur in officina non modo ex argilla similitudinem insignem, verum et de parvis admodum surculis quod primum operis instaurati fuit. ea statua indicavit interisse fundendi aeris scientiam, cum et nero largiri aurum argentumque paratus esset et zenodorus scientia fingendi caelandique nulli veterum postponeretur. statuam arvernorum cum faceret provinciae dubio avito praesidente, duo pocula calamidis manu caelata, quae cassio salano avunculo eius, praeceptori suo, germanicus caesar adamata donaverat, aemulatus est, ut vix ulla differentia esset artis. quanto maior zenodoro praestantia fuit, tanto magis deprehenditur aeris obliteratio.

signis, quae vocant corinthia, plerique in tantum capiuntur, ut

secum circumferant, sicut hortensius orator sphingem verri reo ablatam, propter quam cicero illo iudicio in altercatione neganti ei, aenigmata se intellegere, respondit debere, quoniam sphingem domi haberet. circumtulit et nero princeps amazonem, de qua dicemus, et paulo ante c. cestius consularis signum, quod secum etiam in proelio habuit. alexandri quoque magni tabernaculum sustinere traduntur solitae statuae, ex quibus duae ante martis ultoris aedem dicatae sunt, totidem ante regiam.

minoribus simulacris signisque innumera prope artificum multitudo nobilitata est, ante omnes tamen Phidias atheniensis iove olympio facto ex ebore quidem et auro, sed et ex aere signa fecit. floruit autem olympiade lxxxiii, circiter ccc urbis nostrae annum, quo eodem tempore aemuli eius fuere Alcamenes, critias, nesiotes, hegias, et deinde olympiade lxxxvii hagelades, callon, gorgias lacon; rursus lxxxx polyclitus, phradmon, Myron, pythagoras, Scopas, perellus. ex iis polyclitus discipulos habuit argium, asopodorum, alexim, aristidem, phrynonem, dinonem, Athenodorum, demean clitorium, Myron lycium. lxxxxv olympiade floruere naucydes, dinomenes, canachus, patroclus; cii polycles, Cephisodotus, leuchares, hypatodorus; ciiii Praxiteles, euphranor; cvii aetion, therimachus. cxiii lysippus fuit, cum et alexander magnus, item lysistratus frater eius, sthennis, euphron, eucles, sostratus, ion, silanion - in hoc mirabile quod nullo doctore nobilis fuit; ipse discipulum habuit zeuxiaden; cxxi Eutychides, euthycrates, laippus, cephisodotus, timarchus, pyromachus. cessavit deinde ars ac rursus olympiade clvi revixit, cum fuere longe quidem infra praedictos, probati tamen, antaeus, callistratus, polycles athenaeus, callixenus, pythocles, pythias, timocles.

ita distinctis celeberrimorum aetatibus insignes raptim transcurram, reliqua multitudine passim dispersa. venere autem et in certamen laudatissimi, quamquam diversis aetatibus geniti, quoniam fecerant amazonas, quae cum in templo dianae ephesiae dicarentur, placuit eligi probatissimam ipsorum artificum, qui praesentes erant, iudicio, cum apparuit eam esse, quam omnes secundam a sua quisque iudicassent. haec est polycliti, proxima ab ea Phidiae, tertia cresilae, quarta cydonis, quinta phradmonis.

Phidias praeter iovem olympium, quem nemo aemulatur, fecit ex

ebore aeque minervam athenis, quae est in parthenone stans, ex aere vero praeter amazonem supra dictam minervam tam eximiae pulchritudinis, ut formae cognomen acceperit. fecit et cliduchum et aliam minervam, quam romae paulus aemilius ad aedem fortunae huiusce diei dicavit, item duo signa, quae catulus in eadem aede, palliata et alterum colossicon nudum, primusque artem toreuticen aperuisse atque demonstrasse merito iudicatur.

polyclitus sicyonius, hageladae discipulus, diadumenum fecit molliter iuvenem, centum talentis nobilitatum, idem et doryphorum viriliter puerum. fecit et quem canona artifices vocant liniamenta artis ex eo petentes veluti a lege quadam, solusque hominum artem ipsam fecisse artis opere iudicatur. fecit et destringentem se et nudum telo incessentem duosque pueros item nudos, talis ludentes, qui vocantur astragalizontes et sunt in titi imperatoris atrio - hoc opere nullum absolutius plerique iudicant - ; item mercurium, qui fuit lysimacheae, herculem, qui romae, hagetera arma sumentem, artemona, qui periphoretos appellatus est. hic consummasse hanc scientiam iudicatur et toreuticen sic erudisse, ut Phidias aperuisse. proprium eius est, uno crure ut insisterent signa, excogitasse, quadrata tamen esse ea ait Varro et paene ad exemplum.

Myronem eleutheris natum, hageladae et ipsum discipulum, bucula maxime nobilitavit celebratis versibus laudata, quando alieno plerique ingenio magis quam suo commendantur. fecit et canem et discobolon et perseum et pristas et satyrum admirantem tibias et minervam, delphicos pentathlos, pancratiastas, herculem, qui est apud circum maximum in aede pompei magni. fecisse et cicadae monumentum ac locustae carminibus suis erinna significat. fecit et apollinem, quem ab triumviro antonio sublatum restituit ephesiis Divus Augustus admonitus in quiete. primus hic multiplicasse veritatem videtur, numerosior in arte quam polyclitus et in symmetria diligentior, et ipse tamen corporum tenus curiosus animi sensus non expressisse, capillum quoque et pubem non emendatius fecisse, quam rudis antiquitas instituisset.

vicit eum pythagoras reginus ex italia pancratiaste delphis posito; eodem vicit et leontiscum. fecit et stadiodromon astylon, qui olympiae ostenditur, et libyn, puerum tenentem tabellam eodem loco et mala ferentem nudum, syracusis autem claudicantem, cuius ulceris

dolorem sentire etiam spectantes videntur, item apollinem serpentemque eius sagittis configi, citharoedum, qui dicaeus appellatus est, quod, cum thebae ab alexandro caperentur, aurum a fugiente conditum sinu eius celatum esset. hic primus nervos et venas expressit capillumque diligentius. - fuit et alius pythagoras samius, initio pictor, cuius signa ad aedem fortunae huiusce diei septem nuda et senis unum laudata sunt. hic supra dicto facie quoque indiscreta similis fuisse traditur, regini autem discipulus et filius sororis fuisse sostratus.

lysippum sicyonium duris negat ullius fuisse discipulum, sed primo aerarium fabrum audendi rationem cepisse pictoris eupompi responso. eum enim interrogatum, quem sequeretur antecedentium, dixisse monstrata hominum multitudine, naturam ipsam imitandam esse, non artificem. plurima ex omnibus signa fecit, ut diximus, fecundissimae artis, inter quae destringentem se, quem m. agrippa ante thermas suas dicavit, mire gratum tiberio principi. non quivit temperare sibi in eo, quamquam imperiosus sui inter initia principatus, transtulitque in cubiculum alio signo substituto, cum quidem tanta pop. r. contumacia fuit, ut theatri clamoribus reponi apoxyomenon flagitaverit princepsque, quamquam adamatum, reposuerit. nobilitatur lysippus et temulenta tibicina et canibus ac venatione, in primis vero quadriga cum sole rhodiorum. fecit et alexandrum magnum multis operibus, a pueritia eius orsus, quam statuam inaurari iussit nero princeps delectatus admodum illa; dein, cum pretio perisset gratia artis, detractum est aurum, pretiosiorque talis existimabatur etiam cicatricibus operis atque concisuris, in quibus aurum haeserat, remanentibus. idem fecit hephaestionem, alexandri magni amicum, quem quidam polyclito adscribunt, cum is centum prope annis ante fuerit; item alexandri venationem, quae delphis sacrata est, athenis satyrum, turmam alexandri, in qua amicorum eius imagines summa omnium similitudine expressit; hanc metellus macedonia subacta transtulit romam. fecit et quadrigas multorum generum. statuariae arti plurimum traditur contulisse capillum exprimendo, capita minora faciendo quam antiqui, corpora graciliora siccioraque, per quae proceritas signorum maior videretur. non habet latinum nomen symmetria, quam diligentissime custodiit nova intactaque ratione quadratas veterum staturas permutando,

vulgoque dicebat ab illis factos quales essent homines, a se quales viderentur esse. propriae huius videntur esse argutiae operum custoditae in minimis quoque rebus.

filios et discipulos reliquit laudatos artifices laippum, boe+dan, sed ante omnes euthycraten. quamquam is constantiam potius imitatus patris quam elegantiam austero maluit genere quam iucundo placere. itaque optume expressit herculem delphis et alexandrum thespiis venatorem et proelium equestre, simulacrum ipsum trophoni ad oraculum, quadrigas complures, equum cum fiscinis, canes venantium. — huius porro discipulus fuit tisicrates, et ipse sicyonius, sed lysippi sectae propior, ut vix discernantur complura signa, ceu senex thebanus et demetrius rex, peucestes, alexandri magni servator, dignus tanta gloria.

artifices, qui compositis voluminibus condidere haec, miris laudibus celebrant telephanen phocaeum, ignotum alias, quoniam ... thessaliae habitaverit et ibi opera eius latuerint; alioqui suffragiis ipsorum aequatur polyclito, Myroni, pythagorae. laudant eius larisam et spintharum pentathlum et apollinem. alii non hanc ignobilitatis fuisse causam, sed quod se regum xerxis atque darei officinis dediderit, existimant.

Praxiteles quoque, qui marmore felicior, ideo et clarior fuit, fecit tamen et ex aere pulcherrima opera: proserpinae raptum, item catagusam et liberum patrem, ebrietatem nobilemque una satyrum, quem graeci periboe+ton cognominant, et signa, quae ante felicitatis aedem fuere, veneremque, quae ipsa aedis incendio cremata est claudii principatu, marmoreae illi suae per terras inclutae parem, item stephanusam, pseliumenen, oporan, harmodium et aristogitonem tyrannicidas, quos a xerxe persarum rege captos victa perside atheniensibus remisit magnus alexander. fecit et puberem apollinem subrepenti lacertae comminus sagitta insidiantem, quem sauroctonon vocant. spectantur et duo signa eius diversos adfectus exprimentia, flentis matronae et meretricis gaudentis. hanc putant phrynen fuisse deprehenduntque in ea amorem artificis et mercedem in vultu meretricis. habet simulacrum et benignitas eius; calamidis enim quadrigae aurigam suum inposuit, ne melior in equorum effigie defecisse in homine crederetur. ipse calamis et alias quadrigas bigasque fecit equis semper sine aemulo expressis; sed, ne videatur

in hominum effigie inferior, alcumena nullius est nobilior.

Alcamenes, Phidiae discipulus, et marmorea fecit, sed aereum pentathlum, qui vocatur encrinomenos; at polycliti discipulus aristides quadrigas bigasque. amphicrates leaena laudatur. scortum haec, lyrae cantu familiaris harmodio et aristogitoni. consilia eorum de tyrannicidio usque in mortem excruciata a tyrannis non prodidit; quam ob rem athenienses, et honorem habere ei volentes nec tamen scortum celebrasse, animal nominis eius fecere atque, ut intellegeretur causa honoris, in opere linguam addi ab artifice vetuerunt. Bryaxis aesculapium et seleucum fecit, boe+das adorantem, baton apollinem et iunonem, qui sunt romae in concordiae templo, cresilas volneratum deficientem, in quo possit intellegi quantum restet animae, et olympium periclen dignum cognomine, mirumque in hac arte est quod nobiles viros nobiliores fecit. cephisodorus minervam mirabilem in portu atheniensium et aram ad templum iovis servatoris in eodem portu, cui pauca comparantur, canachus apollinem nudum, qui philesius cognominatur, in didymaeo aeginetica aeris temperatura, cervumque una ita vestigiis suspendit, ut linum subter pedes trahatur alterno morsu calce digitisque retinentibus solum, ita vertebrato dente utrisque in partibus, ut a repulsu per vices resiliat. idem et celetizontas pueros, chaereas alexandrum magnum et philippum patrem eius fecit, ctesilaus doryphoron et amazonem volneratam, demetrius lysimachen, quae sacerdos minervae fuit lxiiii annis, idem et minervam, quae myctica appellatur - dracones in gorgone eius ad ictus citharae tinnitu resonant - ; idem equitem simonem, qui primus de equitatu scripsit. daedalus, et ipse inter fictores laudatus, pueros duos destringentes se fecit, dinomenes protesilaum et pythodemum luctatorem. - euphranoris alexander paris est, in quo laudatur quod omnia simul intellegantur, iudex dearum, amator helenae et tamen achillis interfector. huius est minerva, romae quae dicitur catuliana, infra capitolium a q. lutatio dicata, et simulacrum boni eventus, dextra pateram, sinistra spicam ac papavera tenens, item latona puerpera apollinem et dianam infantes sustinens in aede concordiae. fecit et quadrigas bigasque et cliticon eximia forma et virtutem et graeciam, utrasque colossaeas, mulierem admirantem et adorantem, item alexandrum et philippum in quadrigis; Eutychides eurotam, in

quo artem ipso amne liquidiorem plurimi dixere. - hegiae minerva pyrrhusque rex laudatur et celetizontes pueri et castor ac pollux ante aedem iovis tonantis, hagesiae in pario colonia hercules, isidoti buthytes. lycius Myronis discipulus fuit, qui fecit dignum praeceptore puerum sufflantem languidos ignes et argonautas; Leochares aquilam sentientem, quid rapiat in ganymede et cui ferat, parcentemque unguibus etiam per vestem puero, autolycum pancratii victorem, propter quem xenophon symposium scripsit, iovemque illum tonantem in capitolio ante cuncta laudabilem, item apollinem diadematum, lyciscum mangonem, puerum subdolae ac fucatae vernilitatis, lycius et ipse puerum suffitorem. - menaechmi vitulus genu premitur replicata cervice. ipse menaechmus scripsit de sua arte. - naucydes mercurio et discobolo et immolante arietem censetur, naucerus luctatore anhelante, niceratus aesculapio et hygia, qui sunt in concordiae templo romae. pyromachi quadriga ab Alcibiade regitur. polycles hermaphroditum nobilem fecit, pyrrhus hygiam et minervam, phanis, lysippi discipulus, epithyusan. - styppax cyprius uno celebratur signo, splanchnopte; periclis olympii vernula hic fuit exta torrens ignemque oris pleni spiritu accendens. silanion apollodorum fudit, fictorem et ipsum, sed inter cunctos diligentissimum artis et iniquum sui iudicem, crebro perfecta signa frangentem, dum satiari cupiditate artis non quit, ideoque insanum cognominatum - hoc in eo expressit, nec hominem ex aere fecit, sed iracundiam - et achillem nobilem, item epistaten exercentem athletas; strongylion amazonem, quam ab excellentia crurum eucnemon appellant, ob id in comitatu neronis principis circumlatam. idem fecit puerum, quem amando Brutus philippiensis cognomine suo inlustravit. - theodorus, qui labyrinthum fecit sami, ipse se ex aere fudit. praeter similitudinis mirabilem famam magna suptilitate celebratur: dextra limam tenet, laeva tribus digitis quadrigulam tenuit, tralatam praeneste parvitatis ut miraculum: pictam eam currumque et aurigam integeret alis simul facta musca. - xenocrates, tisicratis discipulus, ut alii, euthycratis, vicit utrosque copia signorum. et de sua arte composuit volumina.

plures artifices fecere attali et eumenis adversus gallos proelia, isigonus, pyromachus, stratonicus, antigonus, qui volumina condidit de sua arte. boe+thi, quamquam argento melioris, infans eximium

anserem strangulat. atque ex omnibus, quae rettuli, clarissima quaeque in urbe iam sunt dicata a vespasiano principe in templo pacis aliisque eius operibus, violentia neronis in urbem convecta et in sellariis domus aureae disposita.

praeterea sunt aequalitate celebrati artifices, sed nullis operum suorum praecipui: ariston, qui et argentum caelare solitus est, callides, ctesias, cantharus sicyonius, diodorus, critiae discipulus, deliades, euphorion, eunicus et hecataeus, argenti caelatores, lesbocles, prodorus, pythodicus, polygnotus, idem pictor e nobilissimis, item e caelatoribus stratonicus, scymnus critiae discipulus.

nunc percensebo eos, qui eiusdem generis opera fecerunt, ut apollodorus, androbulus, Asclepiodorus, aleuas philosophos, apellas et adornantes se feminas, antignotus et perixyomenum tyrannicidasque supra dictos, antimachus, Athenodorus feminas nobiles, aristodemus et luctatores bigasque cum auriga, philosophos, anus, seleucum regem. habet gratiam suam huius quoque doryphorus. Cephisodoti duo fuere: prioris est mercurius liberum patrem in infantia nutriens; fecit et contionantem manu elata - persona in incerto est - ; sequens philosophos fecit. colotes, qui cum Phidia iovem olympium fecerat, philosophos, item cleon et cenchramis et callicles et cepis, chalcosthenes et comoedos et athletas, daippus perixyomenon, daiphron et damocritus et daemon philosophos. - epigonus omnia fere praedicta imitatus praecessit in tubicine et matri interfectae infante miserabiliter blandiente. eubuli mulier admirans laudatur, eubulidis digitis computans. - micon athletis spectatur, menogenes quadrigis. - nec minus niceratus omnia, quae ceteri, adgressus repraesentavit Alcibiaden lampadumque accensu matrem eius demaraten sacrificantem. - tisicratis bigae piston mulierem inposuit, idem fecit martem et mercurium, qui sunt in concordiae templo romae. perillum nemo laudet saeviorem phalaride tyranno, cui taurum fecit mugitus inclusi hominis pollicitus igni subdito et primus expertus cruciatum eum iustiore saevitia. huc a simulacris deorum hominumque devocaverat humanissimam artem. ideo tot conditores eius laboraverant, ut ex ea tormenta fierent! itaque una de causa servantur opera eius, ut quisquis illa videat, oderit manus. - sthennis cererem, iovem, minervam fecit, qui sunt romae in

concordiae templo, idem flentes matronas et adorantes sacrificantesque. simon canem et sagittarium fecit, stratonicus caelator ille philosophos, copas uterque; athletas autem et armatos et venatores sacrificantesque baton, euchir, glaucides, heliodorus, hicanus, iophon, lyson, leon, menodorus, myagrus, polycrates, polyidus, pythocritus, protogenes, idem pictor e clarissimis, ut dicemus, patrocles, pollis, posidonius, qui et argentum caelavit nobiliter, natione ephesius, periclymenus, philon, symenus, \Timotheus, theomnestus, timarchides, timon, tisias, thrason.

ex omnibus autem maxime cognomine insignis est callimachus, semper calumniator sui nec finem habentis diligentiae, ob id catatexitechnus appellatus, memorabili exemplo adhibendi et curae modum. huius sunt saltantes lacaenae, emendatum opus, sed in quo gratiam omnem diligentia abstulerit. hunc quidem et pictorem fuisse tradunt. non aere captus nec arte, unam tantum zenonis statuam cypria expeditione non vendidit cato, sed quia philosophi erat, ut obiter hoc quoque noscatur tam insigne exemplum.

in mentione statuarum est et una non praetereunda, quamquam auctoris incerti, iuxta rostra, herculis tunicati, sola eo habitu romae, torva facie sentiensque suprema tunicae. in hac tres sunt tituli: “l. luculli imperatoris de manubiis,” alter: “pupillum luculli filium ex s. c. dedicasse,” tertius: “t. septimium sabinum aed. cur. ex privato in publicum restituisse.” tot certaminum tantaeque dignationis simulacrum id fuit.

nunc praevertemur ad differentias aeris et mixturas. in cyprio coronarium et regulare est utrumque ductile coronarium tenuatur in lamnas, taurorumque felle tinctum speciem auri in coronis histrionum praebet, idemque in uncias additis auri scripulis senis praetenui pyropi brattea ignescit. regulare et in aliis fit metallis, itemque caldarium. differentia quod caldarium funditur tantum, malleis fragile, quibus regulare obsequitur ab aliis ductile appellatum, quale omne cyprium est. sed et in ceteris metallis cura distat a caldario; omne enim diligentius purgatis igni vitiis excoctisque regulare est. - in reliquis generibus palma campano perhibetur, utensilibus vasis probatissimo. pluribus fit hoc modis. namque capuae liquatur non carbonis ignibus, sed ligni, purgaturque roboreo cribro perfusum aqua frigida ac saepius simili modo

coquitur, novissime additis plumbi argentarii hispaniensis denis libris in centenas aeris. ita lentescit coloremque iucundum trahit, qualem in aliis generibus aeris adfectant oleo ac sale. fit campano simile in multis partibus italiae provinciisque, sed octonas plumbi libras addunt et carbone recocunt propter inopiam ligni. quantum ea res differentiae adferat, in gallia maxime sentitur, ubi inter lapides candefactos funditur; exurente enim coctura nigrum atque fragile conficitur. praeterea semel recoquunt, quod saepius fecisse bonitati plurimum confert. id quoque notasse non ab re est, aes omne frigore magno melius fundi. - sequens temperatura statuaria est eademque tabularis hoc modo: massa proflatur in primis, mox in proflatum additur tertia portio aeris collectanei, hoc est ex usu coempti. peculiare in eo condimentum attritu domiti et consuetudine nitoris veluti mansuefacti. miscentur et plumbi argentarii pondo duodena ac selibrae centenis proflati. - appellatur etiamnum et formalis temperatura aeris tenerrimi, quoniam nigri plumbi decima portio additur et argentarii vicesima, maximeque ita colorem bibit, quem graecanicum vocant. novissima est quae vocatur ollaria, vase nomen hoc dante, ternis aut quaternis libris plumbi argentarii in centenas aeris additis. - cyprio si addatur plumbum, colos purpurae fit in statuarum praetextis.

aera extersa robiginem celerius trahunt quam neglecta, nisi oleo perunguantur. servari ea optime in liquida pice tradunt. usus aeris ad perpetuitatem monimentorum iam pridem tralatus est tabulis aereis, in quibus publicae constitutiones inciduntur.

metalla aeris multis modis instruunt medicinam, utpote cum ulcera omnia ibi ocissime sanentur, maxime tamen prosunt cadmea. fit sine dubio haec et in argenti fornacibus, candidior ac minus ponderosa, sed nequaquam comparanda aerariae. plura autem genera sunt. namque ut ipse lapis, ex quo fit aes, cadmea vocatur, fusuris necessarius, medicinae inutilis, sic rursus in fornacibus existit alia, quae originis suae nomen recipit. fit autem egesta flammis atque flatu tenuissima parte materiae et camaris lateribusque fornacium pro quantitate levitatis adplicata. tenuissima est in ipso fornacium ore quam flammae eructarunt, appellata capnitis, exusta et nimia levitate similis favillae. interior optuma, camaris dependens et ab eo argumento botryitis nominata, ponderosior haec priore, levior

secuturis - duo eius colores, deterior cinereus, pumicis melior - , friabilis oculorumque medicamentis utilissima. tertia est in lateribus fornacium, quae propter gravitatem ad camaras pervenire non potuit. haec dicitur placitis, et ipsa ab argumento, planitie crusta verius quam pumex, intus varia, ad psoras utilior et cicatrices trahendas. fiunt ex ea duo alia genera: onychitis extra paene caerulea, intus onychis maculis similis, ostracitis tota nigra et e ceteris sordidissima, volneribus maxime utilis. omnis autem cadmea, in cypri fornacibus optima, iterum a medicis coquitur carbone puro atque, ubi in cinerem rediit, extinguitur vino ammineo quae ad emplastra praeparatur, quae vero ad psoras, aceto. quidam in ollis fictilibus tusam urunt et lavant in mortariis, postea siccant. nymphodorus lapidem ipsum quam gravissimum spississimumque urit pruna et exustum chio vino restinguit tunditque, mox linteo cribrat atque in mortario terit, mox aqua pluvia macerat iterumque terit quod subsedit, donec cerussae simile fiat, nulla dentium offensa. eadem iollae ratio, sed quam purissimum eligit lapidem. cadmeae effectus siccare, persanare, sistere fluctiones, pterygia et sordes oculorum purgare, scabritiam extenuare et quidquid in plumbi effectu dicemus.

et aes ipsum uritur ad omnia eadem, praeterque albugines oculorum et cicatrices, ulcera quoque oculorum cum lacte sanat; itaque aegyptii collyrii id modo terunt in coticulis. facit et vomitiones e melle sumptum. uritur autem cyprium in fictilibus crudis cum sulpuris pari pondere, vasorum circumlito spiramento, in caminis, donec vasa ipsa percoquantur. quidam et salem addunt, aliqui alumen pro sulpure, alii nihil, sed aceto tantum aspergunt. ustum teritur in mortario thebaico, aqua pluvia lavatur iterumque adiecta largiore teritur et, dum considat, relinquitur, hoc saepius, donec ad speciem minii redeat. tunc siccatum in sole in aerea pyxide servatur.

et scoria aeris simili modo lavatur, minore effectu quam ipsum aes. sed et aeris flos medicinae utilis est. fit aere fuso et in alias fornaces tralato; ibi flatu crebriore excutiuntur veluti milii squamae, quas vocant florem; cadunt autem, cum panes aeris aqua refrigerantur, rubentque similiter squamae aeris, quam vocant lepida, et sic adulteratur flos, ut squama veneat pro eo. est autem squama aeris decussa vi clavis, in quos panes aerei feruminantur, in cypri maxime officinis. omnis differentia haec est, quod squama excutitur

ictu isdem panibus, flos cadit sponte. squamae est alterum genus suptilius, ex summa scilicet lanugine decussum, quod vocant stomoma.

atque haec omnia medici - quod pace eorum dixisse liceat - ignorant. parent nominibus: in tantum a conficiendis medicaminibus absunt, quod esse proprium medicinae solebat. nunc quotiens incidere in libellos, componere ex iis volentes aliqua, hoc est inpendio miserorum experiri commentaria, credunt seplasiae omnia fraudibus corrumpenti. iam quidem facta emplastra et collyria mercantur, tabesque mercium aut fraus seplasiae sic excitetur!

et squama autem et flos uruntur in patinis fictilibus aut aereis, dein lavantur ut supra ad eosdem usus; squama et amplius narium carnosa vitia, item sedis, et gravitates aurium per fistulam in eas flatu inpulsa et uvas oris farina admota tollit et tonsillas cum melle. fit ex candido aere squama longe cypria inefficacior. nec non urina pueri prius macerant clavos panesque quidam excussuri squamam, teruntque et aqua pluvia lavant. dant et hydropicis eam drachmis ii in mulsi hemina et inlinunt cum polline.

aeruginis quoque magnus usus est. pluribus fit ea modis. namque et lapidi, ex quo coquitur aes, deraditur, et aere candido perforato atque in cadis suspenso super acetum acre opturatumque operculo. multo probatior est, si hoc idem squamis fiat. quidam vasa ipsa candidi aeris fictilibus condunt in acetum raduntque decumo die. alii vinaceis contegunt totidemque post dies radunt, alii delimatam aeris scobem aceto spargunt versantque spathis saepius die, donec absumatur. eandem scobem alii terere in mortariis aereis ex aceto malunt. ocissime vero contingit coronariorum recisamentis in acetum id additis. adulterant marmore trito maxime rhodiam aeruginem, alii pumice aut cummi. praecipue autem fallit atramento sutorio adulterata; cetera enim dente deprehenduntur stridentia in frendendo. experimentum in vatillo ferreo, nam quae sincera est, suum colorem retinet, quae mixta atramento, rubescit. deprehenditur et papyro galla prius macerato, nigrescit enim statim aerugine inlita. deprehenditur et visu maligne virens. sed sive sinceram sive adulteram aptissimum est elui siccatamque in patina nova uri ac versari, donec favilla fiat; postea teritur ac reconditur. aliqui in crudis fictilibus urunt, donec figlinum percoquatur. nonnulli et tus masculum admiscent. lavatur

autem aerugo sicut cadmea. vis eius collyriis oculorum aptissima et delacrimationibus mordendo proficiens, sed ablui necessarium penicillis calidis, donec rodere desinat. - hieracium vocatur collyrium, quod ea maxime constat. temperatur autem id hammoniaci unciis iiii, aeruginis cypriae ii, atramenti sutorii, quod chalcanthum vocant, totidem, misyos una, croci vi. haec omnia trita aceto thasio colliguntur in pilulas, excellentis remedii contra initia glaucomatum et suffusionum, contra caligines aut scabritias et albugines et genarum vitia. cruda autem aerugo volnerariis emplastris miscetur. oris etiam gingivarumque exulcerationes mirifice emendat et labrorum ulcera cum oleo. quod si et cera addatur, purgat et ad cicatricem perducit. aerugo et callum fistularum erodit vitiorumque circa sedem sive per se sive cum hammoniaco inlita vel collyrii modo in fistulas adacta. eadem cum resinae terebinthinae tertia parte subacta lepras tollit.

est et alterum genus aeruginis, quam vocant scoleca, in cyprio aere trito alumine et sale aut nitro pari pondere cum aceto albo quam acerrimo. non fit hoc nisi aestuosissimis diebus circa canis ortum. teritur autem, donec viride fiat contrahatque se vermiculorum specie, unde et nomen. quod vitiatum ut emendetur, ii partes quam fuere aceti miscentur urinae pueri inpubis. idem autem in medicamentis et santerna efficit, qua diximus aurum feruminari. usus utriusque qui aeruginis. scolex fit et per se derasus aerario lapidi, de quo nunc dicemus.

chalcitim vocant, ex quo et ipso aes coquitur. distat a cadmea, quod illa super terram ex subdialibus petris caeditur, haec ex obrutis, item quod chalcitis friat se statim, mollis natura, ut videatur lanugo concreta. est et alia distinctio, quod chalcitis tria genera continet, aeris et misyos et soreos, de quibus singulis dicemus suis locis. habet autem aeris venas oblongas. probatur mellei coloris, gracili venarum discursu, friabilis nec lapidosa. putant et recentem utiliorem esse, quoniam inveterata sori fiat. vis eius ad excrescentia in ulceribus, sanguinem sistere, gingivas, uvam, tonsillas farina compescere, volvae vitiis in vellere inponi. cum suco vero porri verendorum additur emplastris. maceratur autem in fictili ex aceto, circumlito fimo diebus xl, et colorem croci trahit. tum admixto cadmeae pari pondere medicamentum efficit psoricon dictum. quod si ii partes

chalcitidis tertia cadmeae temperentur, acrius hoc idem fiat; etiamnum vehementius, si aceto quam vino temperetur; tosta vero efficacior fit ad eadem omnia.

sori aegyptium maxime laudatur, multum superato cyprio hispaniensique et africo, quamquam oculorum curationi quidam utilius putent cyprium; sed in quacumque natione optimum cui maximum virus olfactu, tritumque pinguiter nigrescens et spongiosum. stomacho res contraria in tantum, ut quibusdam olfactum modo vomitiones moveat. et aegyptium quidem tale, alterius nationis contritum splendescit ut misy et est lapidosius. prodest autem et dentium dolori, si contineatur atque colluat, et ulceribus oris gravibus quaeque serpant. uritur carbonibus ut chalcitis.

misy aliqui tradiderunt fieri exusto lapide in scrobibus, flore eius luteo miscente se ligni pineae favillae. re vera autem e supra dicto fit lapide, concretum natura discretumque vi, optimum in cypriorum officinis, cuius notae sunt friati aureae scintillae et, cum teratur, harenosa natura sine terra, chalcitidi similis. hoc admiscent qui aurum purgant. utilitas eius infusi cum rosaceo auribus purulentis et in lana inpositi capitis ulceribus. extenuat et scabritias oculorum inveteratas, praecipue utile tonsillis contraque anginas et suppurata. ratio ut xvi drachmae in hemina aceti coquantur addito melle, donec lentescat. sic ad supra dicta utile est. quotiens opus sit molliri vim eius, mel adspergitur. erodit et callum fistularum ex aceto foventium et collyriis additur, sistit et sanguinem ulceraque quae serpant quaeve putrescant, absumit et excrescentes carnes. peculiariter virilitatis vitiis utile et feminarum profluvium sistit.

graeci cognationem aeris nomine fecerunt et atramento sutorio; appellant enim chalcanthon. nec ullius aeque mira natura est. fit in hispaniae puteis stagnisve id genus aquae habentibus. decoquitur ea admixta dulci pari mensura et in piscinas ligneas funditur. immobilibus super has transtris dependent restes lapillis extentae, quibus adhaerescens limus vitreis acinis imaginem quandam uvae reddit. exemptum ita siccatur diebus xxx. color est caeruleus perquam spectabili nitore, vitrumque esse creditur; diluendo fit atramentum tinguendis coriis. fit et pluribus modis: genere terrae eo in scrobes cavato, quorum e lateribus destillantes hiberno gelu stirias

stalagmian vocant, neque est purius aliud. sed ex eo, candidum colorem sentiente viola, lonchoton appellant. fit et in saxorum catinis pluvia aqua conrivato limo gelante; fit et salis modo flagrantissimo sole admissas dulces aquas cogente. ideo quidam duplici differentia fossile aut facticium appellant, hoc pallidius et quantum colore, tantum bonitate deterius. probant maxime cyprium in medicinae usu. sumitur ad pellenda ventris animalia drachmae pondere cum melle. purgat et caput dilutum ac naribus instillatum, item stomachum cum melle aut aqua mulsa sumptum. medetur et oculorum scabritiae dolorique et caligini et oris ulceribus. sistit et sanguinem narium, item haemorroidum. extrahit ossa fracta cum semine hyoscyami, suspendit epiphoras penicillo fronti inpositum, efficax et in emplastris ad purganda volnera et excrescentia ulcerum. tollit et uvas, vel si decocto tangantur, cum lini quoque semine superponitur emplastris ad dolores tollendos. quod ex eo candicat, in uno usu praefertur violaceis, ut gravitati aurium per fistulas inspiretur. volnera per se inlitum sanat, sed tinguit cicatrices. nuper inventum ursorum in harena et leonum ora spargere illo, tantaque est vis in adstringendo, ut non queant mordere.

etiamnum in aerariis reperiuntur quae vocant pompholygem et spodon. differentia, quod pompholyx lotura separatur, spodos inlota est. aliqui quod sit candidum levissimumque pompholygem dixere et esse aeris ac cadmeae favillam, spodon nigriorem esse ponderosioremque, derasam parietibus fornacium, mixtis scintillis, aliquando et carbonibus. haec aceto accepto odorem aeris praestat et, si tangatur lingua, saporem horridum. convenit oculorum medicamentis, quibuscumque vitiis occurrens, et ad omnia quae spodos. hoc solum distat, quod huius elutior vis est. additur et in emplastra, quibus lenis refrigeratio quaeritur et siccatio. utilior ad omnia quae vino lota est.

spodos cypria optima. fit autem liquescentibus cadmea et aerario lapide. levissimum hoc est flaturae totius evolatque e fornacibus et tectis adhaerescit, a fuligine distans candore. quod minus candidum ex ea, inmaturae fornacis argumentum est; hoc quidam pompholygem vocant. quod vero rubicundius ex iis invenitur, acriorem vim habet et exulcerat adeo, ut, cum lavatur, si attigit oculos, excaecet. est et mellei coloris spodos, in qua plurimum aeris

intellegitur. sed quodcumque genus lavando fit utilius; purgatur ante pinna, dein crassiore lotura digitis scabritiae excernuntur. eximia vis est eius, quae vino lavatur. est aliqua et in genere vini differentia. leni enim lota collyriis oculorum minus utilis putatur, eademque efficacior ulceribus, quae manent, vel oris, quae madeant, et omnibus medicamentis, quae parentur contra gangraenas. fit et in argenti fornacibus spodos, quam vocant lauriotim. utilissima autem oculis adfirmatur quae fiat in aurariis, nec in alia parte magis est vitae ingenia mirari. quippe ne quaerenda essent metalla, vilissimis rebus utilitates easdem excogitavit.

antispodon vocant cinerem fici arboris vel caprifici vel myrti foliorum cum tenerrimis ramorum partibus vel oleastri vel oleae vel cotonei mali vel lentisci, item ex moris inmaturis, id est candidis, in sole arefactis vel e buxi coma aut pseudocypiri aut rubi aut terebinthi vel oenanthes. taurini quoque glutinis aut linteorum cinerem similiter pollere inventum est. uruntur omnia ea crudo fictili in fornacibus, donec figlina percoquantur.

in aerariis officinis et smegma fit iam liquato aere ac percocto additis etiamnum carbonibus paulatimque accensis, ac repente vehementiore flatu exspuitur aeris palea quaedam. solum, quo excipiatur, stratum esse debet marilla.

ab ea discernitur quam in isdem officinis diphrygem vocant graeci ab eo, quod bis torreatur. cuius origo triplex. fieri enim traditur ex lapide pyrite cremato in caminis, donec excoquatur in rubricam. fit et in cypro ex luto cuiusdam specus arefacto prius, mox paulatim circumdatis sarmentis. tertio fit modo in fornacibus aeris faece subsidente. differentia est, quod aes ipsum in catinos defluit, scoria extra fornaces, flos supernatat, diphryges remanent. quidam tradunt in fornacibus globos lapidis, qui coquatur, feruminari, circa hunc aes fervere, ipsum vero non percoqui nisi tralatum in alias fornaces, et esse nodum quendam materiae; id, quod ex cocto supersit, diphryga vocari. ratio eius in medicina similis praedictis: siccare et excrescentia consumere ac repurgare. probatur lingua, ut eam siccet tactu statim saporemque aeris reddat.

unum etiamnum aeris miraculum non omittemus. servilia familia inlustris in fastis trientem aereum pascit auro, argento, consumentem utrumque. origo atque natura eius incomperta mihi est. verba ipsa de

ea re messallae senis ponam: “serviliorum familia habet trientem sacrum, cui summa cum cura magnificentiaque sacra quotannis faciunt. quem ferunt alias crevisse, alias decrevisse videri et ex eo aut honorem aut deminutionem familiae significare.”

proxime indicari debent metalla ferri. optumo pessimoque vitae instrumento est, siquidem hoc tellurem scindimus, arbores serimus, arbusta tondemus, vites squalore deciso annis omnibus cogimus iuvenescere, hoc exstruimus tecta, caedimus saxa, omnesque ad alios usus ferro utimur, sed eodem ad bella, caedes, latrocinia, non comminus solum, sed etiam missili volucrique, nunc tormentis excusso, nunc lacertis, nunc vero pinnato, quam sceleratissimam humani ingenii fraudem arbitror, siquidem, ut ocius mors perveniret ad hominem, alitem illam fecimus pinnasque ferro dedimus. quam ob rem culpa eius non naturae fiat accepta. aliquot experimentis probatum est posse innocens esse ferrum. in foedere, quod expulsis regibus populo romano dedit porsina, nominatim comprehensum invenimus, ne ferro nisi in agri cultu uteretur. et tum stilo osseo scribere institutum vetustissimi auctores prodiderunt. magni pompei in tertio consulatu extat edictum in tumultu necis clodianae prohibentis ullum telum esse in urbe. et ars antiqua ipsa non defuit honorem mitiorem habere ferro quoque. aristonidas artifex, cum exprimere vellet athamantis furorem learcho filio praecipitato residentem paenitentia, aes ferrumque miscuit, ut robigine eius per nitorem aeris relucente exprimeretur verecundiae rubor. hoc signum exstat hodie rhodi. est in eadem urbe et ferreus hercules, quem fecit alcon laborum dei patientia inductus. videmus et romae scyphos e ferro dicatos in templo martis ultoris. obstitit eadem naturae benignitas exigentis ab ferro ipso poenas robigine eademque providentia nihil in rebus mortalius facientis quam quod esset infestissimum mortalitati.

ferri metalla ubique propemodum reperiuntur, quippe etiam insula italiae ilva gignente, minimaque difficultate adgnoscuntur colore ipso terrae manifesto. ratio eadem excoquendis venis; in cappadocia tantum quaestio est, aquae an terrae fiat acceptum, quoniam perfusa ceraso fluvio terra neque aliter ferrum e fornacibus reddit. differentia ferri numerosa. prima in genere terrae caelive: aliae molle tantum plumboque vicinum subministrant, aliae fragile et aerosum

rotarumque usibus et clavis maxime fugiendum, cui prior ratio convenit; aliud brevitate sola placet clavisque caligariis, aliud robiginem celerius sentit. stricturae vocantur hae omnes, quod non in aliis metallis, a stringenda acie vocabulo inposito. et fornacium magna differentia est, nucleusque quidam ferri excoquitur in iis ad indurandam aciem, alioque modo ad densandas incudes malleorumve rostra. summa autem differentia in aqua, cui subinde candens inmergitur. haec alibi atque alibi utilior nobilitavit loca gloria ferri, sicuti bilbilim in hispania et turiassonem, comum in italia, cum ferraria metalla in iis locis non sint. ex omnibus autem generibus palma serico ferro est; seres hoc cum vestibus suis pellibusque mittunt; secunda parthico. neque alia genera ferri ex mera acie temperantur, ceteris enim admiscetur mollior complexus. in nostro orbe aliubi vena bonitatem hanc praestat, ut in noricis, aliubi factura, ut sulmone, aqua ubi diximus, quippe cum exacuendo oleariae cotes aquariaeque differant et oleo delicatior fiat acies. mirumque, cum excoquatur vena, aquae modo liquari ferrum, postea in spongeas frangi. tenuiora ferramenta oleo restingui mos est, ne aqua in fragilitatem durentur. a ferro sanguis humanus se ulciscitur, contactum namque eo celerius robiginem trahit.

de magnete lapide suo loco dicemus concordiaque, quam cum ferro habet. sola haec materia virus ab eo lapide accipit retinetque longo tempore, aliud adprehendens ferrum, ut anulorum catena spectetur interdum. quod volgus imperitum appellat ferrum vivum, vulneraque talia asperiora fiunt. hic lapis et in cantabria nascitur, non ut ille magnes verus caute continua, sed sparsa bulbatione - ita appellant - , nescio an vitro fundendo perinde utilis, nondum enim expertus est quisquam; ferrum utique inficit eadem vi. - magnete lapide architectus timochares alexandriae arsinoes templum concamarare incohaverat, ut in eo simulacrum e ferro pendere in ae +re videretur. intercessit ipsius mors et ptolemaei regis, qui id sorori suae iusserat fieri. - metallorum omnium vena ferri largissima est cantabriae. maritima parte, qua oceanus adluit, mons praealtus - incredibile dictu - totus ex ea materia est, ut in ambitu oceani diximus.

ferrum accensum igni, nisi duretur ictibus, corrumpitur. rubens non est habile tundendo neque antequam albescere incipiat. aceto aut

alumine inlitum fit aeri simile. a robigine vindicatur cerussa et gypso et liquida pice. haec est ferro a graecis antipathia dicta. ferunt quidem et religione quadam id fieri et exstare ferream catenam apud euphraten amnem in urbe, quae zeugma appellatur, qua alexander magnus ibi iunxerit pontem, cuius anulos, qui refecti sint, robigine infestari, carentibus ea prioribus.

medicina e ferro est et alia quam secandi. namque et circumscribi circulo terve circumlato mucrone et adultis et infantibus prodest contra noxia medicamenta, et praefixisse in limine evulsos sepulchris clavos adversus nocturnas lymphationes, pungique leviter mucrone, quo percussus homo sit, contra dolores laterum pectorumque subitos, qui punctionem adferant. quaedam ustione sanantur, privatim vero canis rabidi morsus, quippe etiam praevalente morbo expaventesque potum usta plaga ilico liberantur. calfit etiam ferro candente potus in multis vitiis, privatim vero dysentericis.

est et robigo ipsa in remediis, et sic proditur telephum sanasse achilles, sive id aerea sive ferrea cuspide fecit; ita certe pingitur ex ea decutiens gladio. sed robigo ferri deraditur umido ferro clavis veteribus. potentia eius ligare, siccare, sistere. emendat alopecias inlita. utuntur et ad scabritias genarum pusulasque totius corporis cum cera et myrteo oleo, ad ignes vero sacros ex aceto, item ad scabiem, paronychia digitorum et pterygia in linteolis. sistit et feminarum profluvia inposita velleribus, plagis quoque recentibus vino diluta et cum murra subacta, condylomatis ex aceto. podagras quoque inlita lenit.

squama quoque ferri in usu est ex acie aut mucronibus, maxime simili, sed acriore vi quam robigo, quam ob rem et contra epiphoras oculorum adsumitur. sanguinem sistit, cum volnera ferro maxime fiant. sistit et feminarum profluvia. inponitur et contra lienium vitia, et haemorroidas compescit ulcerumque serpentia. et genis prodest farinae modo adspersa paullisper. praecipua tamen commendatio eius in hygremplastro ad purganda vulnera fistulasque et omnem callum erodendum et rasis ossibus carnes recreandas. componitur hoc modo: propolis oboli vi, cimoliae cretae drachmae vi, aeris tusi drachmae ii, squamae ferri totidem, cerae x, olei sextarius. his adicitur, cum sunt repurganda volnera aut replenda, ceratum.

sequitur natura plumbi, cuius duo genera, nigrum atque candidum.

pretiosissimum in hoc candidum, graecis appellatum cassiterum fabuloseque narratum in insulas atlantici maris peti vitilibusque navigiis et circumsutis corio advehi. nunc certum est in lusitania gigni et in gallaecia summa tellure, harenosa et coloris nigri. pondere tantum ea deprehenditur; interveniunt et minuti calculi, maxime torrentibus siccatis. lavant eas harenas metallici et, quod subsedit, cocunt in fornacibus. invenitur et in aurariis metallis, quae alutias vocant, aqua inmissa eluente calculos nigros paullum candore variatos, quibus eadem gravitas quae auro, et ideo in calathis, quibus aurum colligitur, cum eo remanent; postea caminis separantur conflatique in plumbum album resolvuntur. non fit in gallaecia nigrum, cum vicina cantabria nigro tantum abundet, nec ex albo argentum, cum fiat ex nigro. iungi inter se plumbum nigrum sine albo non potest nec hoc ei sine oleo ac ne album quidem secum sine nigro. album habuit auctoritatem et iliacis temporibus teste homero, cassiterum ab illo dictum. plumbi nigri origo duplex est; aut enim sua provenit vena nec quicquam aliud ex sese parit aut cum argento nascitur mixtisque venis conflatur. huius qui primus fuit in fornacibus liquor stagnum appellatur; qui secundus, argentum; quod remansit in fornacibus, galena, quae fit tertia portio additae venae; haec rursus conflata dat nigrum plumbum deductis partibus nonis ii.

stagnum inlitum aereis vasis saporem facit gratiorem ac compescit virus aeruginis, mirumque, pondus non auget. specula etiam ex eo laudatissima, ut diximus, brundisi temperabantur, donec argenteis uti coepere et ancillae. nunc adulteratur stagnum addita aeris candidi tertia portione in plumbum album. fit et alio modo mixtis albi plumbi nigrique libris; hoc nunc aliqui argentarium appellant. iidem et tertiarium vocant, in quo duae sunt nigri portiones et tertia albi. pretium eius in libras #1108 xx. hoc fistulae solidantur. inprobiores ad tertiarium additis partibus aequis albi argentarium vocant et eo quae volunt incoquunt. pretium huius faciunt in p. #1108 lxx. albo per se sincero pretium sunt #1108 lxxx, nigro #1108 vii.

albi natura plus aridi habet, contraque nigri tota umida est. ideo album nulli rei sine mixtura utile est. neque argentum ex eo plumbatur, quoniam prius liquescat argentum, confirmantque, si minus albo nigri, quam satis sit, misceatur, erodi ab eo argentum. album incoquitur aereis operibus galliarum invento ita, ut vix

discerni possit ab argento, eaque incoctilia appellant. deinde et argentum incoquere simili modo coepere equorum maxime ornamentis iumentorumque ac iugorum in alesia oppido; reliqua gloria biturigum fuit. coepere deinde et esseda sua colisataque ac petorita exornare simili modo, quae iam luxuria ad aurea quoque, non modo argentea, staticula pervenit, quaeque in scyphis cerni prodigum erat, haec in vehiculis adteri cultus vocatur. plumbi albi experimentum in charta est, ut liquefactum pondere videatur, non calore, rupisse. india neque aes neque plumbum habet gemmisque ac margaritis suis haec permutat.

nigro plumbo ad fistulas lamnasque utimur, laboriosius in hispania eruto totasque per gallias, sed in brittannia summo terrae corio adeo large, ut lex ultro dicatur, ne plus certo modo fiat. nigri generibus haec sunt nomina: iovetanum, caprariense, oleastrense, nec differentia ulla scoria modo excocta diligenter. mirum in his solis metallis, quod derelicta fertilius revivescunt. hoc videtur facere laxatis spiramentis ad satietatem infusus ae+r, aeque ut feminas quasdam fecundiores facere abortus. nuper id conpertum in baetica samariensi metallo, quod locari solitum #1108 [cc] annuis, postquam obliteratum erat, #1108 [cclv] locatum est. simili modo antonianum in eadem provincia pari locatione pervenit ad hs [cccc] vectigalis. mirum et addita aqua non liquescere vasa e plumbo, eadem, si in aquam addantur calculus vel aereus quadrans, peruri.

in medicina per se plumbi usus cicatrices reprimere adalligatisque lumborum et renium parti lamnis frigidiore natura inhibere inpetus veneris visaque in quiete veneria sponte naturae erumpentia usque in genus morbi. his lamnis calvus orator cohibuisse se traditur viresque corporis studiorum labori custodisse. nero, quoniam ita placuit diis, princeps, lamna pectori inposita sub ea cantica exclamans alendis vocibus demonstravit rationem. coquitur ad medicinae usus patinis fictilibus substrato sulpure minuto, lamnis inpositis tenuibus opertisque sulpure et ferro mixtis. cum coquatur, munienda in eo opere foramina spiritus convenit; alioqui plumbi fornacium halitus noxius sentitur. et pestilens est, canibus ocissime, omnium vero metallorum muscis et culicibus, quam ob rem non sunt ea taedia in metallis. quidam in coquendo scobem plumbi lima quaesitam sulpuri miscent, alii cerussam potius quam sulpur. fit et lotura plumbi usus in

medicina. cum se ipso teritur in mortariis plumbeis addita aqua caelesti, donec crassescat; postea supernatans aqua tollitur spongeis; quod crassissimum fuit, siccatum dividitur in pastillos. quidam limatum plumbum sic terunt, quidam et plumbaginem admiscent, alii vero acetum, alii vinum, alii adipem, alii rosam. quidam in lapideo mortario et maxime thebaico plumbeum pistillum terere malunt, candidiusque ita fit medicamentum. id autem quod ustum est plumbum lavatur ut stibis et cadmea. potest adstringere, sistere, contrahere cicatrices; usu est eodem et in oculorum medicamentis, maxime contra procidentiam eorum et inanitates ulcerum excrescentiave rimasque sedis aut haemorroidas et condylomata. ad haec maxime lotura plumbi facit, cinis autem usti ad serpentia ulcera aut sordida, eademque quae chartis ratio profectus. uritur autem in patinis per lamnas minutas cum sulpure, versatum rudibus ferreis aut ferulaceis, donec liquor mutetur in cinerem; dein refrigeratum teritur in farinam. alii elimatam scobem in fictili crudo cocunt in caminis, donec percoquatur figlinum. aliqui cerussam admiscent pari mensura aut hordeum teruntque ut in crudo dictum est, et praeferunt sic plumbum spodio cyprio.

scoria quoque plumbi in usu est. optima quae maxime ad luteum colorem accedit, sine plumbi reliquiis aut sulpuris specie et terra carens. lavatur haec in mortariis minutim fracta, donec aqua luteum colorem trahat, et transfunditur in vas purum, idque saepius, usque dum subsidat quod utilissimum est. effectus habet eosdem quos plumbum, sed acriores. mirarique succurrit experientiam vitae, ne faece quidem rerum excrementorumque foeditate intemptata tot modis.

fit et spodium ex plumbo eodem modo quo ex cyprio aere; lavatur in linteis raris aqua caelesti separaturque terrenum transfusione; cribratum teritur. quidam pulverem eum pinnis digerere malunt ac terere in vino odorato.

est et molybdaena, quam alio loco galenam appellavimus, vena argenti plumbique communis. melior haec, quanto magis aurei coloris quantoque minus plumbosa, friabilis et modice gravis. cocta cum oleo iocineris colorem trahit. adhaerescit et auri argentique fornacibus; hanc metallicam vocant. laudatissima quae in zephyrio fiat; probantur minime terrenae minimeque lapidosae. coquuntur

lavanturque scoriae modo. usus in lipara ad lenienda ac refrigeranda ulcera et emplastris, quae non inligantur, sed inlita ad cicatricem perducunt in teneris corporibus mollissimisque partibus. compositio eius e libris iii et cerae libra, olei iii heminis, quod in senili corpore cum fracibus additur. temperatur cum spuma argenti et scoria plumbi ad dysenteriam et tenesmum fovenda calida.

psimithium quoque, hoc est cerussam, plumbariae dant officinae, laudatissimam in rhodo. fit autem ramentis plumbi tenuissimis super vas aceti asperrimi inpositis atque ita destillantibus. quod ex eo cecidit in ipsum acetum, arefactum molitur et cribratur iterumque aceto admixto in pastillos dividitur et in sole siccatur aestate. fit et alio modo, addito in urceos aceti plumbo opturatos per dies x derasoque ceu situ ac rursus reiecto, donec deficiat materia. quod derasum est, teritur et cribratur et coquitur in patinis misceturque rudiculis, donec rufescat et simile sandaracae fiat. dein lavatur dulci aqua, donec nubeculae omnes eluantur. siccatur postea similiter et in pastillos dividitur. vis eius eadem quae supra dictis, lenissima tantum ex omnibus, praeterque ad candorem feminarum. est autem letalis potu sicut spuma argenti. postea cerussa ipsa, si coquatur, rufescit.

sandaracae quoque propemodum dicta natura est. invenitur autem et in aurariis et in argentariis metallis, melior quo magis rufa quoque magis virus sulpuris redolens ac pura friabilisque. valet purgare, sistere, excalfacere, erodere, summa eius dote septica. explet alopecias ex aceto inlita; additur oculorum medicamentis; fauces purgat cum melle sumpta vocemque limpidam et canoram facit; suspiriosis et tussientibus iucunde medetur cum resina terebinthina in cibo sumpta, suffita quoque cum cedro ipso nidore isdem medetur.

et arrhenicum ex eadem est materia. quod optimum, coloris etiam in auro excellentis; quod vero pallidius aut sandaracae simile est, deterius iudicatur. est et tertium genus, quo miscetur aureus color sandaracae. utraque haec squamosa, illud vero siccum purumque, gracili venarum discursu fissile. vis eadem quae supra, sed acrior. itaque et causticis additur et psilotris. tollit et pterygia digitorum carnesque narium et condylomata et quidquid excrescit. torretur, ut valdius prosit, in nova testa, donec mutet colorem.

metallorum, quibus opes constant, adgnascentiumque iis natura indicata propemodum est, ita conexis rebus, ut inmensa medicinae silva officinarumque tenebrae et morosa caelandi fingendique ac tinguendi subtilitas simul dicerentur. restant terrae ipsius genera lapidumque vel numerosiore serie, plurimis singula a graecis praecipue voluminibus tractata. nos in iis brevitatem sequemur utilem instituto, modo nihil necessarium aut naturale omittentes, primumque dicemus quae restant de pictura, arte quondam nobili - tunc cum expeteretur regibus populisque - et alios nobilitante, quos esset dignata posteris tradere, nunc vero in totum marmoribus pulsa, iam quidem et auro, nec tantum ut parietes toti operiantur, verum et interraso marmore vermiculatisque ad effigies rerum et animalium crustis. non placent iam abaci nec spatia montes in cubiculo dilatantia: coepimus et lapide pingere. hoc claudii principatu inventum, neronis vero maculas, quae non essent in crustis, inserendo unitatem variare, ut ovatus esset numidicus, ut purpura distingueretur synnadicus, qualiter illos nasci optassent deliciae. montium haec subsidia deficientium, nec cessat luxuria id agere, ut quam plurimum incendiis perdat.

imaginum quidem pictura, qua maxime similes in aevum propagabantur figurae, in totum exolevit. aerei ponuntur clipei argentea facie, surdo figurarum discrimine; statuarum capita permutantur, volgatis iam pridem salibus etiam carminum. adeo materiam conspici malunt omnes quam se nosci. et inter haec pinacothecas veteribus tabulis consuunt alienasque effigies colunt, ipsi honorem non nisi in pretio ducentes, ut frangat heres furisque detrahat laqueo. itaque nullius effigie vivente imagines pecuniae, non suas, relincunt. iidem palaestras athletarum imaginibus et ceromata sua exornant, epicuri voltus per cubicula gestant ac circumferunt secum. natali eius sacrificant, feriasque omni mense vicesima luna custodiunt, quas icadas vocant, ii maxime, qui se ne viventes quidem nosci volunt. ita est profecto: artes desidia perdidit, et quoniam animorum imagines non sunt, negleguntur etiam corporum. aliter apud maiores in atriis haec erant, quae spectarentur; non signa

externorum artificum nec aera aut marmora: expressi cera vultus singulis disponebantur armariis, ut essent imagines, quae comitarentur gentilicia funera, semperque defuncto aliquo totus aderat familiae eius qui umquam fuerat populus. stemmata vero lineis discurrebant ad imagines pictas. tabulina codicibus implebantur et monimentis rerum in magistratu gestarum. aliae foris et circa limina animorum ingentium imagines erant adfixis hostium spoliis, quae nec emptori refigere liceret, triumphabantque etiam dominis mutatis aeternae domus. erat haec stimulatio ingens, exprobrantibus tectis cotidie inbellem dominum intrare in alienum triumphum. exstat messalae oratoris indignatio, quae prohibuit inseri genti suae laevinorum alienam imaginem. similis causa messalae seni expressit volumina illa quae de familiis condidit, cum scipionis pomponiani transisset atrium vidissetque adoptione testamentaria salvittones - hoc enim fuerat cognomen - africanorum dedecori inrepentes scipionum nomini. sed - pace messalarum dixisse liceat - etiam mentiri clarorum imagines erat aliquis virtutum amor multoque honestius quam mereri, ne quis suas expeteret.

non est praetereundum et novicium inventum, siquidem non ex auro argentove, at certe ex aere in bibliothecis dicantur illis, quorum inmortales animae in locis iisdem locuntur, quin immo etiam quae non sunt finguntur, pariuntque desideria non traditos vultus, sicut in homero evenit. quo maius, ut equidem arbitror, nullum est felicitatis specimen quam semper omnes scire cupere, qualis fuerit aliquis. asini pollionis hoc romae inventum, qui primus bibliothecam dicando ingenia hominum rem publicam fecit. an priores coeperint alexandreae et pergami reges, qui bibliothecas magno certamine instituere, non facile dixerim. imaginum amorem flagrasse quondam testes sunt atticus ille ciceronis edito de iis volumine, M. Varro benignissimo invento insertis voluminum suorum fecunditati etiam septingentorum inlustrium aliquo modo imaginibus, non passus intercidere figuras aut vetustatem aevi contra homines valere, inventor muneris etiam dis invidiosi, quando inmortalitatem non solum dedit, verum etiam in omnes terras misit, ut praesentes esse ubique ceu di possent. et hoc quidem alienis ille praestitit.

verum clupeos in sacro vel publico dicare privatim primus instituit, ut reperio, appius claudius qui consul cum p. servilio fuit

anno urbis cclviiii. posuit enim in bellonae aede maiores suos, placuitque in excelso spectari et titulos honorum legi, decora res, utique si liberum turba parvulis imaginibus ceu nidum aliquem subolis pariter ostendat, quales clupeos nemo non gaudens favensque aspicit. post eum m. aemilius collega in consulatu quinti lutatii non in basilica modo aemilia, verum et domi suae posuit, id quoque martio exemplo. scutis enim, qualibus apud troiam pugnatum est, continebantur imagines, unde et nomen habuere clupeorum, non, ut perversa grammaticorum suptilitas voluit, a cluendo. origo plena virtutis, faciem reddi in scuto cuiusque, qui fuerit usus illo. poeni ex auro factitavere et clupeos et imagines secumque vexere. in castris certe captis talem hasdrubalis invenit marcius, scipionum in hispania ultor, isque clupeus supra fores capitolinae aedis usque ad incendium primum fuit. maiorum quidem nostrorum tanta securitas in ea re adnotatur, ut l. manlio, q. fulvio cos. anno urbis dlxxv m. aufidius tutelae capitolio redemptor docuerit patres argenteos esse clupeos, qui pro aereis per aliquot iam lustra adsignabantur.

de picturae initiis incerta nec instituti operis quaestio est. aegyptii sex milibus annorum aput ipsos inventam, priusquam in graeciam transiret, adfirmant, vana praedicatione, ut palam est; graeci autem alii sicyone, alii aput corinthios repertam, omnes umbra hominis lineis circumducta, itaque primam talem, secundam singulis coloribus et monochromaton dictam, postquam operosior inventa erat, duratque talis etiam nunc. inventam liniarem a philocle aegyptio vel cleanthe corinthio primi exercuere aridices corinthius et telephanes sicyonius, sine ullo etiamnum hi colore, iam tamen spargentes linias intus. ideo et quos pinxere adscribere institutum. primus inlevit eas colore testae, ut ferunt, tritae ecphantus corinthius. hunc eodem nomine alium fuisse quam tradit cornelius nepos secutum in italiam damaratum, tarquinii prisci regis romani patrem, fugientem a corintho tyranni iniurias cypseli, mox docebimus.

iam enim absoluta erat pictura etiam in italia. exstant certe hodieque antiquiores urbe picturae ardeae in aedibus sacris, quibus equidem nullas aeque miror, tam longo aevo durantes in orbitate tecti veluti recentes. similiter lanivi, ubi atalante et helena comminus pictae sunt nudae ab eodem artifice, utraque excellentissima forma, sed altera ut virgo, ne ruinis quidem templi concussae. gaius princeps

tollere eas conatus est libidine accensus, si tectorii natura permisisset. durant et caere antiquiores et ipsae, fatebiturque quisquis eas diligenter aestimaverit nullam artium celerius consummatam, cum iliacis temporibus non fuisse eam appareat.

apud romanos quoque honos mature huic arti contigit, siquidem cognomina ex ea pictorum traxerunt fabii clarissimae gentis, princepsque eius cognominis ipse aedem salutis pinxit anno urbis conditae ccccl, quae pictura duravit ad nostram memoriam aede ea claudi principatu exusta. proxime celebrata est in foro boario aede herculis pacui poetae pictura. enni sorore genitus hic fuit clarioremque artem eam romae fecit gloria scaenae. postea non est spectata honestis manibus, nisi forte quis turpilium equitem romanum e venetia nostrae aetatis velit referre, pulchris eius operibus hodieque veronae exstantibus. laeva is manu pinxit, quod de nullo ante memoratur. parvis gloriabatur tabellis extinctus nuper in longa senecta titedius labeo praetorius, etiam proconsulatu provinciae narbonensis functus, sed ea re inrisa etiam contumeliae erat. fuit et principum virorum non omittendum de pictura celebre consilium, cum q. pedius, nepos q. pedii consularis triumphalisque et a caesare dictatore coheredis Augusto dati, natura mutus esset. in eo messala orator, ex cuius familia pueri avia fuerat, picturam docendum censuit, idque etiam Divus Augustus comprobavit; puer magni profectus in ea arte obiit. dignatio autem praecipua romae increvit, ut existimo, a m’. valerio maximo messala, qui princeps tabulam picturam proelii, quo carthaginienses et hieronem in sicilia vicerat, proposuit in latere curiae hostiliae anno ab urbe condita ccccxc. fecit hoc idem et l. scipio tabulamque victoriae suae asiaticae in capitolio posuit, idque aegre tulisse fratrem africanum tradunt, haut inmerito, quando filius eius illo proelio captus fuerat. non dissimilem offensionem et aemiliani subiit l. hostilius mancinus, qui primus carthaginem inruperat, situm eius oppugnationesque depictas proponendo in foro et ipse adsistens populo spectanti singula enarrando, qua comitate proximis comitiis consulatum adeptus est. habuit et scaena ludis claudii pulchri magnam admirationem picturae, cum ad tegularum similitudinem corvi decepti imagine advolarent.

tabulis autem externis auctoritatem romae publice fecit primus

omnium l. mummius, cui cognomen achaici victoria dedit. namque cum in praeda vendenda rex attalus #1108 [30vi]30 emisset tabulam aristidis, liberum patrem, pretium miratus suspicatusque aliquid in ea virtutis, quod ipse nesciret, revocavit tabulam, attalo multum querente, et in cereris delubro posuit. quam primam arbitror picturam externam romae publicatam, deinde video et in foro positas volgo. hinc enim ille Crassi oratoris lepos agentis sub veteribus; cum testis compellatus instaret: “dic ergo, Crasse, qualem me noris talem,” inquit, ostendens in tabula inficetissime gallum exerentem linguam. in foro fuit et illa pastoris senis cum baculo, de qua teutonorum legatus respondit interrogatus, quantine eum aestimaret, donari sibi nolle talem vivum verumque. sed praecipuam auctoritatem publice tabulis fecit caesar dictator aiace et media ante veneris genetricis aedem dicatis, post eum m. agrippa, vir rusticitati propior quam deliciis. exstat certe eius oratio magnifica et maximo civium digna de tabulis omnibus signisque publicandis, quod fieri satius fuisset quam in villarum exilia pelli. verum eadem illa torvitas tabulas duas aiacis et veneris mercata est a cyzicenis hs [30xii]30. in thermarum quoque calidissima parte marmoribus incluserat parvas tabellas, paulo ante, cum reficerentur, sublatas. super omnes Divus Augustus in foro suo celeberrima in parte posuit tabulas duas, quae belli faciem pictam habent et triumphum, item castores ac victoriam. posuit et quas dicemus sub artificum mentione in templo caesaris patris. idem in curia quoque, quam in comitio consecrabat, duas tabulas inpressit parieti. nemean sedentem supra leonem, palmigeram ipsam, adstante cum baculo sene, cuius supra caput tabella bigae dependet, nicias scripsit se inussisse; tali enim usus est verbo. alterius tabulae admiratio est puberem filium seni patri similem esse aetatis salva differentia, supervolante aquila draconem complexa; philochares hoc suum opus esse testatus est, inmensa, vel unam si tantum hanc tabulam aliquis aestimet, potentia artis, cum propter philocharen ignobilissimos alioqui glaucionem filiumque eius aristippum senatus populi romani tot saeculis spectet! posuit et tiberius caesar, minime comis imperator, in templo ipsius Augusti quas mox indicabimus. hactenus dictum sit de dignitate artis morientis.

quibus coloribus singulis primi pinxissent diximus, cum de iis pigmentis traderemus in metallis, quae monochromata a genere

picturae vocantur. qui deinde et quae invenerint et quibus temporibus, dicemus in mentione artificum, quoniam indicare naturas colorum prior causa operis instituti est. tandem se ars ipsa distinxit et invenit lumen atque umbras, differentia colorum alterna vice sese excitante. postea deinde adiectus est splendor, alius hic quam lumen. quod inter haec et umbras esset, appellarunt tonon, commissuras vero colorum et transitus harmogen.

sunt autem colores austeri aut floridi. utrumque natura aut mixtura evenit. floridi sunt - quos dominus pingenti praestat - minium, armenium, cinnabaris, chrysocolla, indicum, purpurissum; ceteri austeri. ex omnibus alii nascuntur, alii fiunt. nascuntur sinopis, rubrica, paraetonium, melinum, eretria, auripigmentum; ceteri finguntur, primumque quos in metallis diximus, praeterea e vilioribus ochra, cerussa usta, sandaraca, sandyx, syricum, atramentum.

sinopis inventa primum in ponto est; inde nomen a sinope urbe. nascitur et in aegypto, baliaribus, africa, sed optima in lemno et in cappadocia, effossa e speluncis. pars, quae saxis adhaesit, excellit. glaebis suus colos, extra maculosus. hac usi sunt veteres ad splendorem. species sinopidis tres: rubra et minus rubens atque inter has media. pretium optimae #1108 ii, usus ad penicillum aut si lignum colorare libeat; eius, quae ex africa venit, octoni asses - cicerculum appellant - ; magis ceteris rubet, utilior abacis. idem pretium et eius, quae pressior vocatur, et est maxime fusca. usus ad bases abacorum, in medicina vero blandus ... emplastrisque et malagmatis, sive sicca compositione sive liquida facilis, contra ulcera in umore sita, velut oris, sedis. alvum sistit infusa, feminarum profluvia pota denarii pondere. eadem adusta siccat scabritias oculorum, e vino maxime.

rubricae genus in ea voluere intellegi quidam secundae auctoritatis, palmam enim lemniae dabant. minio proxima haec est, multum antiquis celebrata cum insula, in qua nascitur. nec nisi signata venumdabatur, unde et sphragidem appellavere. hac minium sublinunt adulterantque. in medicina praeclara res habetur. epiphoras enim oculorum mitigat ac dolores circumlita et aegilopia manare prohibet, sanguinem reicientibus ex aceto datur bibenda. bibitur et contra lienum reniumque vitia et purgationes feminarum, item et contra venena et serpentium ictus terrestrium marinorumque,

omnibus ideo antidotis familiaris. - e reliquis rubricae generibus fabris utilissima aegyptia et africana, quoniam maxime sorbentur tectoriis. rubrica autem nascitur et in ferrariis metallis. ea et fit ochra exusta in ollis novis luto circumlitis. quo magis arsit in caminis, hoc melior. omnis autem rubrica siccat ideoque ex emplastris conveniet igni etiam sacro.

sinopidis ponticae selibrae silis lucidi libris x et melini graecensis ii mixtis tritisque una per dies duodenos leucophorum fit. hoc est glutinum auri, cum inducitur ligno.

paraetonium loci nomen habet ex aegypto. spumam maris esse dicunt solidatam cum limo, et ideo conchae minutae inveniuntur in eo. fit et in creta insula atque cyrenis. adulteratur romae creta cimolia decocta conspissataque. pretium optimo in pondo vi #1108 l. e candidis coloribus pinguissimum et tectorii tenacissimum propter levorem.

melinum candidum et ipsum est, optimum in melo insula. in samo quod nascitur, eo non utuntur pictores propter nimiam pinguitudinem; accubantes effodiunt ibi inter saxa venam scrutantes. in medicina eundem usum habet quem eretria creta; praeterea linguam tactu siccat, pilos detrahit smectica vi. pretium in libras sestertii singuli.

tertius e candidis colos est cerussa, cuius rationem in plumbi metallis diximus. fuit et terra per se in theodoti fundo inventa zmyrnae, qua veteres ad navium picturas utebantur. nunc omnis ex plumbo et aceto fit, ut diximus. usta casu reperta est in incendio piraeei cerussa in urceis cremata. hac primum usus est nicias supra dictus. optima nunc asiatica habetur, quae et purpurea appellatur. pretium eius in libras #1108 vi. fit et romae cremato sile marmoroso et restincto aceto. sine usta non fiunt umbrae.

eretria terrae suae habet nomen. hac nicomachus et parrhasius usi. refrigerat, emollit, explet volnera; si coquatur, ad siccanda praecipitur, utilis et capitis doloribus et ad deprehendenda pura; subesse enim ea intellegunt, si ex aqua inlita continuo arescat.

sandaracam et ochram iuba tradidit in insula rubri maris topazo nasci, sed inde non pervehuntur ad nos. sandaraca quomodo fieret diximus. fit et adulterina ex cerussa in fornace cocta. color esse debet flammeus. pretium in libras asses quini. haec si torreatur aequa parte

rubrica admixta, sandycem facit, quamquam animadverto vergilium existimasse herbam id esse illo versu:

“sponte sua sandyx pascentis vestiat agnos.” pretium in libras dimidium eius quod sandaracae. nec sunt alii colores maioris ponderis.

inter facticios est et syricum, quo minium sublini diximus. fit autem sinopide et sandyce mixtis.

atramentum quoque inter facticios erit, quamquam est et terrae, geminae originis. aut enim salsuginis modo emanat, aut terra ipsa sulpurei coloris ad hoc probatur. inventi sunt pictores, qui carbones infestatis sepulchris effoderent. inportuna haec omnia ac novicia. fit enim e fuligine pluribus modis, resina vel pice exustis, propter quod etiam officinas aedificavere fumum eum non emittentes. laudatissimum eodem modo fit e taedis. adulteratur fornacium balinearumque fuligine quo ad volumina scribenda utuntur. sunt qui et vini faecem siccatam excoquant adfirmentque, si ex bono vino faex ea fuerit, indici speciem id atramentum praebere. polygnotus et micon, celeberrimi pictores, athenis e vinaceis fecere, tryginon appellantes. Apelles commentus est ex ebore combusto facere, quod elephantinum vocatur. adportatur et indicum ex india inexploratae adhuc inventionis mihi. fit etiam aput infectores ex flore nigro, qui adhaerescit aereis cortinis. fit et ligno e taedis combusto tritisque in mortario carbonibus. mira in hoc saepiarum natura, sed ex iis non fit. omne autem atramentum sole perficitur, librarium cumme, tectorium glutino admixto. quod aceto liquefactum est, aegre eluitur.

e reliquis coloribus, quos a dominis dari diximus propter magnitudinem pretii, ante omnes est purpurissum. creta argentaria cum purpuris pariter tinguitur bibitque eum colorem celerius lanis. praecipuum est primum, fervente aheno rudibus medicamentis inebriatum, proximum egesto eo addita creta in ius idem et, quotiens id factum est, elevatur bonitas pro numero dilutiore sanie. quare puteolanum potius laudetur quam tyrium aut gaetulicum vel laconicum, unde pretiosissimae purpurae; causa est quod hysgino maxime inficitur rubiaque, quae cogitur sorbere. vilissimum a canusio. pretium a singulis denariis in libras ad xxx. pingentes sandyce sublita, mox ex ovo inducentes purpurissum, fulgorem minii faciunt. si purpurae facere malunt, caeruleum sublinunt, mox

purpurissum ex ovo inducunt.

ab hoc maxima auctoritas indico. ex india venit harundinum spumae adhaerescente limo. cum cernatur, nigrum, at in diluendo mixturam purpurae caeruleique mirabilem reddit. alterum genus eius est in purpurariis officinis innatans cortinis, et est purpurae spuma. qui adulterant, vero indico tingunt stercora columbina aut cretam selinusiam vel anulariam vitro inficiunt. probatur carbone; reddit enim quod sincerum est flammam excellentis purpurae et, dum fumat, odorem maris. ob id quidam e scopulis id colligi putant. pretium indico #1108 xx in libras. in medicina indicum rigores et impetus sedat siccatque ulcera.

armenia mittit quod eius nomine appellatur. lapis est, hic quoque chrysocollae modo infectus, optimumque est quod maxime vicinum et communicato colore cum caeruleo. solebant librae eius trecenis nummis taxari. inventa per hispanias harena est similem curam recipiens; itaque ad denarios senos vilitas rediit. distat a caeruleo candore modico, qui teneriorem hunc efficit colorem. usus in medicina ad pilos tantum alendos habet maximeque in palpebris.

sunt etiamnum novicii duo colores e vilissimis: viride est quod appianum vocatur et chrysocollam mentitur, ceu parum multa dicta sint mendacia eius; fit e creta viridi, aestimatum sestertiis in libras. anulare quod vocant, candidum est, quo muliebres picturae inluminantur; fit et ipsum e creta admixtis vitreis gemmis e volgi anulis, inde et anulare dictum.

ex omnibus coloribus cretulam amant udoque inlini recusant purpurissum, indicum, caeruleum, melinum, auripigmentum, appianum, cerussa. cerae tinguntur isdem his coloribus ad eas picturas, quae inuruntur, alieno parietibus genere, sed classibus familiari, iam vero et onerariis navibus, quoniam et pericula expingimus, ne quis miretur et rogos pingi, iuvatque pugnaturos ad mortem aut certe caedem speciose vehi.

qua contemplatione tot colorum tanta varietate subit antiquitatem mirari. quattuor coloribus solis immortalia illa opera fecere - ex albis melino, e silaciis attico, ex rubris sinopide pontica, ex nigris atramento — Apelles, aetion, melanthius, nicomachus, clarissimi pictores, cum tabulae eorum singulae oppidorum venirent opibus. nunc et purpuris in parietes migrantibus et india conferente fluminum

suorum limum, draconum elephantorumque saniem nulla nobilis pictura est. omnia ergo meliora tunc fuere, cum minor copia. ita est, quoniam, ut supra diximus, rerum, non animi pretiis excubatur.

et nostrae aetatis insaniam in pictura non omittam. nero princeps iusserat colosseum se pingi cxx pedum linteo, incognitum ad hoc tempus. ea pictura, cum peracta esset in maianis hortis, accensa fulmine cum optima hortorum parte conflagravit. libertus eius, cum daret anti munus gladiatorium, publicas porticus occupavit pictura, ut constat, gladiatorum ministrorumque omnium veris imaginibus redditis. hic multis iam saeculis summus animus in pictura, pingi autem gladiatoria munera atque in publico exponi coepta a c. terentio lucano. is avo suo, a quo adoptatus fuerat, triginta paria in foro per triduum dedit tabulamque pictam in nemore dianae posuit.

nunc celebres in ea arte quam maxima brevitate percurram, neque enim instituti operis est talis executio; itaque quosdam vel in transcursu et in aliorum mentione obiter nominasse satis erit, exceptis operum claritatibus quae et ipsa conveniet attingi, sive exstant sive intercidere.

non constat sibi in hac parte graecorum diligentia multas post olympiadas celebrando pictores quam statuarios ac toreutas, primumque olympiade lxxxx, cum et Phidian ipsum initio pictorem fuisse tradatur clipeumque athenis ab eo pictum, praeterea in confesso sit lxxx tertia fuisse fratrem eius Panaenum, qui clipeum intus pinxit elide minervae, quam fecerat colotes, discipulus Phidiae et ei in faciendo iove olympio adiutor. quid quod in confesso perinde est bularchi pictoris tabulam, in qua erat magnetum proelium, a candaule, rege lydiae heraclidarum novissimo, qui et myrsilus vocitatus est, repensam auro tanta iam dignatio picturae erat. circa romuli id aetatem acciderit necesse est, etenim duodevicensima olympiade interiit candaules aut, ut quidam tradunt, eodem anno quo romulus, nisi fallor, manifesta iam tunc claritate artis, adeo absolutione. quod si recipi necesse est, simul apparet multo vetustiora principia eosque, qui monochromatis pinxerint, quorum aetas non traditur, aliquanto ante fuisse, hygiaenontem, dinian, charmadan et, qui primus in pictura marem a femina discreverit, eumarum atheniensem, figuras omnes imitari ausum, quique inventa eius excoluerit, cimonem cleonaeum. hic catagrapha invenit, hoc est

obliquas imagines, et varie formare voltus, respicientes suspicientesve vel despicientes; articulis membra distinxit, venas protulit, praeterque in vestibus rugas et sinus invenit. panaenus quidem frater Phidiae etiam proelium atheniensium adversus persas apud marathona factum pinxit. adeo iam colorum usus increbruerat adeoque ars perfecta erat, ut in eo proelio iconicos duces pinxisse tradatur, atheniensium miltiadem, callimachum, cynaegirum, barbarorum datim, artaphernen. quin immo certamen etiam picturae florente eo institutum est corinthi ac delphis, primusque omnium certavit cum timagora chalcidense, superatus ab eo pythiis, quod et ipsius timagorae carmine vetusto apparet, chronicorum errore non dubio.

alii quoque post hos clari fuere ante lxxxx olympiadem, sicut polygnotus thasius, qui primus mulieres tralucida veste pinxit, capita earum mitris versicoloribus operuit plurimumque picturae primus contulit, siquidem instituit os adaperire, dentes ostendere, voltum ab antiquo rigore variare. huius est tabula in porticu pompei, quae ante curiam eius fuerat, in qua dubitatur ascendentem cum clupeo pinxerit an descendentem. hic delphis aedem pinxit, hic et athenis porticum, quae poecile vocatur, gratuito, cum partem eius micon mercede pingeret. vel maior huic auctoritas, siquidem amphictyones, quod est publicum graeciae concilium, hospitia ei gratuita decrevere. - fuit et alius micon, qui minoris cognomine distinguitur, cuius filia timarete et ipsa pinxit. -

lxxxx autem olympiade fuere aglaophon, cephisodorus, erillus, euenor, pater parrhasii et praeceptor maximi pictoris, de quo suis annis dicemus, omnes iam inlustres, non tamen in quibus haerere expositio debeat festinans ad lumina artis, in quibus primus refulsit apollodorus atheniensis lxxxxiii olympiade. hic primus species exprimere instituit primusque gloriam penicillo iure contulit. eius est sacerdos adorans et aiax fulmine incensus, quae pergami spectatur hodie. neque ante eum tabula ullius ostenditur, quae teneat oculos.

ab hoc artis fores apertas zeuxis heracleotes intravit olympiadis lxxxxv anno quarto, audentemque iam aliquid penicillum - de hoc enim adhuc loquamur - ad magnam gloriam perduxit, a quibusdam falso in lxxxviiii olympiade positus, cum fuisse necesse est demophilum himeraeum et nesea thasium, quoniam utrius eorum

discipulus fuerit ambigitur. in eum apollodorus supra scriptus versum fecit, artem ipsis ablatam zeuxim ferre secum. opes quoque tantas adquisivit, ut in ostentatione earum olympiae aureis litteris in palliorum tesseris intextum nomen suum ostentaret. postea donare opera sua instituit, quod nullo pretio satis digno permutari posse diceret, sicuti alcmenam agragantinis, pana archelao. fecit et penelopen, in qua pinxisse mores videtur, et athletam adeoque in illo sibi placuit, ut versum subscriberet celebrem ex eo, invisurum aliquem facilius quam imitaturum. magnificus est et iuppiter eius in throno adstantibus diis et hercules infans dracones ii strangulans alcmena matre coram pavente et amphitryone. reprehenditur tamen ceu grandior in capitibus articulisque, alioqui tantus diligentia, ut agragantinis facturus tabulam, quam in templo iunonis laciniae publice dicarent, inspexerit virgines eorum nudas et quinque elegerit, ut quod in quaque laudatissimum esset pictura redderet. pinxit et monochromata ex albo. aequales eius et aemuli fuere timanthes, androcydes, eupompus, parrhasius. descendisse hic in certamen cum zeuxide traditur et, cum ille detulisset uvas pictas tanto successu, ut in scaenam aves advolarent, ipse detulisse linteum pictum ita veritate repraesentata, ut zeuxis alitum iudicio tumens flagitaret tandem remoto linteo ostendi picturam atque intellecto errore concederet palmam ingenuo pudore, quoniam ipse volucres fefellisset, parrhasius autem se artificem. fertur et postea zeuxis pinxisse puerum uvas ferentem, ad quas cum advolassent aves, eadem ingenuitate processit iratus operi et dixit: “uvas melius pinxi quam puerum, nam si et hoc consummassem, aves timere debuerant.” fecit et figlina opera, quae sola in ambracia relicta sunt, cum inde musas fulvius nobilior romam transferret. zeuxidis manu romae helena est in philippi porticibus, et in concordiae delubro marsyas religatus.

parrhasius ephesi natus et ipse multa contulit. primus symmetrian picturae dedit, primus argutias voltus, elegantiam capilli, venustatem oris, confessione artificum in liniis extremis palmam adeptus. haec est picturae summa suptilitas. corpora enim pingere et media rerum est quidem magni operis, sed in quo multi gloriam tulerint; extrema corporum facere et desinentis picturae modum includere rarum in successu artis invenitur. ambire enim se ipsa debet extremitas et sic desinere, ut promittat alia et post se ostendatque etiam quae occultat.

hanc ei gloriam concessere antigonus et xenocrates, qui de pictura scripsere, praedicantes quoque, non solum confitentes; et alias multa graphidis vestigia exstant in tabulis ac membranis eius, ex quibus proficere dicuntur artifices. minor tamen videtur sibi comparatus in mediis corporibus exprimendis. pinxit demon atheniensium argumento quoque ingenioso. ostendebat namque varium: iracundum iniustum inconstantem, eundem exorabilem clementem misericordem; gloriosum ... , excelsum humilem, ferocem fugacemque et omnia pariter. idem pinxit et thesea, quae romae in capitolio fuit, et nauarchum thoracatum, et in una tabula, quae est rhodi, meleagrum, herculem, persea; haec ibi ter fulmine ambusta neque obliterata hoc ipso miraculum auget. pinxit et archigallum, quam picturam amavit tiberius princeps atque, ut auctor est deculo, hs [30lx]30 aestimatam cubiculo suo inclusit. pinxit et thressam nutricem infantemque in manibus eius et philiscum et liberum patrem adstante virtute, et pueros duos, in quibus spectatur securitas aetatis et simplicitas, item sacerdotem adstante puero cum acerra et corona. sunt et duae picturae eius nobilissimae, hoplites in certamine ita decurrens, ut sudare videatur, alter arma deponens, ut anhelare sentiatur. laudantur et aeneas castorque ac pollux in eadem tabula, item telephus, achilles, agamemnon, ulixes. fecundus artifex, sed quo nemo insolentius usus sit gloria artis, namque et cognomina usurpavit habrodiaetum se appellando aliisque versibus principem artis et eam ab se consummatam, super omnia apollinis se radice ortum et herculem, qui est lindi, talem a se pictum, qualem saepe in quiete vidisset, et, cum magnis suffragiis superatus a timanthe esset sami in aiace armorumque iudicio, herois nomine se moleste ferre dicebat, quod iterum ab indigno victus esset. - (pinxit et minoribus tabellis libidines, eo genere petulantis ioci se reficiens). -

nam timanthi vel plurimum adfuit ingenii. eius enim est iphigenia oratorum laudibus celebrata, qua stante ad aras peritura cum maestos pinxisset omnes praecipueque patruum et tristitiae omnem imaginem consumpsisset, patris ipsius voltum velavit, quem digne non poterat ostendere. sunt et alia ingenii eius exempla, veluti cyclops dormiens in parvola tabella, cuius et sic magnitudinem exprimere cupiens pinxit iuxta satyros thyrso pollicem eius metientes. atque in unius huius operibus intellegitur plus semper quam pingitur et, cum sit ars

summa, ingenium tamen ultra artem est. pinxit et heroa absolutissimi operis, artem ipsam complexus viros pingendi, quod opus nunc romae in templo pacis est.

euxinidas hac aetate docuit aristiden, praeclarum artificem, eupompus pamphilum, Apellis praeceptorem. est eupompi victor certamine gymnico palmam tenens. ipsius auctoritas tanta fuit, ut diviserit picturam: genera, quae ante eum duo fuere - helladicum et asiaticum appellabant - , propter hunc, qui erat sicyonius, diviso helladico tria facta sunt, ionicum, sicyonium, atticum. pamphili cognatio et proelium ad phliuntem ac victoria atheniensium, item ulixes in rate. ipse macedo natione, sed ... primus in pictura omnibus litteris eruditus, praecipue arithmetica et geometria, sine quibus negabat artem perfici posse, docuit neminem talento minoris - annuis #1108 d - , quam mercedem et Apelles et melanthius dedere ei. huius auctoritate effectum est sicyone primum, deinde in tota graecia, ut pueri ingenui omnia ante graphicen, hoc est picturam in buxo, docerentur recipereturque ars ea in primum gradum liberalium. semper quidem honos ei fuit, ut ingenui eam exercerent, mox ut honesti, perpetuo interdicto ne servitia docerentur. ideo neque in hac neque in toreutice ullius, qui servierit, opera celebrantur.

clari et centesima septima olympiade exstitere aetion ac therimachus. aetionis sunt nobiles picturae liber pater, item tragoedia et comoedia, semiramis ex ancilla regnum apiscens, anus lampadas praeferens et nova nupta verecundia notabilis.

verum omnes prius genitos futurosque postea superavit Apelles cous olympiade centesima duodecima. picturae plura solus prope quam ceteri omnes contulit, voluminibus etiam editis, quae doctrinam eam continent. praecipua eius in arte venustas fuit, cum eadem aetate maximi pictores essent; quorum opera cum admiraretur, omnibus conlaudatis deesse illam suam venerem dicebat, quam graeci χάριτα vocant; cetera omnia contigisse, sed hac sola sibi neminem parem. et aliam gloriam usurpavit, cum protogenis opus inmensi laboris ac curae supra modum anxiae miraretur; dixit enim omnia sibi cum illo paria esse aut illi meliora, sed uno se praestare, quod manum de tabula sciret tollere, memorabili praecepto nocere saepe nimiam diligentiam. fuit autem non minoris simplicitatis quam artis. melanthio dispositione cedebat, Asclepiodoro de mensuris, hoc

est quanto quid a quoque distare deberet.

scitum inter protogenen et eum quod accidit. ille rhodi vivebat, quo cum Apelles adnavigasset, avidus cognoscendi opera eius fama tantum sibi cogniti, continuo officinam petiit. aberat ipse, sed tabulam amplae magnitudinis in machina aptatam una custodiebat anus. haec foris esse protogenen respondit interrogavitque, a quo quaesitum diceret. “ab hoc,” inquit Apelles adreptoque penicillo lineam ex colore duxit summae tenuitatis per tabulam. et reverso protogeni quae gesta erant anus indicavit. ferunt artificem protinus contemplatum subtilitatem dixisse Apellen venisse, non cadere in alium tam absolutum opus; ipsumque alio colore tenuiorem lineam in ipsa illa duxisse abeuntemque praecepisse, si redisset ille, ostenderet adiceretque hunc esse quem quaereret. atque ita evenit. revertit enim Apelles et vinci erubescens tertio colore lineas secuit nullum relinquens amplius subtilitati locum. at protogenes victum se confessus in portum devolavit hospitem quaerens, placuitque sic eam tabulam posteris tradi omnium quidem, sed artificum praecipuo miraculo. consumptam eam priore incendio caesaris domus in palatio audio, spectatam rhodi ante, spatiose nihil aliud continentem quam lineas visum effugientes, inter egregia multorum opera inani similem et eo ipso allicientem omnique opere nobiliorem.

Apelli fuit alioqui perpetua consuetudo numquam tam occupatum diem agendi, ut non lineam ducendo exerceret artem, quod ab eo in proverbium venit. idem perfecta opera proponebat in pergula transeuntibus atque, ipse post tabulam latens, vitia quae notarentur auscultabat, vulgum diligentiorem iudicem quam se praeferens; feruntque reprehensum a sutore, quod in crepidis una pauciores intus fecisset ansas, eodem postero die superbo emendatione pristinae admonitionis cavillante circa crus, indignatum prospexisse denuntiantem, ne supra crepidam sutor iudicaret, quod et ipsum in proverbium abiit. fuit enim et comitas illi, propter quam gratior alexandro magno frequenter in officinam ventitanti - nam, ut diximus, ab alio se pingi vetuerat edicto - , sed in officina imperite multa disserenti silentium comiter suadebat, rideri eum dicens a pueris, qui colores tererent. tantum erat auctoritati iuris in regem alioqui iracundum. quamquam alexander honorem ei clarissimo perhibuit exemplo. namque cum dilectam sibi e pallacis suis

praecipue, nomine pancaspen, nudam pingi ob admirationem formae ab Apelle iussisset eumque, dum paret, captum amore sensisset, dono dedit ei, magnus animo, maior imperio sui nec minor hoc facto quam victoria alia, quia ipse se vicit, nec torum tantum suum, sed etiam adfectum donavit artifici, ne dilectae quidem respectu motus, cum modo regis ea fuisset, modo pictoris esset. sunt qui venerem anadyomenen ab illo pictam exemplari putent. Apelles et in aemulis benignus protogeni dignationem primus rhodi constituit. sordebat suis, ut plerumque domestica, percontantique, quanti liceret opera effecta, parvum nescio quid dixerat, at ille quinquagenis talentis poposcit famamque dispersit, se emere, ut pro suis venderet. ea res concitavit rhodios ad intellegendum artificem, nec nisi augentibus pretium cessit.

imagines adeo similitudinis indiscretae pinxit, ut - incredibile dictu - apio grammaticus scriptum reliquerit, quendam ex facie hominum divinantem, quos metoposcopos vocant, ex iis dixisse aut futurae mortis annos aut praeteritae vitae. non fuerat ei gratia in comitatu alexandri cum ptolemaeo, quo regnante alexandriam vi tempestatis expulsus, subornato fraude aemulorum plano regio invitatus, ad cenam venit indignantique ptolemaeo et vocatores suos ostendenti, ut diceret, a quo eorum invitatus esset, arrepto carbone extincto e foculo imaginem in pariete delineavit, adgnoscente voltum plani rege inchoatum protinus. pinxit et antigoni regis imaginem altero lumine orbati primus excogitata ratione vitia condendi; obliquam namque fecit, ut, quod deerat corpori, picturae deesse potius videretur, tantumque eam partem e facie ostendit, quam totam poterat ostendere. sunt inter opera eius et exspirantium imagines. quae autem nobilissima sint, non est facile dictu. venerem exeuntem e mari Divus Augustus dicavit in delubro patris caesaris, quae anadyomene vocatur, versibus graecis tantopere dum laudatur, aevis victa, sed inlustrata. cuius inferiorem partem corruptam qui reficeret non potuit reperiri, verum ipsa iniuria cessit in gloriam artificis. consenuit haec tabula carie, aliamque pro ea substituit nero in principatu suo dorothei manu. Apelles inchoaverat et aliam venerem coi, superaturus etiam illam suam priorem. invidit mors peracta parte, nec qui succederet operi ad praescripta liniamenta inventus est. pinxit et alexandrum magnum fulmen tenentem in templo ephesiae

dianae viginti talentis auri. digiti eminere videntur et fulmen extra tabulam esse - legentes meminerint omnia ea quattuor coloribus facta - ; manipretium eius tabulae in nummo aureo mensura accepit, non numero. pinxit et megabyzi, sacerdotis dianae ephesiae, pompam, clitum cum equo ad bellum festinantem, galeam poscenti armigerum porrigentem. alexandrum et philippum quotiens pinxerit, enumerare supervacuum est. mirantur eius habronem sami; menandrum, regem cariae, rhodi, item antaeum; alexandreae gorgosthenen tragoedum; romae castorem et pollucem cum victoria et alexandro magno, item belli imaginem restrictis ad terga manibus, alexandro in curru triumphante. quas utrasque tabulas Divus Augustus in fori sui celeberrimis partibus dicaverat simplicitate moderata; divus claudius pluris existimavit utrisque excisa alexandri facie Divi Augusti imagines addere. eiusdem arbitrantur manu esse et in dianae templo herculem aversum, ut, quod est difficillimum, faciem eius ostendat verius pictura quam promittat. pinxit et heroa nudum eaque pictura naturam ipsam provocavit. est et equus eius, sive fuit, pictus in certamine, quo iudicium ad mutas quadripedes provocavit ab hominibus. namque ambitu praevalere aemulos sentiens singulorum picturas inductis equis ostendit: Apellis tantum equo adhinnivere, idque et postea semper evenit, ut experimentum artis illud ostentaretur. fecit et neoptolemum ex equo adversus persas, archelaum cum uxore et filia, antigonum thoracatum cum equo incedentem. peritiores artis praeferunt omnibus eius operibus eundem regem sedentem in equo et dianam sacrificantium virginum choro mixtam, quibus vicisse homeri versus videtur id ipsum describentis. pinxit et quae pingi non possunt, tonitrua, fulgetra fulguraque; bronten, astrapen et ceraunobolian appellant. - inventa eius et ceteris profuere in arte; unum imitari nemo potuit, quod absoluta opera atramento inlinebat ita tenui, ut id ipsum, cum repercussum claritatis colorum omnium excitaret custodiretque a pulvere et sordibus, ad manum intuenti demum appareret, sed et luminum ratione magna, ne claritas colorum aciem offenderet veluti per lapidem specularem intuentibus et e longinquo eadem res nimis floridis coloribus austeritatem occulte daret.

aequalis eius fuit aristides thebanus. is omnium primus animum pinxit et sensus hominis expressit, quae vocant graeci ἤθη, item

perturbationes, durior paulo in coloribus. huius opera ... oppido capto ad matris morientis ex volnere mammam adrepens infans, intellegiturque sentire mater et timere, ne emortuo e lacte sanguinem lambat. quam tabulam alexander magnus transtulerat pellam in patriam suam. idem pinxit proelium cum persis, centum homines tabula ea conplexus pactusque in singulos mnas denas a tyranno elatensium mnasone. pinxit et currentes quadrigas et supplicantem paene cum voce et venatores cum captura et leontion epicuri et anapauomenen propter fratris amorem, item liberum et ariadnen spectatos romae in aede cereris, tragoedum et puerum in apollinis, cuius tabulae gratia interiit pictoris inscitia, cui tergendam eam mandaverat m. iunius praetor sub die ludorum apollinarium. spectata est et in aede fidei in capitolio senis cum lyra puerum docentis. pinxit et aegrum sine fine laudatum tantumque arte valuit, ut attalus rex unam tabulam eius centum talentis emisse tradatur.

simul, ut dictum est, et protogenes floruit. patria ei caunus, gentis rhodiis subiectae. summa paupertas initio artisque summa intentio et ideo minor fertilitas. quis eum docuerit, non putant constare; quidam et naves pinxisse usque ad quinquagensimum annum; argumentum esse, quod cum athenis celeberrimo loco minervae delubri propylon pingeret, ubi fecit nobilem paralum et hammoniada, quam quidam nausicaan vocant, adiecerit parvolas naves longas in iis, quae pictores parergia appellant, ut appareret, a quibus initiis ad arcem ostentationis opera sua pervenissent. palmam habet tabularum eius ialysus, qui est romae dicatus in templo pacis. cum pingeret eum, traditur madidis lupinis vixisse, quoniam sic simul et famem sustineret et sitim nec sensus nimia dulcedine obstrueret. huic picturae quater colorem induxit ceu tria subsidia iniuriae et vetustatis, ut decedente superiore inferior succederet. est in ea canis mire factus, ut quem pariter et casus pinxerit. non iudicabat se in eo exprimere spumam anhelantis, cum in reliqua parte omni, quod difficillimum erat, sibi ipse satisfecisset. displicebat autem ars ipsa: nec minui poterat et videbatur nimia ac longius a veritate discedere, spumaque pingi, non ex ore nasci. anxio animi cruciatu, cum in pictura verum esse, non verisimile vellet, absterserat saepius mutaveratque penicillum, nullo modo sibi adprobans. postremo iratus arti, quod intellegeretur, spongeam inpegit inviso loco tabulae. et illa

reposuit ablatos colores qualiter cura optaverat, fecitque in pictura fortuna naturam. hoc exemplo eius similis et nealcen successus spumae equi similiter spongea inpacta secutus dicitur, cum pingeret poppyzonta retinentem eum. ita protogenes monstravit et fortunam. propter hunc ialysum, ne cremaret tabulam, demetrius rex, cum ab ea parte sola posset rhodum capere, non incendit, parcentemque picturae fugit occasio victoriae. erat tunc protogenes in suburbano suo hortulo, hoc est demetrii castris, neque interpellatus proeliis incohata opera intermisit omnino nisi accitus a rege, interrogatusque, qua fiducia extra muros ageret, respondit scire se cum rhodiis illi bellum esse, non cum artibus. disposuit rex in tutelam eius stationes, gaudens quod manus servaret, quibus pepercerat, et, ne saepius avocaret, ultro ad eum venit hostis relictisque victoriae suae votis inter arma et murorum ictus spectavit artificem; sequiturque tabulam illius temporis haec fama, quod eam protogenes sub gladio pinxerit: satyrus hic est, quem anapauomenon vocant, ne quid desit temporis eius securitati, tenentem tibias. fecit et cydippen et tlepolemum, Philiscum, tragoediarum scriptorem, meditantem et athletam et antigonum regem, matrem aristotelis philosophi, qui ei suadebat, ut alexandri magni opera pingeret propter aeternitatem rerum - impetus animi et quaedam artis libido in haec potius eum tulere - ; novissime pinxit alexandrum ac pana. fecit et signa ex aere, ut diximus.

eadem aetate fuit Asclepiodorus, quem in symmetria mirabatur Apelles. huic mnaso tyrannus pro duodecim diis dedit in singulos mnas tricenas, idemque theomnesto in singulos heroas vicenas.

his adnumerari debet et nicomachus, aristidis filius ac discipulus. pinxit raptum proserpinae, quae tabula fuit in capitolio in minervae delubro supra aediculam iuventatis, et in eodem capitolio, quam plancus imperator posuerat, victoria quadrigam in sublime rapiens. ulixi primus addidit pilleum. pinxit et apollinem ac dianam, deumque matrem in leone sedentem, item nobiles bacchas obreptantibus satyris, scyllamque, quae nunc est romae in templo pacis. nec fuit alius in ea arte velocior. tradunt namque conduxisse pingendum ab aristrato, sicyoniorum tyranno, quod is faciebat telesti poetae monimentum praefinito die, intra quem perageretur, nec multo ante venisse, tyranno in poenam accenso, paucisque diebus absolvisse et celeritate et arte mira. - discipulos habuit aristonem fratrem et

aristiden filium et philoxenum eretrium, cuius tabula nullis postferenda, cassandro regi picta, continuit alexandri proelium cum dario. idem pinxit et lasciviam, in qua tres sileni comissantur. hic celeritatem praeceptoris secutus breviores etiamnum quasdam picturae conpendiarias invenit. - adnumeratur his et nicophanes, elegans ac concinnus ita, ut venustate ei pauci conparentur; cothurnus et gravitas artis multum a zeuxide et Apelle abest. (Apellis discipulus perseus, ad quem de hac arte scripsit, huius fuerat aetatis). aristidis thebani discipuli fuerunt et filii niceros et ariston, cuius est satyrus cum scypho coronatus, discipuli antorides et euphranor, de quo mox dicemus.

namque subtexi par est minoris picturae celebres in penicillo, e quibus fuit piraeicus arte paucis postferendus: proposito nescio an distinxerit se, quoniam humilia quidem secutus humilitatis tamen summam adeptus est gloriam. tonstrinas sutrinasque pinxit et asellos et obsonia ac similia, ob haec cognominatus rhyparographos, in iis consummatae voluptatis, quippe eae pluris veniere quam maximae multorum. e diverso “maeniana,” inquit Varro, “omnia operiebat serapionis tabula sub veteribus.” hic scaenas optime pinxit, sed hominem pingere non potuit. contra dionysius nihil aliud quam homines pinxit, ob id anthropographos cognominatus. parva et callicles fecit, item calates comicis tabellis, utraque antiphilus. namque et hesionam nobilem pinxit et alexandrum ac philippum cum minerva, qui sunt in schola in octaviae porticibus, et in philippi liberum patrem, alexandrum puerum, hippolytum tauro emisso expavescentem, in pompeia vero cadmum et europen. idem iocosis nomine gryllum deridiculi habitus pinxit, unde id genus picturae grylli vocantur. ipse in aegypto natus didicit a ctesidemo.

decet non sileri et ardeatis templi pictorem, praesertim civitate donatum ibi et carmine, quod est in ipsa pictura his versibus:

“dignis digna. loco picturis condecoravit
reginae iunonis supremi coniugis templum
plautius marcus, cluet asia lata esse oriundus,
quem nunc et post semper ob artem hanc ar

dea laudat,” eaque sunt scripta antiquis litteris latinis, non fraudanda et studio Divi Augusti aetate, qui primus instituit amoenissimam parietum picturam, villas et porticus ac topiaria

opera, lucos, nemora, colles, piscinas, euripos, amnes, litora, qualia quis optaret, varias ibi obambulantium species aut navigantium terraque villas adeuntium asellis aut vehiculis, iam piscantes, aucupantes aut venantes aut etiam vindemiantes. sunt in eius exemplaribus nobiles palustri accessu villae, succollatis sponsione mulieribus labantes, trepidis quae feruntur, plurimae praeterea tales argutiae facetissimi salis. idem subdialibus maritimas urbes pingere instituit, blandissimo aspectu minimoque inpendio. sed nulla gloria artificum est nisi qui tabulas pinxere. eo venerabilior antiquitatis prudentia apparet. non enim parietes excolebant dominis tantum nec domos uno in loco mansuras, quae ex incendiis rapi non possent. casa protogenes contentus erat in hortulo suo; nulla in Apellis tectoriis pictura erat. nondum libebat parietes totos tinguere; omnium eorum ars urbibus excubabat, pictorque res communis terrarum erat. - fuit et arellius romae celeber paulo ante Divum Augustum, ni flagitio insigni corrupisset artem, semper ei lenocinans feminae, cuius amore flagraret, et ob id deas pingens, sed dilectarum imagine. itaque in pictura eius scorta numerabantur. fuit et nuper gravis ac severus idemque floridis tumidus pictor famulus. huius erat minerva spectantem spectans, quacumque aspiceretur. paucis diei horis pingebat, id quoque cum gravitate, quod semper togatus, quamquam in machinis. carcer eius artis domus aurea fuit, et ideo non extant exempla alia magnopere. post eum fuere in auctoritate cornelius pinus et attius priscus, qui honoris et virtutis aedes imperatori Vespasiano Augusto restituenti pinxerunt, priscus antiquis similior. - non est omittenda in picturae mentione celebris circa lepidum fabula, siquidem in triumviratu quodam loco deductus a magistratibus in nemorosum hospitium minaciter cum iis postero die expostulavit somnum ademptum sibi volucrum concentu; at illi draconem in longissima membrana depictum circumdedere luco, eoque terrore aves tunc siluisse narratur et postea posse compesci.

ceris pingere ac picturam inurere quis primus excogitaverit, non constat. quidam aristidis inventum putant, postea consummatum a praxitele; sed aliquanto vetustiores encaustae picturae exstitere, ut polygnoti et nicanoris, mnesilai pariorum. elasippus quoque aeginae picturae suae inscripsit ἐνέκαεν, quod profecto non fecisset nisi encaustica inventa. pamphilus quoque, Apellis praeceptor, non

pinxisse solum encausta, sed etiam docuisse traditur pausian sicyonium, primum in hoc genere nobilem. bryetis filius hic fuit eiusdemque primo discipulus. pinxit et ipse penicillo parietes thespiis, cum reficerentur quondam a polygnoto picti, multumque comparatione superatus existimabatur, quoniam non suo genere certasset. idem et lacunaria primus pingere instituit, nec camaras ante eum taliter adornari mos fuit; parvas pingebat tabellas maximeque pueros. hoc aemuli interpretabantur facere eum, quoniam tarda picturae ratio esset illa. quam ob rem daturus ei celeritatis famam absolvit uno die tabellam, quae vocata est hemeresios, puero picto. amavit in iuventa glyceram municipem suam, inventricem coronarum, certandoque imitatione eius ad numerosissimam florum varietatem perduxit artem illam. postremo pinxit et ipsam sedentem cum corona, quae e nobilissimis tabula est, appellata stephanoplocos, ab aliis stephanopolis, quoniam glycera venditando coronas sustentaverat paupertatem. huius tabulae exemplar, quod apographon vocant, l. lucullus duobus talentis emit ... dionysius athenis. pausias autem fecit et grandes tabulas, sicut spectatam in pompei porticu boum immolationem. eam primus invenit picturam, quam postea imitati sunt multi, aequavit nemo. ante omnia, cum longitudinem bovis ostendi vellet, adversum eum pinxit, non traversum, et abunde intellegitur amplitudo. dein, cum omnes, quae volunt eminentia videri, candicanti faciant colore, quae condunt, nigro, hic totum bovem atri coloris fecit umbraeque corpus ex ipsa dedit, magna prorsus arte in aequo extantia ostendente et in confracto solida omnia. sicyone et hic vitam egit, diuque illa fuit patria picturae. tabulas inde e publico omnes propter aes alienum civitatis addictas Scauri aedilitas romam transtulit.

post eum eminuit longe ante omnes euphranor isthmius olympiade ciiii, idem qui inter fictores dictus est nobis. fecit et colossos et marmorea et typos scalpsit, docilis ac laboriosus ante omnes et in quocumque genere excellens ac sibi aequalis. hic primus videtur expressisse dignitates heroum et usurpasse symmetrian, sed fuit in universitate corporum exilior et capitibus articulisque grandior. volumina quoque composuit de symmetria et coloribus. opera eius sunt equestre proelium, xii dei, theseus, in quod dixit eundem apud parrhasium rosa pastum esse, suum vero carne. nobilis eius tabula

ephesi est, ulixes simulata insania bovem cum equo iungens et palliati cogitantes, dux gladium condens.

eodem tempore fuere cydias, cuius tabulam argonautas hs [cxxxxiiii] hortensius orator mercatus est eique aedem fecit in tusculano suo, euphranoris autem discipulus antidotus. huius est clipeo dimicans athenis et luctator tubicenque inter pauca laudatus. ipse diligentior quam numerosior et in coloribus severus maxime inclaruit discipulo nicia atheniense, qui diligentissime mulieres pinxit. lumen et umbras custodiit atque ut eminerent e tabulis picturae maxime curavit. operum eius nemea advecta ex asia romam a silano, quam in curia diximus positam, item liber pater in aede concordiae, hyacinthus, quem Caesar Augustus delectatus eo secum deportavit alexandrea capta, et ob id tiberius caesar in templo eius dicavit hanc tabulam et danaen, ephesi vero est megabyzi, sacerdotis ephesiae dianae, sepulchrum, athenis necyomantea homeri. hanc vendere attalo regi noluit talentis lx potiusque patriae suae donavit abundans opibus. fecit et grandes picturas, in quibus sunt calypso et io et andromeda; alexander quoque in pompei porticibus praecellens et calypso sedens huic eidem adscribuntur. quadripedum prosperrime canes expressit. hic est nicias, de quo dicebat Praxiteles interrogatus, quae maxime opera sua probaret in marmoribus: “quibus nicias manum admovisset;” tantum circumlitioni eius tribuebat. non satis discernitur, alium eodem nomine an hunc eundem quidam faciant olympiade cxii.

niciae conparatur et aliquando praefertur athenion maronites, glaucionis corinthii discipulus, austerior colore et in austeritate iucundior, ut in ipsa pictura eruditio eluceat. pinxit in templo eleusine phylarchum et athenis frequentiam, quam vocavere syngenicon, item achillem virginis habitu occultatum ulixe deprendente et in una tabula vi signa, quaque maxime inclaruit, agasonem cum equo. quod nisi in iuventa obiisset, nemo compararetur.

est nomen et heraclidi macedoni. initio naves pinxit captoque perseo rege athenas commigravit. ubi eodem tempore erat metrodorus, pictor idemque philosophus, in utraque scientia magnae auctoritatis. itaque cum l. paulus devicto perseo petiisset ab atheniensibus, ut ii sibi quam probatissimum philosophum mitterent

ad erudiendos liberos, item pictorem ad triumphum excolendum, athenienses metrodorum elegerunt, professi eundem in utroque desiderio praestantissimum, quod ita paulus quoque iudicavit.

timomachus byzantius caesaris dictatoris aetate aiacem et mediam pinxit, ab eo in veneris genetricis aede positas, lxxx talentis venundatas. talentum atticum #1108 [vi] taxat M. Varro. timomachi aeque laudantur orestes, iphigenia in tauris et lecythion, agilitatis exercitator, cognatio nobilium, palliati, quos dicturos pinxit, alterum stantem, alterum sedentem. praecipue tamen ars ei favisse in gorgone visa est.

pausiae filius et discipulus aristolaus e severissimis pictoribus fuit, cuius sunt epaminondas, pericles, media, virtus, theseus, imago atticae plebis, boum immolatio. - sunt quibus et nicophanes, eiusdem pausiae discipulus, placeat diligentia, quam intellegant soli artifices, alias durus in coloribus et sile multus. nam socrates iure omnibus placet; tales sunt eius cum aesculapio filiae hygia, aegle, panacea, iaso et piger, qui appellatur ocnos, spartum torquens, quod asellus adrodit.

hactenus indicatis proceribus in utroque genere non silebuntur et primis proximi: aristoclides, qui pinxit aedem apollinis delphis. antiphilus puero ignem conflante laudatur ac pulchra alias domo splendescente ipsiusque pueri ore, item lanificio, in quo properant omnium mulierum pensa, ptolemaeo venante, sed nobilissimo satyro cum pelle pantherina, quem aposcopeuonta appellant, aristophon ancaeo vulnerato ab apro cum socia doloris astypalaea numerosaque tabula, in qua sunt priamus, helena, credulitas, ulixes, deiphobus, dolus. androbius pinxit scyllum ancoras praecidentem persicae classis, artemon danaen mirantibus eam praedonibus, reginam stratonicen, herculem et deianiram, nobilissimas autem, quae sunt in octaviae operibus, herculem ab oeta monte doridos exusta mortalitate consensu deorum in caelum euntem, laomedontis circa herculem et neptunum historiam; alcimachus dioxippum, qui pancratio olympiae citra pulveris iactum, quod vocant ἀκονιτί, vicit; coenus stemmata. ctesilochus, Apellis discipulus, petulanti pictura innotuit, iove liberum parturiente depicto mitrato et muliebriter ingemescente inter obstetricia dearum, cleon cadmo, ctesidemus oechaliae expugnatione, laodamia, ctesicles reginae stratonices iniuria. nullo enim honore

exceptus ab ea pinxit volutantem cum piscatore, quem reginam amare sermo erat, eamque tabulam in portu ephesi proposuit, ipse velis raptus. regina tolli vetuit, utriusque similitudine mire expressa. cratinus comoedos athenis in pompeo pinxit; Eutychides bigam: regit victoria. eudorus scaena spectatur - idem et ex aere signa fecit - , hippys neptuno et victoria. habron amicam et concordiam pinxit et deorum simulacra, leontiscus aratum victorem cum tropaeo, psaltriam, leon sappho, nearchus venerem inter gratias et cupidines, herculem tristem insaniae paenitentia, nealces venerem, ingeniosus et sollers, ... ime siquidem, cum proelium navale persarum et aegyptiorum pinxisset, quod in nilo cuius est aqua maris similis factum volebat intellegi, argumento declaravit quod arte non poterat: asellum enim bibentem in litore pinxit et crocodilum insidiantem ei; oenias syngenicon, Philiscus officinam pictoris ignem conflante puero, phalerion scyllam, simonides agatharchum et mnemosynen, simus iuvenem requiescentem, officinam fullonis quinquatrus celebrantem, idemque nemesim egregiam, theorus se inungentem, idem ab oreste matrem et aegisthum interfici, bellumque iliacum pluribus tabulis, quod est romae in philippi porticibus, et cassandram, quae est in concordiae delubro, leontium epicuri cogitantem, demetrium regem, theon orestis insaniam, thamyram citharoedum, Tauriscus discobolum, clytaemestram, paniscon, polynicen regnum repetentem et capanea.

non omittetur inter hos insigne exemplum. namque erigonus, tritor colorum nealcae pictoris, in tantum ipse profecit, ut celebrem etiam discipulum reliquerit pasiam, fratrem aeginetae fictoris. illud vero perquam rarum ac memoria dignum est, suprema opera artificum inperfectasque tabulas, sicut irim aristidis, tyndaridas nicomachi, mediam timomachi et quam diximus venerem Apellis, in maiore admiratione esse quam perfecta, quippe in iis liniamenta reliqua ipsaeque cogitationes artificum spectantur, atque in lenocinio commendationis dolor est manus, cum id ageret, exstinctae.

sunt etiamnum non ignobiles quidem, in transcursu tamen dicendi aristocydes, anaxander, aristobulus syrus, Arcesilas, tisicratis filius, coroebus, nicomachi discipulus, charmantides euphranoris, dionysodorus colophonius, dicaeogenes, qui cum demetrio rege vixit, euthymides, heraclides macedo, milon soleus, pyromachi statuarii

discipuli, mnasitheus sicyonius, mnasitimus, aristonidae filius et discipulus, nessus, habronis filius, polemon alexandrinus, theodorus samius et stadios, nicosthenis discipuli, xenon, neoclis discipulus, sicyonius.

pinxere et mulieres: timarete, miconis filia, dianam, quae in tabula ephesi est antiquissimae picturae; irene, cratini pictoris filia et discipula, puellam, quae est eleusine, calypso, senem et praestigiatorem theodorum, alcisthenen saltatorem; aristarete, nearchi filia et discipula, aesculapium. iaia cyzicena, perpetua virgo, M. Varronis iuventa romae et penicillo pinxit et cestro in ebore imagines mulierum maxime et neapoli anum in grandi tabula, suam quoque imaginem ad speculum. nec ullius velocior in pictura manus fuit, artis vero tantum, ut multum manipretiis antecederet celeberrimos eadem aetate imaginum pictores sopolim et dionysium, quorum tabulae pinacothecas inplent. pinxit et quaedam olympias, de qua hoc solum memoratur, discipulum eius fuisse autobulum.

encausto pingendi duo fuere antiquitus genera, cera et in ebore cestro, id est vericulo, donec classes pingi coepere. hoc tertium accessit resolutis igni ceris penicillo utendi, quae pictura navibus nec sole nec sale ventisve corrumpitur.

pingunt et vestes in aegypto, inter pauca mirabili genere, candida vela, postquam attrivere, inlinentes non coloribus, sed colorem sorbentibus medicamentis. hoc cum fecere, non apparet in velis, sed in cortinam pigmenti ferventis mersa post momentum extrahuntur picta. mirumque, cum sit unus in cortina colos, ex illo alius atque alius fit in veste accipientis medicamenti qualitate mutatus, nec postea ablui potest. ita cortina, non dubie confusura colores, si pictos acciperet, digerit ex uno pingitque, dum coquit, et adustae eae vestes firmiores usibus fiunt quam si non urerentur. - de pictura satis superque. contexuisse his et plasticen conveniat eiusdem operae terrae.

fingere ex argilla similitudines butades sicyonius figulus primus invenit corinthi filiae opera, quae capta amore iuvenis, abeunte illo peregre, umbram ex facie eius ad lucernam in pariete lineis circumscripsit, quibus pater eius inpressa argilla typum fecit et cum ceteris fictilibus induratum igni proposuit, eumque servatum in nymphaeo, donec mummius corinthum everterit, tradunt. sunt qui in

samo primos omnium plasticen invenisse rhoecum et theodorum tradant multo ante bacchiadas corintho pulsos, damaratum vero ex eadem urbe profugum, qui in etruria tarquinium regem populi romani genuit, comitatos fictores euchira, diopum, eugrammum; ab iis italiae traditam plasticen. butadis inventum est rubricam addere aut ex rubra creta fingere, primusque personas tegularum extremis imbricibus inposuit, quae inter initia prostypa vocavit; postea idem ectypa fecit. hinc et fastigia templorum orta. propter hunc plastae appellati.

hominis autem imaginem gypso e facie ipsa primus omnium expressit ceraque in eam formam gypsi infusa emendare instituit lysistratus sicyonius, frater lysippi, de quo diximus. hic et similitudines reddere instituit; ante eum quam pulcherrimas facere studebant. idem et de signis effigies exprimere invenit, crevitque res in tantum, ut nulla signa statuaeve sine argilla fierent. quo apparet antiquiorem hanc fuisse scientiam quam fundendi aeris.

plastae laudatissimi fuere damophilus et gorgasus, iidem pictores, qui cereris aedem romae ad circum maximum utroque genere artis suae excoluerant, versibus inscriptis graece, quibus significarent ab dextra opera damophili esse, ab laeva gorgasi. ante hanc aedem tuscanica omnia in aedibus fuisse auctor est Varro, et ex hac, cum reficeretur, crustas parietum excisas tabulis marginatis inclusas esse, item signa ex fastigiis dispersa. fecit et chalcosthenes cruda opera athenis, qui locus ab officina eius ceramicos appellatur. M. Varro tradit sibi cognitum romae possim nomine, a quo facta poma et uvas nemo posset aspectu discernere a veris. idem magnificat Arcesilaum, l. luculli familiarem, cuius proplasmata pluris venire solita artificibus ipsis quam aliorum opera; ab hoc factam venerem genetricem in foro caesaris et, priusquam absolveretur, festinatione dedicandi positam; eidem a lucullo hs [30x]30 signum felicitatis locatum, cui mors utriusque inviderit; octavio equiti romano cratera facere volenti exemplar e gypso factum talento. laudat et pasitelen, qui plasticen matrem caelaturae et statuariae scalpturaeque dixit et, cum esset in omnibus iis summus, nihil umquam fecit ante quam finxit. praeterea elaboratam hanc artem italiae et maxime etruriae; vulcam veis accitum, cui locaret tarquinius priscus iovis effigiem in capitolio dicandam; fictilem eum fuisse et ideo miniari solitum; fictiles in fastigio templi eius quadrigas, de quibus saepe diximus; ab hoc

eodem factum herculem, qui hodieque materiae nomen in urbe retinet. hae enim tum effigies deorum erant lautissimae, nec paenitet nos illorum, qui tales eos coluere; aurum enim et argentum ne diis quidem conficiebant. durant etiam nunc plerisque in locis talia simulacra; fastigia quidem templorum etiam in urbe crebra et municipiis, mira caelatura et arte suique firmitate, sanctiora auro, certe innocentiora.

in sacris quidem etiam inter has opes hodie non murrinis crystallinisve, sed fictilibus prolibatur simpulis, inenarrabili terrae benignitate, si quis singula aestimet, etiam ut omittantur in frugum, vini, pomorum, herbarum et fruticum, medicamentorum, metallorum generibus beneficia eius, quae adhuc diximus. neque adsiduitate satiant figlinarum opera, doliis ad vina excogitatis, ad aquas tubulis, ad balineas mammatis, ad tecta imbricibus, coctilibus laterculis fundamentisque aut quae rota fiunt, propter quae numa rex septimum collegium figulorum instituit. quin et defunctos sese multi fictilibus soliis condi maluere, sicut M. Varro, pythagorio modo in myrti et oleae atque populi nigrae foliis. maior pars hominum terrenis utitur vasis. samia etiam nunc in esculentis laudantur. retinent hanc nobilitatem et arretium in italia et calicum tantum surrentum, hasta, pollentia, in hispania saguntum, in asia pergamum. habent et trallis ibi opera sua et in italia mutina, quoniam et sic gentes nobilitantur et haec quoque per maria, terras ultro citro portantur, insignibus rotae officinis. erythris in templo hodieque ostenduntur amphorae duae propter tenuitatem consecratae discipuli magistrique certamine, uter tenuiorem humum duceret. cois ea laus maxima, hadrianis firmitas, nonnullis circa hoc severitatis quoque exemplis. q. coponium invenimus ambitus damnatum, quia vini amphoram dedisset dono ei, cui suffragi latio erat. atque ut e luxu quoque aliqua contingat auctoritas figlinis: “tripatinium,” inquit fenestella, “appellabatur summa cenarum lautitia; una erat murenarum, altera luporum, tertia mixti piscis,” inclinatis iam scilicet moribus, ut tamen eos praeferre graeciae etiam philosophis possimus, siquidem in aristotelis heredum auctione septuaginta patinas venisse traditur. nos cum unam aesopi tragoediarum histrionis in natura avium diceremus hs [c] stetisse, non dubito indignatos legentes. at, hercules, vitellius in principatu suo [30x]30 hs condidit patinam, cui faciendae fornax in campis

exaedificata erat, quoniam eo pervenit luxuria, ut etiam fictilia pluris constent quam murrina. propter hanc mucianus altero consulatu suo in conquestione exprobravit patinarum paludes vitelli memoriae, non illa foediore, cuius veneno asprenati reo cassius severus accusator obiciebat interisse convivas cxxx. nobilitantur his quoque oppida, ut regium et cumae. samia testa matris deum sacerdotes, qui galli vocantur, virilitatem amputare nec aliter citra perniciem, m. caelio credamus, qui linguam sic amputandam obiecit gravi probro, tamquam et ipse iam tunc eidem vitellio malediceret. quid non excogitat vita fractis etiam testis utendo, sic ut firmius durent, tunsis calce addita, quae vocant signina! quo genere etiam pavimenta excogitavit.

verum et ipsius terrae sunt alia commenta. quis enim satis miretur pessumam eius partem ideoque pulverem appellatam in puteolanis collibus opponi maris fluctibus, mersumque protinus fieri lapidem unum inexpugnabilem undis et fortiorem cotidie, utique si cumano misceatur caemento eadem est terrae natura et in cyzicena regione, sed ibi non pulvis, verum ipsa terra qua libeat magnitudine excisa et demersa in mare lapidea extrahitur. hoc idem circa cassandream produnt fieri, et in fonte cnidio dulci intra octo menses terram lapidescere. ab oropo quidem aulida usque quidquid attingitur mari terrae mutatur in saxa. non multum a pulvere puteolano distat e nilo harena tenuissima sui parte, non ad sustinenda maria fluctusque frangendos, sed ad debellanda corpora palaestrae studiis. inde certe patrobio, neronis principis liberto, advehebatur. quin et cratero et leonnato ac meleagro, alexandri magni ducibus, solitum hoc portari cum reliquis militaribus commerciis reperio, plura de hac parte non dicturus, non, hercules, magis quam de terrae usu in ceromatis, quibus exercendo iuventus nostra corporis vires perdit animorum. quid non in africa hispaniaque e terra parietes, quos appellant formaceos, quoniam in forma circumdatis ii utrimque tabulis inferciuntur verius quam struuntur, aevis durant, incorrupti imbribus, ventis, ignibus omnique caemento firmiores spectat etiam nunc speculas Hannibalis hispania terrenasque turres iugis montium inpositas. hinc et caespitum natura castrorum vallis accommodata contraque fluminum impetus aggeribus. inlini quidem crates parietum luto et lateribus crudis exstrui quis ignorat

lateres non sunt ex sabuloso neque harenoso multoque minus calculoso ducendi solo, sed e cretoso et albicante aut ex rubrica vel etiam e sabulo, masculo certe. finguntur optime vere, nam solstitio rimosi fiunt. aedificiis non nisi bimos probant, quia et intritam ipsam eorum, priusquam fingantur, macerari oportet. genera eorum fiunt tria: lydion, quo nos utimur, longum sesquipedem, latum pedem, alterum tetradoron, tertium pentadoron. graeci enim antiqui δῶρον palmum vocabant et ideo δῶρα munera, quia manu darentur; ergo a quattuor et quinque palmis, prout sunt, nominantur. eadem est et latitudo. minore privatis operibus, maiore in publicis utuntur in graecia. pitanae in asia et in ulteriore hispania civitatibus maxilua et callet fiunt lateres, qui siccati non merguntur in aqua. sunt enim e terra pumicosa, cum subigi potest, utilissima. graeci, praeterquam ubi e silice fieri poterat structura, latericios parietes praetulere. sunt enim aeterni, si ad perpendiculum fiant. ideo et publica opera et regias domos sic struxere: murum athenis, qui ad montem hymettum spectat, patris aedes iovis et herculis, quamvis lapideas columnas et epistylia circumdarent, domum trallibus regiam attali, item sardibus croesi, quam gerusian fecere, halicarnasi mausoli, quae etiam nunc durant. lacedaemone quidem latericiis parietibus excisum opus tectorium propter excellentiam picturae ligneis formis inclusum romam deportavere in aedilitate ad comitium exornandum murena et Varro. cum opus per se mirum esset, tralatum tamen magis mirabantur. in italia quoque latericius murus arreti et mevaniae est. romae non fiunt talia aedificia, quia sesquipedalis paries non plus quam unam contignationem tolerat, cautumque est, ne communis crassior fiat, nec intergerivorum ratio patitur.

haec sint dicta de lateribus. in terrae autem reliquis generibus vel maxime mira natura est sulpuris, quo plurima domantur. nascitur in insulis aeoliis inter siciliam et italiam, quas ardere diximus, sed nobilissimum in melo insula. in italia quoque invenitur in neapolitano campanoque agro collibus, qui vocantur leucogaei. ibi e cuniculis effossum perficitur igni. genera iiii: vivum, quod graeci apyron vocant, nascitur solidum solum - cetera enim liquore constant et conficiuntur oleo incocta - ; vivum effoditur tralucetque et viret. solo ex omnibus generibus medici utuntur. alterum genus appellant glaebam, fullonum tantum officinis familiare. tertio quoque generi

unus tantum est usus ad lanas suffiendas, quoniam candorem mollitiamque confert. egula vocatur hoc genus, quartum caute ad ellychnia maxime conficienda; cetero tantum vis est ut morbos comitiales deprehendat nidore inpositum igni. lusit et anaxilaus eo, addens in calicem vini prunaque subdita circumferens, exardescentis repercussu pallorem dirum velut defunctorum effundente in conviviis. natura eius excalfacit, concoquit, sed et discutit collectiones corporum, ob hoc talibus emplastris malagmatisque miscetur. renibus quoque et lumbis in dolore cum adipe mire prodest inpositum. aufert et lichenas faciei cum terebinthi resina et lepras; harpax ita vocatur a celeritate praebendi, avelli enim subinde debet. prodest et suspiriosis linctu, purulenta quoque extussientibus et contra scorpionum ictus. vitiligines vivum nitro mixtum atque ex aceto tritum et inlitum tollit, item lendes, et in palpebris aceto sandaracato admixtum. habet et in religionibus locum ad expiandas suffitu domos. sentitur vis eius et in aquis ferventibus, neque alia res facilius accenditur, quo apparet ignium vim magnam ei inesse. fulmina, fulgura quoque sulpuris odorem habent, ac lux ipsa eorum sulpurea est.

et bituminis vicina natura est. aliubi limus, aliubi terra est, limus e iudaeae lacu, ut diximus, emergens, terra in syria circa sidonem oppidum maritimum. spissantur haec utraque et in densitatem coeunt. est vero liquidum bitumen, sicut zacynthium et quod a babylone invehitur; ibi quidem et candidum gignitur. liquidum est et apolloniaticum, quae omnia graeci pissasphalton appellant ex argumento picis ac bituminis. gignitur et pingue oleique liquoris in sicilia agragantino fonte, inficiens rivum. incolae id harundinum paniculis colligunt, citissime sic adhaerescens, utunturque eo ad lucernarum lumina olei vice, item ad scabiem iumentorum. sunt qui et naphtham, de qua in secundo diximus volumine, bituminis generibus adscribant, verum eius ardens natura et ignium cognata procul ab omni usu abest. bituminis probatio ut quam maxime splendeat sitque ponderosum, graveolens, atrum modice, quoniam adulteratur pice. vis quae sulpuri: sistit, discutit, contrahit, glutinat. serpentes accensum nidore fugat. ad suffusiones oculorum et albugines babylonium efficax traditur, item ad lepras, lichenas pruritusque corporum. inlinitur et podagris. omnia autem eius genera

incommodos oculorum pilos replicant, dentium doloribus medentur simul nitro intrito. lenit tussim veterem et anhelitus cum vino potum; dysintericis etiam datur eodem modo sistitque alvum. cum aceto vero potum discutit concretum sanguinem ac detrahit. mitigat lumborum dolores, item articulorum, cum farina hordeacia inpositum emplastrum peculiare facit suo nomine. sanguinem sistit, volnera colligit, glutinat nervos. utuntur etiam ad quartanas bituminis drachma et hedyosmi pari pondere cum murrae obolo subacti. comitiales morbos ustum deprendit. volvarum strangulationes olfactu discutit cum vino et castoreo, procidentes suffitu reprimit, purgationes feminarum in vino potum elicit. in reliquo usu aeramentis inlinitur firmatque ea contra ignes. diximus et tingui solitum aes eo statuasque inlini. calcis quoque usum praebuit ita feruminatis babylonis muris. placet in ferrariis fabrorum officinis tinguendo ferro clavorum capitibus et multis aliis usibus.

nec minor est aut adeo dissimilis aluminis opera, quod intellegitur salsugo terrae. plura et eius genera. in cypro candidum et nigrius, exigua coloris differentia, cum sit usus magna, quoniam inficiendis claro colore lanis candidum liquidumque utilissimum est contraque fuscis aut obscuris nigrum. et aurum nigro purgatur. fit autem omne ex aqua limoque, hoc est terrae exudantis natura. conrivatum hieme aestivis solibus maturatur. quod fuit ex eo praecox, candidius fit. gignitur autem in hispania, aegypto, armenia, macedonia, ponto, africa, insulis sardinia, melo, lipara, strongyle. laudatissimum in aegypto, proximum in melo. huius quoque duae species, liquidum spissumque. liquidi probatio ut sit limpidum lacteumque, sine offensis fricandi, cum quodam igniculo caloris. hoc phorimon vocant. an sit adulteratum, deprehenditur suco punici mali; sincerum enim mixtura ... alterum genus est pallidi et scabri et quod inficiatur et galla, ideoque hoc vocant paraphoron. liquidi aluminis vis adstringere, indurare, rodere. melle admixto sanat oris ulcera, papulas pruritusque. haec curatio fit in balneis ii mellis partibus, tertia aluminis. virus alarum sudorisque sedat. sumitur pilulis contra lienis vitia pellendumque per urinam sanguinem. emendat et scabiem nitro ac melanthio admixtis.

concreti aluminis unum genus σχιστὸν appellant graeci, in capillamenta quaedam canescentia dehiscens, unde quidam trichitim

potius appellavere. hoc fit e lapide, ex quo et aes - chalcitim vocant - , ut sudor quidam eius lapidis in spumam coagulatus. hoc genus aluminis minus siccat minusque sistit umorem inutilem corporum, et auribus magnopere prodest infusum; vel inlitum et oris ulceribus dentibusque et si saliva cum eo contineatur. et oculorum medicamentis inseritur apte verendisque utriusque sexus. coquitur in catinis, donec liquari desinat. inertioris est alterum generis, quod strongylen vocant. duae et eius species, fungosum atque omni umore dilui facile, quod in totum damnatur. melius pumicosum et foraminum fistulis spongeae simile rotundumque natura, candido propius, cum quadam pinguitudine, sine harenis, friabile, nec inficiens nigritia. hoc coquitur per se carbonibus puris, donec cinis fiat. - optimum ex omnibus quod melinum vocant ab insula, ut diximus. nulli vis maior neque adstringendi neque denigrandi neque indurandi, nullum spissius. oculorum scabritias extenuat, combustum utilius epiphoris inhibendis, sic et ad pruritus corporis. sanguinem quoque sistit intus potum, foris inlitum. evulsis pilis ex aceto inlinitur renascentesque mollit in languinem. summa omnium generum vis in adstringendo, unde nomen graecis. ob id oculorum vitiis aptissima sunt, sanguinis fluctiones inhibent cum adipe. putrescentia ulcerum compescit cum adipe - sic et infantium ulcera et hydropicorum eruptiones siccat - et aurium vitia cum suco punici mali et unguium scabritias cicatricumque duritias et pterygia ac perniones, phagedaenas ulcerum ex aceto aut cum galla pari pondere cremata, lepras cum suco olerum, cum salis vero ii partibus vitia, quae serpunt, lendes et alia capillorum animalia aquae permixtum. sic et ambustis prodest et furfuribus corporum cum sero picis. infunditur et dysintericis uvamque in ore comprimit ac tonsillas. ad omnia, quae in ceteris generibus diximus, efficacius intellegatur ex melo advectum, nam ad reliquos usus vitae in coriis lanisque perficiendis quanti sit momenti, significatum est.

ab his per se ad medicinam pertinentia terrae genera tractabimus. samiae ii sunt, quae collyrium et quae aster appellantur. prioris laus ut recens sit ac levissima linguaeque glutinosa, altera glaebosior; candida utraque. uritur, lavatur. sunt qui praeferant priorem. prosunt sanguinem expuentibus; emplastrisque, quae siccandi causa componuntur, oculorum quoque medicamentis miscentur.

eretria totidem differentias habet, namque est alba et cinerea, quae praefertur in medicina. probatur mollitia et quod, si aere perducatur, violacium reddit colorem. vis et ratio eius in medendo dicta est inter pigmenta. - lavatur omnis terra - in hoc enim loco dicemus - perfusa aqua siccataque solibus, iterum ex aqua trita ac reposita, donec considat et digeri possit in pastillos. coquitur in calicibus crebro concussis.

est in medicaminibus et chia terra candicans. effectus eius idem qui samiae; usus ad mulierum maxime cutem. idem et selinusiae. lactei coloris haec et aqua dilui celerrima; eadem lacte diluta tectoriorum albaria interpolantur. pnigitis eretriae simillima est, grandioribus tantum glaebis glutinosaque. effectus eius idem qui cimoliae, infirmior tantum. bitumini simillima est ampelitis. experimentum eius, si cerae modo accepto oleo liquescat et si nigricans colos maneat tostae. usus ad molliendum discutiendumque, et ad haec medicamentis additur, praecipue in calliblepharis et inficiendis capillis.

cretae plura genera. ex iis cimoliae duo ad medicos pertinentia, candidum et ad purpurissum inclinans. vis utrique ad discutiendos tumores, sistendas fluctiones aceto adsumpto. panos quoque et parotidas cohibet et lienem inlita pusulasque, si vero aphronitrum et cyprum adiciatur et acetum, pedum tumores ita, ut in sole curatio haec fiat et post vi horas aqua salsa abluatur. testium tumoribus cypro et cera addita prodest. et refrigerandi quoque natura cretae est, sudoresque inmodicos sistit inlita atque ita papulas cohibet ex vino adsumpta in balineis. laudatur maxime thessalica. nascitur et in lycia circa bubonem.

est et alius cimoliae usus in vestibus. nam sarda, quae adfertur e sardinia, candidis tantum adsumitur, inutilis versicoloribus, et est vilissima omnium cimoliae generum, pretiosior umbrica et quam vocant saxum. proprietas saxi quod crescit in macerando; itaque pondere emitur, illa mensura. umbrica non nisi poliendis vestibus adsumitur. neque enim pigebit hanc quoque partem adtingere, cum lex metilia extet fullonibus dicta, quam c. flaminius l. aemilius censores dedere ad populum ferendam. adeo omnia maioribus curae fuere. ergo ordo hic est: primum abluitur vestis sarda, dein sulpure suffitur, mox desquamatur cimolia quae est coloris veri. fucatus enim

deprehenditur nigrescitque et funditur sulpure, veros autem et pretiosos colores emollit cimolia et quodam nitore exhilarat contristatos sulpure. candidis vestibus saxum utilius a sulpure, inimicum coloribus. graecia pro cimolia tymphaico utitur gypso.

alia creta argentaria appellatur nitorem argento reddens, set vilissima qua circum praeducere ad victoriae notam pedesque venalium trans maria advectorum denotare instituerunt maiores; talemque publilium antiochium, mimicae scaenae conditorem, et astrologiae consobrinum eius manilium antiochum, item grammaticae staberium erotem eadem nave advectos videre proavi. sed quid hos referat aliquis, litterarum honore commendatos talem in catasta videre chrysogonum sullae, amphionem q. catuli, hectorem l. luculli, demetrium pompei, augenque demetri, quamquam et ipsa pompei credita est, hipparchum m. antoni, menam et Menecraten sexti pompei aliosque deinceps, quos enumerare iam non est, sanguine quiritium et proscriptionum licentia ditatos. hoc est insigne venaliciis gregibus obprobriumque insolentis fortunae. quos et nos adeo potiri rerum vidimus, ut praetoria quoque ornamenta decerni a senatu iubente agrippina claudi caesaris videremus tantumque non cum laureatis fascibus remitti illo, unde cretatis pedibus advenissent.

praeterea sunt genera terrae proprietatis suae, de quibus iam diximus, sed et hoc loco reddenda natura: ex galata insula et circa clupeam africae scorpiones necat, baliaris et ebusitana serpentes.

lapidum natura restat, hoc est praecipua morum insania, etiam ut gemmae cum sucinis atque crystallinis murrinisque sileantur. omnia namque, quae usque ad hoc volumen tractavimus, hominum genita causa videri possunt: montes natura sibi fecerat ut quasdam compages telluris visceribus densandis, simul ad fluminum impetus domandos fluctusque frangendos ac minime quietas partes coercendas durissima sui materia. caedimus hos trahimusque nulla alia quam deliciarum causa, quos transcendisse quoque mirum fuit. in portento prope maiores habuere alpis ab Hannibale exsuperatas et postea a cimbris: nunc ipsae caeduntur in mille genera marmorum. promunturia aperiuntur mari, et rerum natura agitur in planum; evehimus ea, quae separandis gentibus pro terminis constituta erant, navesque marmorum causa fiunt, ac per fluctus, saevissimam rerum naturae partem, huc illuc portantur iuga, maiore etiamnum venia quam cum ad frigidos potus vas petitur in nubila caeloque proximae rupes cavantur, ut bibatur glacie. secum quisque cogitet, et quae pretia horum audiat, quas vehi trahique moles videat, et quam sine iis multorum sit beatior vita. ista facere, immo verius pati mortales quos ob usus quasve ad voluptates alias nisi ut inter maculas lapidum iaceant, ceu vero non tenebris noctium, dimidia parte vitae cuiusque, gaudia haec auferentibus!

ingens ista reputantem subit etiam antiquitatis rubor. exstant censoriae leges claudianae in cenis glires et alia dictu minora adponi vetantes: marmora invehi, maria huius rei causa transiri quae vetaret, lex nulla lata est. dicat fortassis aliquis: non enim invehebantur. id quidem falso. ccclx columnas M. Scauri aedilitate ad scaenam theatri temporari et vix mense uno futuri in usu viderunt portari silentio legum. sed publicis nimirum indulgentes voluptatibus. id ipsum cur aut qua magis via inrepunt vitia quam publica quo enim alio modo in privatos usus venere ebora, aurum, gemmae aut quid omnino diis reliquimus verum esto, indulserint publicis voluptatibus. etiamne tacuerunt, maximas earum atque adeo duodequadragenum pedum lucullei marmoris in atrio Scauri conlocari nec clam id occulteque factum est. satisdare sibi damni infecti coegit redemptor cloacarum,

cum in palatium eae traherentur. non ergo in tam malo exemplo moribus caveri utilius fuerat tacuere tantas moles in privatam domum trahi praeter fictilia deorum fastigia! nec potest videri Scaurus rudi et huius mali inprovidae civitati obrepsisse quodam vitii rudimento. iam L. Crassum oratorem illum, qui primus peregrini marmoris columnas habuit in eodem palatio, hymettias tamen nec plures sex aut longiores duodenum pedum, M. Brutus in iurgiis ob id venerem palatinam appellaverat. nimirum ista omisere moribus victis, frustraque interdicta, quae vetuerant, cernentes nullas potius quam inritas esse leges maluerunt. haec atque quae secuntur meliores esse nos probabunt. quis enim hodie tantarum columnarum atrium habet sed priusquam de marmoribus dicamus, hominum in iis praeferenda iudicamus pretia. ante igitur artifices percensebimus.

marmore scalpendo primi omnium inclaruerunt Dipoenus et Scyllis, geniti in creta insula etiamnum medis imperantibus priusque, quam Cyrus in persis regnare inciperet. hoc est olympiade circiter quinquagensima. hi sicyonem se contulere, quae diu fuit officinarum omnium talium patria. deorum simulacra publice locaverant iis sicyonii, quae priusquam absolverentur, artifices iniuriam questi abiere in aetolos. protinus sicyonem fames invasit ac sterilitas maerorque dirus. remedium petentibus apollo pythius respondit: “si Dipoenus et Scyllis deorum simulacra perfecissent.” quod magnis mercedibus obsequiisque impetratum est. fuere autem simulacra ea apollinis, dianae, herculis, minervae, quod de caelo postea tactum est. — cum hi essent, iam fuerat in chio insula Melas scalptor, dein filius eius Micciades ac deinde nepos Archermus, cuius filii Bupalus et Athenis vel clarissimi in ea scientia fuere Hipponactis poetae aetate, quem certum est lx olympiade fuisse. quodsi quis horum familiam ad proavum usque retro agat, inveniat artis eius originem cum olympiadum initio coepisse. Hipponacti notabilis foeditas voltus erat; quam ob rem imaginem eius lascivia iocosam hi proposuere ridentium circulis, quod Hipponax indignatus destrinxit amaritudinem carminum in tantum, ut credatur aliquis ad laqueum eos conpulisse. quod falsum est. conplura enim in finitimis insulis simulacra postea fecere, sicut in delo, quibus subiecerunt carmen non vitibus tantum censeri chion, sed et operibus Archermi filiorum. ostendunt et iasii dianam manibus eorum factam. in ipsa chio narrata

est operis eorum dianae facies in sublimi posita, cuius voltum intrantes tristem, abeuntes exhilaratum putant. romae eorum signa sunt in palatina aede apollinis in fastigio et omnibus fere, quae fecit Divus Augustus. patris quoque eorum et deli fuere opera et in lesbo insula. Dipoeni quidem ambracia, argos, cleonae operibus refertae fuere.

omnes autem candido tantum marmore usi sunt e paro insula, quem lapidem coepere lychniten appellare, quoniam ad lucernas in cuniculis caederetur, ut auctor est Varro, multis postea candidioribus repertis, nuper vero etiam in lunensium lapicidinis. sed in pariorum mirabile proditur, glaeba lapidis unius cuneis dividentium soluta, imaginem sileni intus extitisse.

non omittendum hanc artem tanto vetustiorem fuisse quam picturam aut statuariam, quarum utraque cum Phidia coepit octogensima tertia olympiade, post annos circiter cccxxxii. et ipsum Phidian tradunt scalpsisse marmora, veneremque eius esse romae in octaviae operibus eximiae pulchritudinis. Alcamenen atheniensem, quod certum est, docuit in primis nobilem, cuius sunt opera athenis complura in aedibus sacris praeclarumque veneris extra muros, quae appellatur Ἀφροδίτη ἐν κήποις. huic summam manum ipse Phidias inposuisse dicitur. eiusdem discipulus fuit Agoracritus parius, et aetate gratus, itaque e suis operibus pleraque nomini eius donasse fertur. certavere autem inter se ambo discipuli venere facienda, vicitque Alcamenes non opere, sed civitatis suffragiis contra peregrinum suo faventis. quare Agoracritus ea lege signum suum vendidisse traditur, ne athenis esset, et appellasse nemesin. id positum est rhamnunte pago atticae, quod M. Varro omnibus signis praetulit. est et in matris magnae delubro eadem civitate Agoracriti opus. Phidian clarissimum esse per omnes gentes, quae iovis olympii famam intellegunt, nemo dubitat, sed ut laudari merito sciant etiam qui opera eius non videre, proferemus argumenta parva et ingenii tantum. neque ad hoc iovis olympii pulchritudine utemur, non minervae athenis factae amplitudine, cum sit ea cubitorum xxvi — ebore haec et auro constat — , sed in scuto eius amazonum proelium caelavit intumescente ambitu, in parmae eiusdem concava parte deorum et gigantum dimicationes, in soleis vero lapitharum et centaurorum. adeo momenta omnia capacia artis illi fuere. in basi

autem quod caelatum est, Πανδώρας γένεσιν appellant: dii sunt nascenti ... s xx numero. victoria praecipue mirabili, periti mirantur et serpentem ac sub ipsa cuspide aeream sphingem. haec sint obiter dicta de artifice numquam satis laudato, simul ut noscatur illam magnificentiam aequalem fuisse et in parvis.

Praxitelis aetatem inter statuarios diximus, qui marmoris gloria superavit etiam semet. opera eius sunt athenis in ceramico, sed ante omnia est non solum Praxitelis, verum in toto orbe terrarum venus, quam ut viderent, multi navigaverunt cnidum. duas fecerat simulque vendebat, alteram velata specie, quam ob id praetulerunt quorum condicio erat, coi, cum eodem pretio detulisset, severum id ac pudicum arbitrantes; reiectam cnidii emerunt, inmensa differentia famae. voluit eam a cnidiis postea mercari rex Nicomedes, totum aes alienum, quod erat ingens, civitatis dissoluturum se promittens. omnia perpeti maluere, nec inmerito; illo enim signo Praxiteles nobilitavit cnidum. aedicula eius tota aperitur, ut conspici possit undique effigies deae, favente ipsa, ut creditur, facta. nec minor ex quacumque parte admiratio est. ferunt amore captum quendam, cum delituisset noctu, simulacro cohaesisse, eiusque cupiditatis esse indicem maculam. sunt in cnido et alia signa marmorea inlustrium artificum, liber pater Bryaxidis et alter Scopae et minerva, nec maius aliud veneris praxiteliae specimen quam quod inter haec sola memoratur. eiusdem est et cupido, obiectus a cicerone verri “ille, propter quem thespiae visebantur,” nunc in octaviae scholis positus; eiusdem et alter nudus in pario colonia propontidis, par veneri cnidiae nobilitate et iniuria; adamavit enim Alcetas rhodius atque in eo quoque simile amoris vestigium reliquit. romae Praxitelis opera sunt flora, triptolemus, ceres in hortis servilianis, boni eventus et bonae fortunae simulacra in capitolio, item maenades et quas thyiadas vocant et caryatidas, et sileni in pollionis asini monimentis et apollo et neptunus. Praxitelis filius Cephisodotus et artis heres fuit. cuius laudatum est pergami symplegma nobile digitis corpori verius quam marmori inpressis. romae eius opera sunt latona in palatii delubro, venus in pollionis asini monumentis et intra octaviae porticus in iunonis aede aesculapius ac diana.

Scopae laus cum his certat. is fecit venerem et pothon, qui samothrace sanctissimis caerimoniis coluntur, item apollinem

palatinum, vestam sedentem laudatam in servilianis hortis duosque campteras circa eam, quorum pares in asini monimentis sunt, ubi et canephoros eiusdem. sed in maxima dignatione delubro cn. domitii in circo flaminio neptunus ipse et thetis atque achilles, nereides supra delphinos et cete aut hippocampos sedentes, item tritones chorusque phorci et pistrices ac multa alia marina, omnia eiusdem manu, praeclarum opus, etiam si totius vitae fuisset. nunc vero praeter supra dicta quaeque nescimus mars etiamnum est sedens colossiaeus eiusdem manu in templo bruti callaeci apud circum eundem, praeterea venus in eodem loco nuda, praxiteliam illam antecedens et quemcumque alium locum nobilitatura.

romae quidem multitudo operum et iam obliteratio ac magis officiorum negotiorumque acervi omnes a contemplatione tamen abducunt, quoniam otiosorum et in magno loci silentio talis admiratio est. qua de causa ignoratur artifex eius quoque veneris, quam vespasianus imperator in operibus pacis suae dicavit antiquorum dignam fama. par haesitatio est in templo apollinis sosiani, niobae liberos morientes Scopas an Praxiteles fecerit; item ianus pater, in suo templo dicatus ab Augusto ex aegypto advectus, utrius manu sit, iam quidem et auro occultatus. similiter in curia octaviae quaeritur de cupidine fulmen tenente; id demum adfirmatur, Alcibiaden esse, principem forma in ea aetate. multa in eadem schola sine auctoribus placent: satyri quattuor, ex quibus unus liberum patrem palla velatum umeris praefert, alter liberam similiter, tertius ploratum infantis cohibet, quartus cratere alterius sitim sedat, duaeque aurae velificantes sua veste. nec minor quaestio est in saeptis, olympum et pana, chironem cum achille qui fecerint, praesertim cum capitali satisdatione fama iudicet dignos.

Scopas habuit aemulos eadem aetate Bryaxim et Timotheum et Leocharen, de quibus simul dicendum est, quoniam pariter caelavere mausoleum. sepulchrum hoc est ab uxore artemisia factum mausolo, cariae regulo, qui obiit olympiadis cvii anno secundo. opus id ut esset inter septem miracula, hi maxime fecere artifices. patet ab austro et septentrione sexagenos ternos pedes, brevius a frontibus, toto circumitu pedes ccccxxxx, attollitur in altitudinem xxv cubitis, cingitur columnis xxxvi. pteron vocavere circumitum. ab oriente caelavit Scopas, a septentrione Bryaxis, a meridie Timotheus, ab

occasu Leochares, priusque quam peragerent, regina obiit. non tamen recesserunt nisi absoluto, iam id gloriae ipsorum artisque monimentum iudicantes; hodieque certant manus. accessit et quintus artifex. namque supra pteron pyramis altitudinem inferiorem aequat, viginti quattuor gradibus in metae cacumen se contrahens; in summo est quadriga marmorea, quam fecit Pythis. haec adiecta cxxxx pedum altitudine totum opus includit. Timothei manu diana romae est in palatio apollinis delubro, cui signo caput reposuit avianius evander.

in magna admiratione est hercules Menestrati et hecate ephesi in templo dianae post aedem, in cuius contemplatione admonent aeditui parcere oculis; tanta marmoris radiatio est. (non postferuntur et charites in propylo atheniensium, quas socrates fecit, alius ille quam pictor, idem ut aliqui putant). nam Myronis illius, qui in aere laudatur, anus ebria est zmyrnae in primis incluta.

pollio asinius, ut fuit acris vehementiae, sic quoque spectari monumenta sua voluit. in iis sunt centauri nymphas gerentes Arcesilae, thespiades Cleomenis, oceanus et iuppiter Heniochi, appiades Stephani, hermerotes taurisci, non caelatoris illius, sed tralliani, iuppiter hospitalis Papyli, Praxitelis discipuli, zethus et amphion ac dirce et taurus vinculumque ex eodem lapide, a rhodo advecta opera Apollonii et Taurisci. parentum hi certamen de se fecere, Menecraten videri professi, sed esse naturalem artemidorum. eodem loco liber pater Eutychidis laudatur, ad octaviae vero porticum apollo Philisci rhodii in delubro suo, item latona et diana et musae novem et alter apollo nudus. eum, qui citharam in eodem templo tenet, timarchides fecit, intra octaviae vero porticus aedem iunonis ipsam deam dionysius et polycles aliam, venerem eodem loco Philiscus, cetera signa Praxiteles. iidem polycles et dionysius, timarchidis filii, iovem, qui est in proxima aede, fecerunt, pana et olympum luctantes eodem loco heliodorus, quod est alterum in terris symplegma nobile, venerem lavantem sese daedalsas, stantem polycharmus. ex honore apparet, in magna auctoritate habitum lysiae opus, quod in palatio super arcum Divus Augustus honori octavi patris sui dicavit in aedicula columnis adornata, id est quadriga currusque et apollo ac diana ex uno lapide. in hortis servilianis reperio laudatos calamidis apollinem illius caelatoris, dercylidis pyctas, amphistrati callisthenen historiarum scriptorem. - nec deinde

multo plurium fama est, quorundam claritati in operibus eximiis obstante numero artificum, quoniam nec unus occupat gloriam nec plures pariter nuncupari possunt, sicut in laocoonte, qui est in titi imperatoris domo, opus omnibus et picturae et statuariae artis praeferendum. ex uno lapide eum ac liberos draconumque mirabiles nexus de consilii sententia fecere summi artifices Hagesander et Polydorus et Athenodorus rhodii. similiter palatinas domos caesarum replevere probatissimis signis craterus cum pythodoro, polydeuces cum hermolao, pythodorus alius cum artemone, at singularis aphrodisius trallianus. agrippae pantheum decoravit diogenes atheniensis; in columnis templi eius caryatides probantur inter pauca operum, sicut in fastigio posita signa, sed propter altitudinem loci minus celebrata. inhonorus est nec in templo ullo hercules, ad quem poeni omnibus annis humana sacrificaverant victima, humi stans ante aditum porticus ad nationes. sitae fuere et thespiades ad aedem felicitatis, quarum unam amavit eques romanus iunius pisciculus, ut tradit Varro, admirator et pasitelis, qui et quinque volumina scripsit nobilium operum in toto orbe. natus hic in graeca italiae ora et civitate romana donatus cum iis oppidis, iovem fecit eboreum in metelli aede, qua campus petitur. accidit ei, cum in navalibus, ubi ferae africanae erant, per caveam intuens leonem caelaret, ut ex alia cavea panthera erumperet, non levi periculo diligentissimi artificis. fecisse opera complura dicitur; quae fecerit, nominatim non refertur. Arcesilaum quoque magnificat Varro, cuius se marmoream habuisse leaenam aligerosque ludentes cum ea cupidines, quorum alii religatam tenerent, alii cornu cogerent bibere, alii calciarent soccis, omnes ex uno lapide. idem et a coponio quattuordecim nationes, quae sunt circa pompeium, factas auctor est. - invenio et canachum laudatum inter statuarios fecisse marmorea. nec sauram atque batrachum obliterari convenit, qui fecere templa octaviae porticibus inclusa, natione ipsi lacones. quidam et opibus praepotentes fuisse eos putant ac sua inpensa construxisse, inscriptionem sperantes, qua negata hoc tamen alio modo usurpasse. sunt certe etiam nunc in columnarum spiris inscalptae nominum eorum argumento lacerta atque rana. in iovis aede ex iis pictura cultusque reliquus omnis femineis argumentis constat; erat enim facta iunoni, sed, cum inferrentur signa, permutasse geruli traduntur, et id religione

custoditum, velut ipsis diis sedem ita partitis. ergo et in iunonis aede cultus est qui iovis esse debuit.

sunt et in parvolis marmoreis famam consecuti myrmecides, cuius quadrigam cum agitatore operuit alis musca, et callicrates, cuius formicarum pedes atque alia membra pervidere non est.

haec sint dicta de marmoris scalptoribus summaque claritate artificum, quo in tractatu subit mentem non fuisse tum auctoritatem maculoso marmori. fecere et e thasio, cycladum insularum aequo, et e lesbio; lividius hoc paulo. versicolores quidem maculas et in totum marmorum apparatum etiam menander, diligentissimus luxuriae interpres, primus et raro attigit. columnis demum utebantur in templis, nec lautitiae causa - nondum enim ista intellegebantur - , sed quia firmiores aliter statui non poterant. sic est inchoatum athenis templum iovis olympii, ex quo sulla capitolinis aedibus advexerat columnas. fuit tamen inter lapidem atque marmor differentia iam et apud homerum; dicit enim marmoreo saxo percussum, sed hactenus, regias quoque domus, cum lautissime, praeter aes, aurum, electrum, argentum ebore tantum adornans. primum, ut arbitror, versicolores istas maculas chiorum lapicidinae ostenderunt, cum exstruerent muros, faceto in id m. ciceronis sale - omnibus enim ostentabant ut magnificum - : “multo,” inquit, “magis mirarer, si tiburtino lapide fecissetis.” et, hercules, non fuisset picturis honos ullus, non modo tantus, aliqua marmorum auctoritate.

secandi in crustas nescio an cariae fuerit inventum. antiquissima, quod equidem inveniam, halicarnasi domus mausoli proconnesio marmore exculta est latericiis parietibus. is obiit olympiadis cvii anno secundo, urbis romae cdiii.

primum romae parietes crusta marmoris operuisse totos domus suae in caelio monte cornelius nepos tradit mamurram, formiis natum equitem romanum, praefectum fabrum c. caesaris in gallia, ne quid indignitati desit, tali auctore inventa re. hic namque est mamurra catulli veroniensis carminibus proscissus, quem, ut res est, domus ipsius clarius quam catullus dixit “habere quidquid habuisset comata gallia.” namque adicit idem nepos primum totis aedibus nullam nisi e marmore columnam habuisse et omnes solidas e carystio aut luniensi. m. lepidus q. catuli in consulatu conlega primus omnium limina ex numidico marmore in domo posuit magna reprensione. is

fuit consul anno urbis dclxxvi. hoc primum invecti numidici marmoris vestigium invenio, non in columnis tamen crustisve, ut supra carystii, sed in massa ac vilissimo liminum usu. post hunc lepidum quadriennio l. lucullus consul fuit, qui nomen, ut ex re apparet, luculleo marmori dedit, admodum delectatus illo, primusque romam invexit, atrum alioqui, cum cetera maculis aut coloribus commendentur. nascitur autem in melo insula, solumque paene hoc marmor ab amatore nomen accepit. inter hos primum, ut arbitror, marmoreos parietes habuit scaena M. Scauri, non facile dixerim secto an solidis glaebis polito, sicuti est hodie iovis tonantis aedis in capitolio. nondum enim secti marmoris vestigia invenio in italia.

sed quisquis primus invenit secare luxuriaque dividere, inportuni ingenii fuit. harena hoc fit et ferro videtur fieri, serra in praetenui linea premente harenas versandoque tractu ipso secante. aethiopica haec maxime probatur, nam id quoque accessit, ut ab aethiopia usque peteretur quod secaret marmora, immo vero etiam in indos, quo margaritas quoque peti severis moribus indignum erat. haec proxime laudatur; mollior tamen quae aethiopica. illa nulla scabritie secat, indica non aeque levat, sed combusta ea polientes marmora fricare iubentur. simile et naxiae vitium est et coptitidi, quae vocatur aegyptia. haec fuere antiqua genera marmoribus secandis. postea reperta est non minus probanda ex quodam hadriatici maris vado, aestu nudante, observatione non facili. iam quidem quacumque harena secare e fluviis omnibus fraus artificum ausa est, quod dispendium admodum pauci intellegunt. crassior enim harena laxioribus segmentis terit et plus erodit marmoris maiusque opus scabritia politurae relinquit; ita sectae attenuantur crustae. rursus thebaica polituris accommodatur et quae fit e poro lapide aut e pumice. - signis e marmore poliendis gemmisque etiam scalpendis atque limandis naxium diu placuit ante alia. ita vocantur cotes in cypro insula genitae. vicere postea ex armenia invectae.

marmorum genera et colores non attinet dicere in tanta notitia nec facile est enumerare in tanta multitudine. quoto cuique enim loco non suum marmor invenitur et tamen celeberrimi generis dicta sunt in ambitu terrarum cum gentibus suis. non omnia autem in lapicidinis gignuntur, sed multa et sub terra sparsa, pretiosissimi quidem generis, sicut lacedaemonium viride cunctisque hilarius, sicut et

augusteum ac deinde tibereum, in aegypto Augusti ac tiberii primum principatu reperta. differentia eorum est ab ophite, cum sit illud serpentium maculis simile, unde et nomen accepit, quod haec maculas diverso modo colligunt, augusteum undatim crispum in vertices, tibereum sparsa, non convoluta, canitie. neque ex ophite columnae nisi parvae admodum inveniuntur. duo eius genera: molle candidi, nigricantis durum. dicuntur ambo capitis dolores sedare adalligati et serpentium ictus. quidam phreneticis ac lethargicis adalligari iubent candicantem. contra serpentes autem a quibusdam praecipue laudatur ex iis quem tephrian appellant a colore cineris. vocatur et memphites a loco, gemmantis naturae. huius usus conteri et iis, quae urenda sint aut secanda, ex aceto inlini; obstupescit ita corpus nec sentit cruciatum. rubet porphyrites in eadem aegypto; ex eodem candidis intervenientibus punctis leptopsephos vocatur. quantislibet molibus caedendis sufficiunt lapicidinae. statuas ex eo claudio caesari procurator eius in urbem ex aegypto advexit vitrasius pollio, non admodum probata novitate; nemo certe postea imitatus est. invenit eadem aegyptus in aethiopia quem vocant basaniten, ferrei coloris atque duritiae, unde et nomen ei dedit. numquam hic maior repertus est quam in templo pacis ab imperatore Vespasiano Augusto dicatus argumento nili, sedecim liberis circa ludentibus, per quos totidem cubita summi incrementi augentis se amnis eius intelleguntur. non absimilis illi narratur in thebis delubro serapis, ut putant, memnonis statuae dicatus, quem cotidiano solis ortu contactum radiis crepare tradunt.

onychem in arabiae tantum montibus nec usquam aliubi nasci putavere nostri veteres, sudines in carmania. potoriis primum vasis inde factis, dein pedibus lectorum sellisque, nepos cornelius tradit magno fuisse miraculo, cum p. lentulus spinther amphoras ex eo chiorum magnitudine cadorum ostendisset, post quinquennium deinde xxxii pedum longitudinis columnas vidisse se. variatum in hoc lapide et postea est, namque pro miraculo insigni quattuor modicas in theatro suo cornelius balbus posuit; nos ampliores xxx vidimus in cenatione, quam callistus caesaris claudi libertorum, potentia notus, sibi exaedificaverat. hunc aliqui lapidem alabastriten vocant, quem cavant et ad vasa unguentaria, quoniam optume servare incorrupta dicatur. idem et ustus emplastris convenit. nascitur circa

thebas aegyptias et damascum syriae. hic ceteris candidior, probatissimus vero in carmania, mox in india, iam quidem et in syria asiaque, vilissimus autem et sine ullo nitore in cappadocia. probantur quam maxime mellei coloris, in vertices maculosi atque non tralucidi. vitia in iis corneus colos aut candidus et quidquid simile vitro est.

paulum distare ab eo in unguentorum fide multi existimant lygdinos, in paro repertos amplitudine qua lances craterasque non excedant, antea ex arabia tantum advehi solitos, candoris eximii. magnus et duobus contrariae inter se naturae honos, corallitico in asia reperto mensurae non ultra bina cubita, candore proximo ebori et quadam similitudine. e diverso niger est alabandicus terrae suae nomine, quamquam et mileti nascens, ad purpuram tamen magis aspectu declinante. idem liquatur igni funditurque ad usum vitri. thebaicus lapis interstinctus aureis guttis invenitur in africae parte aegypto adscripta, coticulis ad terenda collyria quadam utilitate naturali conveniens, circa syenen vero thebaidis syenites, quem antea pyrrhopoecilon vocabant.

trabes ex eo fecere reges quodam certamine, obeliscos vocantes solis numini sacratos. radiorum eius argumentum in effigie est, et ita significatur nomine aegyptio. primus omnium id instituit mespheres, qui regnabat in solis urbe, somnio iussus; hoc ipsum inscriptum in eo, etenim scalpturae illae effigiesque quas videmus aegyptiae sunt litterae. postea et alii excidere reges. statuit eos in supra dicta urbe sesothes quattuor numero, quadragenum octonum cubitorum longitudine, rhamsesis autem, quo regnante ilium captum est, cxxxx cubitorum. idem ... digressis inde, ubi fuit mnevidis regia, posuit alium, longitudine quidem cxx cubitorum, sed prodigiosa crassitudine, undenis per latera cubitis. opus id fecisse dicuntur [cxx] hominum. ipse rex, cum surrecturus esset verereturque, ne machinae ponderi non sufficerent, quo maius periculum curae artificum denuntiaret, filium suum adalligavit cacumini, ut salus eius apud molientes prodesset et lapidi. hac admiratione operis effectum est, ut, cum oppidum id expugnaret cambyses rex ventumque esset incendiis ad crepidines obelisci, extingui iuberet molis reverentia qui nullam habuerat urbis. sunt et alii duo, unus a zmarre positus, alter a phio sine notis, quadragenum octonum cubitorum. alexandriae statuit

unum ptolemaeus philadelphus octoginta cubitorum. exciderat eum necthebis rex purum, maiusque opus in devehendo statuendove inventum est quam in excidendo. a satyro architecto aliqui devectum tradunt rate, callixenus a phoenice, fossa perducto usque ad iacentem obeliscum nilo, navesque duas in latitudinem patulas pedalibus ex eodem lapide ad rationem geminati per duplicem mensuram ponderis oneratas ita, ut subirent obeliscum pendentem extremitatibus suis in ripis utrimque; postea egestis laterculis adlevatas naves excepisse onus; statutum autem in sex talis e monte eodem, et artificem donatum talentis l. hic fuit in arsinoeo positus a rege supra dicto munus amoris, coniuge eademque sorore arsinoe. inde eum navalibus incommodum maximus quidam praefectus aegypti transtulit in forum, reciso cacumine, dum vult fastigium addere auratum, quod postea omisit. et alii duo sunt alexandreae ad portum in caesaris templo, quos excidit mesphres rex, quadragenum binum cubitorum.

super omnia accessit difficultas mari romam devehendi, spectatis admodum navibus. Divus Augustus eam, quae priorem advexerat, miraculi gratia puteolis perpetuis navalibus dicaverat; incendio consumpta ea est. divus claudius aliquot per annos adservatam, qua c. caesar inportaverat, omnibus quae umquam in mari visa sunt mirabiliorem, in ipsa turribus puteolis e pulvere exaedificatis, perductam ostiam portus gratia mersit. alia ex hoc cura navium, quae tiberi subvehant, quo experimento patuit non minus aquarum huic amni esse quam nilo. is autem obeliscus, quem Divus Augustus in circo magno statuit, excisus est a rege psemetnepserphreo, quo regnante pythagoras in aegypto fuit, lxxxv pedum et dodrantis praeter basim eiusdem lapidis; is vero, quem in campo martio, novem pedibus minor, a sesothide. inscripti ambo rerum naturae interpretationem aegyptiorum philosophia continent. - ei, qui est in campo, Divus Augustus addidit mirabilem usum ad deprendendas solis umbras dierumque ac noctium ita magnitudines, strato lapide ad longitudinem obelisci, cui par fieret umbra brumae confectae die sexta hora paulatimque per regulas, quae sunt ex aere inclusae, singulis diebus decresceret ac rursus augesceret, digna cognitu res, ingenio facundi novi mathematici. is apici auratam pilam addidit, cuius vertice umbra colligeretur in se ipsam, alias enormiter iaculante apice, ratione, ut ferunt, a capite hominis intellecta. haec observatio

xxx iam fere annis non congruit, sive solis ipsius dissono cursu et caeli aliqua ratione mutato sive universa tellure a centro suo aliquid emota (ut deprehendi et aliis in locis accipio) sive urbis tremoribus ibi tantum gnomone intorto sive inundationibus tiberis sedimento molis facto, quamquam ad altitudinem inpositi oneris in terram quoque dicuntur acta fundamenta. - tertius est romae in vaticano gai et neronis principum circo - ex omnibus unus omnino fractus est in molitione - , quem fecerat sesosidis filius nencoreus. eiusdem remanet et alius centum cubitorum, quem post caecitatem visu reddito ex oraculo soli sacravit.

dicantur obiter et pyramides in eadem aegypto, regum pecuniae otiosa ac stulta ostentatio, quippe cum faciendi eas causa a plerisque tradatur, ne pecuniam successoribus aut aemulis insidiantibus praeberent aut ne plebs esset otiosa. multa circa hoc vanitas hominum illorum fuit. vestigia complurium incohatarum extant. una est in arsinoite nomo, duae in memphite, non procul labyrintho, de quo et ipso dicemus, totidem ubi fuit moeridis lacus, hoc est fossa grandis, sed aegyptiis inter mira ac memoranda narrata. harum cacumina cc cubita extra aquam eminere dicuntur. reliquae tres, quae orbem terrarum inplevere fama, sane conspicuae undique adnavigantibus, sitae sunt in parte africae monte saxeo sterilique inter memphim oppidum et quod appellari diximus delta, a nilo minus iiii milia passuum, a memphi [vii] d, vico adposito quem vocant busirin; in eo sunt adsueti scandere illas.

ante est sphinx vel magis narranda, de qua siluere, numen accolentium. harmain regem putant in ea conditum et volunt invectam videri; est autem saxo naturali elaborata. rubrica facies monstri colitur. capitis per frontem ambitus centum duos pedes colligit, longitudo pedum cxliii est, altitudo a ventre ad summam aspidem in capite, lxis.

pyramis amplissima ex arabicis lapicidinis constat. ccclx milia hominum annis xx eam construxisse produntur. tres vero factae annis lxxxviii, mensibus iiii. qui de iis scripserint - sunt herodotus, euhemerus, duris samius, aristagoras, dionysius, artemidorus, alexander polyhistor, butoridas, antisthenes, demetrius, demoteles, apion - , inter omnes eos non constat, a quibus factae sint, iustissimo casu obliteratis tantae vanitatis auctoribus. aliqui ex iis prodiderunt in

raphanos et alium ac cepas mdc talenta erogata. amplissima septem iugera optinet soli. quattuor angulorum paribus intervallis dcclxxxiii pedes singulorum laterum, altitudo a cacumine ad solum pedes dccxxv colligit, ambitus cacuminis pedes xvis. alterius intervalla singula per quattuor angulos pedes dcclviis comprehendunt. tertia minor quidem praedictis, sed multo spectatior, aethiopicis lapidibus adsurgit ccclxiii pedibus inter angulos. vestigia aedificationum nulla exstant, harena late pura circa, lentis similitudine, qualis in maiore parte africae. quaestionum summa est, quanam ratione in tantam altitudinem subiecta sint caementa. alii nitro ac sale adaggeratis cum crescente opere et peracto fluminis inrigatione dilutis; alii lateribus e luto factis exstructos pontes, peracto opere lateribus in privatas domos distributis, nilum enim non putant rigare potuisse multo humiliorem. in pyramide maxima est intus puteus lxxxvi cubitorum; flumen illo admissum arbitrantur. mensuram altitudinis earum omnemque similem deprehendere invenit thales milesius umbram metiendo, qua hora par esse corpori solet. haec sunt pyramidum miracula, supremumque illud, ne quis regum opes miretur, minimam ex iis, sed laudatissimam, a rhodopide meretricula factam. aesopi fabellarum philosophi conserva quondam et contubernalis haec fuit, maiore miraculo, tantas opes meretricio esse conquisitas.

magnificatur et alia turris a rege facta in insula pharo portum optinente alexandriae, quam constitisse dccc talentis tradunt, magno animo, ne quid omittamus, ptolemaei regis, quo in ea permiserit sostrati cnidii architecti structura ipsa nomen inscribi. usus eius nocturno navium cursu ignes ostendere ad praenuntianda vada portusque introitum, quales iam compluribus locis flagrant, sicut ostiae ac ravennae. periculum in continuatione ignium, ne sidus existimetur, quoniam e longinquo similis flammarum aspectus est. hic idem architectus primus omnium pensilem ambulationem cnidi fecisse traditur.

dicamus et labyrinthos, vel portentosissimum humani inpendii opus, sed non, ut existimari potest, falsum. durat etiam nunc in aegypto in heracleopolite nomo qui primus factus est ante annos, ut tradunt, [iii] dc a petesuchi rege sive tithoe, quamquam herodotus totum opus xii regum esse dicit novissimique psammetichi. causas faciendi varie interpretantur, demoteles regiam moteridis fuisse,

lyceas sepulchrum moeridis, plures soli sacrum id exstructum, quod maxime creditur. hinc utique sumpsisse daedalum exemplar eius labyrinthi, quem fecit in creta, non est dubium, sed centensimam tantum portionem eius imitatum, quae itinerum ambages occursusque ac recursus inexplicabiles continet, non - ut in pavimentis puerorumve ludicris campestribus videmus - brevi lacinia milia passuum plura ambulationis continentem, sed crebris foribus inditis ad fallendos occursus redeundumque in errores eosdem. secundus hic fuit ab aegyptio labyrinthus, tertius in lemno, quartus in italia, omnes lapide polito fornicibus tecti, aegyptius, quod miror equidem, introitu lapidis e paro columnisque, reliqua e syenite molibus compositis, quas dissolvere ne saecula quidem possint, adiuvantibus heracleopolitis, quod opus invisum mire spectavere.

positionem operis eius singulasque partes enarrare non est, cum sit in regiones divisum atque praefecturas, quas vocant nomos, xxi nominibus eorum totidem vastis domibus adtributis, praeterea templa omnium aegypti deorum contineat superque nemesis xl aediculis incluserit pyramides complures quadragenarum ulnarum senas radice ἀρούρας optinentes. fessi iam eundo perveniunt ad viarum illum inexplicabilem errorem, quin et cenacula clivis excelsa, porticusque descenduntur nonagenis gradibus; intus columnae porphyrite lapide, deorum simulacra, regum statuae, monstrificae effigies. quarundam domuum talis est situs, ut adaperientibus fores tonitrum intus terribile existat, maiore autem in parte transitus est per tenebras. aliae rursus extra murum labyrinthi aedificiorum moles; pteron appellant. inde aliae perfossis cuniculis subterraneae domus. refecit unus omnino pauca ibi chaeremon, spado necthebis regis, d ante alexandrum magnum annis. id quoque traditur, fulsisse trabibus spinae oleo incoctae, dum in fornices quadrati lapides adsurgerent.

et de cretico labyrintho satis dictum est. lemnius similis illi columnis tantum cl memorabilior fuit, quarum in officina turbines ita librati pependerunt, ut puero circumagente tornarentur. architecti fecere zmilis et rhoecus et theodorus indigenae. exstantque adhuc reliquiae eius, cum cretici italicique nulla vestigia exstent. namque et italicum dici convenit, quem fecit sibi porsina, rex etruriae, sepulchri causa, simul ut externorum regum vanitas quoque italis superetur. sed cum excedat omnia fabulositas, utemur ipsius M. Varronis in

expositione ea verbis: “sepultus sub urbe clusio, in quo loco monimentum reliquit lapide quadrato quadratum, singula latera pedum tricenum, alta quinquagenum. in qua basi quadrata intus labyrinthum inextricabile, quo si quis introierit sine glomere lini, exitum invenire nequeat. supra id quadratum pyramides stant quinque, quattuor in angulis et in medio una, imae latae pedum quinum septuagenum, altae centenum quinquagenum, ita fastigatae, ut in summo orbis aeneus et petasus unus omnibus sit inpositus, ex quo pendeant exapta catenis tintinabula, quae vento agitata longe sonitus referant, ut dodonae olim factum. supra quem orbem quattuor pyramides insuper singulae stant altae pedum centenum. supra quas uno solo quinque pyramides.” quarum altitudinem Varronem puduit adicere; fabulae etruscae tradunt eandem fuisse quam totius operis ad eas, vesana dementia, quaesisse gloriam inpendio nulli profuturo, praeterea fatigasse regni vires, ut tamen laus maior artificis esset.

legitur et pensilis hortus, immo vero totum oppidum aegyptiae thebae, exercitus armatos subter educere solitis regibus nullo oppidanorum sentiente; etiamnum hoc minus mirum quam quod flumine medium oppidum interfluente. quae si fuissent, non dubium est homerum dicturum fuisse, cum centum portas ibi praedicaret.

graecae magnificentiae vera admiratio exstat templum ephesiae dianae cxx annis factum a tota asia. in solo id palustri fecere, ne terrae motus sentiret aut hiatus timeret, rursus ne in lubrico atque instabili fundamenta tantae molis locarentur, calcatis ea substravere carbonibus, dein velleribus lanae. universo templo longitudo est ccccxxv pedum, latitudo ccxxv, columnae cxxvii a singulis regibus factae lx pedum altitudine, ex iis xxxvi caelatae, una a Scopa. operi praefuit chersiphron architectus. summa miraculi epistylia tantae molis attolli potuisse; id consecutus ille est aeronibus harenae plenis, molli clivo super capita columnarum exaggerato, paulatim exinaniens imos, ut sensim opus in loco sederet. difficillime hoc contigit in limine ipso, quod foribus inponebat; etenim ea maxima moles fuit nec sedit in cubili, anxio artifice mortis destinatione suprema. tradunt in ea cogitatione fessum nocturno tempore in quiete vidisse praesentem deam, cui templum fieret, hortantem, ut viveret: se composuisse lapidem. atque ita postera luce apparuit; pondere ipso correctus videbatur. cetera eius operis ornamenta plurium librorum

instar optinent, nihil ad specimen naturae pertinentia.

durat et cyzici delubrum, in quo millum aureum commissuris omnibus politi lapidis subiecit artifex, eboreum iovem dicaturus intus coronante eum marmoreo apolline. translucent ergo iuncturae tenuissimis capillamentis lenique adflatu simulacra refovent, et praeter ingenium artificis ipsa materia ingenii quamvis occulta in pretio operis intellegitur. - eodem in oppido est lapis fugitivus appellatus; argonautae eum pro ancora usi reliquerant ibi. hunc e prytaneo - ita vocatur locus - saepe profugum vinxere plumbo. - eadem in urbe iuxta portam, quae thracia vocatur, turres septem acceptas voces numeroso repercussu multiplicant. nomen huic miraculo echo est a graecis datum. et hoc quidem locorum natura evenit ac plerumque convallium; ibi casu accidit, olympiae autem arte, mirabili modo, in porticu, quam ob id heptaphonon appellant, quoniam septiens eadem vox redditur. cyzici et buleuterium vocant aedificium amplum, sine ferreo clavo ita disposita contignatione, ut eximantur trabes sine fulturis ac reponantur. quod item romae in ponte sublicio religiosum est, posteaquam coclite horatio defendente aegre revolsus est.

verum et ad urbis nostrae miracula transire conveniat dcccque annorum dociles scrutari vires et sic quoque terrarum orbem victum ostendere. quod accidisse totiens paene, quot referentur miracula, apparebit; universitate vero acervata et in quendam unum cumulum coiecta non alia magnitudo exurget quam si mundus alius quidam in uno loco narretur. nec ut circum maximum a caesare dictatore exstructum longitudine stadiorum trium, latitudine unius, sed cum aedificiis iugerum quaternum, ad sedem [ccl], inter magna opera dicamus: non inter magnifica basilicam pauli columnis e phrygibus mirabilem forumque Divi Augusti et templum pacis vespasiani imp. aug., pulcherrima operum, quae umquam vidit orbis non et tectum diribitori ab agrippa facti, cum theatrum ante texerit romae valerius ostiensis architectus ludis libonis pyramidas regum miramur, cum solum tantum foro exstruendo hs [30m]30 caesar dictator emerit et, si quem inpensa moveat captis avaritia animis, hs [30cxlviii]30 domo empta clodius, quem milo occidit, habitaverit. quod equidem non secus ac regum insaniam miror; itaque et ipsum milonem hs [30dcc]30 aeris alieni debuisse inter prodigia animi humani duco. sed

tum senes aggeris vastum spatium, substructiones capitolii mirabantur, praeterea cloacas, opus omnium dictu maximum, subfossis montibus atque, ut paullo ante retulimus, urbe pensili subterque navigata m. agrippae in aedilitate post consulatum. permeant conrivati septem amnes cursuque praecipiti torrentium modo rapere atque auferre omnia coacti, insuper imbrium mole concitati vada ac latera quatiunt, aliquando tiberis retro infusus recipitur, pugnantque diversi aquarum impetus intus, et tamen obnixa firmitas resistit. trahuntur moles superne tantae non succumbentibus cavis operis, pulsant ruinae sponte praecipites aut inpactae incendiis, quatitur solum terrae motibus, durant tamen a tarquinio prisco annis dcc prope inexpugnabiles, non omittendo memorabili exemplo vel magis, quoniam celeberrimis rerum conditoribus omissum est. cum id opus tarquinius priscus plebis manibus faceret, essetque labor incertum maior an longior, passim conscita nece quiritibus taedium fugientibus, novum, inexcogitatum ante posteaque remedium invenit ille rex, ut omnium ita defunctorum corpora figeret cruci spectanda civibus simul et feris volucribusque laceranda. quam ob rem pudor romani nominis proprius, qui saepe res perditas servavit in proeliis, tunc quoque subvenit, sed illo tempore vi post vitam erubescens, cum puderet vivos, tamquam puditurum esset extinctos. amplitudinem cavis eam fecisse proditur, ut vehem faeni large onustam transmitteret.

parva sunt cuncta, quae diximus, et omnia uni comparanda miraculo, antequam nova attingam. m. lepido q. catulo cos., ut constat inter diligentissimos auctores, domus pulchrior non fuit romae quam lepidi ipsius, at, hercules, intra annos xxxv eadem centensimum locum non optinuit. computet in hac aestimatione qui volet marmorum molem, opera pictorum, inpendia regalia et cum pulcherrima laudatissimaque certantes centum domus posteaque ab innumerabilibus aliis in hunc diem victas. profecto incendia puniunt luxum, nec tamen effici potest, ut mores aliquid ipso homine mortalius esse intellegant.

sed omnes eas duae domus vicerunt. bis vidimus urbem totam cingi domibus principum gai et neronis, huius quidem, ne quid deesset, aurea. nimirum sic habitaverant illi, qui hoc imperium fecere tantum, ad devincendas gentes triumphosque referendos ab aratro aut

foco exeuntes, quorum agri quoque minorem modum optinuere quam sellaria istorum! subit vero cogitatio, quota portio harum fuerint areae illae, quas invictis imperatoribus decernebant publice ad exaedificandas domos; summusque illarum honos erat, sicut in p. valerio publicola, primo consule cum L. Bruto, post tot merita et fratre eius, qui bis in eodem magistratu sabinos devicerat, adici decreto, ut domus eorum fores extra aperirentur et ianua in publicum reiceretur. hoc erat clarissimum insigne inter triumphales quoque domos.

non patiar istos duos ne hac quidem gloria famae frui, docebimusque etiam insaniam eorum victam privatis opibus M. Scauri, cuius nescio an aedilitas maxime prostraverit mores maiusque sit sullae malum tanta privigni potentia quam proscriptio tot milium. in aedilitate hic sua fecit opus maximum omnium, quae umquam fuere humana manu facta, non temporaria mora, verum etiam aeternitatis destinatione. theatrum hoc fuit; scaena ei triplex in altitudinem ccclx columnarum in ea civitate, quae sex hymettias non tulerat sine probro civis amplissimi. ima pars scaenae e marmore fuit, media e vitro, inaudito etiam postea genere luxuriae, summa e tabulis inauratis; columnae, ut diximus, imae duodequadragenum pedum. signa aerea inter columnas, ut indicavimus, fuerunt [iii] numero; cavea ipsa cepit hominum [lxxx], cum pompeiani theatri totiens multiplicata urbe tantoque maiore populo sufficiat large [xxxx] sedere. relicus apparatus tantus attalica veste, tabulis pictis, cetero choragio fuit, ut, in tusculanam villam reportatis quae superfluebant cotidiani usus deliciis, incensa villa ab iratis servis concremaretur hs [30ccc]30.

aufert animum et a destinato itinere degredi cogit contemplatio tam prodigae mentis aliamque conectit maiorem insaniam e ligno. c. curio, qui bello civili in caesarianis partibus obiit, funebri patris munere cum opibus apparatuque non posset superare Scaurum — unde enim illi vitricus sulla et metella mater proscriptionum sectrix unde M. Scaurus pater, totiens princeps civitatis et mariani sodalicii rapinarum provincialium sinus cum iam ne ipse quidem Scaurus sibi par esse posset, quando hoc certe incendi illius praemium habuit convectis ex orbe terrarum rebus, ut nemo postea par esset insaniae illi - ingenio ergo utendum suo curioni et aliquid excogitandum fuit.

operae pretium est scire, quid invenerit, et gaudere moribus nostris ac verso modo nos vocare maiores. theatra iuxta duo fecit amplissima ligno, cardinum singulorum versatili suspensa libramento, in quibus utrisque antemeridiano ludorum spectaculo edito inter sese aversis, ne invicem obstreperent scaenae, repente circumactis - ut constat, post primos dies etiam sedentibus aliquis - , cornibus in se coeuntibus faciebat amphitheatrum gladiatorumque proelia edebat, ipsum magis auctoratum populum romanum circumferens. quid enim miretur quisque in hoc primum, inventorem an inventum, artificem an auctorem, ausum aliquem hoc excogitare an suscipere an iubere super omnia erit populi sedere ausi furor tam infida instabilique sede. en hic est ille terrarum victor et totius domitor orbis, qui gentes, regna diribet, iura exteris mittit, deorum quaedam immortalium generi humano portio, in machina pendens et ad periculum suum plaudens! quae vilitas animarum ista aut quae querella de cannis! quantum mali potuit accidere! hauriri urbes terrae hiatibus publicus mortalium dolor est: ecce populus romanus universus, veluti duobus navigiis inpositus, binis cardinibus sustinetur et se ipsum depugnantem spectat, periturus momento aliquo luxatis machinis! et per hoc quaeritur tribuniciis contionibus gratia, ut pensiles tribus quatiat, in rostris quid non ausurus apud eos, quibus hoc persuaserit! vere namque confitentibus populus romanus funebri munere ad tumulum patris eius depugnavit universus. variavit hanc suam magnificentiam fessis turbatisque cardinibus et amphitheatri forma custodita novissimo die diversis duabus per medium scaenis athletas edidit raptisque e contrario repente pulpitis eodem die victores e gladiatoribus suis produxit. nec fuit rex curio aut gentium imperator, non opibus insignis, ut qui nihil in censu habuerit praeter discordiam principum.

sed dicantur vera aestimatione invicta miracula. q. marcius rex, iussus a senatu aquarum appiae, anienis, tepulae ductus reficere, novam a nomine suo appellatam cuniculis per montes actis intra praeturae suae tempus adduxit; agrippa vero in aedilitate adiecta virgine aqua ceterisque conrivatis atque emendatis lacus dcc fecit, praeterea salientes d, castella cxxx, complura et cultu magnifica, operibus iis signa ccc aerea aut marmorea inposuit, columnas e marmore cccc, eaque omnia annuo spatio. adicit ipse aedilitatis suae

conmemoratione et ludos diebus undesexaginta factos et gratuita praebita balinea clxx, quae nunc romae ad infinitum auxere numerum. - vicit antecedentes aquarum ductus novissimum inpendium operis incohati a c. caesare et peracti a claudio, quippe a xxxx lapide ad eam excelsitatem, ut omnes urbis montes lavarentur, influxere curtius atque caeruleus fontes et anien novus, erogatis in id opus hs [30mmm]30 d. quod si quis diligentius aestumaverit abundantiam aquarum in publico, balineis, piscinis, euripis, domibus, hortis, suburbanis villis, spatia aquae venientis, exstructos arcus, montes perfossos, convalles aequatas, fatebitur nil magis mirandum fuisse in toto orbe terrarum. - eiusdem claudi inter maxime memoranda equidem duxerim, quamvis destitutum successoris odio, montem perfossum ad lacum fucinum emittendum inenarrabili profecto impendio et operarum multitudine per tot annos, cum aut conrivatio aquarum, qua terrenus mons erat, egereretur in verticem machinis aut silex caederetur quantaque intus in tenebris fierent, quae neque concipi animo nisi ab iis, qui videre, neque enarrari humano sermone possunt! nam portus ostiensis opus praetereo, item vias per montes excisas, mare tyrrhenum a lucrino molibus seclusum, tot pontes tantis inpendiis factos. et inter plurima alia italiae ipsius miracula marmora in lapicidinis crescere auctor est papirius fabianus, naturae rerum peritissimus, exemptores quoque adfirmant compleri sponte illa montium ulcera. quae si vera sunt, spes est numquam defutura luxuriae.

a marmoribus degredienti ad reliquorum lapidum insignes naturas quis dubitet in primis magnetem occurrere quid enim mirabilius aut qua in parte naturae maior inprobitas dederat vocem saxis, ut diximus, respondentem homini, immo vero et obloquentem. quid lapidis rigore pigrius ecce sensus manusque tribuit illi. quid ferri duritia pugnacius pedes ei inpertivit et mores. trahitur namque magnete lapide, domitrixque illa rerum omnium materia ad inane nescio quid currit atque, ut propius venit, adsilit, tenetur amplexuque haeret. sideritim ob id alio nomine vocant, quidam heraclion. magnes appellatus est ab inventore, ut auctor est nicander - in ida, ut reperio, namque et passim inveniuntur, in hispania quoque - ; invenisse autem fertur clavis crepidarum, baculi cuspide haerentibus, cum armenta pasceret. quinque genera magnetis sotacus demonstrat:

aethiopicum et a magnesia macedoniae contermina ab euboea iolcum petentibus dextra, tertium in hyetto boeotiae, quartum circa alexandriam troadem, quintum in magnesia asiae. differentia est prima, mas sit an femina, proxima in colore. nam qui in magnesia macedonica reperiuntur rufi nigrique sunt, boeoti vero rufi coloris plus habent quam nigri. is, qui in troade invenitur, niger est et feminei sexus ideoque sine viribus, deterrimus autem in magnesia asiae, candidus neque attrahens ferrum similisque pumici. conpertum tanto meliores esse, quanto sint magis caerulei. aethiopico palma datur pondusque argento rependitur. invenitur hic in aethiopiae zmiri; ita vocatur regio harenosa. ibi et haematites magnes sanguinei coloris sanguinemque reddens, si teratur, sed et crocum. in adtrahendo ferro non eadem haematiti natura quae magneti. aethiopici argumentum est, quod magneta quoque alium ad se trahit. omnes autem hi oculorum medicamentis prosunt ad suam quisque portionem, maximeque epiphoras sistunt. sanant et adusta cremati tritique. alius rursus in eadem aethiopia non procul magnes ferrum omne abigit respuitque. de utraque natura saepius diximus.

lapidem e syro insula fluctuari tradunt, eundem comminutum mergi.

in asso troadis sarcophagus lapis fissili vena scinditur. corpora defunctorum condita in eo absumi constat intra xl diem exceptis dentibus. mucianus specula quoque et strigiles et vestes et calciamenta inlata mortuis lapidea fieri auctor est. eiusdem generis et in lycia saxa sunt et in oriente, quae viventibus quoque adalligata erodunt corpora.

mitiores autem servandis corporibus nec absumendis chernites ebori simillimus, in quo darium conditum ferunt, parioque similis candore et duritia, minus tantum ponderosus, qui porus vocatur. theophrastus auctor est et tralucidi lapidis in aegypto, quem chio similem ait. fortassis tunc fuerit, quoniam et desinunt et novi reperiuntur.

assius gustatu salsus podagras lenit, pedibus in vas ex eo cavatum inditis. praeterea omnia crurum vitia in iis lapicidinis sanantur, cum in metallis omnibus crura vitientur. eiusdem lapidis flos appellatur, in farinam mollis ad quaedam perinde efficax. est autem similis pumici rufo. admixtus cerae cypriae mammarum vitia sanat, pici autem

resinaeve strumas et panos discutit. prodest et phthisicis linctu. cum melle vetera ulcera ad cicatrices perducit, excrescentia erodit et a bestiarum morsu repugnantia curationi suppurata siccat. fit cataplasma ex eo podagricis mixto fabae lomento.

idem theophrastus et mucianus esse aliquos lapides, qui pariant, credunt; theophrastus et ebur fossile e candido et nigro inveniri et ossa e terra nasci invenirique lapides osseos.

palmati circa mundam in hispania, ubi caesar dictator pompeium vicit, reperiuntur idque quotiens fregeris. sunt et nigri, quorum auctoritas venit in marmora, sicut taenarius. Varro nigros ex africa firmiores esse tradit quam in italia, e diverso albos coranos duriores quam parios, idem luniensem silicem serra secari, tusculanum dissilire igni, sabinum fuscum addito oleo etiam lucere. idem molas versatiles volsinis inventas; aliquas et sponte motas invenimus in prodigiis. nusquam hic utilior quam in italia gignitur lapisque, non saxum, est. in quibusdam vero provinciis omnino non invenitur. sunt quidam in eo genere molliores, qui et cote levantur, ut procul intuentibus ophites videri possit, neque est alius firmior, quando et lapidis natura ligno similiter imbres solesque aut hiemes non patitur in aliis generibus atque aliis. sunt et qui lunam non tolerent et qui vetustate robiginem trahant coloremve candidum oleo mutent.

molarem quidam pyriten vocant, quoniam plurimus sit ignis illi, sed est alius spongiosior tantum et alius etiamnum pyrites similitudine aeris. in cypro eum reperiri volunt metallis, quae sint circa acamanta, unum argenteo colore, alterum aureo. cocuntur varie, ab aliis iterum tertiumque in melle, donec consumatur liquor, ab aliis pruna prius, dein in melle, ac postea lavantur ut aes. usus eorum in medicina excalfacere, siccare, discutere, extenuare et duritias in pus vertere. utuntur et crudis tusisque ad strumas atque furunculos. pyritarum etiamnum unum genus aliqui faciunt plurimum ignis habentis. quos vivos appellamus, ponderosissimi sunt, hi exploratoribus castrorum maxime necessarii. qui clavo vel altero lapide percussi scintillam edunt, quae excepta sulpure aut fungis aridis vel foliis dicto celerius praebet ignem.

ostracitae similitudinem testae habent. usus eorum pro pumice ad levandam cutem. poti sanguinem sistunt et inliti cum melle ulcera doloresque mammarum sanant. - amiantus alumini similis nihil igni

deperdit. hic veneficiis resistit omnibus, privatim magorum. - geoden ex argumento appellant, quoniam conplexus est terram, oculorum medicamentis utilissimum, item mammarum ac testium vitiis. - melitinus lapis sucum remittit dulcem melleumque. tunsus et cerae mixtus eruptionibus pituitae maculisque corporis medetur et faucium exulcerationi, epinyctidas tollit, volvarum dolores inpositus vellere. - gagates lapis nomen habet loci et amnis gagis lyciae. aiunt et in leucolla expelli mari atque intra xii stadia colligi. niger est, planus, pumicosus, levis, non multum a ligno differens, fragilis, odore, si teratur, gravis. fictilia ex eo inscripta non delentur; cum uritur, odorem sulpureum reddit; mirumque, accenditur aqua, oleo restinguitur. fugat serpentes ita recreatque volvae strangulationes. deprendit sonticum morbum et virginitatem suffitus. idem ex vino decoctus dentibus medetur strumisque cerae permixtus. hoc dicuntur uti magi in ea, quam vocant axinomantiam, et peruri negant, si eventurum sit quod aliquis optet. - spongitae lapides inveniuntur in spongeis et sunt marini. quidam eos tecolithos vocant, quoniam vesicis medentur, calculos rumpunt in vino poti. - phrygius lapis gentis habet nomen; est autem glaeba pumicosa. uritur ante vino perfusus, flatus follibus, donec rufescat, ac rursus dulci vino extinguitur ternis vicibus, tinguendis vestibus tantum utilis.

schistos et haematites cognationem habent. haematites invenitur in metallis, ustus minii colorem imitatur, uritur ut phrygius, sed non restinguitur vino. adulteratum haematiten discernunt venae rubentes et friabilis natura. oculis cruore suffusis mire convenit. sistit profluvia mulierum potus. bibunt et qui sanguinem reiecerunt cum suco punici mali. et in vesicae vitiis efficax bibitur et in vino contra serpentium ictus. infirmiora omnia eadem in eo, quem schiston appellant. oculorum vitiis commodior croco similis, peculiaris explendis ulcerum lacunis in lacte muliebri, procidentesque oculos praeclare cohibet. haec est sententia eorum, qui nuperrime scripsere; sotacus e vetustissimis auctoribus quinque genera haematitarum tradit praeter magnetem. principatum dat ex iis aethiopico, oculorum medicamentis utilissimo et iis, quae panchresta appellat, item ambustis. alterum androdamanta dicit vocari, colore nigrum, pondere ac duritia insignem, et inde nomen traxisse praecipueque in africa repertum; trahere autem in se argentum, aes, ferrum. experimentum

eius esse in cote ex lapide basanite - reddere enim sucum sanguineum - , et esse ad iocineris vitia praecipui remedii. tertium genus arabici facit, simili duritia, vix reddentis sucum ad cotem aquariam, aliquando croco similem. quarti generis hepatiten vocari, quamdiu crudus sit, coctum vero miltiten, utilem ambustis, ad omnia utiliorem rubrica; quinti generis schiston, haemorroidas reprimentem in potu. omnes autem haematitas tritos in oleo iii drachmarum pondere a ieiunis bibendos ad vitia sanguinis. idem schiston et alterius generis quam haematiten tradit, quem vocat anthraciten; nasci in africa nigrum, attritum aquariis cotibus reddere ab ea parte, quae fuerit ab radice, nigrum colorem, ab altera parte croci. ipsum utilem esse oculorum medicamentis.

ae+titae lapides ex argumento nominis magnam famam habent. reperiuntur in nidis aquilarum, sicut in decumo volumine diximus. aiunt binos inveniri, marem ac feminam, nec sine iis parere quas diximus aquilas, et ideo binos tantum; genera eorum quattuor: in africa nascentem pusillum ac mollem, intra se velut in alvo habentem argillam suavem, candidam. ipsum friabilem feminei sexus putant, marem autem, qui in arabia nascatur, durum, gallae similem aut subrutilum, in alvo habentem durum lapidem. tertius in cypro invenitur colore illis in africa nascentibus similis, amplior tamen atque dilatatus; ceteris enim globosa facies. habet in alvo harenam iucundam et lapillos, ipse tam mollis, ut etiam digitis frietur. quarti generis taphiusius appellatur, nascens iuxta leucada in taphiusa, qui locus est dextra navigantibus ex ithaca leucadem. invenitur in fluminibus candidus ac rotundus. huic est in alvo lapis, qui vocatur callimus, nec quicquam terreni. ae+titae gravidis adalligati mulieribus vel quadripedibus pelliculis sacrificatorum animalium continent partus, non nisi parturiant removendi; alioqui volvae excidunt. sed nisi parturientibus auferantur, omnino non pariant.

est et lapis samius in eadem insula, ubi terram laudavimus, poliendo auro utilis, in medicina oculorum ulceribus cum lacte quo supra dictum est modo et contra veteres lacrimationes. prodest et contra vitia stomachi potus, vertigines sedat mentesque commotas restituit. quidam et morbis comitialibus utiliter dari putant et ad urinae difficultates. et acopis miscetur. probatur gravitate, candore. volunt et partus contineri adalligato eo. - arabus lapis, ebori similis,

dentifriciis adcommodatur crematus. privatim haemorroidas sanat cum lanugine linteorum aut super linteolis inpositis.

non praetermittenda est et pumicum natura. appellantur quidem ita erosa saxa in aedificiis, quae musaea vocant, dependentia ad imaginem specus arte reddendam, sed ii pumices, qui sunt in usu corporum levandorum feminis, iam quidem et viris, atque, ut ait catullus, libris, laudatissimi sunt in melo, nisyro et aeoliis insulis. probatio in candore minimoque pondere et ut quam maxime spongiosi aridique sint, teri faciles nec harenosi in fricando. vis eorum in medicina extenuare, siccare, trina ustione ita, uti torreantur carbone puro, totiens vino restinguantur albo. lavantur deinde ut cadmia et siccati conduntur quam minime uliginoso loco. usus farinae ex iis oculorum maxime medicamentis: ulcera purgant eorum leniter explentque, cicatrices emendant. - (quidam a tertia ustione refrigeratos potius quam restinctos terere malunt ex vino). - adduntur et in malagmata capitum verendorumque ulceribus utilissimi. fiunt ex iis et dentifricia. theophrastus auctor est potores in certamine bibendi praesumere farinam eam, sed, nisi universo potu inpleantur, periclitari, tantamque refrigerandi naturam esse, ut musta fervere desinant pumice addito.

auctoribus curae fuere lapides mortariorum quoque, nec medicinalium tantum aut ad pigmenta pertinentium. etesium lapidem in iis praetulere ceteris, mox thebaicum, quem pyrropoecilon appellavimus - aliqui psaranum vocant - , tertium ex chalazio chrysiten, medicis autem ex basanite. hic enim lapis nihil ex sese remittit. ii lapides, qui sucum reddunt, oculorum medicamentis utiles existimantur; ideo aethiopici ad ea maxime probantur. taenarium lapidem et phoeniceum et haematiten iis medicamentis prodesse tradunt, quae ex croco componantur; ex alio taenario, qui niger est, et ex pario lapide non aeque medicis utilem, potioremque ex alabastrite aegyptio vel ex ophite albo. est enim hoc genus ophitis, ex quo vasa et cados etiam faciunt.

in siphno lapis est, qui cavatur tornaturque in vasa vel coquendis cibis utilia vel ad esculentorum usus, quod et in comensi italiae lapide viridi accidere scimus, sed in siphnio singulare quod excalfactus oleo nigrescit durescitque natura mollissimus. tanta qualitatium differentia est, nam mollitiae trans alpis praecipua sunt

exempla. in belgica provincia candidum lapidem serra, qua lignum, faciliusque etiam secant tantum ad tegularum et imbricum vicem vel, si libeat, quae vocant pavonacea tegendi genera.

et hi quidem sectiles sunt, specularis vero, quoniam et hic lapidis nomen optinet, faciliore multo natura finditur in quamlibeat tenues crustas. hispania hunc tantum citerior olim dabat, nec tota, sed intra [c] passuum circa segobrigam urbem, iam et cypros et cappadocia et sicilia et nuper inventum africa, postferendos tamen omnes hispaniae, cappadocia amplissimos magnitudine, sed obscuros. sunt et in bononiensi italiae parte breves, macula complexu silicis alligata, quorum tamen appareat natura similis. puteis in hispania effoditur e profunda altitudine, nec non et saxo inclusus sub terra invenitur extrahiturque aut exciditur, sed maiore ex parte fossili natura, absolutus in se caementi modo, numquam adhuc quinque pedum longitudine amplior. umorem hunc terrae quadam anima crystalli modo glaciari et in lapidem concrescere manifesto apparet, quod cum ferae decidere in puteos tales, medullae in ossibus earum post unam hiemem in eandem lapidis naturam figurantur. invenitur et niger aliquando, sed candido natura mira, cum sit mollitia nota, perpetiendi soles rigoresque, nec senescit, si modo iniuria absit, cum hoc etiam in caementis multorum generum accidat. invenere et alium usum in ramentis squamaque, circum maximum ludis circensibus sternendi ut sit in commendatione candor.

nerone principe in cappadocia repertus est lapis duritia marmoris, candidus atque tralucens etiam qua parte fulvae inciderant venae, ex argumento phengites appellatus. hoc construxerat aedem fortunae, quam seiani appellant, a servio rege sacratam, amplexus aurea domo; quare etiam foribus opertis interdiu claritas ibi diurna erat alio quam specularium modo tamquam inclusa luce, non transmissa. - in arabia quoque esse lapidem vitri modo tralucidum, quo utantur pro specularibus, iuba auctor est.

nunc ad operarios lapides transisse conveniat primumque cotes ferro acuendo. multa earum genera: creticae diu maximam laudem habuere, secundam laconicae e taygeto monte, oleo utraeque indigentes. inter aquarias naxiae laus maxima fuit, mox armeniacae, de quibus diximus. ex oleo et aqua ciliciae pollent, ex aqua arsinoiticae. repertae sunt et in italia aqua trahentes aciem acerrimae

effectu, nec non et trans alpis, quas passernices vocant. quarta ratio est saliva hominis proficientium in tonstrinarum officinis. laminitanae ex hispania citeriore in eo genere praecipuae.

e reliqua multitudine lapidum tofus aedificiis inutilis est mortalitate, mollitia. quaedam tamen loca non alium habent, sicuti carthago in africa. exestur halitu maris, friatur vento, everberatur imbri. sed cura tuentur picando parietes, quoniam et tectorii calce eroditur, sciteque dictum est ad tecta eos pice, ad vina calce uti, quoniam sic musta condiunt. alia mollitia circa romam fidenati et albano. in umbria quoque et venetia albus lapis dentata serra secatur. hi tractabiles in opere laborem quoque tolerant, sub tecto dumtaxat; aspergine et gelu pruinisque rumpuntur in testas, nec contra auram maris robusti. tiburtini, ad reliqua fortes, vapore dissiliunt.

nigri silices optimi, quibusdam in locis et rubentes. nonnusquam vero et albi, sicut in tarquiniensi anicianis lapicidinis circa lacum volsiniensem et in statoniensi, quibus ne ignis quidem noceat. iidem et in monimentis scalpti contra vetustatem quoque incorrupti permanent; ex iis formae fiunt, in quibus aera funduntur. est et viridis lapis vehementer igni resistens, sed nusquam copiosus et, ubi invenitur, lapis, non saxum, est. e reliquis pallidus in caemento raro utilis, globosus contra iniurias fortis, sed structurae infidelis, nisi multa suffrenatione devinctus. nec certior fluviatilis, semper veluti madens. remedium est in lapide dubio aestate eum eximere nec ante biennium inserere tecto, domitum tempestatibus. quae ex eo laesa fuerint, subterraneae structurae aptentur utilius; quae restiterint, tutum est vel caelo committere.

graeci e lapide duro aut silice aequato struunt veluti latericios parietes. cum ita fecerunt, isodomon vocant genus structurae; at cum inaequali crassitudine structa sunt coria, pseudisodomon. tertium est emplecton; tantummodo frontibus politis reliqua fortuita conlocant. alternas coagmentationes fieri, ut commissuras antecedentium medii lapides optineant, necessarium est, in medio quoque pariete, si res patiatur; si minus, utique a lateribus. medios parietes farcire fractis caementis diatonicon vocant. reticulata structura, qua frequentissime romae struunt, rimis opportuna est. structuram ad normam et libellam fieri, ad perpendiculum respondere oportet. cisternas harenae purae asperae v partibus, calcis quam vehementissimae ii construi,

fragmentis silicis non excedentibus libras; ita ferratis vectibus calcari solum parietesque similiter. utilius geminas esse, ut in priore vitia considant atque per colum in proximam transeat pura aqua.

calcem e vario lapide cato censorius inprobat; ex albo melior. quae ex duro, structurae utilior; quae ex fistuloso, tectoriis; ad utrumque damnatur ex silice. utilior eadem effosso lapide quam ex ripis fluminum collecto, utilior e molari, quia est quaedam pinguior natura eius. mirum aliquid, postquam arserit, accendi aquis. - harenae tria genera: fossicia, cui quarta pars calcis addi debet, fluviatili aut marinae tertia. si et testae tusae tertia pars addatur, melior materia erit. ab appennino ad padum non invenitur fossicia, nec trans maria. - ruinarum urbis ea maxume causa, quod furto calcis sine ferumine suo caementa componuntur. intrita quoque ea quo vetustior, eo melior. in antiquorum aedium legibus invenitur, ne recentiore trima uteretur redemptor; ideo nullae tectoria eorum rimae foedavere. tectorium, nisi quod ter harenato et bis marmorato inductum est, numquam satis splendoris habet. uliginosa et ubi salsugo vitiet testaceo sublini utilius. in graecia tectoriis etiam harenatum, quo inducturi sunt, prius in mortario ligneis vectibus subigunt. experimentum marmorati est in subigendo, donec rutro non cohaereat; contra in albario opere, ut macerata calx ceu glutinum haereat; macerari non nisi ex glaeba oportet. elide aedis est minervae, in qua frater Phidiae Panaenus tectorium induxit lacte et croco subactum, ut ferunt; ideo, si teratur hodie in eo saliva pollice, odorem croci saporemque reddit.

columnae eaedem densius positae crassiores videntur. genera earum quattuor: quae sextam partem altitudinis in crassitudine ima habent, doricae vocantur; quae nonam, ionicae; quae septimam, tuscanicae; corinthiis eadem ratio quae ionicis, set differentia, quoniam capitulis corinthiarum eadem est altitudo, quae colligitur crassitudine ima, ideoque graciliores videntur; ionicis enim capituli altitudo tertia pars est crassitudinis. antiqua ratio erat columnarum altitudinis tertia pars latitudinum delubri. in ephesiae dianae aede, quae prius fuit, primum columnis spirae subditae et capitula addita, placuitque altitudinis octava pars in crassitudine et ut spirae haberent crassitudinis dimidium septimaeque partes detraherentur summarum crassitudine. praeter haec sunt quae vocantur atticae columnae quaternis angulis, pari laterum intervallo.

calcis et in medicina magnus usus. eligitur recens nec aspersa aquis. urit, discutit, extrahit incipientesque serpentium ulcerum impetus coercet; aceto et rosaceo mixta atque inlita, mox cera ac rosaceo temperata perducit ad cicatricem. luxatis quoque cum liquida resina aut adipe suillo ex melle medetur, eadem compositione et strumis.

maltha e calce fit recenti. glaeba vino restinguitur, mox tunditur cum adipe suillo et fico, duplici lenimento. quae res omnium tenacissima et duritiam lapidis antecedens. quod malthatur, oleo perfricatur ante.

cognata calci res gypsum est. plura eius genera. nam et e lapide coquitur, ut in syria ac thuriis, et e terra foditur, ut in cypro ac perrhaebia; e summa tellure et tymphaicum est. qui coquitur lapis non dissimilis alabastritae esse debet aut marmoroso. in syria durissimos ad id eligunt cocuntque cum fimo bubulo, ut celerius urantur. omnium autem optimum fieri compertum est e lapide speculari squamamve talem habente. gypso madido statim utendum est, quoniam celerrime coit; tamen rursus tundi se et in farinam resolvi patitur. usus gypsi in albariis, sigillis aedificiorum et coronis gratissimus. exemplum inlustre est, c. proculeium, Augusti Caesaris familiaritate subnixum, in stomachi dolore gypso poto conscivisse sibi mortem.

pavimenta originem apud graecos habent elaborata arte picturae ratione, donec lithostrota expulere eam. celeberrimus fuit in hoc genere sosus, qui pergami stravit quem vocant asaroton oecon, quoniam purgamenta cenae in pavimentis quaeque everri solent velut relicta fecerat parvis e tessellis tinctisque in varios colores. mirabilis ibi columba bibens et aquam umbra capitis infuscans; apricantur aliae scabentes sese in canthari labro. - pavimenta credo primum facta quae nunc vocamus barbarica atque subtegulanea, in italia festucis pavita. hoc certe ex nomine ipso intellegi potest. romae scutulatum in iovis capitolini aede primum factum est post tertium bellum punicum initum, frequentata vero pavimenta ante cimbricum magna gratia animorum indicio est lucilianus ille versus:

“arte pavimenti atque emblemate vermiculato.”

subdialia graeci invenere talibus domos contegentes, genus facile tractu tepente, sed fallax ubicumque imbres gelant. necessarium

binas per diversum coaxationes substerni et capita earum praefigi, ne torqueantur, et ruderi novo tertiam partem testae tusae addi, dein rudus, in quo ii quintae calcis misceantur, pedali crassitudine festucari, tunc nucleo crasso vi digitos induci, tessella grandi non minus alta ii digitos strui, fastigium vero servari in pedes denos sescunciae ac diligenter cote despumari. quernis axibus contabulari, quia torquentur, inutile putant, immo et felice aut palea substerni melius esse, quo minor vis calcis perveniat. necessarium et globosum lapidem subici. similiter fiunt spicata testacea. - non neglegendum est etiamnum unum genus graecanici: solo festucato inicitur rudus aut testaceum pavimentum, dein spisse calcatis carbonibus inducitur ex sabulo et calce ac favilla mixtis materia crassitudine semipedali, ad regulam et libellam exigitur, et est forma terrena; si vero cote depolitum est, nigri pavimenti usum optinet.

lithostrota coeptavere iam sub sulla; parvolis certe crustis exstat hodieque quod in fortunae delubro praeneste fecit. pulsa deinde ex humo pavimenta in camaras transiere vitro. novicium et hoc inventum; agrippa certe in thermis, quas romae fecit, figlinum opus encausto pinxit in calidis, reliqua albario adornavit, non dubie vitreas facturus camaras, si prius inventum id fuisset aut a parietibus scaenae, ut diximus, Scauri pervenisset in camaras. quam ob rem et vitri natura indicanda est.

pars syriae, quae phoenice vocatur, finitima iudaeae intra montis carmeli radices paludem habet, quae vocatur candebia. ex ea creditur nasci belus amnis quinque milium passuum spatio in mare perfluens iuxta ptolemaidem coloniam. lentus hic cursu, insaluber potu, sed caerimoniis sacer, limosus, vado profundus, non nisi refuso mari harenas fatetur; fluctibus enim volutatae nitescunt detritis sordibus. tunc et marino creduntur adstringi morsu, non prius utiles. quingentorum est passuum non amplius litoris spatium, idque tantum multa per saecula gignendo fuit vitro. fama est adpulsa nave mercatorum nitri, cum sparsi per litus epulas pararent nec esset cortinis attollendis lapidum occasio, glaebas nitri e nave subdidisse, quibus accensis, permixta harena litoris, tralucentes novi liquoris fluxisse rivos, et hanc fuisse originem vitri. mox, ut est ingeniosa sollertia, non fuit contenta nitrum miscuisse; coeptus addi et magnes lapis, quoniam in se liquorem vitri quoque ut ferrum trahere creditur.

simili modo et calculi splendentes multifariam coepti uri, dein conchae ac fossiles harenae. auctores sunt in india et crystallo fracta fieri et ob id nullum conparari indico. levibus autem aridisque lignis coquitur addito cypro ac nitro, maxime aegyptio. continuis fornacibus ut aes liquatur, massaeque fiunt colore pingui nigricantes. acies tanta est quacumque, ut citra sensum ullum ad ossa consecet quidquid adflaverit corporis. ex massis rursus funditur in officinis tinguiturque, et aliud flatu figuratur, aliud torno teritur, aliud argenti modo caelatur, sidone quondam his officinis nobili, siquidem etiam specula excogitaverat.

haec fuit antiqua ratio vitri. iam vero et in volturno amne italiae harena alba nascens sex milium passuum litore inter cumas atque liternum, qua mollissima est, pila molave teritur. dein miscetur iii partibus nitri pondere vel mensura ac liquata in alias fornaces transfunditur. ibi fit massa, quae vocatur hammonitrum, atque haec recoquitur et fit vitrum purum ac massa vitri candidi. iam vero et per gallias hispaniasque simili modo harena temperatur. ferunt tiberio principe excogitato vitri temperamento, ut flexile esset, totam officinam artificis eius abolitam, ne aeris, argenti, auri metallis pretia detraherentur, eaque fama crebrior diu quam certior fuit. sed quid refert, neronis principatu reperta vitri arte, quae modicos calices duos, quos appellabant petrotos, hs [vi] venderet

in genere vitri et obsiana numerantur ad similitudinem lapidis, quem in aethiopia invenit obsius, nigerrimi coloris, aliquando et tralucidi, crassiore visu atque in speculis parietum pro imagine umbras reddente. gemmas multi ex eo faciunt; vidimus et solidas imagines Divi Augusti capaci materia huius crassitudinis, dicavitque ipse pro miraculo in templo concordiae obsianos iiii elephantos. remisit et tiberius caesar heliopolitarum caerimoniis repertam in hereditate sei eius, qui praefuerat aegypto, obsianam imaginem menelai, ex qua apparet antiquior materiae origo, nunc vitri similitudine interpolata. xenocrates obsianum lapidem in india et in samnio italiae et ad oceanum in hispania tradit nasci. fit et tincturae genere obsianum ad escaria vasa et totum rubens vitrum atque non tralucens, haematinum appellatum. fit et album et murrina aut hyacinthos sappirosque imitatum et omnibus aliis coloribus, neque est alia nunc sequacior materia aut etiam picturae accommodatior.

maximus tamen honos in candido tralucentibus, quam proxima crystalli similitudine. usus eorum ad potandum argenti metalla et auri pepulit. est autem caloris inpatiens, ni praecedat frigidus liquor, cum addita aqua vitreae pilae sole adverso in tantum candescant, ut vestes exurant. fragmenta teporata adglutinantur tantum, rursus tota fundi non queunt praeterquam abruptas sibimet in guttas, veluti cum calculi fiunt, quos quidam ab oculis appellant, aliquos et pluribus modis versicolores. - vitrum sulpuri concoctum feruminatur in lapidem.

et peractis omnibus, quae constant ingenio arte naturam faciente, succurrit mirari nihil paene non igni perfici. accipit harenas, ex quibus aliubi vitrum, aliubi argentum, aliubi minium, aliubi plumbi genera, aliubi pigmenta, aliubi medicamenta fundit. igni lapides in aes solvuntur, igni ferrum gignitur ac domatur, igni aurum perficitur, igni cremato lapide caementa in tectis ligantur. alia saepius uri prodest, eademque materia aliud gignit primis ignibus, aliud secundis, aliud tertiis, quando ipse carbo vires habere incipit restinctus atque interisse creditus maioris fit virtutis. inmensa, inproba rerum naturae portio et in qua dubium sit, plura absumat an pariat.

est et ipsis ignibus medica vis. pestilentiae, quae obscuratione solis contrahitur, ignes si fiant, multifariam auxiliari certum est. empedocles et hippocrates id demonstravere diversis locis. “ad convolsa interiora viscera aut contusa,” M. Varro — ipsis enim verbis eius utar— “pyxis sit,” inquit, “focus. inde enim cinis lixivus potus medetur. licet videre gladiatores, cum deluserunt, hac iuvari potione.” quin et carbunculum, genus morbi, quo duos consulares nuper absumptos indicavimus, querneus carbo tritus cum melle sanat. adeo in rebus damnatis quoque ac iam nullis sunt aliqua commoda, ut carbone ecce atque cinere.

non praeteribo et unum foci exemplum romanis litteris clarum: tarquinio prisco regnante tradunt repente in foco eius comparuisse genitale e cinere masculi sexus eamque, quae insederat ibi, tanaquilis reginae ancillam ocresiam captivam consurrexisse gravidam. ita servium tullium natum, qui regno successit. inde et in regia cubanti ei puero caput arsisse, creditumque laris familiaris filium. ob id compitalia ludos laribus primum instituisse.

LIBER XXXVII

ut nihil instituto operi desit, gemmae supersunt et in artum coacta rerum naturae maiestas, multis nulla parte mirabilior. tantum tribuunt varietati, coloribus, materiae, decori, violare etiam signis, quae causa gemmarum est, quasdam nefas ducentes, aliquas vero extra pretia ulla taxationemque humanarum opum arbitrantes, ut plerisque ad summam absolutamque naturae rerum contemplationem satis sit una aliqua gemma. quae fuerit origo et a quibus initiis in tantum admiratio haec exarserit, diximus quadamtenus in mentione auri anulorumque. fabulae primordium a rupe caucasi tradunt, promethei vinculorum interpretatione fatali, primumque saxi eius fragmentum inclusum ferro ac digito circumdatum: hoc fuisse anulum et hoc gemmam.

his initiis coepit auctoritas in tantum amorem elata, ut polycrati samio, insularum ac litorum tyranno, felicitatis suae, quam nimiam fatebatur etiam ipse qui felix erat, satis piamenti in unius gemmae voluntario damno videretur, si cum fortunae volubilitate paria fecisset, planeque ab invidia eius abunde se redimi putaret, si hoc unum doluisset, adsiduo gaudio lassus. ergo provectus navigio in altum anulum mersit. at illum piscis, eximia magnitudine regi natus, escae vice raptum, ut faceret ostentum, in culina domino rursus fortunae insidiantis manu reddidit. sardonychem eam gemmam fuisse constat, ostenduntque romae, si credimus, in concordiae delubro cornu aureo augustae dono inclusam et novissimum prope locum praelatis multis optinentem.

post hunc anulum regis alterius in fama est gemma, pyrrhi illius, qui adversus romanos bellum gessit. namque habuisse dicitur achaten, in qua novem musae et apollo citharam tenens spectarentur, non arte, sed naturae sponte ita discurrentibus maculis, ut musis quoque singulis sua redderentur insignia. nec deinde alia, quae tradatur magnopere, gemmarum claritas exstat apud auctores, praeterquam ismenian choraulen multis fulgentibusque uti solitum, comitante fabula vanitatem eius: indicato in cypro sex aureis smaragdo, ubi erat scalpta amymone, iussisse numerari et, cum duo relati essent, “male, hercules, factum” dixisse, “multum enim

detractum gemmae dignitati." hic videtur instituisse, ut omnes musicae artis hac quoque ostentatione censerentur, veluti dionysodorus, aequalis eius et aemulus, ut sic quoque non par videretur qui tertius eodem tempore inter musicos fuit: nicomachus enim multas tantum habuisse gemmas traditur, sed nulla peritia electas. et forte quadam his exemplis initio voluminis oblatis adversus istos, qui sibi hac ostentatione adrogant, ut palam sit eos tibicinum gloria tumere:

polycratis gemma, quae demonstratur, intacta inlibataque est; ismeniae aetate multos post annos apparet scalpi etiam smaragdos solitos. confirmat hanc eandem opinionem edictum alexandri magni, quo vetuit in hac gemma ab alio se scalpi quam ab pyrgotele, non dubie clarissimo artis eius. post eum apollonides et cronius in gloria fuere quique Divi Augusti imaginem simillime expressit, qua postea principes signant, dioscurides. sulla dictator traditione iugurthae semper signavit. est apud auctores et intercatiensem illum, cuius patrem scipio aemilianus ex provocatione interfecerat, pugnae effigie eius signasse, volgato stilonis praeconini sale, quidnam fuisse facturum, si scipio a patre eius interemptus fuisset. Divus Augustus inter initia sphinge signavit. duas in matris anulis eas indiscretae similitudinis invenerat. altera per bella civilia absente ipso signavere amici epistulas et edicta, quae ratio temporum nomine eius reddi postulabat, non inficeto lepore accipientium, aenigmata adferre eam sphingem. quippe etiam maecenatis rana per collationes pecuniarum in magno terrore erat. Augustus postea ad devitanda convicia sphingis alexandri magni imagine signavit.

gemmas plures primus omnium romae habuit - quod peregrino appellant nomine dactyliothecam — privignus sullae Scaurus, diuque nulla alia fuit, donec pompeius magnus eam, quae mithridatis regis fuerat, inter dona in capitolio dicaret, ut Varro aliique aetatis eius auctores confirmant, multum praelata Scauri. hoc exemplo caesar dictator sex dactyliothecas in aede veneris genetricis consecravit, marcellus octavia genitus unam in aede palatini apollinis.

victoria primum ad margaritas gemmasque mores inclinavit, sicut l. scipionis et cn. manli ad caelatum argentum et vestes attalicas et triclinia aerata, sicut l. mummi ad corinthia et tabulas pictas. id uti planius noscatur, verba ex ipsis pompei triumphorum actis subiciam.

ergo tertio triumpho, quem de piratis, asia, ponto gentibusque et regibus in vii volumine operis huius indicatis m. pisone m. messala cos. pr. k. octobres natali suo egit, transtulit alveum cum tesseris lusorium e gemmis duabus latum pedes tres, longum pedes quattuor - ne quis effetas res dubitet nulla gemmarum magnitudine hodie prope ad hanc amplitudinem accedente, in eo fuit luna aurea pondo xxx - , lectos tricliniares tres, vasa ex auro et gemmis abacorum novem, signa aurea tria minervae, martis, apollinis, coronas ex margaritis xxxiii, montem aureum quadratum cum cervis et leonibus et pomis omnis generis circumdata vite aurea, musaeum ex margaritis, in cuius fastigio horologium. erat et imago cn. pompei e margaritis, illo relicino honore grata, illius probi oris venerandique per cunctas gentes, ficta ex margaritis, ita severitate victa et veriore luxuriae triumpho! numquam profecto inter illos viros durasset cognomen magni, si prima victoria sic triumphasset! e margaritis, magne, tam prodiga re et feminis reperta, quas gerere te fas non sit, fieri tuos voltus sic te pretiosum videri non ergo illa tua similior est imago, quam pyrenaei iugis inposuisti grave profecto, foedum probrum erat, ni verius saevum irae deorum ostentum id credi oporteret clareque intellegi posset iam tum illud caput orientis opibus sine reliquo corpore ostentatum. cetera triumphi eius quam virilia! hs [30mm]30 r. p. data, legatis et quaestoribus, qui oras maris defendissent, hs [30m]30, militibus singulis hs sena milia. tolerabiliorem tamen causam fecit c. principis, qui super cetera muliebria soccos induebat e margaritis, aut neronis principis, qui sceptra et personas et cubilia viatoria unionibus construebat. quin immo etiam ius videmur perdidisse corripiendi gemmata potoria et varia supellectilis genera, anulos translucentes. quae enim non luxuria innocentior existimari possit

eadem victoria primum in urbem myrrhina invexit, primusque pompeius capides et pocula ex eo triumpho capitolino iovi dicavit. quae protinus ad hominum usum transiere, abacis etiam escariisque vasis expetitis; et crescit in dies eius luxuria. myrrhino [lxx] hs empto, capaci plane ad sextarios tres calice, potavit ... anus consularis, ob amorem adroso margine eius, ut tamen iniuria illa pretium augeret; neque est hodie myrrhini alterius praestantior indicatura. idem in reliquis generis eius quantum voraverit, licet

aestimare ex multitudine, quae tanta fuit, ut auferente liberis eius nerone exposita occuparent theatrum peculiare trans tiberim in hortis, quod a populo impleri canente se, dum pompeiano proludit, etiam neroni satis erat. vidi tunc adnumerari unius scyphi fracti membra, quae in dolorem, credo, saeculi invidiamque fortunae tamquam alexandri magni corpus in conditorio servari, ut ostentarentur, placebat. t. petronius consularis moriturus invidia neronis, ut mensam eius exheredaret, trullam myrrhinam hs [ccc] emptam fregit; sed nero, ut par erat principem, vicit omnes hs [30x]30 capidem unam parando. memoranda res tanti imperatorem patremque patriae bibisse!

oriens myrrhina mittit. inveniuntur ibi pluribus locis nec insignibus, maxime parthici regni, praecipua tamen in carmania. umorem sub terra putant calore densari. amplitudine numquam parvos excedunt abacos, crassitudine raro quanta dicta sunt potoria. splendor est iis sine viribus nitorque verius quam splendor. sed in pretio varietas colorum subinde circumagentibus se maculis in purpuram candoremque et tertium ex utroque, ignescente veluti per transitum coloris purpura aut rubescente lacteo. sunt qui maxime in iis laudent extremitates et quosdam colorum repercussus, quales in caelesti arcu spectantur. iam aliis maculae pingues placent - tralucere quicquam aut pallere vitium est - itemque sales verrucaeque non eminentes, sed, ut in corpore etiam, plerumque sessiles. aliqua et in odore commendatio est.

contraria huic causa crystallum facit, gelu vehementiore concreto. non aliubi certe reperitur quam ubi maxime hibernae nives rigent, glaciemque esse certum est, unde nomen graeci dedere. oriens et hanc mittit, quoniam indicae nulla praefertur. nascitur et in asia, vilissima circa alabanda et orthosiam finitimisque, item in cypro, sed laudata in europa alpium iugis. iuba auctor est et in quadam insula rubri maris ante arabiam sita nasci, quae necron vocetur, et in ea, quae iuxta gemmam topazum ferat, cubitalemque effossam a pythagora ptolemaei praefecto; cornelius bocchus et in lusitania perquam mirandi ponderis in ammaeensibus iugis, depressis ad libramentum aquae puteis. hoc mirum, quod xenocrates ephesius tradit, aratro in asia et cypro excitari; non enim reperiri in terreno nec nisi inter cautes creditum fuerat. similius veri est, quod idem

xenocrates tradit, et torrentibus saepe deportari. sudines negat nisi ad meridiem spectantibus locis nasci. quod certum est, non reperitur in aquosis, quamquam in regione praegelida, vel si ad vada usque glacientur amnes. e caelesti umore puraque nive id fieri necesse est; ideo caloris inpatiens nisi in frigido potu abdicatur. quare nascatur sexangulis lateribus, non facile ratio iniri potest, eo magis quod neque in mucronibus eadem species est et ita absolutus laterum levor est, ut nulla id arte possit aequari.

magnitudo amplissima adhuc visa nobis erat quam in capitolio livia Augusti dicaverat, librarum circiter cl. xenocrates idem auctor est vas amphorale visum, et aliqui ex india sextariorum quattuor. - (nos liquido adfirmare possumus in cautibus alpium nasci adeo inviis plerumque, ut fune pendentes eam extrahant.) - peritis signa et indicia nota sunt. infestantur plurimis vitiis, scabro ferumine, maculosa nube, occulta aliquando vomica, praeduro fragilique centro, item sale appellato. est et rufa aliquis robigo, aliis capillamentum rimae simile. hoc artifices caelatura occultant. quae vero sine vitio sint, pura esse malunt, acenteta appellantes, nec spumei coloris, sed limpidae aquae. postrema auctoritas in pondere est. invenio apud medicos, quae sint urenda corporum, non aliter utilius uri putari quam crystallina pila adversis opposita solis radiis. alius et in his furor, hs centum quinquaginta milibus trullam unam non ante multos annos mercata matre familias nec divite. nero amissarum rerum nuntio accepto duos calices crystallinos in suprema ira fregit inlisos. haec fuit ultio saeculum suum punientis, ne quis alius iis biberet. fragmenta sarciri nullo modo queunt. mire his ad similitudinem accessere vitrea, sed prodigii modo, ut suum pretium auxerint, crystalli non deminuerint.

proximum locum in deliciis, feminarum tamen adhuc tantum, sucina optinent, eandemque omnia haec quam gemmae auctoritatem; sane priora illa aliquis de causis, crystallina frigido potu, myrrhina utroque; in sucinis causam ne deliciae quidem adhuc excogitare potuerunt.

occasio est vanitatis graecorum detegendae: legentes modo aequo perpetiantur animo, cum hoc quoque intersit vitae scire, non quidquid illi prodidere mirandum. phae+thontis fulmine icti sorores luctu mutatas in arbores populos lacrimis electrum omnibus annis

fundere iuxta eridanum amnem, quem padum vocavimus, electrum appellatum, quoniam sol vocitatus sit elector, plurimi poe+tae dixere primique, ut arbitror, aeschylus, philoxenus, euripides, nicander, satyrus. quod esse falsum italiae testimonio patet. diligentiores eorum electridas insulas in mari hadriatico esse dixerunt, ad quas delaberetur pado. qua appellatione nullas umquam ibi fuisse certum est, nec vero ullas ita positas esse, in quas quidquam cursu padi devehi posset. nam quod aeschylus in hiberia hoc est in hispania eridanum esse dixit eundemque appellari rhodanum, euripides rursus et Apollonius in hadriatico litore confluere rhodanum et padum, faciliorem veniam facit ignorati sucini tanta ignorantia orbis. modestiores, sed aeque falsum, prodidere in extremis hadriatici sinus inviis rupibus arbores stare, quae canis ortu hanc effunderent cummim. theophrastus effodi in liguria dixit, chares vero phae +thontem in aethiopia Ἄμμωνος νήσῳ obisse, ibi et delubrum eius esse atque oraculum electrumque gigni. philemon fossile esse et in scythia erui duobus locis, candidum atque cerei coloris quod vocaretur electrum, in alio fulvum quod appellaretur sualiternicum. demostratus lyncurium vocat et fieri ex urina lyncum bestiarum, e maribus fulvum et igneum, e feminis languidius atque candidum; alios id dicere langurium et esse in italia bestias languros. zenothemis langas vocat easdem et circa padum iis vitam adsignat, sudines arborem, quae gignat in liguria, vocari lynca. in eadem sententia et metrodorus fuit. sotacus credidit in brittannia petris effluere, quas electridas vocavit, pytheas guionibus, germaniae genti, accoli aestuarium oceani metuonidis nomine spatio stadiorum sex milium; ab hoc diei navigatione abesse insulam abalum; illo per ver fluctibus advehi et esse concreti maris purgamentum; incolas pro ligno ad ignem uti eo proximisque teutonis vendere. huic et timaeus credidit, sed insulam basiliam vocavit. philemon negavit flammam ab electro reddi. nicias solis radiorum sucum intellegi voluit hoc; circa occasum vehementiores in terram actos pinguem sudorem in ea relinquere, oceani deinde aestibus in germanorum litora eici. in aegypto nasci simili modo - vocari sacal - , item in india gratiusque et ipso ture esse indis; in syria quoque feminas verticillos inde facere et vocare harpaga, quia folia paleasque et vestium fimbrias rapiat. theochrestus oceano id exaestuante ad pyrenaei promunturia adpelli,

quod et xenocrates credidit, qui de his nuperrime scripsit vivitque adhuc. asarubas tradit iuxta atlanticum mare esse lacum cephisida, quem mauri vocent electrum. hunc sole excalfactum e limo reddere electrum fluitans. mnaseas africae locum sicyonem appellat et crathin amnem in oceanum effluentem e lacu, in quo aves, quas meleagridas et penelopas vocat, vivere; ibi nasci ratione eadem qua supra dictum est. theomenes syrtim iuxta magnam hortum hesperidon esse et stagnum electrum, ibi arbores populos, quarum e cacuminibus in stagnum cadat; colligi autem ab virginibus hesperidum. ctesias in indis flumen esse hypobarum, quo vocabulo significetur omnia bona eum ferre; fluere a septentrione in exortivum oceanum iuxta montem silvestrem arboribus electrum ferentibus. arbores eas psitthachoras vocari, qua appellatione significetur praedulcis suavitas. mithridates in carmaniae litoribus insulam esse, quam vocari seritam, cedri genere silvosam, inde defluere in petras. xenocrates non sucinum tantum in italia, sed et thium vocari, a scythis vero sacrium, quoniam et ibi nascatur; alios putare in numidia ex limo gigni. super omnes est sophocles poeta tragicus, quod equidem miror, cum tanta gravitas ei cothurni sit, praeterea vitae fama alias principi loco genito athenis et rebus gestis et exercitu ducto. hic ultra indiam fieri dixit e lacrimis meleagridum avium meleagrum deflentium. quod credidisse eum aut sperasse aliis persuaderi posse quis non miretur quamve pueritiam tam inperitam posse reperiri, quae avium ploratus annuos credat lacrimasve tam grandes avesve, quae a graecia, ubi meleager periit, ploratum adierint indos quid ergo non multa aeque fabulosa produnt poetae sed hoc in ea re, quae cotidie invehatur atque abundet ac mendacium coarguat, serio quemquam dixisse summa hominum contemptio est et intoleranda mendaciorum inpunitas.

certum est gigni in insulis septentrionalis oceani et ab germanis appellari glaesum, itaque et ab nostris ob id unam insularum glaesariam appellatam, germanico caesare res ibi gerente classibus, austeraviam a barbaris dictam. nascitur autem defluente medulla pinei generis arboribus, ut cummis in cerasis, resina in pinis erumpit umoris abundantia. densatur rigore vel tempore ac mari, cum ipsum intumescens aestus rapuit ex insulis, certa in litora expellitur, ita volubile, ut pendere videatur atque non sidere in vado. arboris sucum esse etiam prisci nostri credidere, ob id sucinum appellantes. pinei

autem generis arboris esse indicio est pineus in adtritu odor et quod accensum taedae modo ac nidore flagrat. adfertur a germanis in pannoniam maxime provinciam, et inde veneti primum, quos enetos graeci vocaverunt, famam rei fecere proximique pannoniae et agentes circa mare hadriaticum. pado vero adnexa fabula est evidente causa, hodieque transpadanorum agrestibus feminis monilium vice sucina gestantibus, maxime decoris gratia, sed et medicinae; creditur quippe tonsillis resistere et faucium vitiis, varie genere aquarum iuxta alpis infestante guttura hominum. dc m p. fere a carnunto pannoniae abesse litus id germaniae, ex quo invehitur, percognitum nuper, vivitque eques r. ad id comparandum missus ab iuliano curante gladiatorium munus neronis principis. qui et commercia ea et litora peragravit, tanta copia invecta, ut retia coercendis feris podium protegentia sucinis nodarentur, harena vero et libitina totusque unius diei apparatus in variatione pompae singulorum dierum esset e sucino. maximum pondus is glaebae attulit xiii librarum. nasci et in india certum est. archelaus, qui regnavit in cappadocia, illinc pineo cortice inhaerente tradit advehi rude polirique adipe suis lactentis incoctum. liquidum id primo destillare argumento sunt quaedam intus tralucentia, ut formicae culicesque et lacertae, quae adhaesisse musteo non est dubium et inclusa durescente eodem remansisse.

genera eius plura sunt. ex iis candida odoris praestantissimi, sed nec his nec cerinis pretium. fulvis maior auctoritas. ex iis etiamnum amplius tralucentibus, praeterquam si nimio ardore flagrent; imaginem igneam in iis esse, non ignem, placet. summa laus falernis a vini colore dictis, molli fulgore perspicuis in quibus et decocti mellis lenitas placeat. verum hoc quoque notum fieri oportet, quocumque modo libeat, ea tingui, haedorum sebo et anchusae radice, quippe iam et conchylio inficiuntur. ceterum attritu digitorum accepta caloris anima trahunt in se paleas et folia arida et philyras, ut magnes lapis ferrum. ramenta quoque eius oleo addito flagrant dilucidius diutiusque quam lini medulla. taxatio in deliciis tanta, ut hominis quamvis parva effigies vivorum hominum vigentiumque pretia exsuperet, prorsus ut castigatio una non sit satis. in corinthiis aes placet argento auroque mixtum, in caelatis ars et ingenia; myrrhinorum et crystallinorum diximus gratiam; uniones capite circumferuntur, gemmae digitis; in omnibus denique aliis vitiis aut

ostentatio aut usus placet: in sucinis sola deliciarum conscientia. domitius nero in ceteris vitae suae portentis capillos quoque poppaeae coniugis suae in hoc nomen adoptaverat quodam etiam carmine sucinos appellando, quoniam nullis vitiis desunt pretiosa nomina; ex eo tertius quidam hic colos coepit expeti matronis.

usus tamen aliquis sucinorum invenitur in medicina, sed non ob hoc feminis placent. infantibus adalligari amuleti ratione prodest. callistratus prodesse etiam cuicumque aetati contra lymphationes tradit et urinae difficultatibus potum adalligatumque. hic et differentiam novam fecit appellando chryselectrum quod sit coloris aurei et matutino gratissimi aspectus, rapacissimum ignium, si iuxta fuerint, celerrime ardescens. hoc collo adalligatum mederi febribus et morbis, tritum vero cum melle ac rosaceo aurium vitiis et, si cum melle attico teratur, oculorum quoque obscuritati, stomachi etiam vitiis vel per se farina eius sumpta vel cum mastiche pota ex aqua. - sucina et gemmis, quae sunt tralucidae, adulterandis magnum habent locum, maxime amethystis, cum tamen omni, ut diximus, colore tinguantur.

de lyncurio proxime dici cogit auctorum pertinacia, quippe, etiamsi non electrum id, tamen gemmam esse contendunt, fieri autem ex urina quidem lyncis, sed et genere terrae, protinus eo animali urinam operiente, quoniam invideat homini, ibique lapidescere. esse autem, qualem in sucinis, colorem igneum, scalpique nec folia tantum aut stramenta ad se rapere, sed aeris etiam ac ferri lamnas, quod diocli cuidam theophrastus quoque credit. ego falsum id totum arbitror nec visam in aevo nostro gemmam ullam ea appellatione. falsum et quod de medicina simul proditur, calculos vesicae poto eo elidi et morbo regio succurri, si ex vino bibatur aut spectetur etiam.

nunc gemmarum confessa genera dicemus ab laudatissimis orsi, nec vero id solum agemus, sed etiam maiore utilitate vitae coarguemus magorum infandam vanitatem, quando vel plurima illi prodidere de gemmis ab medicinae blandissima specie ad prodigia transgressi.

maximum in rebus humanis, non solum inter gemmas, pretium habet adamas, diu non nisi regibus et iis admodum paucis cognitus. ita appellabatur auri nodus in metallis repertus perquam raro comes auri nec nisi in auro nasci videbatur. veteres eum in aethiopum

metallis tantum inveniri existimavere inter delubrum mercuri et insulam meroen, dixeruntque non ampliorem cucumis semine aut colore dissimilem inveniri. nunc primum genera eius sex noscuntur: indici non in auro nascentis et quadam crystalli cognatione, siquidem et colore tralucido non differt et laterum sexangulo levore, turbinati in mucronem e duabus contrariis partibus, quo magis miremur, ut si duo turbines latissimis partibus iungantur, magnitudine vero etiam abellani nuclei. similis est huic arabius, minor tantum, similiter et nascens. ceteris pallor argenti et in auro non nisi excellentissimo natalis. incudibus hi deprehenduntur ita respuentes ictus, ut ferrum utrimque dissultet, incudes ipsae etiam exiliant. quippe duritia est inenarrabilis, simulque ignium victrix natura et numquam incalescens, unde et nomen interpretatione graeca indomita vis accepit. unum ex iis vocant cenchron, milii magnitudine, alterum macedonium, in philippico auro repertum; hic est cucumis semini par. post hos cyprius vocatur in cypro repertus, vergens ad aereum colorem, sed medica vi, de qua dicemus, efficacissimus. post hunc siderites ferrei splendoris, pondere ante ceteros, sed natura dissimilis. namque et ictibus frangi et alio adamante perforari potest, quod et cyprio evenit, breviterque ut degeneres nominis tantum auctoritatem habent.

nunc quod totis voluminibus his docere conati sumus de discordia rerum concordiaque, quam antipathian graeci vocavere ac sympathian, non aliter clarius intellegi potest, siquidem illa invicta vis, duarum violentissimarum naturae rerum ferri igniumque contemptrix, hircino rumpitur sanguine, neque aliter quam recenti calidoque macerata et sic quoque multis ictibus, tunc etiam praeterquam eximias incudes malleosque ferreos frangens. cuius hoc invento quove casu repertum aut quae fuit coniectura experiendi rem inmensi pretii in foedissimo animalium numinum profecto talis inventio est et hoc munus omne, nec quaerenda ratio in ulla parte naturae, sed voluntas! cum feliciter contigit rumpere, in tam parvas friatur crustas, ut cerni vix possint. expetuntur hae scalptoribus ferroque includuntur, nullam non duritiam ex facili cavantes. adamas dissidet cum magnete in tantum, ut iuxta positus ferrum non patiatur abstrahi aut, si admotus magnes adprehenderit, rapiat atque auferat. adamas et venena vincit atque inrita facit et lymphationes abigit

metusque vanos expellit a mente. ob id quidam eum ananciten vocavere. - metrodorus scepsius in eadem germania basilia insula nasci, in qua et sucinum, solus, quod equidem legerim, dicit et praefert arabicis. quod esse falsum quis dubitet

proximum apud nos indicis arabicisque margaritis pretium est, de quibus in nono diximus volumine inter res marinas.

tertia auctoritas smaragdis perhibetur pluribus de causis, quippe nullius coloris aspectus iucundior est. nam herbas quoque silentes frondesque avide spectamus, smaragdos vero tanto libentius, quoniam nihil omnino viridius comparatum illis viret. praeterea soli gemmarum contuitu inplent oculos nec satiant. quin et ab intentione alia aspectu smaragdi recreatur acies, scalpentibusque gemmas non alia gratior oculorum refectio est: ita viridi lenitate lassitudinem mulcent. praeterea longinquo amplificantur visu inficientes circa se repercussum ae+ra, non sole mutati, non umbra, non lucernis, semperque sensim radiantes et visum admittentes ad crassitudinem sui facilitate tralucida, quod etiam in aquis nos iuvat. iidem plerumque concavi, ut visum conligant. quam ob rem decreto hominum iis parcitur scalpi vetitis. quamquam scythicorum aegyptiorumque duritia tanta est, ut non queant volnerari. quorum vero corpus extentum est, eadem qua specula ratione supini rerum imagines reddunt. nero princeps gladiatorum pugnas spectabat in smaragdo.

genera eorum duodecim: nobilissimi scythici, ab ea gente, in qua reperiuntur, appellati. nullis maior austeritas nec minus vitii; quantum smaragdi a gemmis distant, tantum scythicus a ceteris smaragdis. proximam laudem habent, sicut et sedem, bactriani. in commissuris saxorum colligere eos dicuntur etesiis flantibus; tunc enim tellure deoperta internitent, quia iis ventis harenae maxime moventur. sed hos minores multo scythicis esse tradunt. tertium locum aegyptii habent. eruuntur circa copton, oppidum thebaidis, collibus excavatis.

reliqua genera in metallis aerariis inveniuntur, quapropter principatum ex iis optinent cyprii. dos eorum est in colore liquido nec diluto, verum ex umido pingui quaque perspicitur imitante tralucidum maris, pariterque ut traluceat et niteat hoc est ut colorem expellat, aciem recipiat. ferunt in ea insula tumulo reguli hermiae

iuxta cetarias marmoreo leoni fuisse inditos oculos e smaragdis ita radiantibus etiam in gurgitem, ut territi thynni refugerent, diu mirantibus novitatem piscatoribus, donec mutavere oculis gemmas. - sed et vitia demonstrari convenit in tam prodigis pretiis. sunt quidem omnium eadem, quaedam tamen nationum peculiaria, sicut in homine. ergo cyprii, varie glauci magisque ac minus in eodem smaragdo aliis partibus, tenorem illum scythicae austeritatis non semper custodiunt. ad hoc quibusdam intercurrit umbra, surdusque fit colos, qui inprobatur etiam dilutior. hinc genera distinguntur, ut sint aliqui obscuri, quos vocant caecos, alii densi nec e liquido tralucidi, quidam varii, quidam nubecula obducti. aliud est haec quam umbra, de qua diximus. nubecula albicantis est vitium, cum viridis non pertransit aspectus, sed aut intus occurrit aut excipit in fine visum candor. haec coloris sunt vitia, item corporis capillamentum, sal, plumbago, quae communia fere sunt.

ab his aethiopici laudantur ab copto dierum itinere, ut auctor est iuba, xxv, acriter virides, sed non facile puri aut concolores. democritus in hoc genere ponit thermiaeos et persicos, illos intumescentes pinguiter, persicos vero non tralucidos, sed iucundi tenoris visum inplere, quem non admittant, felium pantherarumque oculis similes, namque et illos radiare nec perspici, eosdem in sole hebetari, in umbra refulgere et longius quam ceteros nitere. omnium horum etiamnum vitium, quod fellis colorem aut acris olei habent, dilucidi quidem ac liquidi, sed non virides. haec vitia in atticis maxime sentiuntur in argentariis metallis repertorum. in loco, qui thoricos vocatur, semper minus pingues, sed ex longinquo speciosiores. frequens est in his et plumbago, hoc est ut in sole plumbei videantur. illud peculiare, quod quidam ex his senescunt, paulatim viriditate evanida, et sole quoque laeduntur. post hos medici plurimum habent varietatis, interdum aliquid et e sappiro. hi sunt fluctuosi ac rerum imagines complexi, papaverum verbi gratia aut avium catulorumque vel pinnarum. quidam tamen virides nasci videntur, quoniam oleo meliores fiunt, neque est aliorum amplitudo maior. calchedonii - nescio an in totum - exoleverunt, postquam metalla aeris ibi defecerunt, et semper tamen vilissimi fuere minimique, iidem fragiles et coloris incerti et virentium in caudis pavonum columbarumque e collo plumis similiter ad inclinationem

magis aut minus lucidi, venosi iidem squamosique. erat et peculiare in iis vitium sarcion appellatum, hoc est quaedam gemmae caro. mons est iuxta calchedonem, in quo legebantur, smaragdites vocatus. iuba auctor est smaragdum, quam chloran vocent, in arabia aedificiorum ornamentis includi et lapidem, quem alabastriten aegyptii vocent, complures vero e proximis et in taygeto monte erui medicis similes et alios in sicilia.

inseritur smaragdis et quae vocatur tanos e persis veniens gemma, ingrate viridis atque intus sordida, itidem chalcosmaragdos e cypro, turbida aereis venis. theophrastus tradit in aegyptiorum commentariis reperiri regi eorum a rege babylonio muneri missum smaragdum quattuor cubitorum longitudine ac trium latitudine, et fuisse apud eos in iovis delubro obeliscum e quattuor smaragdis quadraginta cubitorum longitudine, latitudine vero in parte quattuor, in parte duorum, se autem scribente esse in tyro herculis templo stelen amplam e smaragdo, nisi potius pseudosmaragdus sit, nam et hoc genus reperiri, et in cypro inventum ex dimidia parte smaragdum, ex dimidia iaspidem, nondum umore in totum transfigurato. apion cognominatus plistonices paulo ante scriptum reliquit esse etiam nunc in labyrintho aegypti colosseum serapim e smaragdo novem cubitorum.

eandem multis naturam aut certe similem habere berulli videntur. india eos gignit, raro alibi repertos. poliuntur omnes sexangula figura artificum ingeniis, quoniam hebes unitate surda color repercussu angulorum excitetur. aliter politi non habent fulgorem. probatissimi ex iis sunt qui viriditatem maris puri imitantur, proximi qui vocantur chrysoberulli, paulo pallidiores, sed in aureum colorem exeunte fulgore. vicinum huic genus est, sed pallidius et a quibusdam proprii generis existimatum vocatumque chrysoprasum. quarto loco numerantur hyacinthizontes, quinto quos ae+roidis vocant, postea cerini ac deinde oleagini, hoc est colore olei, postremi crystallo similes. hi fere capillamenta habent sordesque, alioqui evanidi, quae sunt omnia vitia. indi mire gaudent longitudine eorum solosque gemmarum esse praedicant, qui carere auro malint; ob id perforatos elephantorum saetis subligant. convenit non oportere perforari quorum sit absoluta bonitas, umbilicis tantum ex auro capita conprehendentibus. ideo cylindros ex iis malunt facere quam

gemmas, quoniam est summa commendatio in longitudine. quidam et angulosos statim putant nasci et perforatos gratiores fieri medulla candoris exempta additoque auri repercussu aut omnino castrata perspicuitati crassitudine. vitia praeter iam dicta eadem fere, quae in smaragdis, et pterygia. in nostro orbe aliquando circa pontum inveniri putantur. indi et alias quidem gemmas crystallum tinguendo adulterare invenerunt, sed praecipue berullos.

minimum iidemque plurimum ab iis differunt opali, smaragdis tantum cedentes. india sola et horum mater est. qui ut pretiosissimarum gloria compositi gemmarum maxime inenarrabilem difficultatem adferunt. est in his carbunculi tenuior ignis, est amethysti fulgens purpura, est smaragdi virens mare, cuncta pariter incredibili mixtura lucentia. alii summam fulgoris armenio colori pigmentorum aequari credunt, alii sulpuris ardentis flammae aut ignis oleo accensi. magnitudo abellanam nucem aequat, insignis etiam apud nos historia, siquidem exstat hodieque huius generis gemma, propter quam ab antonio proscriptus est nonius senator, filius strumae noni eius, quem catullus poeta in sella curuli visum indigne tulit, avusque servili noniani, quem consulem vidimus. ille proscriptus fugiens hunc e fortunis omnibus anulum abstulit secum. certum est sestertio vicies tum aestimatum, sed mira antoni feritas atque luxuria propter gemmam proscribentis, nec minus noni contumacia proscriptionem suam amantis, cum etiam ferae abrosa parte corporis, propter quam periclitari se sciant, et relicta redimere se credantur.

vitia opalis sunt, si color in florem herbae, quae vocatur heliotropium, exeat aut in crystallum aut grandinem, si sal interveniat aut scabritia aut puncta oculis occursantia. nullos magis fraus indiscreta similitudine vitro adulterat. experimentum in sole tantum: falsis enim contra radios libratis digito ac pollice unus atque idem tralucet colos in se consumptus; veri fulgor subinde variatur et modo ex hoc plus, modo ex illo spargit, fulgorque lucis in digitos funditur. hanc gemmam propter eximiam gratiam plerique appellavere paederota. qui privatum genus eius faciunt, sangenon ab indis vocari tradunt. nasci dicitur in aegypto et in arabia, et vilissima in ponto, item in galatia ac thaso et cypro. qui praecellit ex his, opali quidem gratiam habet, sed mollius nitet, raro non scaber. summa illi coloris ex ae+re et purpura constat, viriditas smaragdi deest. melior ille,

cuius fulgor vini colore fuscatur, quam qui diluitur aquae.

hactenus de principatu convenit mulierum maxime senatusconsulto. minus certa sunt de quibus et viri iudicant; singulorum enim libido pretia singulis facit praecipueque aemulatio, velut cum claudius caesar smaragdos induebat vel sardonyches. primus autem romanorum sardonyche usus est africanus prior, ut tradit demostratus, et inde romanis gemmae huius auctoritas. quam ob rem et proximum ei dabimus locum.

sardonyches olim, sicut ex ipso nomine apparet, intellegebantur candore in sarda, hoc est veluti carne ungui hominis inposita, et utroque tralucido. talesque esse indicas tradunt ismenias, demostratus, zenothemis, sotacus, hi quidem duo reliquas omnes, quae non traluceant, caecas appellantes. quae nunc abstulere nomen, nullo sardarum vestigio indicarum, arabicae sunt, coeperuntque pluribus hae gemmae coloribus intellegi, radice nigra aut caeruleum imitante et ungue minium, redimitum candido pingui, nec sine quadam spe purpurae candore in minium transeunte. has indis non habitas in honore zenothemis scribit, tantae alias magnitudinis, ut inde capulos factitarent - etenim constat ibi torrentibus detegi - , placuisse in nostro orbe initio, quoniam solae prope gemmarum scalptae ceram non auferrent. persuasimus deinde indis, ut ipsi quoque iis gauderent. utitur perforatis vulgus in collo; et hoc nunc est indicarum argumentum. arabicae excellunt candore, circulo praelucido atque non gracili neque in recessu gemmae aut in deiectu renidente, sed in ipsis umbonibus nitente, praeterea substrato nigerrimi coloris. hoc in indicis caeruleum aut corneum invenitur. item circuli albi quaedam in iis caelestis arcus anhelatio est, superficies vero locustarum maris, crustis rubentibus. nam melleae aut faeculentae - hoc enim nomen est vitio - inprobantur, aut si zona alba fundat se, non colligat, simili modo si ex alio colore admittat in se aliquid enormiter. nihil in sua sede interpellari alieno placet. sunt et armeniae, cetera probandae, sed pallida zona.

exponenda est et onychis ipsius natura propter nominis societatem. hoc aliubi lapidis, hic gemmae vocabulum est. sudines dicit in gemma esse candorem unguis humani similitudine, item chrysolithi colorem et sardae et iaspidis, zenothemis indicam onychem plures habere varietates, igneam, nigram, corneam,

cingentibus candidis venis oculi modo, intervenientibus quarundam et obliquis venis. sotacus et arabicam tradit onychem distare, quod indica igniculos habeat albis cingentibus zonis singulis pluribusve aliter quam in sardonyche indica; illic enim momentum esse, hic circulum; arabicas onychas nigras inveniri candidis zonis; satyrus carnosas esse indicas, parte carbunculi, parte chrysolithi et amethysti, totumque id genus abdicat; veram autem onychem plurimas variasque cum lacteis habere venas, omnium in transitu colore inenarrabili et in unum redeunte concentum suavitate grata.

nec sarda differenda est, huic gemmae dividua ex eodem et ipsa nomine, obiterque omnium ardentium gemmarum indicanda natura.

principatum habent carbunculi a similitudine ignium appellati, cum ipsi non sentiant ignes, a quibusdam ob hoc acaustoe appellati. horum genera indici et garamantici, quos et carchedonios vocavere propter opulentiam carthaginis magnae. adiciunt aethiopicos et alabandicos in orthosia cariae nascentes, sed qui perficiantur alabandis. praeterea in omni genere masculi appellantur acriores et feminae languidius refulgentes. in masculis quoque observant liquidiores aut flammae nigrioris et quosdam ex alto lucidos ac magis ceteris in sole flagrantes, optimos vero amethystizontas, hoc est quorum extremus igniculus in amethysti violam exeat, proximos illis, quos vocant syrtitas, pinnato fulgore radiantes. inveniri autem ubi maxime sit solis repercussus. satyrus indicos non esse claros dicit ac plerumque sordidos ac semper fulgoris retorridi, aethiopicos pingues lucemque non fundentes convoluto igne flagrare. callistratus fulgorem carbunculi debere candidum esse, ut positus extremo visu nubilante sit, si attollatur, exardescente fulgore - ob id plerique hunc carbunculum candidum vocavere, eum, qui languidius lucet, lignyzontem - ; carchedonios multo minores esse, indicos etiam sextarii unius mensura cavari. archelaus carchedonios nigrioris aspectus esse, sed igni vel sole et inclinatione acrius quam ceteros excitari; eosdem obumbrante tecto purpureos videri, sub caelo flammeos, contra radios solis scintillare, ceras signantibus his liquescere, quamvis in opaco. multi indicos carchedoniis candidiores esse et e diverso inclinatione hebetari scripsere, etiamnum in carchedoniis maribus stellam intus ardere, feminas fulgorem universum fundere extra se, alabandicos nigriores ceteris esse

scabrosque. et circa miletum nascuntur in terra coloris eiusdem, ignem minime sentientes. theophrastus auctor est et in orchomeno arcadiae inveniri et in chio, illos nigriores, e quibus et specula fieri; esse et troezenios varios intervenientibus maculis albis, item corinthios, sed pallidiores e candido; a massilia quoque inportari. bocchus et in olisiponensi erui scripsit, magno labore ob argillam soli adusti. - nec est aliud difficilius quam discernere haec genera; tanta est in iis occasio artis, subditis per quae tralucere cogantur. aiunt hebetiores, in aceto maceratos xiiii diebus, nitescere totidem mensibus durante fulgore. adulterantur vitro simillime, sed cote deprehenduntur, sicut aliae gemmae; fictis enim mollior materia fragilisque est. centrosas cote deprehendunt et pondere, quod minus est in vitreis, aliquando et pusulis argenti modo relucentibus.

est et anthracitis appellata, in thesprotia fossilis, carbonibus similis. falsum arbitror quod et in liguria nasci prodiderunt, nisi forte tunc nascebantur. esse in iis et praecinctas candida vena tradunt. harum igneus color ut superiorum, sed peculiare quod tactu velut intermortuae extinguntur, contra aquis perfusae exardescunt.

cognata est et sandastros, proxima natura eius, quam aliqui garamanticam vocant. nascitur in indis loco eiusdem nominis. gignitur et in arabia ad meridiem versa. commendatio summa quod veluti in tralucido ignis optentus stellantibus fulget intus aureis guttis, semper in corpore, numquam in cute. accedit et religio narrata siderum cognatione, quoniam fere pliadum hyadumque dispositione ac numero stellantur, ob id chaldaeis in caerimoniis habitae. et hic mares austeritas distinguat et quidam vigor adposita tinguens; indicae quidem etiam hebetare visus dicuntur. blandior feminis flamma, allucens magis quam accendens. sunt qui praeferant arabicas indicis fumidaeque chrysolitho similes illas dicant. ismenias negat poliri sandastros propter teneritatem, et ob id magno venire. sunt qui has sandrisitas vocent. inter omnes constat, quantum numero stellarum accedat, tantum et pretio accedere. - adfert aliquando errorem similitudo nominis sandaresi. nicander sandaserion vocat, alii sandareson, quidam vero hanc sandastrum, illam sandaresum, in india nascentem illam quoque et loci nomen custodientem, mali colore aut olei viridis, omnibus inprobatam.

ex eodem genere ardentium est lychnis appellata a lucernarum

adsensu, tum praecipuae gratiae. nascitur circa orthosiam totaque caria ac vicinis locis, sed probatissima in indis. quidam remissiorem carbunculum esse dixerunt, secundam bonitate quae similis esset iovis appellatis floribus. et alias invenio differentias: unam quae purpuram radiet, alteram quae coccum; has sole excalfactas aut attritu digitorum paleas et chartarum fila ad se rapere. - hoc idem et carchedonia facere dicitur, quamquam multo vilior praedictis. nascitur apud nasamonas in montibus, ut incolae putant, imbre divino. inveniuntur ad repercussum lunae maxime plenae, carthaginem quondam deportabantur. archelaus et in aegypto circa thebas nasci tradit fragiles, venosas, morienti carboni similes. potoria ex hac et ex lychnide factitata invenio, omnia autem haec genera contumaciter scalpturae resistunt partemque in signo cerae tenent.

e diverso ad haec sarda utilissima, quae nomen cum sardonyche communicavit. ipsa volgaris et primum sardibus reperta est; laudatissimae circa babylona. cum lapicidinae quaedam aperiantur, haerentes in saxo cordis modo reperiuntur. hoc metallum apud persas defecisse tradunt, sed inveniuntur compluribus aliis locis, ut in paro et asso; in india trium generum: rubrae et quas pionias vocant ab pinguitudine; tertium genus est quod argenteis bratteis sublinunt. indicae perlucent, crassiores sunt arabicae. inveniuntur et circa leucada epiri et in aegypto quae brattea aurea sublinuntur. et in his autem mares excitatius fulgent, feminae pigriores et crassius nitent. nec fuit alia gemma apud antiquos usu frequentior - hac certe apud menandrum et philemonem fabulae superbiunt - , nec ullae tralucentium tardius subfusae umore hebetantur, oleoque magis quam alio liquore. damnantur ex iis melleae ac validius testaceae.

egregia etiam nunc sua topazo gloria est, e virenti genere et, cum primum reperta est, praelatae omnibus. accidit in arabiae insula, quae cytis vocabatur, in quam devenerant trogodytae praedones fame et tempestate fessi, ut, cum herbas radicesque foderent, eruerent topazon. haec archelai sententia est. iuba topazum insulam in rubro mari a continenti stadiis ccc abesse dicit; nebulosam et ideo quaesitam saepius navigantibus nomen ex ea causa accepisse, topazin enim trogodytarum lingua significationem habere quaerendi. ex hac primum inportatam berenicae reginae, quae fuit mater sequentis ptolemaei, ab philone praefecto; regi mire placuisse et inde factam

statuam arsinoae ptolemaei uxori quattuor cubitorum, sacratam in delubro, quod arsinoeum cognominabatur. recentissimi auctores et circa thebaidis alabastrum oppidum nasci dicunt et duo genera eius faciunt, prasoides atque chrysopteron, simile chrysopraso. tota enim similitudo ad porri sucum derigitur. est autem amplissima gemmarum. eadem sola nobilium limam sentit, ceterae naxio et cotibus poliuntur. haec et usu atteritur.

comitatur eam similitudine propior quam auctoritate callaina, e viridi pallens. nascitur post aversa indiae apud incolas caucasi montis, hyrcanos, sacas, dahas, amplitudine conspicua, sed fistulosa ac sordium plena, sincerior praestantiorque multo in carmania, utrobique autem in rupibus inviis et gelidis, oculi figura extuberans leviterque adhaerescens nec ut adnata petris, sed ut adposita. quam ob rem scandere ad eas pigritia pedum equestres populos taedet, simul et periculum terret; ergo fundis e longinquo incessunt et cum toto musco excutiunt. hoc vectigal, hoc gestamen in cervice, digitis gratissimum norunt, hinc census, haec gloria a pueritia deiectum numerum praedicantium; in quo varia fortuna quidam ictu primo cepere praeclaras, multi ad senectam nullas. et venatus quidem callainis talis est. sectura inde formantur, alias faciles. optimis color smaragdi, ut tamen appareat alienum esse quod placeat. inclusae decorantur auro, aurumque nullae magis decent. quae sunt earum pulchriores, oleo, unguento, etiam mero colorem deperdunt, viliores constantius repraesentant, neque est imitabilior alia mendacio vitri. sunt qui in arabia inveniri eas dicant in nidis avium, quas melancoryphos vocant.

viridantium et alia plura sunt genera. vilioris turbae prasius, cuius alterum genus sanguineis punctis abhorret, tertium virgulis tribus distinctum candidis. praefertur his chrysoprasos porri sucum et ipsa referens, sed haec paulum declinantem a topazo in aurum. huic et amplitudo ea est, ut cymbia etiam ex ea fiant, cylindri quidem et creberrime. - india et has generat et nilion, fulgore ab ea distantem brevi et, cum intueare, fallaci. sudines dicit et in sibero atticae flumine nasci. est autem color fumidae topazi aut aliquando melleae. iuba in aethiopia gigni tradit in litoribus amnis, quem nilum vocamus, et inde nomen trahere. - non tralucet molochitis; spissius viret ab colore malvae nomine accepto, reddendis laudata signis et

infantum custodia quodamque innato contra pericula medicamine. - viret et saepe tralucet iaspis, etiam victa multis antiquitatis gloriam retinens. plurimae ferunt eam gentes, smaragdo similem indi, cypros duram glaucoque pingui, persae ae+ri similem, quae ob id vocatur ae +rizusa; talis et caspia est. caerulea est circa thermodontem amnem, in phrygia purpurea et in cappadocia ex purpura caerulea, tristis atque non refulgens. amisos indicae similem mittit, calchedon turbidam. sed minus refert nationes quam bonitates distinguere. optima quae purpurae aliquid habet, secunda quae rosae, tertia quae smaragdi. singulis graeci nomina ex argumento dedere. quarta apud eos vocatur boria, caelo autumnali matutino similis; haec erit illa, quae ae+rizusa dicitur. similis est et sardae, imitata et violas. non minus multae species reliquae sunt, sed omnes in vitium caeruleae, ut crystallo similis aut myxis, item terebinthizusa. quam ob rem praestantiores funda cluduntur, ut sint patentes ab utraque parte nec praeter margines quicquam auro amplectente. vitium in iis est et brevis nitor nec longe splendescens et sal et quae ceteris omnia. et vitro adulterantur, quod manifestum fit, cum extra fulgorem spargunt atque non in se continent. reliquas sphragidas vocant, publico gemmarum nomine his tantum dato quoniam optime signent. totus vero oriens pro amuleto gestare eas traditur. ea, quae ex iis smaragdo similis est, saepe transversa linea alba media praecingitur et monogrammos vocatur; quae pluribus, polygrammos. libet obiter vanitatem magicam hic quoque coarguere, quoniam hanc utilem esse contionantibus prodiderunt. - est et onychi iuncta quae iasponyx vocatur, et nubem complexa et nives imitata et stellata rutilis punctis. est et sali megarico similis et velut fumo infecta, quae capnias vocatur. magnitudine xvi unciarum vidimus formatam inde effigiem neronis thoracatam.

reddetur et per se cyanos, accommodato paulo ante et iaspidi nomine a colore caeruleo. optima scythica, dein cypria, postremo aegyptia. adulteratur maxime tinctura, idque in gloria est regum aegypti; adscribitur et qui primus tinxit. dividitur autem et haec in mares feminasque. inest ei aliquando et aureus pulvis, non qualis sappiris; in his enim aurum punctis conlucet. - caeruleae et sappiri, rarumque ut cum purpura. optimae apud medos, nusquam tamen perlucidae. praeterea inutiles scalpturis intervenientibus crystallinis

centris. quae sunt ex iis cyanei coloris, mares existimantur.

alius ex hoc ordo purpureis dabitur aut quae ab iis descendunt. principatum amethysti tenent indicae, sed in arabiae quoque parte, quae finitima syriae petra vocatur, et in armenia minore et aegypto et galatia reperiuntur, sordidissimae autem vilissimaeque in thaso et cypro. causam nominis adferunt quod usque ad vini colorem accedens, priusquam eum degustet, in violam desinat fulgor, alii quia sit quiddam in purpura illa non ex toto igneum, sed in vini colorem deficiens. perlucent autem omnes violaceo decore, scalpturis faciles. indica absolutum phoenices purpurae colorem habet. ad hanc tinguentium officinae dirigunt vota. fundit autem aspectu leniter blandum neque in oculos, ut carbunculi, vibrantem. alterum earum genus descendit ad hyacinthos; hunc colorem indi socon vocant, talemque gemmam socondion. dilutior ex eodem sapenos vocatur, eademque pharanitis in contermino arabiae, gentis nomine. quartum genus colorem vini habet. quintum ad vicina crystalli descendit albicante purpurae defectu. hoc minime probatur, quando praecellens debeat esse in suspectu velut ex carbunculo refulgens quidam leniter in purpura roseus nitor. tales aliqui malunt paederotas vocare, alii anterotas, multi veneris genam. magorum vanitas ebrietati eas resistere promittit et inde appellatas, praeterea, si lunae nomen ac solis inscribatur in iis atque ita suspendantur e collo cum pilis cynocephali et plumis hirundinis, resistere veneficiis, iam vero quoquo modo adesse reges adituris, grandinem quoque avertere ac locustas precatione addita, quam demonstrant. nec non in smaragdis quoque similia promisere, si aquilae scalperentur aut scarabaei, quae quidem scripsisse eos non sine contemptu et inrisu generis humani arbitror.

multum ab hac distat hyacinthos, ab vicino tamen colore descendens. differentia haec est, quod ille emicans in amethysto fulgor violaceus diluitur hyacintho primoque aspectu gratus evanescit, antequam satiet, adeoque non inplet oculos, ut paene non attingat, marcescens celerius nominis sui flore. - hyacinthos aethiopia mittit et chrysolithos aureo fulgore tralucentes. praeferuntur his indicae et, si variae non sint, tibarenae. deterrimae autem arabicae, quoniam turbidae sunt et variae, fulgoris interpellati nubilo macularum, etiam quae limpidae contigere, veluti scobe refertae.

optimae sunt quae in collatione aurum albicare quadam argenti facie cogunt. hae funda includuntur perspicuae, ceteris subicitur aurichalcum, tametsi exiere iam de gemmarum usu. - appellantur aliquae et chryselectroe, in colorem electri declinantes, matutino tamen tantum aspectu. ponticas deprehendit levitas. quaedam durae sunt ac rufae, quaedam molles, sordidae. bocchus auctor est et in hispania repertas et quo in loco crystallum dixit ad libramentum aquae puteis defossis erui, chrysolithon xii pondo a se visam. - fiunt et leucochrysi interveniente candida vena. sunt et in hoc genere capniae. sunt et vitreis similes, velut croco fulgentes; vitro adulterantur, ut visu discerni non possint; tactus deprendit, tepidior in vitreis. in eodem genere sunt melichrysi veluti per aurum sincero melle tralucente. has india fert, quamquam in duritia fragiles, non ingratas. eadem et xuthon parit, plebeiam sibi gemmam.

candidarum dux est paederos, quamquam quaeri potest, in quo colore numerari debeat totiens iactati per alienas pulchritudines nominis, adeo ut decoris praerogativa in vocabulo facta sit. sed tamen et suum genus expectatione tanta dignum. coeunt quippe in tralucidam crystallum viridis suo modo ae+r simulque purpurae et quidam vini aurei nitor semper extremus in visu, sed purpura coronatus. madere videtur et singulis his et pariter omnibus, nec gemmarum esse ulla liquidior potest iucunda suavitate oculis. haec laudatissima est in indis, apud quos sangenon vocatur, proxima in aegypto, ubi syenites, tertia in arabia, verum scabra, tum pontica, quae mollius radiat, thasia, et ipsa mollior, et galatica et thracia et cypria. vitia earum languor aut alienis turbari coloribus et quae ceterarum.

proxima candicantium est asteria. principatum habet proprietate naturae, quod inclusam lucem pupilla quadam continet. hanc transfundit cum inclinatione velut intus ambulantem alio atque alio loco reddens. eadem contraria soli regerit candicantes radios in modum stellae, unde nomen invenit. difficiles in india natae ad caelandum. praeferuntur carmanicae.

similiter candida est quae vocatur astrion, crystallo propinqua, in india nascens et in patalenes litoribus. huic intus a centro stella lucet fulgore pleno lunae. quidam causam nominis reddunt quod astris opposita fulgorem rapiat et regerat. optimam in carmania gigni

dicunt nullamque minus obnoxiam vitio; cerauniam etiam vocari quae sit deterior; pessimam vero lanternarum lumini similem. celebrant et astrioten, mirasque laudes eius in magicis artibus zoroastren cecinisse produnt. - astolon sudines dicit oculis piscium similem esse, radiare fulgore candido ut solem.

est inter candidas et quae ceraunia vocatur, fulgorem siderum rapiens, ipsa crystallina, splendoris caerulei, in carmania nascens. zenothemis fatetur albam esse, sed habere intus stellam coruscantem; fieri et hebetes ceraunias, quas in nitro et aceto maceratas per aliquot dies concipere stellam eam, quae post totidem menses relanguescat. sotacus et alia duo genera fecit cerauniae, nigrae rubentisque similes eas esse securibus. ex his quae nigrae sint ac rotundae, sacras esse; urbes per illas expugnari et classes; baetulos vocari; quae vero longae sint, ceraunias. faciunt et aliam raram admodum, magorum studiis expetitam, quoniam non aliubi inveniatur quam in loco fulmine icto.

proximum cerauniae nomen apud eos habet quae vocatur iris. effoditur in quadam insula rubri maris, quae distat a berenice urbe [lx] p., cetera sui parte crystallus. itaque quidam eam radicem crystalli esse dixerunt. ex argumento vocatur iris, nam sub tecto percussa sole species et colores arcus caelestis in proximos parietes eiaculatur, subinde mutans magnaque varietate admirationem sui augens. sexangulam esse ut crystallum constat, sed aliqui scabris lateribus et angulis inaequalibus dicunt, in sole aperto radios in se candentes discutere, aliquo vero ante se proiecto nitore adiacentia inlustrare. colores autem non nisi ex opaco, ut diximus, reddunt, nec ut ipsae habeant, sed ut repercussu parietum elidant; optima quae maximos arcus facit simillimosque caelestibus. est et alia iritis, cetera similis, sed praedura. hanc orus crematam tusamque ad ichneumonum morsus remedio esse scripsit, nasci autem in perside. - similis aspectu est, sed non eiusdem effectus, quae vocatur leros, alba nigraque macula in traversum distinguentibus crystallum.

expositis per genera colorum principalibus gemmis reliquas per litterarum ordinem explicabimus.

achates in magna fuit auctoritate, nunc in nulla est, reperta primum in sicilia iuxta flumen eiusdem nominis, postea plurimis in terris, excellens amplitudine, numerosa varietatibus, quae mutant cognomina eius. vocatur enim iaspachates, cerachates,

smaragdachates, haemachates, leucachates, dendrachates, quae velut arbusculis insignis est, antachates, quae, cum uritur, murram redolet, corallachates guttis aureis sappiri modo sparsa, qualis copiosissima in creta. quae et sacra appellatur. quidam putant contra araneorum et scorpionum ictus eam prodesse. quod in siculis utique crediderim, quoniam primo eius provinciae adflatu scorpionum pestis extinguitur. et in india inventae contra eadem pollent, magnis et aliis miraculis: reddunt enim fluminum species, nemorum, iumentorum etiam. essedariis staticula, equorum ornamenta inde medicisque coticulas faciunt, nam spectasse etiam prodest oculis. sitim quoque sedant in os additae. phrygiae viridia non habent. thebis aegyptiis repertae carent rubentibus venis et albis, hae quoque contra scorpiones validae. eadem auctoritas et cypriis. sunt qui maxime probent vitream perspicuitatem in his. reperiuntur et in trachinia circa oetam et in parnaso et in lesbo et in messene similes limitum floribus et in rhodo. aliae apud magos differentiae sunt in iis: quae leoninis pellibus similes reperiuntur, potentiam habere contra scorpiones dicunt. in persis vero suffitu earum tempestates averti et presteras, flumina sisti - argumentum esse, si in ferventes cortinas additae refrigerent - , sed, ut prosint, leoninis iubis adalligandas, nam hyaenae addita abominantur discordiam domibus. eam vero, quae unius coloris sit, invictam athletis esse, argumento, quod in ollam plenam olei coiecta cum pigmentis, intra duas horas suffervefacta, unum colorem ex omnibus faciat minii.

acopos nitro colore similis est, pumicosa, guttis aureis stellata. cum hac oleum suffervefactum perunctis lassitudinem, si credimus, solvit. - alabastritis nascitur in alabastro aegypti et in syriae damasco candore interstincto variis coloribus. haec cremata cum fossili sale et trita gravitates oris et dentium extenuare dicitur. - alectorias vocant in ventriculis gallinaceorum inventas crystallina specie, magnitudine fabae, quibus milonem crotoniensem usum in certaminibus invictum fuisse videri volunt. - androdamas argenti nitorem habet ut adamas, quadratis semper tessellis similis. magi putant nomen inpositum ab eo, quod impetus hominum et iracundias domet. argyrodamas eadem sit an alia, auctores non explicant. - antipathes nigra non tralucet. experimentum eius ut coquatur in lacte; facit enim id murrae simile. inmensum quiddam in hac fortassis aliquis expectet, in tot exemplis

uni possessione huius nominis data. contra effascinationes auxiliari eam magi volunt. - arabica ebori simillima est, et hoc videretur, nisi abnueret duritia. hanc putant contra dolores nervorum prodesse habentibus. - aromatitis et ipsa in arabia invenitur, sed et in aegypto circa philas, ubique lapidosa et murrae coloris et odoris, ob hoc reginis frequentata. - asbestos in arcadiae montibus nascitur coloris ferrei. - aspisatim democritus in arabia nasci tradit, ignei coloris, et oportere cum cameli fimo splenicis adalligari, inveniri utique in nido arabicarum alitum; et aliam eodem nomine ibi in leucopetra nasci, argentei coloris, radiantem; cum ... contra lymphatum habentibus. - atizoen in india et persidis acidane monte nasci, argenteo nitore fulgentem, magnitudine trium digitorum, ad lenticulae figuram, odoris iucundi, necessariam magis regem constituentibus. - augitis non alia videtur multis esse quam callaina.

lapis amphidanes alio nomine chrysocolla appellatur, nascens in indiae parte, ubi formicae eruunt aurum, in quo et invenitur auro similis, quadrata figura. adfirmatur natura eius quae magnetis esse, nisi quod augere quoque aurum traditur. - aphrodisiaca ex candido rufa est. - apsyctos septenis diebus calorem tenet excalefacta igni, nigra ac ponderosa, distinguentibus eam venis rubentibus. putant prodesse contra frigora. - aegyptillam iacchus intellegit per album sardae nigraque venis transeuntibus, volgus autem nigra radice, caerulea facie. nomen a loco.

balanitae duo genera sunt, subviridis et corinthii aeris similitudine, illa a copto, haec ab trogodytica veniens, medias secante flammea vena. - batrachitas quoque coptos mittit, unam ranae similem colore, alteram et venis, tertiam rubetis e nigro. - baptes, mollis alioqui, odore excellit. - beli oculus albicans pupillam cingit nigram e medio aureo colore fulgentem et propter speciem sacratissimo assyriorum deo dicatam. belum autem aliam, quam sic vocant, in arbelis nasci democritus tradit nucis iuglandis magnitudine, vitrea specie. - baroptenus sive baripe, nigra sanguineis et albis nodis, adalligata proicitur veluti portentosa. - botryitis alia nigra est, alia pampinea, incipienti uvae similis. - bostrychitin zoroastres crinibus mulierum similiorem vocat. - bucardia, bubulo cordi similis, babylone tantum nascitur. - brontea, capiti testudinum, e tonitribus cadit, ut putant, restinguitque fulmine icta, si credimus. -

boloe in hibero inveniuntur, glaebae similitudine.

cadmitis eadem est quae ostracitis vocatur, nisi quod hanc caeruleae interdum cingunt bullae. - callais sappirum imitatur candidior et litoroso mari similis. - capnitis quibusdam videtur suum genus habere, pluribus iaspidis fumidae, ut suo loco diximus. - cappadocia et in phrygia nascitur, ebori similis. - callaicam vocant e turbido callaino. ferunt plures coniunctas semper inveniri. - catochitis corsicae lapis est, ceteris maior et magis mirabilis, si vera traduntur, inpositam manum veluti cummi retinens. - catoptritis in cappadocia provenit candore imaginem regerens. - cepitis sive cepolatitis candida est, venarum coeuntibus lineis in unum. - ceramitis testae colorem habet. - cinaediae inveniuntur in cerebro piscis eiusdem nominis, candidae et oblongae eventuque mirae, si modo est fides praesagire eas habitum maris nubili vel tranquilli. - ceritis cerae similis est, circos accipitri, corsoides canitiae capitis, corallachates curalio, aureis guttis distincta, corallis minio; gignitur in india et syene. - crateritis inter chrysolithum et electrum colorem habet, praedura natura. - crocallis ceras repraesentat. - cyitis circa copton nascitur candida et videtur intus habere partum, qui sentiatur etiam crepitu. - chalcophonos nigra est, sed inlisa aeris tinnitum reddit, tragoedis, ut suadent, gestanda. - chelidoniae duorum sunt generum, hirundinum colore, ex altera parte purpureae, in alia purpuram nigris interpellantibus maculis. - chelonia oculus est indicae testudinis, vel portentosissima magorum mendaciis. melle enim colluto ore inpositam linguae futurorum divinationem praestare promittunt xv luna et silente toto die, decrescente vero ante ortum solis, ceteris diebus a prima in sextam horam. - sunt et chelonitides aliarum testudinum superficiei similes, ex quibus ad tempestates sedandas multa vaticinantur, eam vero, quae ex iis aureis guttis aspersa sit, cum scarabaeo deiectam in aquam ferventem tempestates commovere. - chloritis herbacei coloris est; eam in ventre motacillae avis inveniri dicunt magi congenitam ei et ferro includi iubent ad quaedam prodigiosa moris sui. - choaspitis a flumine dicta est, ex viridi fulgoris aurei. - chrysolampsis in aethiopia nascitur, pallida alias, sed noctu ignea. - chrysopis aurum videtur esse. - cetionides in aeolide nunc atarneo pago, quondam oppido, nascuntur, multis coloribus tralucentes, alias vitreae, alias crystallinae, alias iaspidis,

sed et sordidis tantus est nitor, ut imagines reddant ceu specula.

daphnean zoroastres morbis comitialibus demonstrat. - diadochos berullo similis est. - diphyes duplex, candida ac nigra, mas ac femina, genitale utriusque sexus distinguente linea. - dionysias, nigra ac dura, mixtis rubentibus maculis, ex aqua trita saporem vini facit et ebrietati resistere putatur. - draconitis sive dracontias e cerebro fit draconum, sed nisi viventibus absciso capite non gemmescit invidia animalis mori se sentientis. igitur dormientibus amputant. sotacus, qui visam eam gemmam sibi apud regem scripsit, bigis vehi quaerentes tradit et viso dracone spargere somni medicamenta atque ita sopiti praecidere. esse candore tralucido, nec postea poliri aut artem admittere.

encardia cognominatur enariste, in nigro colore effigie cordis eminente; altera eodem nomine viridi colore cordis speciem, tertia nigrum cor ostendit, reliqua sui parte candida. - enorchis candida est divisisque fragmentis testium effigiem repraesentat. - exhebenum zoroastres speciosam et candidam tradit, qua aurifices aurum poliant. - erythallis, cum sit candida, ad inclinationes rubescere videtur. - erotylos sive amphicomos sive hieromnemon democrito laudatur in argumentis divinationum. - eumeces in bactris nascitur, silici similis, et capiti supposita visa nocturna oraculi modo reddit. - eumitren beli gemmam, sanctissimi deorum sui, assyrii observant, porracei coloris, superstitionibus gratam. - eupetalos quattuor colores habet, caeruleum, igneum, minii, mali. - eureos nucleo olivae similis est, striata concharum modo, non adeo candida. - eurotias situ videtur operire nigritiam. - eusebes ex eo lapide est, quo traditur in tyro herculis templo facta sedes, ex qua pii facile surgebant. — epimelas fit, cum candida gemma superne nigricat.

galaxian aliqui galactiten vocant, similem proxime dictis, sed intercurrentibus sanguineis aut candidis venis. - galactitis ex uno colore lactis est. eandem leucogaeam et leucographitim appellant et synechitim, in attritu lactis suco ac sapore notabilem, in educatione nutricibus lactis fecundam. infantium quoque collo adalligata salivam facere traditur, in ore autem liquescere, eadem memoriam adimere. mittunt eam nilus et achelous amnes. sunt qui smaragdum albis venis circumligatum galactiten vocent. - gallaica argyrodamanti similis est, paulo sordidior; inveniuntur iunctae binae ternaeque. -

gassinnaden medi mittunt, coloris orobini, veluti floribus sparsam; nascitur et in arbelis. haec quoque gemma concipere dicitur et intra se partum fateri concussa, concipere autem trimenstri spatio. - glossopetra, linguae similis humanae, in terra non nasci dicitur, sed deficiente luna caelo decidere, selenomantiae necessaria. quod ne credamus, promissi quoque vanitas facit; ventos enim ea comprimi narrant. - gorgonia nihil aliud est quam curalium. nominis causa, quod in duritiam lapidis mutatur emollitum in mari. hanc fulminibus et typhoni resistere adfirmant. - goniaeam eadem vanitate inimicorum poenas efficere promittunt.

heliotropium nascitur in aethiopia, africa, cypro, porraceo colore, sanguineis venis distincta. causa nominis, quoniam deiecta in vas aquae, fulgore solis accidente, repercussu sanguineo mutat eum, maxime aethiopica. eadem extra aquam speculi modo solem accipit deprenditque defectus, subeuntem lunam ostendens. magorum inpudentiae vel manifestissimum in hac quoque exemplum est, quoniam admixta herba heliotropio, quibusdam additis precationibus, gerentem conspici negent. - hephaestitis quoque speculi naturam habet in reddendis imaginibus, quamquam rutila. experimentum est, si statim addita fervens aqua refrigerata sit aut si in sole adposita aridam materiam statim accendat. nascitur in coryco. - hermu aedoeon ex argumento virilitatis in candida gemma vel nigra, aliquando et pallida, ambiente circulo coloris aurei appellatur. - hexecontalithos, in parva magnitudine multicolor hoc sibi nomen adoptavit, reperitur in trogodytice. - hieracitis alternat tota miluinis nigrisque veluti plumis. - hammitis ovis piscium similis est, et alia velut e nitro composita, praedura alioqui. - hammonis cornu inter sacratissimas aethiopiae, aureo colore arietini cornus effigiem reddens, promittitur praedivina somnia repraesentare. - hormiscion inter gratissimas aspicitur ex igneo colore radians auro portante secum in extremitatibus candidam lucem. - hyaeniae, ex oculis hyaenae lapides, ... inveniri dicuntur et, si credimus, linguae hominis subditi futura praecinere. - haematitis in aethiopia quidem principalis est, sed et in arabia et in africa invenitur, sanguineo colore, non omittendis promissis ad coarguendas magorum insidias. zachalias babylonius in iis libris, quos scripsit ad regem mithridatem, gemmis humana fata adtribuens hanc, non contentus oculorum et iocineris

medicina decorasse, a rege etiam aliquid petituris dedit, eandem litibus iudiciisque interposuit, in proeliis etiam exangui salutarem pronuntiavit. est et alia eiusdem generis, quae vocatur menui, ab aliis xuthos. ita appellant graeci e fulvo candicantes.

idaei dactyli in creta ferreo colore pollicem humanum exprimunt. - icterias cuti mali luridae similis et ideo salubris existimata contra regios morbos. est et alia eodem nomine lividior, tertia folio similis, prioribus latior et paene sine pondere, venis luridis, quartum genus in eodem colore nigriore luridis venis discurrentibus. - iovis gemma candida est, non ponderosa, tenera. hanc et drosolithon appellant. - indicae gentium suarum habent nomen, subrufo colore, sed in attritu purpureo sudore manant. alia eodem nomine candida, pulvereo aspectu. - ion apud indos violacea est; rarum ut saturo colore luceat.

lepidotis squamas piscium variis coloribus imitatur, lesbias glaebas, patriae habens nomen; invenitur tamen et in india. - leucophthalmos, rutila alias, oculi speciem candidam nigramque continet. - leucopoecilos candorem minii guttis ex auro distinguit. - libanochrus turis similitudinem ostendit et mellis sucum. - limoniatis eadem videtur quae smaragdos. - de liparea hoc tantum traditur, suffita ea omnes bestias evocari. - lysimachos, rhodio marmori similis auratis venis, politur ex maiore amplitudine in angustias, ut inutilia exterantur. - leucochrysos fit e chrysolitho interalbicante.

memnonia qualis sit, non traditur. - media nigra est, ab media illa fabulosa inventa; habet venas aurei coloris, sudorem reddit croci, saporem vini. - meconitis papavera exprimit. - mithrax e persis venit et rubri maris montibus, multicolor ac contra solem varie refulgens. - morochthos, colore porracea, lacte sudat. - mormorion ab india nigerrimo colore tralucet, vocatur et promnion, cum in ea miscetur et carbunculi color, alexandrion, ubi vero sardae, cyprium. nascitur et in tyro et in galatia; xenocrates et sub alpibus nasci tradit. hae sunt gemmae, quae ad ectypas scalpturas aptantur. - myrrhitis murrae colorem habet faciemque minime gemmae, odorem unguenti, attrita etiam nardi. - myrmecias nigra habet eminentia similia verrucis, myrsinitis melleum colorem, odorem myrti. - mesoleucos fit mediam gemmam candido distinguente limbo, mesomelas nigra vena quemlibet colorem secante per medium.

nasamonitis sanguinea est nigris venis. - nebritis, libero patri

sacra, nomen traxit a nebridum similitudine; alia e nigro generis eiusdem. - nipparene urbis et gentis persicae habet nomen, similis hippopotami dentibus.

oica barbari nominis e nigro et fulvo viridique et candido placet. - ombria, quam alii notiam vocant, sicut et ceraunia et brontea, cadere cum imbribus et fulminibus dicitur eundemque effectum habere; praeterea hac in aras addita libamenta non amburi. - onocardia cocco similis est, neque aliud de ea traditur. - oritis globosa specie a quibusdam et sideritis vocatur, ignes non sentiens. - ostracias sive ostracitis est testacea, durior ceramitide, achatae similis, nisi quod illa politura pinguescit. huic tanta duritia inest, ut fragmentis eius aliae gemmae scalpantur. - ostritidi ostrea a similitudine nomen dedere. - ophicardelon barbari vocant, nigrum colorem binis lineis albis includentibus. - de opsiano lapide diximus priore libro. inveniuntur et gemmae eodem nomine ac colore non solum in aethiopia indiaque, sed etiam in samnio et, ut aliqui putant, in hispania litoribus eius oceani.

panchrus fere ex omnibus coloribus constat. - pangonus non longior digito, ne crystallus videatur, numero plurium angulorum facit. - paneros qualis sit, a metrodoro non dicitur, sed carmen timaridis reginae in eam, dicatum veneri, non inelegans ponit, ex quo intellegitur adiutam fecunditatem. hanc quidam paneraston vocant. - ponticarum plura sunt genera: est stellata nunc sanguineis, nunc auratis guttis, quae inter sacras habetur. alia pro stellis eiusdem coloris lineas habet, alia montium convalliumque effigies. - phloginos, quam et chrysitim vocant, ochrae atticae adsimulata, invenitur in aegypto. - phoenicitis ex balani similitudine appellatur, phycitis algae. - perileucos fit ab oris gemmae ad radicem usque albo descendente. - paeanitides, quas quidam gaeanidas vocant, praegnantes fieri et parere dicuntur mederique parturientibus. natalis iis in macedonia iuxta monimentum tiresiae, species aquae glaciatae.

solis gemma candida est, ad speciem sideris in orbem fulgentis spargens radios. - sagdam chaldaei vocant et adhaerentem, ut ferunt, navibus inveniunt, prasini coloris. - samothraca insula dat sui nominis, nigram ac sine pondere, similem ligno. - sauritim in ventre viridis lacertae harundine dissecto inveniri tradunt. - sarcitis bubulas carnes repraesentat. - selenitis ex candido tralucet melleo fulgore

imaginem lunae continens, redditque ea in dies singulos crescentis minuentisque sideris speciem, si verum est. nasci putatur in arabia. - sideritis ferro similis est; maleficio inlata aliquis discordiam facit. nascitur in aethiopia. sideropoecilos ex ea fit variantibus guttis. - spongitis nomen suum repraesentat. - synodontitis e cerebro piscium est, qui synodontes vocantur. - syrtitides in litore syrtium, iam quidem et lucaniae, inveniuntur, e melleo colore croco refulgentes, intus autem stellas continent languidas. - syringitis stipulae internodio similis perpetua fistula cavatur.

trichrus ex africa venit, nigra, sed tres sucos reddit, ab radice nigrum, medio sanguineum, summo ochrum. - thelyrrhizos, cinerei coloris aut rufi, candidis radicibus spectatur. - thelycardios colore ... cordis persas, apud quos gignitur, magnopere delectat; mucul eam appellant. - thracia trium generum est, livida aut pallidior, in tertio guttis sanguineis. - tephritis lunae novae speciem habet curvatae in cornua, quamvis in colore cineris. - tecolithos oleae nucleus videtur, neque est ei gemmae honos, sed lingentium calculos frangit pellitque.

veneris crines nigerrimi nitoris continent in se speciem rufi crinis. - veientana italica gemma est, veis reperta, nigram materiam distinguente limite albo.

zathenen in media nasci democritus tradit electri colore et, si quis terat in vino palmeo et croco, cerae modo lentescere odore magnae suavitatis. - zamilampis in euphrate nascitur, proconnesio marmori similis, medio colore glauco. - zoraniscaeos in indo flumine magorum gemma narratur, neque aliud amplius de ea.

est etiamnum alia distinctio, quam equidem fecerim subinde variata expositione, siquidem a membris corporis habent nomina: hepatitis a iocinere, steatitis singulorum animalium adipe numerosa, adadu nephros sive renes, eiusdem oculus, digitus; deus et hic colitur a syris. triophthalmos in onyche nascitur tres hominis oculos simul exprimens.

ab animalibus cognominantur: carcinias marini cancri colore, echitis viperae, scorpitis scorpionis aut colore aut effigie, scaritis scari piscis, triglitis mulli, aegophthalmos caprino oculo, item alia suillo, et a gruis collo geranitis, hieracitis ab accipitris, ae+titis a colore aquilae candicante cauda. myrmecitis innatam formicae

repentis effigiem habet, scarabaeorum cantharias. lycophthalmos quattuor colorum est, rutila, sanguinea; media nigrum candido cingit, ut luporum oculi. taos pavoni est similis, itemque aspidi quam vocari timictoniam invenio.

rerum similitudo est in ammochryso velut auro harenis mixto, cenchrite sparsis milii granis, dryite truncis arborum; haec et ligni modo ardet. cissitis in candido perlucet hederae foliis, quae totam tenent narcissitim venis etiam cetera distinctam. cyamias nigra est, sed fracta ex se fabae similitudinem parit. pyren ab olivae nucleo dicta est; huic aliquando inesse piscium spinae videntur; phoenicitis ut balanus. - chalazias grandinum et candorem et figuram habet, adamantinae duritiae, ut narrent in ignes etiam additae manere suum frigus. pyritis nigra quidem est, sed attritu digitos adurit. polyzonos in nigro multis distincta lineis candicat, astrapaea in candido aut cyaneo discurrentibus in medio fulminis radiis. in phlogitide intus flamma videtur ardere, quae non exeat, in anthracitide scintillae discurrere. - enhygros semper rotunditatis absolutae in candore leni est; ad motum fluctuatur intus in ea, ut in ovis, liquor. - polythrix in viridi capillaturam ostendit, sed defluvia comarum facere dicitur. sunt et a leonis pelle et a pantherae nominatae. - colos appellavit drosolithum herbaceus, melichrum melleus, cuius plura genera, melichlorum geminus, parte flavus, parte melleus, crocian croci, polian canitiei similitudinem quandam spargens e nigro, spartopolian rarior. rhoditis rosae est, melitis mali coloris, chalcitis aeris, sycitis fici, bostrychitis in nigro ramosa candidis vel sanguineis frondibus, chernitis velut in petra candidis manibus inter se complexis. - anancitide in hydromantia dicunt evocari imagines deorum, synochitide teneri umbras inferum evocatas, dendritide alba defossa sub arbore, quae caedatur, securium aciem non hebetari. - sunt et multo plures magisque monstrificae, quibus barbara dedere nomina confessi lapides esse, non gemmas. nobis satis erit in his coarguisse dira mendacia magorum.

gemmae nascuntur et repente novae ac sine nominibus, sicut olim in metallis aurariis lampsaci unam inventam, quae propter pulchritudinem alexandro regi missa sit, auctor est theophrastus. cochlides, quae nunc volgatissimae, fiunt verius quam nascuntur, in arabia repertis ingentibus glaebis, quae melle excoqui tradunt

septenis diebus noctibusque sine intermissione: ita omni terreno vitiosoque decusso purgatam puramque glaebam artificum ingenio varie distingui venas ductusque macularum quam maxime vendibili ratione spectantium, quondamque tantae magnitudinis factas, ut equis regum in oriente frontalia ac pro phaleris pensilia facerent. et alias omnes gemmae mellis decoctu nitescunt, praecipue corsici in omni alio usu acrimonia abhorrentis. quae variae sunt, et ad unitatem excidere calliditati ingeniorum contingit, utque eaedem nomen usitatum non habeant, physis appellant velut ipsius naturae admirationem in iis venditantes.

cum finis nominum non sit - quae persequi non equidem cogito, innumera et graeca vanitate - , indicatis nobilibus gemmis, immo vero etiam plebeis, rariorum genera digna dictu distinxisse satis erit. illud modo meminisse conveniet, increscentibus varie maculis atque verrucis linearumque interveniente multiplici ductu et colore saepius mutari nomina in eadem plerumque materia.

nunc communiter ad omnium gemmarum observationem pertinentia dicemus opiniones secuti auctorum.

cavae aut extuberantes viliores videntur aequalibus. figura oblonga maxime probatur, deinde quae vocatur lenticula, postea epipedos et rotunda, angulosis autem minima gratia.

veras a falsis discernere magna difficultas, quippe cum inventum sit ex veris generis alterius in aliud falsas traducere, ut sardonyches e ternis glutinentur gemmis ita, ut deprehendi ars non possit, aliunde nigro, aliunde candido, aliunde minio sumptis, omnibus in suo genere probatissimis. quin immo etiam exstant commentarii auctorum - quos non equidem demonstrabo - , quibus modis ex crystallo smaragdum tinguant aliasque tralucentes, sardonychem e sarda, item ceteras ex aliis; neque enim est ulla fraus vitae lucrosior. nos contra rationem deprendendi falsas demonstrabimus, quando etiam luxuriam adversus fraudes muniri deceat. igitur praeter illa, quae in principatu cuiusque generis privatim diximus, tralucentes matutino probari censent aut, si necesse est, in quartam horam; postea vetant. experimenta pluribus modis constant: primum pondere, graviores enim sunt verae; dein frigore, eaedem namque in ore gelidiores sentiuntur; post haec corpore. ficticiis pusula e profundo apparet, scabritia in cute et capillamenta, fulgoris

inconstantia, priusquam ad oculos perveniat, desinens nitor. decussi fragmenti, quod in lamina ferrea uratur, efficacissimum experimentum excusate mangones gemmarum recusant, similiter et limae probationem. obsianae fragmenta veras gemmas non scariphant, in ficticiis scariphatio omnis candicat. iam tanta differentia est, ut aliae ferro scalpi non possint, aliae non nisi retuso, omnes autem adamante. plurimum vero in iis terebrarum proficit fervor.

gemmiferi amnes sunt acesinus et ganges, terrarum autem omnium maxime india. etenim peractis omnibus naturae operibus discrimen quoddam rerum ipsarum atque terrarum facere conveniet.

ergo in toto orbe, quacumque caeli convexitas vergit, pulcherrima omnium est iis rebus, quae merito principatum naturae optinent, italia, rectrix parensque mundi altera, viris feminis, ducibus militibus, servitiis, artium praestantia, ingeniorum claritatibus, iam situ ac salubritate caeli atque temperie, accessu cunctarum gentium facili, portuosis litoribus, benigno ventorum adflatu. quod contingit positione procurrentis in partem utilissimam et inter ortus occasusque mediam, aquarum copia, nemorum salubritate, montium articulis, ferorum animalium innocentia, soli fertilitate, pabuli ubertate. quidquid est quo carere vita non debeat, nusquam est praestantius: fruges, vinum, oleum, vellera, lina, vestes, iuvenci. ne equos quidem in trigariis ullos vernaculis praeferunt. metallis auri, argenti, aeris, ferri, quamdiu licuit exercere, nullis cessit terris et nunc intra se gravida pro omni dote varios sucos et frugum pomorumque sapores fundit. ab ea exceptis indiae fabulosis proximam equidem duxerim hispaniam quacumque ambitur mari, quamquam squalidam ex parte, verum, ubi gignit, feracem frugum, olei, vini, equorum metallorumque omnium generum, ad haec pari gallia. verum desertis suis sparto vincit hispania et lapide speculari, pigmentorum etiam deliciis, laborum excitatione, servorum exercitio, corporum humanorum duritia, vehementia cordis.

rerum autem ipsarum maximum est pretium in mari nascentium margaritis; extra tellurem crystallis, intra adamanti, smaragdis, gemmis, myrrinis; e terra vero exeuntibus in cocco, lasere, in fronde nardo, sericis vestibus, in arbore citro, in frutice cinnamo, casia, amomo, arboris aut fruticis suco in sucino, opobalsamo, murra, ture,

in radicibus costo; ex iis, quae spirare convenit, animalibus in terra maximum dentibus elephantorum, in mari testudinum cortici; in tergore pellibus, quas seres inficiunt, et arabiae caprarum villo, quod ladanum vocavimus; ex iis, quae terrena et maris, conchyliis, purpurae. volucrum naturae praeter conos bellicos et commagenum anserum adipem nullum adnotatur insigne. non praetereundum est auro, circa quod omnes mortales insaniunt, decumum vix esse in pretio locum, argento vero, quo aurum emitur, paene vicensimum.

salve, parens rerum omnium natura, teque nobis quiritium solis celebratam esse numeris omnibus tuis fave.

The Biographies

The Porta Nigra Roman gate, Trier, Germany — Pliny's last official position was procurator of Gallia Belgica. The capital of this Roman province was Augusta Treverorum (Trier), named for the Treveri surrounding it.

THE LIFE OF PLINY by Suetonius

Translated by Alexander Thomson

PLINIUS SECUNDUS, a native of New Como , having served in the wars with strict attention to his duties, in the rank of a knight, distinguished himself, also, by the great integrity with which he administered the high functions of procurator for a long period in the several provinces intrusted to his charge. But still he devoted so much attention to literary pursuits, that it would not have been an easy matter for a person who enjoyed entire leisure to have written more than he did. He comprised, in twenty volumes, an account of all the various wars carried on in successive periods with the German tribes. Besides this, he wrote a Natural History, which extended to seven books. He fell a victim to the calamitous event which occurred in Campania. For, having the command of the fleet at Misenum, when Vesuvius was throwing up a fiery eruption, he put to sea with his gallies for the purpose of exploring the causes of the phenomenon close on the spot. But being prevented by contrary winds from sailing back, he was suffocated in the dense cloud of dust and ashes. Some, however, think that he was killed by his slave, having implored him to put an end to his sufferings, when he was reduced to the last extremity by the fervent heat.

INTRODUCTION TO PLINY THE ELDER by H. Rackham

GAIUS PLINIUS SECUNDUS — usually called Pliny the Elder to distinguish him from his nephew and ward, Gaius Plinius Caecilius Secundus, whose collected correspondence has preserved such a vivid picture of Roman life in the time of Trajan — belonged to a family of wealth and position in the North of Italy. He was born at Como in AD 23. After studying at Rome he started when twenty-three years old on an official career, serving in Germany under L. Pomponius Secundus, and rising to the command of a cavalry squadron. Seven or eight years later he came back to Rome and took up the study of law. During most of Nero's principate he lived in retirement, but towards the close of it he re-entered public life and became Procurator in Spain. He held this post until Vespasian won the principate, when he returned to Rome and was admitted to the Emperor's intimate circle; they had been acquainted in earlier days when at the front in Germany. He also launched into another field of activity, receiving a naval commission.

Throughout his busy career as a man of action he had kept up a constant practice of study and authorship. His interest in science finally cost him his life, at the age of 56. He was in command of the fleet at Misenum on the Bay of Naples in AD 79 when the famous eruption of Vesuvius took place on August 23 and 24, overwhelming the little towns of Herculaneum and Pompeii. Pliny as a man of science sailed across the bay to obtain a nearer view; he landed at Stabiae, and there was killed by poisonous fumes. The circumstances are recorded by his nephew in a letter to Tacitus (Pliny, *Epp*. VI. xvi). Vespasian had died and had been succeeded as Princeps by his son Titus two months before.

Pliny's earlier writings were on subjects suggested by his professional experiences, *e.g*., the use of the javelin by cavalry, a

history of the German wars, the training of the orator. During his retirement he produced Dubius Sermo, a treatise on grammar, and later a continuation down to his own time of the history of Rome by Aufidius Bassus; and lastly *Natural History*, the largest and most important of his works and the only one that has survived, although his historical writings on the defence of the German frontier and on the events of his own period were clearly works of value, the loss of which is much to be regretted. The substance of both, however, is doubtless largely incorporated in the writings of Tacitus and Suetonius, the former indeed repeatedly citing Pliny as his authority both in *Annals* and in *Histories*.

Natural History is dedicated to Titus, who is referred to in the Preface, § 3, as 'sexies consul'; this dates the completion of the work at A.D. 77, two years before the author's death and the accession of Titus. It is an encyclopaedia of astronomy, meteorology, geography, mineralogy, zoology and botany, *i.e*. a systematic account of all the material objects that are not the product of man's manufacture; but among these topics, which are implied by the title, Pliny inserts considerable essays on human inventions and institutions (Book VII), as well as minor digressions on similar subjects interspersed in various other parts of the work. He claims in his Preface that the work deals with 20,000 matters of importance, drawn from 100 selected authors, to whose observations he has added many of his own; some of the latter he has indicated as they occur, and there are doubtless others not so labelled, but even so they form only a small fraction of the work, which is in the main a second-hand compilation from the works of others. In selecting from these be has shown scanty judgement and discrimination, including the false with the true at random; his selection is coloured by his love of the marvellous, by his low estimate of human ability and his consciousness of human wickedness, and by his mistrust of Providence. Moreover his compilations show little methodical arrangement, and are sometimes unintelligible because he fails to understand his authority, or else because he gives wrong Latin names to things dealt with by his authorities in Greek.

Nevertheless it is a mistake to underrate the value of his work. He is diligent, accurate, and free from prejudice. Though he had no

considerable firsthand knowledge of the sciences and was not himself a systematic observer, he had a naturally scientific mind, and an unaffected and absorbing interest in his subjects. If he gives as much attention to what is merely curious as to what has an essential importance, this curiosity has incidentally preserved much valuable detail, especially as regards the arts; moreover anecdotes that used to be rejected by critics as erroneous and even absurd have now in not a few cases been corroborated by modern research. The book is valuable as an anthropological document: it is a storehouse of scattered facts exhibiting the history of man's reaction to his environment — the gradual growth of accurate observation, of systematic nomenclature and of classification, *i.e*. of Natural Science.

Pliny's own general attitude towards life, like that of other educated men of his day, may be styled a moderate and rational Stoicism.

A vivid account of his authorship written by his nephew may be appended here. The younger Pliny in reply to an enquiry from a friend, a great admirer of his uncle, gives (Epistles, III, v) a full list of his works, numbering seven in all and filling 102 libri or volumes. Of these the *Naturae historiarum* (*libri*) t*riginta septem* is the latest. He calls it (§ 6) *opus diffiusum*, *eruditum*, *nec minus vermin quam ipsa nature*; and he goes on to describe by what means a busy lawyer, engrossed in important affairs and the friend of princes, contrived to find time for all this authorship (§ 7): 'He had a keen intelligence, incredible devotion to study, and a remarkable capacity for dispensing with sleep. His method was to start during the last week of August rising by candlelight and long before daybreak, not in order to take auspices but to study; and in winter he got to work at one or at latest two a.m., and frequently at 12 p.m. He was indeed a very ready sleeper, sometimes dropping off in the middle of his studies and then waking up again. Before dawn he used to wait on the Emperor Vespasian, who also worked during the night; and then he went off to the duty assigned to him. After returning home he gave all the time that was left to study. Very often after lunch — with him a light and easily digested meal, as the fashion was in old days — in the summer, if he had no engagements, he used to lie in the sun and have a book read to him, from which he made notes and

extracts; he read nothing without making extracts from it — indeed he used to say that no book is so bad but that some part of it has value. After this rest in the sun he usually took a cold bath, and then a snack of food and a very short siesta, and then he put in what was virtually a second day's work, going on with his studies till dinnertime. Over his dinner a book was read aloud to him and notes were made, and that at a rapid pace. I remember that one of his friends, when the reader had rendered a passage badly, called him back and had it repeated; but my uncle said to him, "Surely you got the sense? and on his nodding assent continued, Then what did you call him back for? This interruption of yours has cost us ten more lines!" Such was his economy of time. He used to leave the dinner table before sunset in summer and less than an hour after it in winter — this rule had with him the force of law. These were his habits when in the thick of his engagements and amid the turmoil of town. In vacation, only the time of the bath was exempted from study; and when I say the bath I mean the more central portions of that ritual, for while he was being shampooed and rubbed down he used to have something read to him or to dictate. On a journey he seemed to throw aside all other interests and used the opportunity for study only: he had a secretary at his elbow with book and tablets, his hands in winter protected by mittens so that even the inclemency of the weather might not steal any time from his studies; and with this object he used to go about in a chair even in Rome. Once I remember his pulling me up for going somewhere on foot, saying "You need not have wasted those hours! he thought all time not spent in study wasted. This resolute application enabled him to get through all those volumes, and he bequeathed to me 160 sets of notes on selected books, written on both sides of the paper in an extremely small hand, a method that multiplies this number of volumes! He used to tell how during his Lieutenant-governorship in Spain he had an offer of £3,500 for these notes, and at that date they were considerably fewer in number.'

TEXT

A large number of MS. copies of Pliny's *Natural History* have been

preserved; the oldest date back to the 9th or possibly the 8th century A.D. Attempts have been made by scholars to class them in order of merit, but it cannot be said that even those that appear to be comparatively more correct carry any paramount authority, or indeed show much agreement on doubtful points, while the mass of scientific detail and terminology and the quantity of curious and unfamiliar erudition that the book contains has necessarily afforded numerous opportunities for copyists' errors and for the conjectural emendation of the learned. Many of the textual problems raised are manifestly insoluble. Only a few variants of special interest are given in this edition.

Many editions have been printed, beginning with that published by Spira at Venice, 1469, an edition by Beroaldus published at Parma, 1476, and that of Palmarius at Venice, 1499. Commentaries start with *Hermolai Barbari Castigatianes Plinianae, Romae*, 1492, 3.

The text of the present edition is printed from that of Detlefsen, Berlin, 1866; it has been checked by the Teubner edition of Ludwig von Jan re-edited by Karl Mayhoff in two volumes, 1905, 1909 (Volume I reissued 1933), which is admirably equipped with textual notes.

Useful are the commentary by C. Brotier in *usum Delphini* (1826); *Pliny: Chapters on the Hist. of Art* by K. Jex-Blake and B. Sellers (1896) and more recently *Pliny's Chapters on Chemical Subjects* by K. C. Bailey (1929); and D. J. Campbell's commentary on Book II (1936).

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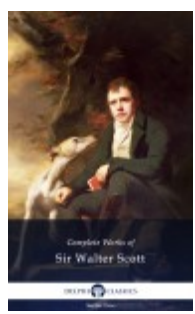

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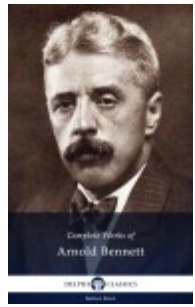

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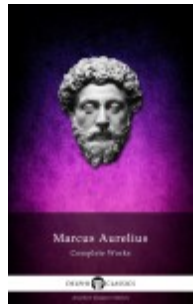

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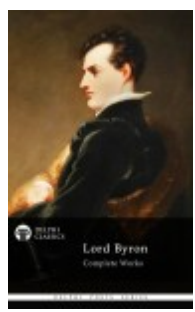

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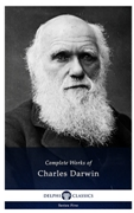

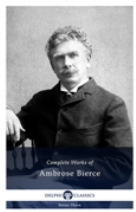

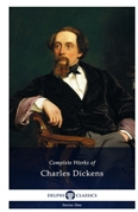

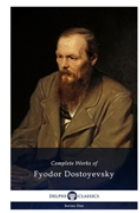

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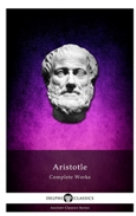

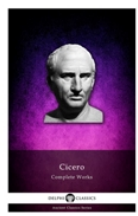

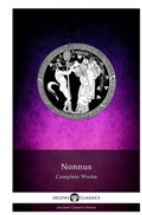

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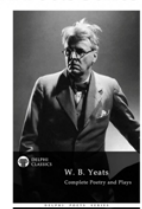

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Pliny died in the eruption of Mt. Vesuvius (AD 79) on the beach at Stabiae

Main entrance of Villa San Marco in Stabiae — Stabiae was an ancient Roman town, located close to the modern town of Castellammare di Stabia, approximately 4.5 km southwest of Pompeii.

Plaster casts of the casualties of the pumice-fall at Pompeii